

TOWN OF EXETER

Planning and Building Department

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www.exeternh.gov

Date: March 19, 2018

To: Exeter Rose Farm LLC
Brenda Kolbow, TF Moran/MSC

From: Dave Sharples, Town Planner

Re: Site Plan Review TRC Comments for Exeter Rose Farm LLC – PB Case #17-27
37-lot Single Family Open Space Subdivision
Tax Map Parcels #54-5, 54-6, 54-7, 63-205

The following comments are provided as a follow-up to the TRC Meeting held on March 15th, 2018 for the above-captioned project:

TOWN PLANNER COMMENTS

1. UEI will review
2. Discuss natural resource plan with Kristen
3. Independent review of traffic impact study is recommended
4. Traffic analysis: address pedestrian safety, off street parking, etc. as outlined in Section 7.14.4 and 8.7. Please revise as necessary to address these standards.
5. The TRC did not recommend any additional studies in accordance with Section 7.14.
6. Submit relevant portions of HOA docs – recreation area/drainage features/emergency access with maintenance agreement of each .
7. Will any landscaping be done at entrance? If so, show easement and include responsibility as part of HOA docs.
8. Describe the largest cuts and fills of the project and explain why they are needed.
9. Show flood boundaries (1% chance) clearly on plans as t is difficult to determine their locations.
10. Show zoning districts clearer on Existing Conditions Plan.
11. Submit functions and values assessment on wetlands.
12. Need more details on the recreational space Area 3. There is graded slopes and a riprap outlet structure in this area. This area does not seem viable for recreation. Consider a different location for this area.
13. Recreation Area 2 doesn't appear that useful. Please explain how you envision this area will be utilized.

14. Do calculations of open space include recreation area? See section 9.6.3.3
15. Provide responses to each provision in Section 9.6.
16. How will section 9.7.3 be satisfied where the road first accesses the site next to the Gallagher and D Tuck properties?
17. Following a discussion regarding planting trees in the right-of-way, the applicant mentioned that the plan would include at least one deciduous tree in each front yard. Please confirm by noting on plans.
18. How will the second provision in section 9.7.5.3 be met?
19. How will the “landlocked” parcel to the north gain access in the event of future development. Committee suggest that Planning Board consider requiring an easement for future access.
20. Will any roadway lighting be proposed? If so, show on plans. Also recommend that traffic analysis makes a recommendation on lighting where warranted.
21. Provide evidence that Section 11.2.6 regarding the open space/common areas has been satisfied?
22. Are the drainage features included as part of the common open space?
23. Are there any prime agricultural soils on these parcels?
24. Multi-family could be used in the R1 to meet requests of PB to eliminate crossing, etc. Mix of uses is permitted and encouraged by 7.7.4. This could allow you to be more flexible with site design by incorporating duplex and possibly multi-family units in the design.
25. Is there a need for Norris Brook Way? Lot 30 could use frontage on Rose Farm Lane. Lot 34 could be accessed across Lot 33 or could reconfigure access to be shared in part with Lots 1 & 2 which would trigger a waiver to have shared driveway for three lots. All frontage requirements still would need to be met.
26. Street names shown on plans are advisory only. See process for street naming in Town ordinance Chapter 14.
27. C-01: well and pressure tank to be abandoned – provide details on abandonment (i.e will it be removed?)
28. C-04: Note 24 needs to be revised. The intent is that all driveways shall be paved at least from the roadway to the property line. All driveways (or portions thereof) that slope toward the road shall be paved. The intent of this is so unpaved driveways do not erode into the Town right-of-way.
29. Legend monumentation has wrong cite. Correct cite s 9.25.
30. The committee understands the entrance area still may change but suggests that a Lot Line Adjustment be provided at the Gallagher property. The committee recognizes that this may necessitate a waiver from the 50’ buffer requirement unless the current lot count can be maintained.

