

Minutes
Zebulon Technical Review Committee
March 3, 2015

Present: Julie Spriggs-Planning, Chris Perry-Fire, Tim Hayworth-Police, Chris Ray-Public Works, Sidney Perry-Interim Town Manager, Lisa Markland-Town Clerk, Debra Ryals-Stormwater, Patrick Paine-Raleigh
Others Present: Joe Faulkner

Julie Spriggs called the meeting to order at 10:05am.

Chris Ray made a motion, second by Tim Hayworth to approve the minutes of October 28, 2014. There was no discussion and the motion passed unanimously.

NEW BUSINESS

TRC-2015-04—Weaver's Pond Phase 2C

Julie Spriggs stated that they would be reviewing the site plan for Weaver's Pond Phase 2C which was off of the Weaver's Pond Drive extension.

City of Raleigh

Patrick Paine with the City of Raleigh said that on page 7-overall he had the following comments:

1. The sewer and the water on Road H needed to move them on the other side of the road. The sewer needed to be moved down and the water needed to be moved up to the north side.
2. Referenced the installation of the rest of the waterline on Road H then down Cattail was not part of that Phase.

Joe Faulkner stated that it was part of that phase because of the pressures out at the site. It was a pressure loop that was being installed. Joe continued by saying that ultimately the 12" would top back out to the main road but it would eventually go across the creek and feed the other side to create even a greater pressure loop for that side of the development. Modeling was done by Hazen and Sawyer to show that it would be the main feed and when the hydrants were tested it was needed. The modeling report would be included when they submitted for permitting. They could not get the fire flows without looping the line.

Patrick Paine asked why it couldn't be done at the same time. Joe Faulkner said that it was a cost issue but it would be done eventually and what was being shown was how it was approved in 2006. Patrick said that he would discuss the issue with Cesar and Robert and let him know what they said.

Chris Ray asked about what the projection was for build out for the future phases. Joe Faulkner said that when interest picked up they would know more. But there really was no specific timeline laid out for the build out.

Technical Review Committee

Minutes

March 3, 2015

Patrick Paine said that there were minor comments to add notes and change a few things and permitting and nothing worth mentioning and said that he would write up his comments for Lisa Markland.

Environmental Services

Debbie Ryals said that she would do a more in depth review when construction plans were submitted. But generally it was noted that Chris Ray made reference to the stream crossing and Debbie stated that she would need that detail on how the pump around would work and making sure that it was working properly.

From the sediment and erosion control stand point everything appeared to be addressed but it would not be approved until the 401 and 404 were taken care of, however, Zebulon required it to be approved prior to TRC approval. Joe Faulkner said that they were being reviewed by DWQ.

The phase would not come under the new stormwater ordinance for Zebulon but was vested under the old approval.

Interim Town Manager

Sidney Perry did not have any comments.

Fire

Chris Perry did not have any comments.

Police

Police Chief Tim Hayworth had no comments.

Public Works

Chris Ray had the following comments.

General:

1. No TRC approval until the NCDENR 401 Permit and ACOE 404 permit have been received and on file with the Town of Zebulon
2. Please add the length of Public Sidewalk to site data – page 1
3. Are central mail boxes required by Postmaster. Request a letter of determination from local Postmaster – Grey Horton @ 919-365-0657
4. Please add the following notes to the plans for reference purposes:
 - A. All curb and gutter requires concrete testing for the following requirements (Section 2.1.1 TOZ Specification)
 1. 4” concrete slump
 2. Temperature - 50° and 90°F
 3. Air mixture range 3.5% to 6.5%
 4. Structural Strength – Lab Break Test – 7, 14, 28 days – 3000 PSI at 28 days
 5. Samples every 1000’ LF of curb and gutter to ensure quality.
 6. Max water-cement ratio by weight: 0.594
 7. Minimum cement content (lbs/cy): 602

