

Delaware County Engineer's Office (DCEO)

Commercial Final Engineering Plan

Review Checklist

Project Name: _____

Submittal Items included with Plans– All references included in this checklist (such as Art. IV, Section 401, etc.), refer to the Delaware County Engineer's Design, Construction and Surveying Standards Manual, current edition, including the Supplemental Specifications to the Standards.

- | | |
|---|--|
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | PDFs of the plans, storm reports, traffic study (if applicable), etc. shall be all submittals |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | It is recommended that the commercial final engineering plan checklist on the website is reviewed in preparing the plans. |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Proper fees, including fee submission checklist been submitted? The fee submission checklist is near the top of the Development Webpage https://engineer.co.delaware.oh.us/development/development-resources/ . The review fees cover 2 submittals. Additional Submittals beyond the first two may result in additional fees being required for additional review. |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Traffic Impact Study (TIS) prepared (only applies to applicable commercial developments –see Supplemental Specifications for TIS requirements). The final approved TIS must be provided before the plans can be approved. |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Existing Topographic Survey - Incorporated into the Plan Sheet(s) |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Drainage Easements and/or R/W Conveyance Instruments, Metes and Bounds Descriptions, and associated Exhibits provided (If applicable – typically for any off-site easements – easements must state their purpose, such as “for drainage purposes”). |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | If the proposed R/W is being provided in fee (W.D. warranty deed), when is the closing scheduled? Note that the property cannot transfer until the deed has been recorded by our office. |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Storm Water Management Report with all the various calculations and predevelopment and post-development tributary maps (See Article IV, Section 403 E, Art. IX and the Supplemental Specifications) |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | For proposed improvements to existing County/Township Road including roadway, shoulder and ditch improvements, additional plan sheets and a cost estimate are required (see separate Road Widening Checklist in the Supplemental Specifications) |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Be sure to provide plans to the local fire department for review. |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Also be sure to provide plans to the local zoning inspector for review. |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Engineer's Estimate based on Delaware County Engineer's Unit Bid Prices (Article 403 A - for publicly inspected items only– See Art. IX and the Supplemental Specifications for guidance regarding how to format the estimate.) |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Copies of approved environmental documents, Army Corps of Engineers permits, ODNR permits and other permits submitted before final plan approval (Article 401 A) |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | OEPA Storm water NOI submitted before final plans approval |
| <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Plan resubmittals shall include written response letter includes the addressing of |

- ☐ Yes ☐ No ☐ N/A previous comments and identifies additions/deletions made to plans since previous submittal (Article 401 A)
- ☐ Yes ☐ No ☐ N/A Construction surety addressed for publicly inspected items (See Article IV, Section 404)
- ☐ Yes ☐ No ☐ N/A Final engineering plan approval will not be granted until the requirements of Article IV, Section 404 and the Supplemental Specifications have been met (See Procedure of Approval).

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.

Title Sheet - A sample title sheet layout is available from DCEO. Please contact this office for a copy.