NATURAL RESOURCE PLANNER COMMENTS

Wetlands and Shoreland

1. Wetland notes indicate Dec 2015 survey date. Have there been follow-up inspections by certified wetland scientist since that date to confirm boundary, including during times when area was free of snow cover and outside of 2015 drought?
2. Has site been evaluated by certified wetland scientist during appropriate active period for detection of vernal pool obligate species?
3. What characteristics were present to distinguish each intermittent stream from perennial and did these observations extend beyond the 2015 drought year?
4. Wetland scientist stamp is missing from sheets. Please confirm the wetlands depicted boundaries that have been confirmed by wetland scientist and add stamp (p. C-1 Note 13, and others).
5. I did not see the Exeter Shoreland Protection District (SPD) boundary (300' for Norris, 150' for perennial) shown on any of the plan sets, or a calculation of impervious cover SPD to determine the conformance with Zoning Ord 9.3.4.B. Additionally, how will application address impervious cover for individual house lots? My estimate showed this may affect lots 1, 2, 4, 10, 11, 26, 26, 30, 36, and 37 at a minimum.
6. The wetland impact plan (p. C-10A) did not distinguish temporary and permanent impacts for the wetland buffer.
7. A SPD impact plan similar to the wetland impact plan and table showing SPD buffer impacts would clarify impacts and provide info needed for SPD Conditional Use Permit application.
8. A wetland waiver (Site and Sub 9.9.3) is not listed under requested waivers. I assume the applicant is filing for a waiver vs. wetland CUP. If correct, update related notes.
9. Response to wetland waiver 4 (minimize impact to buffers) will be helpful if it includes a description of other planning requirements that drive the need for multiple access points to the development and a cul-de-sac to reach the furthest 4 lots.
10. Site and Sub waiver 9.9.3.5.c. requires no more than 50% of drainage structures are within the buffer. Adding buffers to p. C-22 and providing calculation would determine compliance.

Restoration, Landscaping, Lighting

1. If fertilizer will be used as noted on p. C-53, Note D-7 within Shoreland protection district, a waiver request for establishment of new landscaping under Zoning Ord 9.3.4.F.12.a should be included.
2. I did not see a landscaping plan or details on planting (except general statement on p. C-4, Note 30). Need to document restoration of temporary buffer impacts (Site and Sub waiver 9.9.3.7).
3. I did not see locations of lighting along roadways, photometric plan (Site and Sub 9.20.3), or specs indicating lighting will be dark sky compliant (9.20.4).

Recreation and Open Space Areas

1. No details for Recreation Area 3. Appears it may conflict with outfall and Gravel Wetland 1 (p. C-20, C-21). Also p. C-4 note 31 discusses recreational areas 1 and 2 but not 3 (though Rec Area 3 is labeled "See note 31").
2. Are there plans for a trail within the open space/rec area to connect to the existing trails? If so, please add location on plan and include a trail detail/trail construction note, ID any crossings (incl. in wetland application), as well as construction and maintenance responsibilities.
3. Please add note regarding responsibility for designing trail sign shown on plan and clarify if its purpose is showing trails w/i development or a connection to Town Forest?

General Comments

1. I recommend installation of wetland boundary markers in accordance with SS 9.9.1. to help ensure future users are aware of sensitivity of the site.
2. Given the sensitivity of site, our requirements under the MS4 and AOC, and the inclusion of this area as a focus area in the NRI, a Natural Resource Plan seems applicable in this case (SS 9.8.1, 9.8.2).
3. It is difficult to determine the boundary of the special flood hazard area. It would be helpful to have this boundary depicted on the 1"=40' subdivision sheets. Any impacts from the sewer pump station, gravel wetlands proposed north of Rose Farm Drive, or development of Lot 10?
4. Is there a maintenance plan for the MM retention basins? I often receive requests for Town to control excess veg. growth and hear concerns about mosquitoes in the still ponds in Town. If HOA will be responsible, I recommend adding a note with reference to HOA covenants, if Town, it would be good to have this information documented and possibly include ability to maintain in wetland application.
5. When ready to submit for Conservation Commission meeting, I recommend including several possible days/times that work for site walk prior to the meeting, and including the natural resource plan and the functions and values assessment so the Commission has needed information to provide the PB with a recommendation.