Technical Review Committee

Minutes

March 3, 2015

- B. Concrete sidewalk testing is not required, unless construction inspection determines that quality is inferior and does not meet industry standards. Contractor must maintain a 4" concrete slump for all sidewalk work. Air temperatures at placement must be 40° and rising. Surface temperature shall be 50° or greater. (Section 2.2.2 E.)
- C. Asphalt Core samples should be selected every 300' or minimum two cores per roadway for analysis of thickness and density. Asphalt pavement mix SF9.5 B should be compacted to a minimum of 92% of the maximum specific gravity. Asphalt pavement mix SF9.5 A should be compacted to a minimum of 90% of the maximum specific gravity. The contractor is responsible for developing/creating a chart/map of the cored locations for submittal with the testing. Cores will be random taken in the longitudinal directions across the roadway but not within the one foot of the edge of pavement. The results of the samples greater than 10 feet apart will **not** be averaged and used to verify compliance with Town of Zebulon specifications. (Section 2.6 H)
- D. Roadway Subgrade Testing/Installation Requirements :98% Standard proctor on all soils every 300'. All locations tested shall meet the 98% testing requirements. Averaging of density scores to meet standard is not allowed. Successful proof rolls required for all sub-grade soils.((Section 2.5.2 A)
- E. Roadway ABC Stone Testing/Installation Requirements: Requirements: 98% Standard proctor on all Roadway ABC every 150'. All locations tested shall meet the 98% testing requirements. Averaging of density scores to meet standard is not allowed. Successful proof-rolls required for all Roadway ABC Stone. (Section 2.5.3 A)

Weavers Pond Stream Crossing:

1. Please provide detail on the plans for NCDOT precast headwalls for dual 42" pipes. Please provide additional detailing the angle of interface between the ends of the 42" pipe as it is integral to the fabrication of the precast headwalls.
2. The twin 42" RCP in the plan view call for a 12" bury to allow for aquatic flowage with the downstream pipe invert being 338.00' and the upstream pipe invert being 338.80'. It's hard to tell from the plans what the existing stream inverts are at the upstream and downstream ends of the pipes are but it appears to be more than 12" above the proposed invert. Please provide a profile view, along the stream/culvert alignment approximately 100' upstream and downstream detailing both the existing stream invert before and after construction. If there will be more than 12" bury, ultimately

Technical Review Committee

Minutes

March 3, 2015

dictated by the downstream existing profile, then the effective pipe cross sectional area utilized for the drainage will be compromised.

3. The Phase 1 erosion control plan call for the installation of a coffer dam and flexible by-pass pipes or pump to divert the water around the twin 42" RCP's and associated headwalls during construction. Please provide that a detail on the plans along with the calculations supporting the pump/pipe size selection and for what year storm the information is based on. Probably have this information with your 401/404 permitting.
4. All pumping flexible pipes to include sediment socks.

Road H Stream Crossing:

1. The Road H dual 30" crossing is not subject to the Neuse River Riparian Buffer Regulations according to the plans (not shown as buffered). Please provide copy of Buffer Determination excluding this crossing
2. The Phase 1 erosion control plan call for the installation of a coffer dam and flexible by-pass pipes or pump to divert the water around the twin 30" RCP's and associated headwalls during construction. Please provide that a detail on the plans along with the calculations supporting the pump/pipe size selection and for what year storm the information is based on. Probably have this information with your 401/404 permitting.
3. All pumping flexible pipes to include sediment socks.

Construction Plans:

1. Please clarify on the plans that the HOA will be responsible for maintenance of the Level Spreaders and Splitter boxes noted on the plans.
2. Page #9 – 31' roadway detail – should reflect 5' sidewalk instead of 4'
3. Page # 5 at lot 69 shows 18" RCP should be 15" RCP – Page 8 shows 15" RCP
4. Recommend pavement design be completed for the two stream crossing based on Ave Daily Traffic, California Bearing Ration, Pavement Design Life, Structural number of pavement, and soil supportive values. Recommend the use of Town of Wake Forest Specification – Street Design – example Fiquire form 3.5. See attached.
5. Road H to the left of Weavers Pond Drive needs to be 35' wide to comply with specifications based on current layout of 117 homes. Specification – Residential Collector Street – a local access streets that serves as connector between local streets collecting 100 to 400 dwelling units.
6. Storm Drainage behind lots 68-70 is proposed as HDPE – please change to RCP.
7. Please provide a street lighting layout plan with fixture types approximately every 125'. Reminder regarding payment of Duke Progress Fees for installation of poles @ \$536.63 per pole