- ☐ Yes ☐ No ☐ N/A Name of Project
- ☐ 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 North Arrow
- ☐ Yes ☐ No ☐ N/A A clearly legible location map showing the location of the project with respect to the nearest road intersection
- ☐ Yes ☐ No ☐ N/A Written and graphical (bar) scale
- ☐ Yes ☐ No ☐ N/A Name, address, and telephone number of the Design Engineer preparing the plan
- ☐ Yes ☐ No ☐ N/A Signature Line for the County Engineer
- ☐ Yes ☐ No ☐ N/A Signature Line for the County Sanitary Engineer (if applicable). Approval of the County Sanitary Engineer is required before the final engineering plans are approved.
- ☐ Yes ☐ No ☐ N/A Signature Line for Del-Co Water (if applicable)
- Note: DO NOT PROVIDE SIGNATURE LINES FOR THE COUNTY COMMISSIONERS ON THE TITLE SHEET**
- ☐ Yes ☐ No ☐ N/A Applicable Delaware County Standard Drawings referenced by Drawing Number. City of Columbus and/or ODOT standard drawings may be referenced on a project-by-project basis.
- ☐ Yes ☐ No ☐ N/A Index of Sheets
- ☐ Yes ☐ No ☐ N/A Index Map (Showing lot layout)
- ☐ Yes ☐ No ☐ N/A Benchmark list (referenced to USGS datum), Elevations, Designations and Locations
- ☐ Yes ☐ No ☐ N/A Applicable Delaware County Supplemental Specifications referenced by number. City of Columbus and/or ODOT supplemental specifications may be referenced on a project-by-project basis.
- ☐ Yes ☐ No ☐ N/A Owner/Developer's Name, Address, Telephone and Fax Numbers, and Email Address
- ☐ Yes ☐ No ☐ N/A Utility Owner(s) Name, Addresses and Telephone and Fax Numbers
- ☐ Yes ☐ No ☐ N/A Applicable specifications statement per Article IV, Section 402 H provided. (Typically the City of Columbus CMS would be used. Check with DCEO for further guidance.)
- ☐ Yes ☐ No ☐ N/A County Engineer Disclaimer Paragraph: "The Delaware County Engineer's signature on this plan signifies only concurrence with the general purpose and location of the proposed improvements with respect to improvements within the right-of-way, storm water management, erosion and sediment control. All technical details remain the responsibility of the Professional Engineer who prepared and certified these plans."
- ☐ Yes ☐ No ☐ N/A Consultant's Certification Paragraph: "This is to certify that good engineering

practices have been utilized in the design of this project and that all of the minimum standards as delineated in the Delaware County Design, Construction and Surveying Standards Manual have been met, including those standards greater than minimum where, in my opinion, they are needed to protect the safety of the public. Any variances to the above standards are consistent with sound engineering practices and are not detrimental to the public safety and convenience. These variances have been listed herein and have been approved by the Delaware County Engineer.”

☐ Yes ☐ No ☐ N/A
☐ Yes ☐ No ☐ N/A
☐ Yes ☐ No ☐ N/A
☐ Yes ☐ No ☐ N/A

Stamp and Signature of the Design Engineer licensed in the State of Ohio
 Site Data including Total Area and Total Impervious Area
 Change Order (revisions) table
 Variance Table with Approval Dates Shown

General

☐ Yes ☐ No ☐ N/A

Intersection Sight Distance (ISD) Diagram showing adequate intersection sight distance for the proposed entrance drives(s) per the current ODOT Location and Design (L&D) Manual. (Do not use stopping sight distance tables).

☐ Yes ☐ No ☐ N/A

Have all trees and obstructions within the R/W and sight distance triangle been shown (and designated to be removed) on the ISD diagram?

☐ Yes ☐ No ☐ N/A

For proposed improvements to existing County/Township Road including roadway, shoulder and ditch improvements, additional plan sheets and a cost estimate are required (see separate Road Widening Checklist in the Supplemental Specifications).

☐ Yes ☐ No ☐ N/A

Reference provided to DCEO Standard Drawing DCED-R2130 for all road widening, shoulder and ditch improvements

☐ Yes ☐ No ☐ N/A

Show the Clear Zone Setback line for projects located on County and Township Roads according to the ODOT L&D Manual, current editions. Provide additional utility easements if needed.

☐ Yes ☐ No ☐ N/A

Have drainage easements for road widening and/or a ditch setback been addressed?

☐ Yes ☐ No ☐ N/A

Are existing utilities shown in area of road widening and/or a ditch setback? Have the utilities been called out to be relocated? Have easements been provided for utility relocation or future needs?

☐ Yes ☐ No ☐ N/A

All required warranty deeds for R/W, easements for drainage and/or sight distance shall be recorded prior to final engineering plan approval, unless a final plat is required for the site. Copies of the above documents including the exhibits and legal descriptions shall be submitted to the County Engineer for approval.

☐ Yes ☐ No ☐ N/A

Preliminary Plan submitted and approved (only applies to larger commercial developments – Check with County Engineer if preliminary plan is required.)