PUBLIC WORKS COMMENTS

The following comments are based on the information provided by MSC Engineers to the Planning Department, received February 20, 2018, and previous TRC reviews.

Cover Sheet

1. DPW contact should be Jennifer Mates, P.E., (603) 418-6431.

C-07 Open Space Subdivision Plan

2. The sewer pump station should be included in the ROW, not an easement.

C-11A and C-11 Offsite Utility Connections Plan

3. Revise connections to existing water main at Forest St and Salem St to accommodate future water main replacement. Identify tees and reducers. Three valves are not needed at each intersection. Adjust valve placement to allow isolating sections of the main.
4. The proposed 4" force main should be pressure-rated material, not SDR-35.
5. The water main should be adjusted at Station 700+10 to avoid the existing catchbasin and utility pole.
6. The label beginning "pavement patch..." does not point to anything.
7. Revise the layout at the railroad crossing to connect to the existing crossing as shown on the as-built drawings provided.
8. Coordinate the insulation specified in the profile with what is shown in the details.
9. Offsite Utility Notes: 2) replace "water meter boxes" with "water shutoff valve"; 4) temporary water shall be designed by a professional engineer and submitted to the town for review prior to final approval; 5) Any hydrants that will be out of service during construction must be bagged and labeled as out of service as directed by the fire department; 6) "Water MAINS AND service lines..."; and, 6b) replace "meter stop" with "water shutoff valve."
10. The water and sewer must have 10 feet of horizontal separation, which will require relocating the water main alignment. Borings to determine the location of ledge in the new location are recommended.
11. Show water and sewer services.
12. Water and sewer designs+ require a PE stamp.

C-19 to C-21 Grading and Erosion Control Plan

13. The grading at the proposed intersection needs more detail. The Inset shows spot grades that provide a 12% slope in the area of Sta 100+15, 15' right.
14. Show how the existing catchbasin that is to be converted to a manhole will be protected from sedimentation during construction.
15. Grading in the area of Sta 101+00, right is outside of the property line. An easement would be required.
16. Show the proposed driveways on the plans to identify conflicts with drainage structures. Catchbasins should not be adjacent to driveways as shown at the proposed sewer pump station.
17. Sewer Pump Station:
 - a. Eliminate the fence around the pump station.
 - b. Coordinate the size of the generator pad with the generator dimensions shown in the detail.
 - c. Move bollards to protect the generator and remove from the end of the driveway.
 - d. The driveway does not need curbs as long as drainage is directed away from the building. End curbs at the radius.

- e. The land for the pump station should be included in the ROW that the Town will own instead of as an easement.
- 18. Provide crossing detail for the existing ditch on Lot 4 that crosses the proposed drainage pipe.
- 19. Provide headwall details for stream crossings and how they relate to the retaining walls.
- 20. Consider removing the “existing retention barrier”. If it is to remain, it must be evaluated by a structural engineer for condition and stability.
- 21. Provide details of how the walls adjacent to the retention basins will be constructed, including dewatering and stream diversion structures.
- 22. The proposed grading at the existing retention basin near Sta 224+50 is too steep if this is intended to be a recreation area. Also, a safety shelf should be provided adjacent to the basin.
- 23. The proposed drain from Sta 123+60 to the end conflicts with the curb, retaining wall, and guardrail.
- 24. Clarify the ownership and maintenance requirements for the drainage structures cross the proposed road, but do not collect road drainage.
- 25. Clarify the ownership and maintenance requirements for the retaining walls that are outside of the ROW.

C-26 to C-31 Plan and Profile

- 26. Show the location of the geotextile reinforcement as discussed at the meeting at DPW in 2017.
- 27. The driveway location for Lot 37 does not work with the grading and sightline easement.

