

Minutes
Zebulon Technical Review Committee
January 25, 2017

Present: Julie Spriggs-Planning, Chris Perry-Fire, Bob Grossman-Police, Jason Brown-Public Works, Lisa Markland-Town Clerk, Kim Young-Administrative Assistant, Debbie Tanner-Wake County Environmental Services, Keith Tew-City of Raleigh Public Utilities

Others Present: Rick Baker and Patrick Barbeau-Timmons Group

Julie Spriggs called the meeting to order at 9:54am.

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Julie Spriggs asked for a motion to approve the minutes.

Chris Perry made a motion, second by Bob Grossman to approve the minutes of July 27, 2016 as presented. There was no discussion and the motion passed unanimously.

NEW BUSINESS

TRC-2017-02—Shepard Greene

Julie Spriggs said the plan referred to 626 Shepard School Road that was made up of two parcels of land equaling about four acres. The site was planned for an independent senior living complex with 50 units for ages 55 and older and the building would be a little over 19,000 square feet.

City of Raleigh-Public Utilities

Keith Tew had the following comments and reviewed the highlights.

1. See redlines on Existing Conditions Plan. Draft & label all water / sewer / reuse structures & pipes with diameters & materials specified per GIS data unless otherwise verified by field survey. Cross-hatch portion of CORSSE to be abandoned
2. Provide a Plat or Deed reference for the 0.724 acre lot, 3.204 acre lot, CORSSE traversing site, CORSSE adjacent to creek, CORSSE being partially abandoned & Reuse Easement adjacent to North PL
3. Site Data table: list correct acreage for total site / project area. Does it include or exclude the 0.724 acre landlocked parcel?
4. Will the PL between the 0.724 acre lot & 3.204 acre lot remain - or will it be recombined as part of this project?
5. A profile of existing sewer line traversing site will be required on ICP submittal with existing topo, finished grade, new waterline crossing & proposed channel section (downstream of FES#6) shown
6. Label all slopes encroaching across CORSSEs as 3:1 max allowable
7. Re-grade private storm BMP completely outside CORSSE; pond dam may not encroach
8. Extend 8" san. sew. from new MH along East PL to serve 0.724 acre landlocked parcel; dedicate new 30' CORSSE across site (note: this is NOT required if interior PL is recombined as part of project)

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9. Revise layout in this area to eliminate building, retaining wall, fence & landscape conflicts with new CORSSE

Keith Tew said that there seemed to be a lot of GIS data that was not reflected around some of the field surveys, but the field surveys would take precedence over the GIS data. He wanted to see redlines on existing conditions plans, particularly where all water, sewer, reuse structures were used. A plat or deed should be provided to show the easements. He mentioned that there were easements around the property finding plats and deeds associated with the lots was difficult. As a result, it wasn't clear if those easements existed and suggested that technically the easements might have been premerger. If documentation could not be found then they would need to dedicate them on the final plat.

Rick Baker said he believed he had a book and page number for the easement on the west side of the property. However, they could not be found for the sewer easement on the eastern side of the property and they had made a request to abandon that one. Keith said if it were abandoned then nothing would need to be done.

Keith indicated that items three and four addressed the recurring issue of the land locked parcel throughout the plan. The plan showed that there were two lots in what appeared to be the total boundary with only one being disturbed. He asked if they were going to leave it as two lots or if they were going to combine it into one, because that would impact the utility requirements. Further he explained that if the site remained two lots it would require extension of the sewer connections to that property. Rick said they would combine the lots into one parcel.

For the next item, Keith mentioned that a profile of existing sewer lines and topography of the west side of the property, with proposed grading in all utility and storm crosses was needed to ensure there were no impacts.

Keith indicated that the dam to the stormwater pond encroached into the easement by extending into the curvature of the driveway. No private stormwater devices were allowed in the easement and the dam would be a structural component. He felt confident that through pulling the slope out the easement could be changed.

Keith then referred to the sewer extension on the top side of the site plan, behind the building. He explained that if the sewer line was placed in that location it would cause a number of conflicts in the easement area, but if the lot line went away, that would not be an issue.

Keith did not see a hydrant on site and didn't know if they had adequate coverage from public hydrants off site. Deferring to Chris Perry about hydrant standards, he asked if it was a sprinkler. Chris confirmed that it was. Keith explained the Raleigh standard required all parts of the building to be within 600 feet of the nearest fire hydrant. Chris acknowledged that Zebulon had the same requirements. Keith then indicated that they may have to put in a private hydrant. Patrick Barbeau stated the fire hydrant was within 100 feet of FDC.

Keith explained that it looked like they attempted to provide a water line easement around the meter, but it did need to be continuous around the right of way as opposed to a floating easement island. As

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a result, they would need to extend it down to the right of way so there would be access from the street.