☐ Yes ☐ No ☐ N/A

For sites with public roads and/or private roads built to public standards, please refer to and complete the Final Engineering and Construction Plan Review Checklist. A copy of the Final Engineering and Construction Plan Review Checklist must be included with the submittal. Please contact DCEO for guidance regarding when it is required to complete the Final Engineering and Construction Plan Review Checklist.

☐ Yes ☐ No ☐ N/A

General Summary/Table of Estimated Quantities provided?

☐ Yes ☐ No ☐ N/A

General Notes (An ACAD copy of these notes can be obtained from our office.)

☐ Yes ☐ No ☐ N/A

Do the plans contain the standard note about proof surveys being required to confirm elevations, slopes, etc. of storm structures, detention/retention ponds, etc. comply with the approved final engineering and construction plan?

☐ Yes ☐ No ☐ N/A

For Commercial Developments requiring pond construction, an Owners Agreement is required before the plans can be approved by DCEO.

- ☐ Yes ☐ No ☐ N/A Health Department approval provided (If any onsite treatment is shown)?
☐ Yes ☐ No ☐ N/A General DESC permit must be approved before final plans can be approved.
☐ Yes ☐ No ☐ N/A As-built plans are required for all commercial sites per Article IV, Section 404 and Article X.

Site Improvement Plan

- ☐ Yes ☐ No ☐ N/A Show and Label any FEMA designated Floodway and 100-year Flood Plain
☐ Yes ☐ No ☐ N/A Floodway Note provided?
☐ Yes ☐ No ☐ N/A Note any required vehicular access restrictions to public streets. Verify with the approved plat. All driveway access points for the site shall comply with the access management plan for the site and be approved by the County Engineer.
☐ Yes ☐ No ☐ N/A Have plans and plat for all adjoining projects/sites been reviewed to insure the proposed project is compatible, especially drive locations and safety of turning movements entering/exiting the site and adjacent sites?
☐ Yes ☐ No ☐ N/A Are nearby existing adjacent and opposing driveways shown? Are these at safe locations across the streets from each other.
☐ Yes ☐ No ☐ N/A Label Adjacent Property Names, Lot Numbers and Road Names
☐ Yes ☐ No ☐ N/A Show the Sight Distance Triangle for all proposed driveway(s). Are sight distance easements required? If so, the easements must be recorded prior to final engineering plan approval.
☐ Yes ☐ No ☐ N/A Show and Label all Existing and Proposed R/W, Easements (including type), and No-Build Zones
☐ Yes ☐ No ☐ N/A If high voltage power lines on site, has the power company had the chance to review the final plans?
☐ Yes ☐ No ☐ N/A Are any above ground utility structures placed within the drainage areas or installed in a manner that interferes with surface or subsurface drainage (Not permitted)?
☐ Yes ☐ No ☐ N/A Show and Label Centerline, Edge of Pavement (or Back of Curb), and R/W of all adjacent streets.
☐ Yes ☐ No ☐ N/A Label Size, Location, and Type of all Proposed Sidewalks and/or Multi-use paths including all handicap ramps to be built on site or within the Public R/W.
☐ Yes ☐ No ☐ N/A Show and Label all Proposed and/or Existing Ingress/Egress, or Cross Access Easements. Shared access easements shall extend a minimum of 5' beyond the back of curb or edge of pavement for maintenance purposes.
☐ Yes ☐ No ☐ N/A Label the Entrance Drives and Drive Widths. Drive widths provided comply with Township Fire Department requirements (generally 20' minimum width)?
☐ Yes ☐ No ☐ N/A Minimum Driveway Radius (35') provided. A larger radius may be required by DCEO per current County Standard Standards. See Delaware County Standard Drawings (Supplemental Specifications) for further information.
☐ Yes ☐ No ☐ N/A For drives that enter onto a curb and gutter street, are the details for the drive compatible with the street gutter pan and curb? Curb on the drive shall align with the curb on the street. No snag points are permitted. See DECO Standard Drawings (Supplemental Specifications) for further information.
☐ Yes ☐ No ☐ N/A Drive profile per Art. VIII, Section 802 A?
☐ Yes ☐ No ☐ N/A Township Issues Addressed (Building setbacks, parking, pedestrian path, etc.)
☐ Yes ☐ No ☐ N/A North Arrow and Scale
☐ Yes ☐ No ☐ N/A Typical Pavement Section provided (within R/W) - See Table 801
☐ Yes ☐ No ☐ N/A Station and offset or GPS coordinates of all publicly maintained structures (Article IV, Section 403 B)
☐ Yes ☐ No ☐ N/A Check to insure that all cross slopes at all areas of the intersections and/or cul-de-sacs are at 2% or greater slope (no bird baths).