C-32 to C-35 Sewer Profiles

- 28. Sewer pipe should be SDR 35 PVC, not HDPE.
- 29. Sta 414+40, the water main should be labeled as “main” not “line” for consistency.
- 30. Label the force main on the profiles.
- 31. The stationing on C-35 is incorrect.

C-36 to C-38 Utility Plan

- 32. Notes 20 and 21 should be deleted.
- 33. Notes 22, the telephone service is Consolidated Communications.
- 34. Show the drainage infrastructure on the plan to check for conflicts.
- 35. Evaluate the size of the water service required to serve Lots 1 and 2. An 8-inch main is not required. Add a valve to isolate this service and a blow-off at the end. Show individual services with water shut-offs to both lots.
- 36. Move labels off the layout so other utilities can be seen.
- 37. Eliminate hydrant at Sta 227+90.

38. Relocate the services to Lot 24 outside of the retaining wall.
39. The services to T and C pedestals are labeled incorrectly.

C-39 to C-52 Cross Sections

40. Show all utilities on the cross sections.
41. Show retaining walls to scale (block depth) and proposed grading on outside face of the wall. Show geogrid to confirm it doesn't conflict with utilities.

C-54 to C-62 Details

42. Stop Bar & Legend: all traffic paint shall be chlorinated rubber or latex traffic paint, both with glass beads, that meets all specifications in the MUTCD.
43. Norris Brook Crossing: Elevation B-B is not shown in the plan view. Part of detail appears to be missing. Provide a specification for the stream channel material inside the culvert. Is 6" of crushed stone under the culvert sufficient for the roadway live load above?
44. Catchbasin Drop Inlet: Identify base material under the structure. Adjust the structure to be outside the ROW.
45. E-one Stainless Steel Lateral Kit: Replace "by others" with the responsible party. Coordinate pipe size with Force Main Drop Connection detail.
46. Force Main Drop Connection: minimum manhole size is 30 inches. Clarify if this is for the e-one pressure sewer services or the force main from the sewer pump station.
47. Intermittent Stream: at what roadway station is this section located?
48. Cul-de-sac Landscape: do not place trees over utilities that cross through the cul-de-sac. Landscaping must be drought and salt tolerant and easily removed for utility maintenance.
49. Water Service Connection: the material can also be polyethylene pipe with tracer wire.
50. Buried Gate Valve: add a note to specify that valve must open left (typical for all valves)
51. Water/stormwater & Sewer Crossings: this is for water and sewer crossings only, not stormwater.
52. Water Main Trench: maximum compaction lifts are 12 inches, water main shall be ductile iron CL52 only, no PVC.
53. Fire Hydrant: specify "open left"; add Mueller Centurion, Kennedy K-81D, and American Darling B-62-B as acceptable models.
54. Eccentric Catchbasin: change to a 3-foot sump; change base to 12-inches of $\frac{3}{4}$ crushed stone.
55. Provide wall profiles for all retaining walls.
56. Pump Station Plan: check the clearance between the guardrail and sewer; provide the design details, including process diagram, electrical, instrumentation, and plumbing design.

57. Sewer Pump Design Note 1: change “owner” to “contractor/engineer”.
58. Wetwell elevation: change the manhole cover to a hatch; add a drop inlet to the influent sewer pipe.
59. The last page does not have a title on the detail. The generator shown does not match the size shown in the plan view.

Comments from the previous memos that have not been addressed (note that some of the sheet numbers have changed). September 5, 2017, memo from Jennifer Mates, P.E.:

General Comments

6. One of the retention basins is identified as having a “concrete dam”. Please clarify if this is a DES regulated dam, **the condition of the structure**, and who will be the owner.
7. The plans should be signed in addition to the P.E. stamp.
8. The notes on all of the sheets should be numbered.

