



Also Doing Business As (DBA):



Kenneth D. Ellsworth, P.E.
Managing Member

Paul L. Bedford, AIA
Architect

Rodney L. Carey, L.S.
Land Surveyor

Kordian W. Wichtowski, R.A.
Architect

April 12, 2017

Mr. Lawrence Marshall, P.E.
Mercurio-Norton-Tarolli-Marshall
Engineering & Land Surveying, P.C.
45 Main Street, P.O. Box 166
Pine Bush, New York 12566

RE: Laurel Crest
SBL No. 56-1-3.1 and 39-1-90

Dear Mr. Marshall:

We have reviewed the construction documents entitled "Laurel Crest" with a latest revision date of December 2016 and the SWPPP with a latest revision date of January 26, 2017 and offer the following comments:

Site Plan (Sheet 1 of 10):

1. The proposed sand filters and detention basins are located within the setback. A variance will be required from the Town to construct within the setback.
2. Provide an Engineering Report indicating the side yard separation of 25 ft. is supported by a fire flow of 750 gpm.
3. Provide sight distance measurements at northern entrance to Laurel Avenue.
4. Based on our parking lot count we noted 156 parking spaces which is less than required. You indicate you have provided 177, please review.
5. All access drives need to be two (2) ten foot lanes with two (2) foot gravel shoulders for a cleared way of twenty four feet. Provide typical Road Section Detail indicating road side swales or curb.
6. The pool and shul will require accessible parking and route, please indicate.
7. Provide first floor elevations for all buildings and pool deck.
8. Provide a note indicating the maximum number of bedrooms proposed.
9. Provide top and bottom of wall elevations for proposed segmented block retaining wall.
10. Please revise grading plan. Proposed contours indicate runoff directed to structures. All proposed swales must show contours for swale. Please contact our office to discuss.
11. Please review Section 310-8.1(c) of the Town code which restricts parking in the front yard and within 15 ft. of any wall which contains windows.
12. Please provide a rendering of each structure which has a different height of foundation exposed, i.e. walkout or full buried foundation. Coordinate with grading plan.
13. Provide location map and sheet index.
14. Parking spaces should not be on a grade steeper than 8%. Please revise grading or add walls accordingly.

15. Revise note No. 3 as building No. 9 is shown as a duplex.
16. Please indicate the minimum yard distances provided on the plan that are indicated in the Zoning Table. Have the variances been granted?
17. Provide a telephone number for the applicant.

Existing Conditions (Sheet 2 of 10):

1. It appears that the existing sanitary manholes are not being utilized in the new design. Please add a note for the manholes to be removed and backfilled with the lines plugged or plug the lines and fill the structures with flowable fill (concrete).

Overall Survey Plan (Sheet 3 of 10):

1. Provide the easement and agreement in favor of Grandhouse Bungalows, Inc.
2. We are consulting with the Town Planning Board Attorney regarding Note No.'s 3, 5, and 8.
3. Provide a benchmark.

Access Driveway Details (Sheet 4 of 10):

1. The A.D. for the curve at Station 1 + 50 on driveway "A" profile should be 2.02 and the K value should be 49.50.
2. Please provide a low point for driveway "A" prior to the existing drive at Station 15 + 80 ±. Provide starting and ending elevations.
3. Provide equivalent station for the intersection of driveway "A" and "B" and "B" and "C". Profile for driveway B should end and match edge of road driveway "A". Provide elevation verify top of sanitary manhole A is correct as it is currently shown above the road.
4. Driveway "B" profile should end at 9+11±, please revise and provide elevation.
5. Driveway "C" drainage is directed at a 12% grade to and across the intersection of Driveway "B". Please consider a low point for Driveway "C" and structure on the east side of Driveway "B" to collect the runoff and pipe it into Catch Basin D. Provide vertical curve for low point.
6. Driveway "C" profile should end at edge of road of Driveway "B". Provide elevations at beginning and end of profile. Adjust top of MH I.
7. Please revise Standard Asphalt Pavement Section to 1.5" Top Course and 2.5" Binder Course to comply with the Town Standard.

Stormwater Details (Sheet No 5 of 10)

1. Coordinate base area square footage of sand filler between Plan and Detail.
2. A 10 ft. berm is indicated in the detail but not reflected on the plan, please coordinate.

Water, Sewer & Storm Sewer Plan (Sheet No 7 of 10)

