
PUBLIC WORKS ENGINEERING DIVISION

Date: Thursday, October 06, 2016

To:

ENGINEERING SOLUTIONS

Matt Schlicht, P.E.

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From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2016105

Application Type: Engineering Plan Review

Application Name: Manor at Stoney Creek 2nd Plat Street, Stormwater, MDP

The Public Works Department received plans for this project on Sept. 20, 2016. We have completed our review and offer the following comments:

Engineering Review

1. The "Macro Storm Water Drainage Study" (hereinafter referred to as "the stormwater report") dated May 20, 2016 still does not match the weirs shown on the plans. Please see the previous comment letter dated July 19, 2016 for further information.
2. The stormwater report does not appear to show the the stage/storage, culvert/orifice structures, and stage/storage/discharge tables for the 10 and 100 year storm event.
3. Please refer to comment #2 in the previous comment letter dated July 19, 2016. Your response indicated this is a temporary sediment basin. The erosion and sediment control plan does not show this is the case, and in fact, it would appear the erosion and sediment control plan is designed to install gutter buddies on the throats of the field inlets. This will lead to flooding of the lots downstream of these basins. If these depressed areas are to be used for temporary sediment basins, then show how they will be installed without flooding the lots. Show what is being installed, other than gutter buddies, to limit the amount of sediment leaving the site. The City will not allow the installation of sediment basins that are designed to flood lots within the subdivision.
4. Please refer to comment #7 of the previous comment letter dated July 19, 2016. MBOEs were specified, but there is no caculated 100 year water surface elevation shown adjacent to the field inlets to justify their specification. Please show the calculated 100 year water surface elevation, and show the MBOE at least two (2) feet higher than the 100 year water surface elevation.

5. Please refer to comment #13 of the previous comment letter dated July 19, 2016. The 100 year water surface elevation should be specified for all areas within a sump condition, including field inlets. This was not shown on the Master Drainage Plan, and without it, it is impossible to determine what an appropriate MBOE should be for a particular lot.
6. Please refer to comment #14 of the previous comment letter dated July 19, 2016. A 4' by 4' box is shown, but it would appear this is impossible to construct for a 36" HDPE pipe given the outside diameter of the HDPE pipe, and the required 6" minimum side spacing on the pipe. Also, you are showing Section B with the water quality inlet below grade. How is this going to work?
7. Please refer to comment #15 of the previous comment letter. Horizontal dimensions are very difficult to determine from the drawing. Please clearly show the dimensions of this water quality feature, along with traditional dimension lines, labeling, etc.
8. Sheet C.208: grading on the water quality feature appears flat. A 2% minimum slope should be clearly shown on the plans. Creating a flat area on the bottom of this basin will lead to insect problems, and complaints from homeowners.
9. Please see comment #20 of the previous comment letter dated July 19, 2016. No hydraulic grade lines were shown for the design storm. Please be aware that if the system is not capable of managing the 100 year event without surcharging, a suitable overflow route is required.
10. Please refer to comment #21 of the previous comment letter dated July 19, 2016. The grading plan was not superimposed on the individual plan views for the various storm line segments. Please add these to all of the individual storm line segments, and please be aware that the contours should match the grading plan and Master Drainage Plan shown on previous sheets.
11. Please refer to comment #22 of the previous comment letter. The plans are not reviewable due to QA/QC issues. There are numerous instances of field inlet tops being at grade, even though openings are specified. There are several instances where two (2) separate proposed grade lines are shown. Field inlet 1-2 is shown as being in a sump condition, when in fact, it appears to be installed higher than the adjacent grade. Overstrike errors are evident on Sheet C.303. Proposed grading is not shown on the individual storm line segments.
12. Please refer to comment #25 of the previous comment letter. This comment referred to the City's opinion that the dimensions of the rip rap would not be sufficient to manage the energy at the end of pipe. No changes were made to the plans. The response requested that the City refer to the calculations. No calculations were provided.
13. Please refer to comment #30 of the previous comment letter dated July 1`9, 2016, This comment related to the specification on the plans of what sidewalks and ADA-accessible ramps would be constructed with this project. Normal convention is to label those sidewalks that will not be constructed with this project

as "to be installed by others", or equivalent language. If this is the case, then clearly show this on the plans. All other areas specified on the plans as "sidewalk" or "ADA-accessible ramp" would be expected to be constructed along with the other improvements.

14. Please refer to comment #32 of the previous comment letter dated July 19, 2016. There are areas within the swale that significantly less than 2% longitudinal (i.e., running) slope, and in particular, near the southwest corner of the project along County Line Rd. This is a significant issue, and should be addressed.
15. General Comment: The plans suffer from QA/QC issues, and there are concerns that adequate checking of the plans prior to plan submittal was not performed.
16. Engineer's Estimate: The line item for seeding, mulching, and fertilizer appeared very low based on previous estimates for projects of similar size and scope. It also appeared that tracer wire, tracer wire box in accordance with City standards, and other items required for the tracer wire installation on private sanitary sewer laterals was not included. Trench checks for sanitary sewer laterals were not included. Finally, grading for the Master Drainage Plan did not appear to be listed.

Traffic Review

1. Plans required for the off-site road improvements along County Line Road per conditions of project approval (i.e. eastbound left turn lane)
2. Street signs associated with Alabaster need to be relocated to the new alignment.

In order to calculate the Public Works' Engineering Plan Review and Inspection Fee, a sealed Engineer's Opinion of Probable Construction Costs shall accompany your final submittal copies. The itemized estimate (material and installation) shall be sufficiently broken down and shall include the following items, as applicable.

- Public infrastructure, both onsite and offsite.
- Private street construction, including parking lots and driveways.
- Sidewalks located within the right-of-way.
- ADA accessible ramps.
- Sanitary sewer manholes and piping between manholes, including private mains.
- Connection of the building sanitary sewer stub to the public main.
- Waterlines larger than 2 inches in diameter, valves, hydrants, and backflow preventer with vault, if outside the building.
- Stormwater piping greater than 6 inches in diameter, structures, and detention / retention facilities - public or private.
- Water quality features installed to meet the 40-hour extended duration detention requirements.
- Grading for detention / retention ponds.
- Grading to establish proper site drainage.

- Utility infrastructure adjustments to finished grade (i.e. manhole lids, water valves, etc.).
- Erosion and sediment control devices required for construction.
- Re-vegetation and other post-construction erosion and sediment control activities.

Electronic Plans for Resubmittal

Beginning Monday, May 23, 2016, all Planning application and development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies. Electronic copies will not be required for initial application submittals at this time as the plans are subject to change.

Electronic copies shall be provided on CD in the following formats

- Plats – All plats shall be provided in Tagged Image Format File (TIFF) Group 4 compression.
- Engineered Civil Plans – All engineered civil plans shall be provided in Tagged Image Format File (TIFF) Group 4 compression. All sheets shall be individually saved and titled with the sheet title.
- Architectural and other plan drawings – Architectural and other plan drawings, such as site electrical and landscaping, shall be provided in Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).
- It is requested that each plan sheet be a maximum of 2MB.

Please contact Staff with any questions or concerns you may have.

If you have any questions or comments, please contact me, Gene Williams either at (816) 969-1800 or e-mail to Gene.Williams@cityofls.net.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer

cc: Development Engineering Project File