



# TOWN OF NEWINGTON

131 Cedar Street Newington, Connecticut 06111

Keith Chapman  
Town Manager

## Office of Town Engineer

Gary J. Fuerstenberg, P.E.  
Town Engineer

April 17, 2020

Roger Peckham  
6 Judge Lane  
Newington, CT 06111

BGI, Inc.  
170 Pane Road  
Newington, CT 06111

Weston & Sampson  
273 Dividend Road  
Rocky hill, CT 06067

### **RE: 68 Deming Street - Peckham Farm Subdivision – Engineering Comments**

Mr. Roger Peckham,

We reviewed plans titled *Map of Subdivision of Peckham Farm, Deming Street, Newington, Connecticut*, sheets 1 through 15 of 15, dated 02-18-20, revised 3-10-20, prepared by Bongiovanni Group, Inc. (received March 19, 2020).

Provide a landscaping plan with trees (name and size), grass seed mix, etc. Outline planting zone on plan according to sr 3.12.

Since the soil scientist (Scott Stevens) wetland delineation is different than the Town's wetlands map, Conservation Commission may require filing a wetlands map amendment.

#### **Sheet 2 of 15 – Existing Conditions Plan**

1. Identify Deming Street.
2. Provide house number for existing house (68 Deming Street).
3. Include soil numbers/ names for 302, 306, and 308 in the soil types legend. Remove soil numbers/names 96, 105, and 114 from legend, if not used.
4. Show existing sidewalks along westerly side of Deming Street.
5. Evaluate potential wetlands located in northeastern portion of site. If wetlands are present, show wetlands and 100 foot upland review area.

#### **Sheet 3 of 15 – Original Survey**

6. Change name of sheet to "Subdivision Plan".
7. Report lot frontage as arc length at building line (not tangent length) for lots #8, 9, 10 and 11. Tangent length is longer and misleading compared to shorter arc length. Check all frontage and area calculations.
8. Set a monument at angle points in Griswoldville Avenue (three) and Deming Street (one).
9. Provide detail showing the offset relationship between rebar near the brook and property line (rear lot #11).

#### **Sheet 4 of 15 – Utilities & Improvements Plan**

10. See comments for grading plan regarding storm water basin.
11. Expand perimeter fence around the basin to encompass the forebay.
12. Provide fence details.
13. Town will not accept responsibility for maintenance of private drainage. Provide draft documents for maintenance of private storm drainage and appurtenances (not within the street right of way) by HOA.
14. Provide a fixed vertical sediment depth marker in the forebay.

15. Since sidewalk is proposed along the Deming Street, provide sidewalks along the frontage of 100 Deming Street to connect to existing sidewalk in Barn Hill subdivision.
16. Provide sidewalks along the frontage of Peckham Farm Drive.
17. Consider providing crosswalk at Barn Hill Lane crossing Deming Street.
18. Provide crosswalk details conforming to the Town's specifications.
19. Show proposed water services and sanitary laterals for proposed houses on this sheet.
20. Provide street trees on landscaping plan.
21. Delineate planting zone (sr 3.12) on landscaping plan.
22. Show how all lots satisfy the useable backyard area requirement (sr 6.6.d).
23. Remove debris (trash, concrete, metal, plastic, glass, tires, etc.) dumped in northwestern portion of site and in Town of Newington right-of-way.

#### **Sheet 5 of 15 –Grading Plan**

24. Provide storage capacity for a 100 year storm in the infiltration/detention basin.
25. Provide one foot of freeboard above the 100 year storm maximum water elevation.
26. Raise the level spreader/spillway elevation to contain the 100 year storm maximum water elevation per the Town of Newington Stormwater Drainage Manual requirement. Adjust level spreader details.
27. Provide a minimum 12-foot wide access at top of berm (around the entire basin) for equipment to perform maintenance of basin.
28. Enlarge proposed drainage easement to accommodate access for maintenance.
29. Provide spot grade (high point) elevations behind proposed houses on lots #4, 5, 6, 7, 8, and 9.
30. Provide proposed contours between proposed houses on lots #2, 3, 4, 5, 6, 7 and 8 to indicate stormwater runoff swales to supplement drainage arrows.
31. Note 1 on the cover page notes house size is not limited. Therefore, provide house and garage with minimum 3,500 square-foot footprint to account for larger structure and patio/pool which are impervious.

#### **Sheet 6 of 15 – Erosion & Sediment Control Plan**

32. Revise construction entrance per Town requirements: 20 feet paved apron and 50 feet stone (26 feet wide).

#### **Sheet 7 of 15 – Street Plan & Profile**

33. Move CB3 and CB4 to the low point in the road.
34. Provide sanitary laterals for lots #5, 6 and 7.
35. Move water service to be in grass area (not under driveways) for lots #3, 10, and 16.
36. Storm pipe between CB7 and SMH2 is about 5 feet north of the right of way line. Pipe that close to property line cannot be maintained without easement. Provide minimum 10 feet between pipe and property line (provide a structure for change in alignment).
37. Slope between existing sanitary manhole in Deming Street and SMH1 should be 1.89% (not 2.00%).
38. Slope between SMH2 and SMH3 should be 0.80% (not 0.84%).
39. Consider locating storm water structures at nearest station and reporting pipe length to nearest foot.
40. Show easterly right-of-way line of Deming Street on profile.
41. Include symbols and abbreviations (not called-out) in legend.
42. Delineate extent of removal of existing curb along Deming Street.
43. Label curb radius at entrance to Deming Street.
44. Provide 4 foot deep sumps for storm sewer system.