Master Grading Plan

- ☐ Yes ☐ No ☐ N/A Has a Master Grading Plan been provided that complies with Art. IV, Section 403 C?
- ☐ Yes ☐ No ☐ N/A Proper scale used for Master Grading Plan? Check the remaining items in Art. IV, Section 403 C for complete compliance.
- ☐ Yes ☐ No ☐ N/A One-foot contour lines of the development area. Use of County Auditor's website (DALIS) is acceptable for existing topography.
- ☐ Yes ☐ No ☐ N/A Existing Contours (dashed) shown?
- ☐ Yes ☐ No ☐ N/A Proposed Elevations (solid) including Contours and Spot Grades
- ☐ Yes ☐ No ☐ N/A Storm Sewer Top of Casting & Invert Elevations labeled
- ☐ Yes ☐ No ☐ N/A North Arrow and Scale
- ☐ Yes ☐ No ☐ N/A Major Flood Routing (Designated with Unique Arrows defined on legend). Arrows used must be a different symbol than flow routing arrows.
- ☐ Yes ☐ No ☐ N/A Does the major flood routing for the proposed site affect any property downstream (e.g., existing subdivision, commercial sites, homes, etc.)? If so, the final engineering plans shall meet the requirements of Art. IV, IX, and the Supplemental Specifications.
- ☐ Yes ☐ No ☐ N/A Is the 100-year flood routing (including water surface elevations) shown and is it adequate?
- ☐ Yes ☐ No ☐ N/A Elevation of finished floors above 100-year flood (minimum of 1' above 100-year flood)?
- ☐ Yes ☐ No ☐ N/A Proposed Pad and Finished Floor Elevations provided?
- ☐ Yes ☐ No ☐ N/A Finished floor elevation >1' above pavement, unless ADA requirements dictate otherwise.
- ☐ Yes ☐ No ☐ N/A Utility pedestals shall be located outside the 100-year flood elevation along major flood routes.
- ☐ Yes ☐ No ☐ N/A Proposed grading or spot elevations called out by each building location? Drains away from each building?
- ☐ Yes ☐ No ☐ N/A Show and Label any FEMA designated Floodway and 100-year Flood Plain.
- ☐ Yes ☐ No ☐ N/A Floodway Note provided?
- ☐ Yes ☐ No ☐ N/A Proposed Landscape Mounding Contours
- ☐ Yes ☐ No ☐ N/A Label Adjacent Property Names, Lot Numbers and Road Names
- ☐ Yes ☐ No ☐ N/A Existing and proposed utilities shown? (Surface and subsurface)
- ☐ Yes ☐ No ☐ N/A Size, Slope, Length, and Type of Proposed and Existing Culverts [may be done with profiles]
- ☐ Yes ☐ No ☐ N/A Size, Type, Length, and Slope of Existing and Proposed Storm Sewers [may be done with profiles]
- ☐ Yes ☐ No ☐ N/A Storm Sewer and/or Culvert Profiles shown, including material type, size and slope - (must meet County Standards if publicly maintained – provide on separate plan sheet than the Master Grading Plan). If RCP Pipe is spec'd on the plans, the class shall be listed on the profiles, and shall comply with the table in Appendix B of the Standards. Please refer to/complete the Final Engineering and Construction Plan Review Checklist for storm sewer and culvert checklist items for all items that are publicly maintained.
- ☐ Yes ☐ No ☐ N/A Has ditch protection been called out on the plans such as Rock Channel Protection at storm sewer outlets into and out of ponds, etc? Has the ditch protection been called out based on shear stress calculated per ODOT L & D Manual, current edition (Sections 1102.3 and 1102.4 - 670, 660, 659 protection, RCP)?
- ☐ Yes ☐ No ☐ N/A Verify that all materials used for storm sewers that will be publicly maintained