Keith told them there also appeared to be landscaping conflicts on the rear of lot 12 at Fairfield which was near the entrance on the left. Rick specified that there was a little triangular strip between these lots and the sewer easement. Keith acknowledged it looked like there was an easement stubbed to the lots, but he didn't know if it existed.

Wake County Environmental Services

Debbie Tanner had the following comments:

Sediment and Erosion Control

1. Construction Plan Not Approved and Incomplete (Items 1-4 required to be a complete submittal)
2. Approval from either the Wake County Subdivision Section, Wake County Zoning Section, Wake County Stormwater Section, or the Town Engineer(s) for construction and/or utilities depending on the project location and type.
 - Provide documentation of approval by the Town of Zebulon for the construction plans.
 - Provide permission from the property owner in writing to develop the site or provide deed if property conveyed.
3. Erosion Control Calculations:
 - Sediment basin design (See website for Wake County design criteria)
 - i. In Wake County, required storage volume is based on drainage area so the corrected volume is 3870 sf. The provided volume exceeds the requirement.
 - ii. The skimmer should be sized based on the 10 year storm and the required storage volume. The proposed 3" skimmer with 1" orifice meets the criteria by dewatering in 3.35 days.
 - iii. The stormwater report/calculations indicate that the wet pond spillway structure will be used with a skimmer for sediment control but the plan drawings indicate a temporary skimmer basin to be converted to the permanent wet pond following completion of construction. Please clarify.
 - Dissipaters: Q10 velocities, stone size and dimensions.
 - i. Provide design calculations for FES #6 and the wet pond pipe outlet dissipater
4. TEMPORARY SEDIMENT CONTROLS: locations and dimensions of gravel entrances, diversion ditches, silt fence, sediment basins, inlet protection, etc.
 - On sheet C2.1, call out that FES #5 at the inlet to the 24" entrance pipe will be protected by an "arc" or horseshoe inlet protection device. Provide a construction detail.
 - Armor or provide slope drains where the temporary diversions enter the skimmer basin to prevent erosion. If slope drains are proposed, provide design, sizing and construction detail.

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5. Location and requirements for stockpiles (see website for Stockpile Requirements)
 - Are there any proposed stockpiles associated with this project? If so, show location on plan. Stockpile notes provided on sheet C7.4.
6. Wake County Construction Details
 - Add the following construction details to sheet C7.3: silt fence outlet and horseshoe inlet protection
 - Clean water diversion detail is not applicable on this site.
 - The temporary diversion detail cites a rainfall intensity of 6.11 in/hr (Fayetteville Region). Actual intensity used in design was 7.21 in/hr.
 - In lieu of riprap on the skimmer basin weir, a tarp that is 50 mil heavy duty silver or equivalent for u.v. resistance may be used.
7. Wake County Construction Sequence (Provide project specific details as needed)
 - Please remove the construction sequence on sheet C7.4. It contains inaccurate contact information and seeding timeframes.
 - Revise the phased construction sequences on sheets C2.0 and C2.1 to reflect the following:
 - i. Remove inaccuracies such as “Division Drive” in note 2; reference to a second skimmer basin in note 5, etc. in Phase I. Remove “underground detention” in note 2, clean water diversion in note 4, replace NCDENR inspectors with Wake County in note 9, etc. in Phase II
 - ii. Following items should be incorporated in the sequencing: Contact for Wake County is Debra Tanner, Environmental Consultant 919-842-7142; only clear/grade enough to install sediment control devices and call for a compliance inspection before proceeding with grading work; do not remove skimmer basins and diversions prior to fine grading as stated in note 3 without permission from Wake County.
 - iii. Specify when the temporary skimmer basin is to be removed in relation to construction of the permanent wet pond; the skimmer must be attached to the permanent riser if the site is not adequately stabilized.
8. Wake County Basin Removal Sequence
 - Wake County must grant permission to convert the sediment basin over to stormwater use prior to completing any related work (a note in the construction sequence or elsewhere on the plan should indicate this).
9. Erosion Control: This project will require a Land Disturbance Permit if it involves greater than one acre of disturbance. See website for details.

10-20-1 Minimum Standards - All soil erosion and sedimentation control plans and measures must conform to the minimum applicable standards specified in North Carolina’s Erosion and Sediment Control Planning and Design Manual and the Wake County Sedimentation and Erosion Control Plan Review Manual. Erosion control devices must be installed to prevent any offsite sedimentation for any construction site regardless of the size of the land disturbance.
10. Riparian Buffer Rules:
 - Due to the location of this project, it should be noted that a rule to protect and maintain existing buffers along watercourses in the Neuse River Basin became effective on July 22, 1997. The Neuse River Riparian Area Protection and

Maintenance Rule (15A NCAC 2B.0233) applies to all perennial and intermittent streams, lakes, ponds and estuaries in the Neuse River Basin with forest vegetation on the adjacent land or “riparian area”.