1. Provide length and slope from CB A to CB B. Please add an additional CB to divide up the 535 ft. length between CB A and CB B.
2. Outlet the pipe from CB B directly into the Town's ditch on Laurel Avenue. Confirm and provide computations indicating that the Town's ditch can accept the flow. Determine if the Town's ditch needs to be armored for erosion control.
3. Please label the culvert for size, slope and length under Driveway "A" to CB E.
4. Add another CB to divide the 517 ft. between CB E and the outlet. Take the outlet directly to the Town's ditch on Laurel Avenue.
5. With two 18" culverts and the detention basin outletting to the Town's ditch, please provide computations confirming the capacity of the 15" culvert under the southern access drive and the cross culvert under Laurel Avenue.
6. Label the pipe from Outlet Structure A to the Town's ditch.
7. The slope from Sewer Manhole L to M is 16.27%, 9.89% labeled. Please revise on plan and profile.
8. The slope from Sewer Manhole N to O is 8.21%, labeled 7.57%. Please revise.
9. The slope from Sewer Manhole O to P is 7.63%, labeled 7.57%. Please revise.
10. Each unit must have a water and sewer service. Please revise.
11. Please provide a water meter and pit in accordance with the attached detail. Provide an easement and access from the Town right of way to the Town.
12. Please include the attached individual water meter details as required by the Town.
13. Please provide fire hydrants every 600 ft. and inline water valves every 800 ft.
14. Provide a clean out on the sanitary service to the pool.
15. Label the sewer line from MH R to the existing Town manhole. Indicate new invert east.
16. Label sewer manhole G, Station 2+57-83, current labeled Station 0+00.

Sewer Profiles (Sheet No 8 of 10)

1. The water main crossing the sanitary sewer from MH E to MH F, MH H to MH I and MH K to MH L has insufficient cover, less than 4'.

Water & Sewer Details (Sheet 9 of 10):

1. All hydrants need to be painted yellow.
2. The Town requires sand bedding for the water main and laterals and a minimum of 5 ft. of cover. Please revise detail.

General:

1. Will porches or decks be constructed
2. Provide a horizontal alignment and signage plan, indicating traffic flow, speed limit, stop signs and no parking signs.

3. Provide a construction sequence on the plan set.
4. Provide an engineer's report and material specifications.
5. Discuss with the Town if a sewage grinder is required.
6. Provide all radii on plans.
7. Provide earthwork computations.
8. How will clearing and grubbing material be handled, i.e. stumps buried or hauled off site?
9. Provide a lighting plan with details on lights, poles and pole bases.

SWPPP

We understand that the original SWPPP for Laurel Crest was prepared by Michael E. Miele, P.E. dated December 2, 2008 and last revised January 26, 2009 and the project was permitted by the State via Permit No. NYR10V920. Based upon this information as well as recent correspondence with the New York State Department of Environmental Conservation (NYSDEC), we request the SWPPP be submitted as a SWPPP Amendment/Modification. Below we offer the following additional comments:

General

1. As the original project was approved under the GP-0-08-001 General Permit, all original components of the layout must meet those permit requirements. We do not consider the redesigned layout to be a "redevelopment" project therefore 100% of the total Water Quality Volume (WQv) should be provided using either standard management practices or green infrastructure practices. It appears that only 75% WQv is currently provided. Although we find treatment of the increased unit sizes and pool size to be acceptable using standard management practices (per the GP-0-08-001 General Permit), we request that the additional seven (7) proposed units be treated in conformance with the current GP-0-15-002 General Permit which includes Runoff Reduction Volume (RRv) treatment at the source using green infrastructure practices. These modifications should be described in the SWPPP report introduction to limit confusion between GP-08 and GP-15 requirements. Please note that the proposed Sand Filters may be utilized to treat WQv, however they have been designed as "end pipe" treatment and do not constitute RRv treatment for the additional seven (7) units. Please update the plan set where necessary and provide updated WQv and RRv calculations.
2. Please note that the downstream defenders would count towards pre-treatment however cannot be applied towards WQv as the project is not a "redevelopment" project. If the downstream defenders remains applicable to the site, please explain how the Stormwater Management Report states that eight (8) foot diameter units are required yet a six (6) foot diameter units are proposed.
3. A review of the HydroCAD data does not identify whether the project has been modeled as a Type II or III storm. Please verify the site is being modeled appropriately as a Type II storm and show on the attached HydroCAD calculations.

4. SWPPP Section IV.B.2 states that 4.3 acres of impervious surface is proposed yet less than five (5) acres will be disturbed, however the limit of disturbance was left blank in Section V. Please show the limit of disturbance with associated acreage on the plan set and if greater than five (5) acres are to be disturbed, please provide a phasing plan to show how not more than five (5) acres will be disturbed at any one time. Also, the SWPPP indicates that the "project shall be completed in accordance with Figure 4 in Section III" yet Figure 4 does not appear applicable. Please explain or revise.
5. A review of the Sheet 5's Vertical Standpipe Detail indicates a one (1) inch internal orifice. In order to prevent clogging, please provide a minimum three (3) inch orifice as noted in Section V.C. of the Stormwater Management Report.
6. Note that the detention basin is currently modeled as a dry basin. If 100% WQv is achieved by other practices, we will consider this acceptable for Water Quantity treatment (similar to as if 100% RRv was provided), however if the basin is to be used for WQv treatment, then the basin should be redesigned as such in accordance with the current design manual.

Please provide channel design calculations showing that the proposed diversion swale's flow is designed for at least the 10 year storm and the 25 year storm will not overtop the swale.

If you have any questions, please do not hesitate to contact our office.

Very truly yours,

Keystone Associates, LLC



Kenneth D. Ellsworth, P.E.
Managing Member

KDE:las

cc: Will Illing
Mollie Messenger
Paula Kay, Esq.
Paige Bakken
Kyle Ellsworth
Mari Giurastante