Technical Review Committee

Minutes

March 3, 2015

8. Please provide layout for speed limit/stop and street sign. Please include crosswalk layout on same drawing. Provide Detail for Road Closed Barriers/future development Area.
9. Greenways requirement of the special use permit – condition # 7 – Greenways are required to be established, built and maintained in accordance with Zebulon Open Space and Greenway Master Plan. A greenway master plan for Weavers Pond Community must be submitted with each plat for approval by TRC. Greenway Easement shall be 20' wide.
10. Street and Sidewalk inspections fees are do prior to final roadway approvals.
11. Recommend to Raleigh – Casement piping for Water and Sewer under stream crossings. In effort to avoid removal and reinstallation of multiple RCP storm drainage pipes to get to problem.
12. Would like to begin discussion regarding installing final asphalt lifts on Vineyard Ridge Drive and Lacewing Drive – condition # 33 of Special Use Permit
13. Would like to discuss installation of sidewalk/broadwalk to east of Weaver Pond Drive and Pippen Road intersection – condition # 34 of Special Use Permit.

Planning

Julie Spriggs had the following comments.

1. Fees will be calculated once building permit is dropped off, and all fees will need to be paid at the time the building permit is picked up. SUP Condition 35 - \$1,167.31 per house payment for a fee for the Beaverdam Creek Sewer Outfall project. SUP Condition 36 is noted on front page of plan stating water booster pumps must be installed for all undeveloped lots in phase I and II is helpful and should stay. Phase is spelled incorrectly.
2. Copies of all signed permits from NCDOT, NCDENR, etc., will be required to be filed with the Town prior to Final Approval.
3. Final plat approval must be obtained before building permit process begins. Final plats must be recommended by the Planning Board and approved by the Board of Commissioners. Final Approval from TRC must be obtained before the final plat process can proceed. The following documentation must be provided for the final plat approval process:
 - . City of Raleigh Certification Inspections Report (water and sewer services)
 - a. Storm Drainage System As-Built Drawings (paper, mylar, and electronic copies)
 - b. Engineer Certification (roadway and storm drainage system, infrastructure compliance)
 - c. Letter of Dedication of Infrastructure (includes certified values)
 - d. Geotechnical Reports for Roadway Construction (sub-grade, stone, and asphalt)
 - e. Site Improvements Bond (sidewalk, handicap ramp, and decorative speed limit sign completion)
 - f. Punch List Items (Zebulon Public Works Department)
 - g. Payment of Fees (Zoning, light pole installation, inspection)
 - h. SUP Condition 7 – Greenways should be established and submitted with final plat

Technical Review Committee

Minutes

March 3, 2015

- i. Addressing will be done before final plat process and addresses will be included on final plat for recording
 - j. Landscaping trees should be recorded on final plat with a field locate note added
4. Please include separate sheets for landscaping and lighting plans. Please mark general area for tree placement on each lot and add a note for field location of trees. See Chris Ray Public Works Director listed above for help with the lighting plan.
5. SUP Condition 21 – uniform mailboxes – new legislation states mailboxes must be clustered. There is some discussion on whether or not existing subdivision with new phases must comply. Please confirm with Post Office on preference for mailboxes or a kiosk. The Town will comply with current legislation if a kiosk must be supplied rather than individual mailboxes.
6. SUP Condition 14 states latest version of Streets and Storm Drainage Standards and Specifications Manual should be used for sidewalk width. The latest version calls for 5 ft sidewalks along Weavers Pond Drive.
7. SUP Condition 30 calls for a 30 ft buffer on perimeter of subdivision. The buffer is 25 ft in several areas along the property boundary of the Wake County Board of Education.
8. Sheet 4 Note on parcel 67 Fiberglass is misspelled.

There were no further comments from anyone present.

The meeting was adjourned at 10:35am.

Date

Lisa M. Markland—Town Clerk

SEAL