Stormwater

1. Approval of construction plans by the Town of Zebulon
2. Permission from the property owner in writing to develop the site or provide deed if property conveyed
3. Drainage Area Maps with stormwater discharge points and Tc flow paths (existing/post construction/post BMP)
4. Draft Stormwater Agreement, Draft Maintenance Agreement, Draft Deed Restrictions / Protective Covenants Proposal, Draft As Built Plan or performance guarantee paperwork
5. Proposed Site Plan:
 - Table with impervious calculations - existing and proposed impervious surfaces: roads, well lots, recreation sites, single family residences, etc. (consistent with SW Tool inputs)
 - Proposed stormwater easements, access lanes, and backwater easements
6. Location and type of all proposed stormwater management structures (grass swale, wet/dry detention basin, filtering/infiltration basin, bioretention, etc.)
 - Provide cross-section and construction details for the wet pond/spillway structure/elevations, etc. “Typical Spillway Detail” from Town of Zebulon’s specs on sheet C7.2 is not applicable.
 - There is an emergency spillway shown on the wet pond embankment on sheet C4.0 but no on sheet C2.1. My understanding from the report is that the principal spillway structure will pass the 100 year storm. Please clarify on the plans.
7. Stormwater Review Required - All residential subdivision development must submit a plan to comply with Chapter 151. Office, institutional, commercial or industrial development that disturbs greater than 20,000 square feet is required to comply with the stormwater management regulations of Chapter 151. Development and redevelopment that disturb less than 20,000 square feet are not exempt if such activities are part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules. [Chapter 151.05(B)(1-3)]
8. Stormwater Permit – is required for all development and redevelopment unless exempt pursuant to the Code of Ordinances. A permit may only be issued subsequent to a properly submitted, reviewed and approved stormwater management plan and permit application. [Chapter 151] Note: A permit may not be required if there are no post-construction requirements (i.e. SCMs).
9. SCMs - For projects requiring stormwater treatment for quality and/or quantity control, the applicant must comply with the NC BMP Manual, as well as [Chapter 151.50-151.56] Completion of Improvements and Maintenance, prior to issuance of a certificate of compliance or occupancy.
10. Standards Based on Project Density- Projects are identified as Ultra Low-Density (15% or less Built-Upon Area, referred to as BUA, and less than one dwelling unit per acre), Low-Density (more than 15% BUA and no more than 24% BUA), and High-Density (24% or more BUA). [Chapter 151.35]

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11. Standards for High-Density Projects:

- Measures shall control and treat runoff from the first inch of rain. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.
- Structural measures shall be designed to have a minimum of 85 % average annual removal for Total Suspended Solids (TSS)
- Permanent on-site SCMs shall be provided to lower the nitrogen export amounts and are to be designed in accordance with and as specified in the North Carolina Department of Environmental Quality's Design Manual.
- No net increase in peak flow leaving the site from the pre -development conditions for the 1 yr- 24hr storm. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.
- Location of development and redevelopment outside Riparian Buffer and Flood Protection Zones

12. General Standards:

- Downstream Impact Analysis – DIA must be performed in accordance with the “10% rule”, and a copy provided with the application. [Chapter 151.36(A)]

13. Riparian Buffer Rules

- Due to the location of this project, it should be noted that a rule to protect and maintain existing buffers along watercourses in the Neuse River Basin became effective on July 22, 1997. The Neuse River Riparian Area Protection and Maintenance Rule (15A NCAC 2B.0233) applies to all perennial and intermittent streams, lakes, ponds and estuaries in the Neuse River Basin with forest vegetation on the adjacent land or “riparian area”.

14. Erosion Control: This project will require a Land Disturbance Permit if it involves greater than one acre of disturbance. See website for details.

15. Additional Comments

- The narrative references a SHWT report. Please provide a copy. Also, the narrative states that a clay or bentonite liner is required for the pond but the plans have no such specification.

Debbie Tanner specified that the only thing she saw different was the request for anti-floatation calculations for the riser that was added to her comments by Shawn. Patrick and Debbie discussed the Zebulon-Wake County storm water tool and Patrick asked if he did everything right. Debbie indicated that they were good, but needed to show the discharge patterns and flow paths.

Town Manager

Joe Moore had no comments.

Police Department

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Bob Grossman asked if the plan showed an entrance or exit off Privette St. Rick clarified the fact that was an emergency vehicle lane only. Bob wanted to make sure it would not impact the school and cause traffic issues on Privette Street. Rick confirmed that all residential traffic would use Shepard School Rd.

Fire Department

Chris Perry had the following comments.