- ☐ Yes ☐ No ☐ N/A meets current County Standards, including the Supplemental Specifications.
- ☐ Yes ☐ No ☐ N/A Drainage and Backfilling Details - Must comply with County Standards, including the Supplemental Specifications, for all publicly maintained portions of system. Granular backfill must be provided under public and future public roads.
- ☐ Yes ☐ No ☐ N/A Adequate cover provided for the pipe material chosen? See Supplemental Specifications for current requirements.
- ☐ Yes ☐ No ☐ N/A Station and offset or GPS coordinates of all publicly maintained structures (Article IV, Section 403 B)
- ☐ Yes ☐ No ☐ N/A Storm sewers aligned perpendicular with streets (not underneath or parallel to curb and gutter) within public R/W?
- ☐ Yes ☐ No ☐ N/A Proper design year storm used for Drive Pipes (10-year)? Have drive pipes been sized for all drives and shown on the plans? County standards used to compute design year flow (See Art. IX)?
- ☐ Yes ☐ No ☐ N/A Proper drive pipe length provided per Article VIII, Section 802 H?
- ☐ Yes ☐ No ☐ N/A Ditch Direction of Flow and Slope shown?
- ☐ Yes ☐ No ☐ N/A Trees or Landscape Features in R/W? (Not acceptable)
- ☐ Yes ☐ No ☐ N/A Trees or Landscape Features located on or near stormwater management facilities that are publicly maintained? (Not acceptable)
- ☐ Yes ☐ No ☐ N/A Overflow elevation
- ☐ Yes ☐ No ☐ N/A Correct Design Year Storm used for basin sizing (release 100-year post at 2-year pre)?
- ☐ Yes ☐ No ☐ N/A Ponding Limits and Elevation
- ☐ Yes ☐ No ☐ N/A Ponding Tabulations (required and provided)
- ☐ Yes ☐ No ☐ N/A Orifice Plate Details (Not permitted on half-height headwalls)
- ☐ Yes ☐ No ☐ N/A Do pond, sidewalk, or other embankment locations create any safety issues for vehicles or pedestrians?
- ☐ Yes ☐ No ☐ N/A Driveway Slope(s) comply with County Standards and Supplemental Specifications (Art. VIII Section 802 and DCEO Standard Drawing)?
- ☐ Yes ☐ No ☐ N/A Headwall Specifications or DCEO Standard Drawing referenced?
- ☐ Yes ☐ No ☐ N/A Ditch Direction of Flow and Slope shown?
- ☐ Yes ☐ No ☐ N/A Cross-sections of Ditches in R/W or within publicly maintained area (at 50-foot spacings)
- ☐ Yes ☐ No ☐ N/A Spot elevations (minimum of 2, 3 preferred) for area of the proposed driveway radius/curb/edge of pavement
- ☐ Yes ☐ No ☐ N/A Existing Utilities, Storm Sewers, Culverts, etc. – dashed
- ☐ Yes ☐ No ☐ N/A Proposed Utilities, Storm Sewers, Culverts, etc. – solid
- ☐ Yes ☐ No ☐ N/A Key Notes (Legend) identifying all items
- ☐ Yes ☐ No ☐ N/A Are leach fields, mound systems or other approved on-site sanitary shown on the plans for the lots and existing adjacent lots? Storm water routed anywhere near existing or proposed leach fields or mound systems, potentially creating problems for owners or adjacent owners?
- ☐ Yes ☐ No ☐ N/A Separate Sanitary Sewer Plans provided for review? If not, check with Sanitary Engineer's Office.
- ☐ Yes ☐ No ☐ N/A Are we signing the Sanitary Engineer's Plans? If the sanitary sewer goes under any county or township roads, or if any storm sewers going on maintenance are crossing the sanitary sewers, then our office typically sign their Sanitary Plans.

