

Engineering has reviewed the plans for the Dollar General – Pine Grove project submitted October 11, 2018 and have the following comments:

**Stormwater Calculations:**

- 1) Infiltration Trench #2 routing has primary weir length of 4' while detail on Sheet C9 proposes a 5' weir. Please clarify.

**Supplements**

- 2) Minimum design volumes are less than minimum volume required for both SCMs. Minimum design volumes were found using Simple Method (Post Only) for the 1-yr, 24-hr storm with depth of 3.85". However, for SA waters the Design Volume is the difference between runoff volume pre-versus post-development for the 10-year storm. Previously provided 10-yr routing calculations can be used to find Minimum Design Volume required.

Also the Discrete NRCS CN method can be used in determining minimum design volume. Please find NCDEQ link below for additional information.

<https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Stormwater/BMP%20Manual/B%20%20Stormwater%20Calculations.pdf>

Please update both supplements showing that minimum design volumes are being met.

**Plans:**

- 3) Grading Plan (C2): Check Spot Elevations for sidewalk within proposed driveway. The cross slope transitions within driveway. Please clarify.
- 4) Grading Plan (C2): Additional spot elevations are needed along proposed sidewalk running along Pine Grove Drive. These spot elevations need to show compliance with ADA & City regulations acceptable for longitudinal and cross slope. It is difficult to tell if the back of sidewalk is the break point for drainage toward the Road or being treated. Please consider turning off a few of the existing spot elevations for clarity.
- 5) Grading Plan (C2): Provide pipe lengths & slopes and/or add Storm Drain Table.
- 6) Grading Plan (C2): RDCO top needs to be 48.50 to match calcs.
- 7) Drainage Area Map (C2.1): Adjust DA Map at Driveway if sidewalk is break point. Does Sidewalk cross slope fall back to Infiltration Basin #1 on Northwestern side of driveway?
- 8) Layout Plan (C3): Provide Legend to identify hatching for standard and heavy duty asphalt & concrete sections per detail provided on Detail Sheet C6.
- 9) Details (C9): Clarify depth of sump (if any proposed) and bottom of box for JB#1 & Overflow Structure #1 & #2.
- 10) Details (C9): Provide Details for Yard Inlets showing sump for pretreatment.
- 11) Details (C9): Provide detail from JB-T1 showing 12" PVC and Trench Connections.
- 12) Details (C9): Infiltration Trench Section B-B width should be 10.5'.
- 13) Details (C9): Adjust SHWT elevation under "Infiltration Basin #1".
- 14) Details (C9): Provide additional detail on Overflow Structure open throat. Please show this is proposed for all four sides of the box. Additional lines within weir throat look to be a rebar trash guard? Please clarify.

Please submit revised plan sheets, supplements, calculations, and any other documentation to Engineering for additional review. Please call or email if there are any questions or concerns.