1. A fire hydrant must be located so that all portions of the building are located within 600' of a hydrant, when measured along the roadways. Based upon the existing hydrants located on roadways, this distance appears to be exceeded.
2. A fire hydrant must be located within 100' of the fire department connection, per Town of Zebulon ordinance 152.233.
(As a note, a single hydrant can be added to meet both of these requirements.)
3. If the building height exceeds 30' (above the lowest level of fire department access), the access roadway must comply with Section D105 of the N.C. Fire Prevention Code. This could affect the roadway parallel to the building and require a 26 foot width in the immediate vicinity of the building.

Chris Perry pointed out fire hydrants along Shepard School Road and Privette Road and agreed with Keith that there would need to be one other hydrant to meet code. There was extensive discussion over the issue of the width of the roadway not being wide enough for the height of the building per the fire code. Chris indicated that they would need 26 feet of roadway directly in front of the building to comply with Section D105 of the N.C. Fire Prevention Code. They looked at the drawing and discussed how much more room they would need and how to get the extra space by widening the street and parking area since they only had 24 feet. Rick said they would have to look at the plans and decide what they could do to gain the space. Julie suggested compact parking as one option for that area and said they would look at the requirements and let them know what else could be done to help with the issue.

Public Works

Jason Brown read the comments provided by Chris Ray.

1. See attached lighting standards.
 - a. Please include Photometric Plan for the Property with average foot candle, minimum foot candle and coefficient variation.
 - b. Engineer or Manufacture details for installation requirements
 - c. Provide lighting for Fire rear access roadway.
 - d. Provide lighting for sidewalks around building. Building or Wall mounted fixtures are acceptable.
2. Delete Detail # 1 on C.70 – private street/parking on c.70
3. Delete Detail # 20(Handicap Ramps) – on C.70 – NCDOT ROW – use NCDOT 848.05

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4. Fire Department Question– concern about structural strength of grass pave structure to support Fire Truck?
5. NCDOT encroachment and drive permits required for entrance and utility taps on Shepard School Road and entrance on Privette Street
6. Cross walk striping shall be thermoplastic and comply with NCDOT section 1087

In addressing the structural support of the grass paved structures, Patrick asked the weight of the fire trucks and if the Town would like them to provide information about their structural support since the Town had not used them in the past. Jason said they could. Rick asked about providing lighting for the fire access roadway in the rear of the building and brought the fact that it was very narrow and it could be challenging. Julie suggested a low level light, like driveway lighting, to show the entrance or they could use something that could be mounted on the wall that might provide adequate coverage. Rick acknowledged that they had never provided lights on fire roads in so they wanted to make sure it would be done correctly. Julie explained that typically they had the entire site lit without bleed over onto surrounding properties. She also said the Planning Department would like to review the photometric plan to see if some of the wall packs needed to be moved around to ensure sufficient lighting. Julie recommended they contact Bruce Hinton at Duke Progress for help if needed.

Planning

Julie Spriggs had the following comments.

1. Final zoning approval will not be given until all approved permits from other agencies are on file with the Town (DWQ, NCDOT, etc.)
2. Signage is not approved with site plan. A separate building and zoning permit are required for all signage.
3. Site Data Table:
 - a. Notes 7 and 9 need actual site data
 - b. Note 13 add if in or out of floodways with map date

Julie complemented them on the site plans and made known the landscaping looked great. She went on to explain that the Town had a requirement that all monument signage had to be outside the right of way and verified that they had met it. Julie explained that the Planning Department approved where the sign was placed and there was a separate permitting process for the sign itself that would be done during the building permit process. Julie also pointed out that they needed to fill in some blanks where the x's were on the Site Data Table and mentioned they had the map date, but didn't state if it was in or out of the flood plain. Julie told them she did not know if the easements needed to be updated or if anything changed on the encroachment agreement. She explained that the Planning Department would coordinate the review process so that if there were changes, they would just be reflected in the next round of the approval process, ensuring the final set of encroachment agreements matched and were merged. There was discussion on how much time it would take to get the permit for the driveway from NCDOT and possible future revisions.

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Keith said that it was important to know what the pipe material was for the sewer profile. He also referred to the top of his comment letter that said the utility infrastructure construction plan approval would be required.

Patrick and Keith discussed the existing condition sheet. Keith specified that on the left, adjacent to the school property there was a 12 inch reuse line that ran from the treatment plant to the Town. The City of Raleigh's GIS is not accurate enough to know exactly where it was located and said if they could not find evidence on the ground then they could graphically show it using a snap shot of what they had in GIS and they label it approximately. Keith stated that if the reuse line crossed their property that they would have to dedicate an easement. Keith suggested calling 811 and it could be marked.

There were no further comments from anyone present.

The meeting was adjourned at 10:39 am.

Date

Lisa M. Markland—Town Clerk

SEAL