Erosion & Sediment Control Plan

- ☐ Yes ☐ No ☐ N/A Inlet Protection Locations
- ☐ Yes ☐ No ☐ N/A Silt Fence Locations
- ☐ Yes ☐ No ☐ N/A Check Dam Locations
- ☐ Yes ☐ No ☐ N/A Erosion Control Standards Details

- ☐ Yes ☐ No ☐ N/A General Notes (See Supplemental Specifications for Notes)
- ☐ Yes ☐ No ☐ N/A Sequence of Construction (See Supplemental Specifications for Notes)
- ☐ Yes ☐ No ☐ N/A Construction Entrance Location
- ☐ Yes ☐ No ☐ N/A Construction Entrance Detail
- ☐ Yes ☐ No ☐ N/A Major Flood Routing (Designated with Arrows defined on legend)
- ☐ Yes ☐ No ☐ N/A Ditch depth calculations provided in storm report?

Existing Topographic Survey – To be included on applicable plan sheets

- ☐ Yes ☐ No ☐ N/A Show all Existing Features including Structures, Trees, Metes & Bounds, Topography, and Utilities
- ☐ Yes ☐ No ☐ N/A Note which Existing Structures are to be Removed
- ☐ Yes ☐ No ☐ N/A Benchmark used, referenced to NAV Datum 1929 or 1988
- ☐ Yes ☐ No ☐ N/A Legend/Abbreviations
- ☐ Yes ☐ No ☐ N/A Additional Surveying Notes (if applicable)

Storm water Management Report Requirements and Calculations

- ☐ Yes ☐ No ☐ N/A Bound (3-ring) report and CD (PDF Format) of Storm water Management Report submitted?
- ☐ Yes ☐ No ☐ N/A Signature and Stamp of Ohio Registered Professional Engineer
- ☐ Yes ☐ No ☐ N/A Plan with tributary areas defined and tributary acreages labeled including offsite tributaries (Article IV, Section 401 A and the Supplemental Specifications).
- ☐ Yes ☐ No ☐ N/A Pre-Development and Post- Development Maps provided and comply with Art. IV Section 403 E, Art. IX and the Supplemental Specifications?
- ☐ Yes ☐ No ☐ N/A Calculations agree with Plan?
- ☐ Yes ☐ No ☐ N/A Written Explanation/Summary/Narrative provided
- ☐ Yes ☐ No ☐ N/A Storm water Management Facility Plan separate from Master Grading Plan (Art. IV, Section 403 D)? Does Storm water Management Facility Plan comply with Art. IV Section 403 D and the Supplemental Specifications?
- ☐ Yes ☐ No ☐ N/A Summary Table
- ☐ Yes ☐ No ☐ N/A Water quantity addressed and complies with Art. IX and Supplemental Specifications?
- ☐ Yes ☐ No ☐ N/A Water quality addressed and complies with Art. XII and Supplemental Specifications?
- ☐ Yes ☐ No ☐ N/A Routing Calculations
- ☐ Yes ☐ No ☐ N/A Inflow Hydrographs
- ☐ Yes ☐ No ☐ N/A Outflow Hydrographs
- ☐ Yes ☐ No ☐ N/A Storm Sewer Design Calculations including 10-yr HGL line
- ☐ Yes ☐ No ☐ N/A Calculations and frequencies provided according to Art. IX, Supplemental Specifications (See Table 901), and Article IV, Section 403 D and E. Peak runoff from post-development 100-yr 24-hr storm less than pre-development 2-yr 24-hr storm.
- ☐ Yes ☐ No ☐ N/A Calculations of the pre-development 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.
- ☐ Yes ☐ No ☐ N/A Calculations of the post-development 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.
- ☐ Yes ☐ No ☐ N/A Drainage maintenance requirements shall be addressed for any storm water running through the site. Contact the Delaware Soil and Water Conservation District (SWCD). (See Art. IV, Section 401 A)
- ☐ Yes ☐ No ☐ N/A If Drainage Maintenance is required, then a cost estimate and signed Drainage Maintenance Petition is required (See Art. IV, Section 404 and the Supplemental