C10 Wetlands Area & Impacts Plan

9. Show existing and proposed contours. **These are needed to compare to limits of disturbance shown.**

C11 Offsite Utility Connection Plan

12. SMH 3 may need to be replaced to accommodate the new force main and energy dissipator.

C19-C21 Grading and Erosion Control Plan

18. Show the location of guardrails **and grading for terminal units.**
19. Show proposed lot numbers, **houses, and driveway locations.**
20. The sewer pump station will need a driveway, **transformer, generator, access around the entire building, and a fence.** The grading and drainage will need to be revised to accommodate this. **This should be a separate parcel to deed to the Town when the project is complete.**
21. Have cut/fill calculations been completed for the proposed grading that is shown?

C22-C4 Drainage Plan

23. Coordinate with other utilities to avoid conflicts. Provide a minimum of 3 feet between utilities.
25. Provide calculations for sizing all culverts under the proposed road.

C35-C37 Utility Plan

35. Show the utility profile stationing **and drainage** on these plans.
36. Show the water main with appropriate bends and valves as it will be installed, not on a curve. Add **2 valves** at each intersection to allow segments to be isolated for maintenance.
37. Provide a minimum of 3 feet of separation between all utilities and 10 feet between water and sewer.
38. Adjust utilities to eliminate crossing conflicts.
42. Show proposed utility duct banks with appropriate space for all utilities.

C39-C42 Details

47. Add more detail to the box culvert detail such as bedding materials and elevations.
54. Specify the type of retaining walls proposed and provide a typical section. If these are the large gravity block walls (i.e. Redi-Rock) **show the full width** of the wall on the grading plans.

C43-C44 Sewer Details *(These sheets were not included in the February 2018 plan set.)*

56. Add a note that water and sewer service tie-cards are to be provided for each lot in addition to as-built drawings.
57. Add a cleanout to the sewer service.
58. Add a note to reference NH DES Env-Wq 700 as the design standard. Remove the references to the year the ASTM standards. The most current standards should be used.
59. Gravity Sewer Notes:
 - a. Note 10 add "...and visually inspected USING LAMP TEST..."
 - b. Note 11 add "...not less than 30 days AND NO MORE THAN 90 DAYS..."
60. Provide calculations for determining the design flow for the gravity sewers and the pump station.
61. Check the velocity on the steep sections to determine if trench dams or DI pipe are required.
62. Add notes to the sewer manhole detail that no steps are allowed and structures must have a bituminous coating.

October 5, 2017, memo from Paul Vlasich, P.E.:

2.
 - b. Watermain design for future upgrades. **Address connection to existing water mains.**
 - c. Existing water main – Hydrant on Salem - **Connect hydrants, show existing water main improvements.**
 - d. Water and sewer services – **show on plans**

3. Sewer pump station, a. by others – **design is incomplete**
4. Retaining Walls
 - a. Ownership
 - b. Utility excavations in future – geogrid – **need to eliminate conflicts between geogrid and utilities.**
5. Utility Layout, b. Sewer, ii. HDPE – **change to SDR 35 PVC**
7. Subgrade soils – **show locations of fabric and underdrains on the plan and profiles.**
8. Sidewalk, b. 5ft asphalt width – **still shown as 5 feet to the face of the curb on the details.**
14. Cul-de-sac trees – **do not show trees planted on top of utilities.**
15. Guardrail – offset and end treatments – **provide details for terminal units and associated shoulder grading.**

FIRE DEPARTMENT COMMENTS

1. Hydrants to be located at the beginning of the development, the intersection of each road and at the end of the cul-de-sac. The hydrant could be eliminated in the middle of the road (as discussed at the TRC).
2. Fire alarm master boxes are required by each hydrant. FA boxes shall be pedestal type, Gamewell Fire Alarm boxes. Overhead wire is required from the point where the underground fire alarm wire comes up to the pole and the next point where the existing fire alarm wire passes.
3. Turning radius shall accommodate the largest fire dept. vehicle.
4. Should houses become less than 30ft apart, home sprinkler would be required per NFPA 13D

Attachment: L1 Dimensions (Ladder Truck Radius)