#### **Sheet 8 of 15 – Storm Sewer Plan & Profile**

45. See comments in grading plan for storm water basin.

### **Sheet 9 of 15 – Storm Water Management Details**

46. Insert CTDOT drawing referred in general note #1 into this set of drawings.
47. Remove note #4 from general notes.
48. General note #7 should specify the size and pattern of the holes in the catch basin walls. Per CTDOT, add:  
“The openings shall be covered with geotextile. Depending on the masonry used in the walls, the openings shall be formed by the insertion of 2” pipes or by leaving two open vertical joints in the masonry.”

### **Sheet 10 of 15 – Storm Water Management Details**

49. Show bottom of infiltration/detention basin and side slope along structure on EOS1 detail. Revise top of frame elevation per grading comments.
50. Revise elevations on level spreader/spillway details per grading comments.

### **Sheet 13 of 15 – Site Details**

51. Provide fence details.
52. Enlarge granite curb detail and font. Clarify first bullet (hyphen) regarding installing concrete continuously along the radius, in lieu of processed aggregate base (inside, outside, both sides).

### **Sheet 14 of 15 – Erosion & Sediment Control Details**

53. Revise construction entrance detail: 20 feet paved apron and 50 feet stone (26 feet wide).
54. Embed straw bales 4 inches.
55. Show straw bale bindings be parallel to the ground.

### **Sheet 15 of 15 – Erosion & Sediment Control Notes**

56. Clean catch basins and all drainage pipes after paving and landscaping are complete. Include in sequence of work notes.
57. Add note: Connecticut licensed land surveyor shall certify to the Town Engineer that erosion and sediment control measures are installed in the locations specified on the approved plans prior to the start of work.
58. Add note: Notify the zoning enforcement officer for inspecting the erosion and sedimentation controls prior to beginning earthwork and after the erosion and sediment measures have been installed.
59. Add note: Notify the zoning enforcement officer for inspecting the new vegetation after vegetation is established and prior to removing any erosion and sediment measures.

### **Drainage Comments:**

60. See comments for grading plan regarding storm water basin.
61. The permeability value used is not the most conservative value. Use the most conservative permeability value in B-5008A.
62. Soil used for permeability testing was obtained from the “upper stratum” at a depth of 4 to 6 feet below existing grade. The bottom of the detention basin will be about 8 to 10 feet below existing grade in the “lower stratum”. Soil from the “upper stratum” will be excavated to grade the proposed basin. The “upper stratum” and “lower stratum” have different density and gradation and, therefore, will have different permeability rates. Test data from the “upper stratum” which will be excavated is not representative of soil from the “lower stratum” which will remain at the bottom of the basin. Provide soil data representative of the stratum at the bottom of the basin which water will infiltrate into. Provide permeability and gradation test data representative of soil from the “lower stratum” at a minimum of 3 locations. Perform permeability testing in the field (saturate soil prior to testing and run test to steady state conditions) at minimum 3 locations in the lower stratum. Coordinate explorations and field testing schedule with Town Engineer.
63. Test borings were performed in August 2019. Depth to water was measured at the end of drilling only – no long-term measurements provided. Depth to groundwater fluctuates with seasonal changes. Install

- minimum 3 groundwater observation wells in the vicinity of the proposed detention basin to measure depth ground water throughout a 12 month cycle. Abandon wells once they are no longer needed.
64. Apply a minimum factor of safety to 2 for infiltration rate to account for siltation/sedimentation and organic material reducing infiltration.
  65. Compute total storage of basin to the spillway elevation (not above the spillway elevation).
  66. Calculate volume of infiltration/detention basin between proposed elevation 144 and 149.5 (not 150).
  67. Hydrograph number 7 (Infiltration Basin) for 2-, 5-, and 10-year storm – the maximum pond elevation (146.31 [2-year]) does not correspond to the maximum pond elevation in the hydrograph (149.40 [2-year]). Please explain elevation difference or revise computations. Note, elevations and times to peak coincide for 25-, 50- and 100-year storms.
  68. Provide hydrograph data for 0 to 10 hours.
  69. What affect do the 50-year and 100-year storms have on the Winding Brook Lane development located immediately downslope of spillway? Confirm spillway water enters the downslope catch basin and does not bypass the catch basin. Evaluate capacity of Winding Brook Lane stormwater system to accommodate water from spillway.
  70. Use impervious area from the watershed area calculations sheet to compute WQV. Do not round area down.
  71. Calculate volume of pretreatment area between elevation 146 and 148.
  72. Some pipes area surcharged. Maximum pipe capacity is full. Recalculate/resize pipes.
  73. Provide outlet protection reference to ConnDOT Drainage Manual Figure 11-15 as backup.
  74. Design pond to emptying within 24 hours after the storm ends. Pond elevation does not recede over time.
  75. Evaluate stormwater runoff in northwestern portion of site (beyond area A, B and C).
  76. Expand post-development area A to include at least the western portion of the house on lot #1.
  77. Expand post-development area B to in include at least the eastern portion of the house on lot #1 and include at least the southern portion of the back yard of lot #3.

If you have any questions, please contact me to review and discuss the above comments.

Sincerely,



Gary J. Fuerstenberg, P.E.  
Town Engineer

Cc: Craig Minor, Town Planner  
Andrew Armstrong, Assistant Planner, Zoning Officer