- Specifications).
- ☐ Yes ☐ No ☐ N/A Exhibit C showing all storm water management items that will be publicly maintained must be included as part of the final engineering plans. The plans cannot be approved without Exhibit C. A copy of a sample Exhibit C can be obtained from DCEO.
- ☐ Yes ☐ No ☐ N/A The Exhibit C needs to include the following note: “As-built plans are required to be provided of all ponds, floodroutes, and storm sewers on this Exhibit C as being placed on maintenance to verify that these facilities have been constructed per and meet the intent of the approved engineering plan.”
- ☐ Yes ☐ No ☐ N/A Ditch flowline elevation. Foreslope and backslope rates shown (e.g. 4:1, 3:1)? See Article IV, Section 403 B
- ☐ Yes ☐ No ☐ N/A Proper Method used for Storage (Not Rational Method)
- ☐ Yes ☐ No ☐ N/A Is the overall storm water management for the site acceptable? Does it adversely impact property owners downstream? DCEO should go out and review the site drainage.
- ☐ Yes ☐ No ☐ N/A If future lots or parcels will need to provide separate detention, has a storm water master plan been provided that covers future lot/parcel requirements and what report assumptions were used?
- ☐ Yes ☐ No ☐ N/A Does stormwater report discuss the condition of the outlet(s) immediately downstream of the site? If a longer sewer or culvert, does this need to be camera inspected to confirm the condition of the pipes and joints? Is an adequate outlet provided? Did they shoot survey shots of the inlet and outlet inverts to confirm the slope of the pipe for analyzing the pipe capacity of the outlet? (Article 901)
- ☐ Yes ☐ No ☐ N/A Identification of the existing drainage outlet(s) for the site including size, material type, and condition of any storm sewer, culvert, etc. shall be shown. This information shall be based on an onsite investigation and observations of the outlet(s), (e.g., videotape, photographs, 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.

Suggested Items, But Not Required

- ☐ Yes ☐ No ☐ N/A Label and Dimension Handicap Parking Spaces (must meet all applicable requirements of ADAAG)
- ☐ Yes ☐ No ☐ N/A The signs and pavement marking for any private commercial drives entering the public R/W need to comply with the MUTCD. (including stop signs, pavement marking color, etc.). This is a zoning issue, so the Engineer’s Office has no jurisdiction in reviewing the details other than asking that the details be shown on the plans.
- ☐ Yes ☐ No ☐ N/A If site is a public school, have signage and pavement markings been addressed for school zones (speed zone signs along public road, etc.) ?
- ☐ Yes ☐ No ☐ N/A Parking Requirements (spaces provided)
- ☐ Yes ☐ No ☐ N/A Show and Label all Types of Curbs, additional Signs, Site Lights, Trash Enclosures, Fire Hydrants, and any Striping
- ☐ Yes ☐ No ☐ N/A Standard Detail and/or Cross-Sections for all Types of Curbs, Sidewalks, Walk Expansion/Contract Joint, Delivery Ramps (if applicable), Handicap Signs & Symbols, Drains, Fire Hydrants
- ☐ Yes ☐ No ☐ N/A Spot grades for all handicap spaces (max. grade in any direction is 2.0%)

Permits

- ☐ Yes ☐ No ☐ N/A Permit Fees paid? Plans must be forwarded to DCEO Permit Department for required permits (i.e. Driveway, etc.). See Art. IV, Section 404.

☐ Yes ☐ No ☐ N/A Has a DESC permit been obtained? (Required)

Signed Plans

☐ Yes ☐ No ☐ N/A ONCE FINAL PLANS ARE APPROVED – DCEO to add a comment that reads:
Provide a PDF of the plans signed by the consultant. Then, finally the following:
1 full size approved copy of plans, 1 half size (11x17) approved copy of plans,
digital copies of the *.PDF plans and the ACAD files.

Plat (Refer to Checklist for Plats in Supplemental Specifications)

For County Engineer Use only

☐ Yes ☐ No ☐ N/A On public school sites, please notify Design Department and Operations
Department that proposed school will be going in.

☐ Yes ☐ No ☐ N/A Have County Sanitary Engineer review plans (courtesy review). This will insure
that sampling pits go in where required, and they know to inspect them.

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: _____