September 2, 2025

Rolesville Planning Department
c/o Jaqueline Thompson, PE
211 S. Main Street
Rolesville, NC 27571

Subject: **Merritt Reserve – CID-25-02**
Construction Document Submittal #2 – Comment Response Letter

Dear Jaqueline,

Please find below the review comments received via email dated 7/30/25:

Cover:

1. REPEAT: All comments provided as part of the 3rd PSP submittal still apply and should be completed in the next CID submittal. Comments can be addressed in writing in the PSP re-submittal.

   Response: Noted and any PSP comments will be addressed in writing with the future PSP re-submittal.

2. REPEAT: A signing and striping plan is required in CID submittals. Please provide this plan as part of the next submittal.

   Response: A Signing and Striping plan has been added to the set. Please see sheet CS-120.

Sheet G-004:

3. REPEAT: Please confirm the construction sequence for Phase 1 - Stage 1.
   a. Does the construction of the SCMs include only the pond grading?
   b. Will storm sewer pipes and structures be installed and connected later?

   Response: The ponds will be installed to final design parameters excluding the forebays. This includes inlet and outlet pipes. The forebays will be constructed at a later stage of construction. The construction sequence has been revised slightly to clarify.

4. REPEAT: The construction sequence for Phase 2 and 3 - Stage 1 appears to be truly focused on Phase 2 & 3, but the EC plans show additional grading and work in Phase 1. Please review the construction sequence and the plans to ensure phasing is clear for what is being constructed and when; there currently appears to be an overlap with Phase 1 into Phase 2 & 3.

   Response: We have added on to the construction sequence of Phases 2 & 3: Additional grading and construction will be required in phase 1 area to connect to phase 2. This includes connecting storm and sewer structures and rough grading to previously installed improvements.

5. REPEAT: For Phase 1 - Stage 2 construction sequence Step 10, please confirm if sewer is included as a utility that will be installed during this phase. If yes, please add to that step of the construction sequence.

   Response: Yes, sewer will be installed during this phase. It is noted in step 10 and also shown within the plan sheets for this stage.

Sheet CE-114:

6. NEW: Please confirm why the connection to The Point on the west side of the site is not included in Phase 1. It seems that including the 255 LF of the roadway to form the connection would flow well, as well as avoid having construction equipment driving over new infrastructure to build a small section of roadway between two already constructed pieces.

   Response: This section of roadway will be rough graded with this phase to install the sewer and connect to the sewer manhole in The Pointe as needed. This road will be rough graded to proposed elevations – there will be adequate cover over new infrastructure and damage is note expected.

Sheet CE-130:

7. REPEAT: The white color in the NPDES Stabilization Legend is everything not in Area 1 and 2, but this also indicates area outside of the project area and/or areas not disturbed. Please consider this and confirm if this was the intent.
   a. This applies to all NPDES Plan Sheets.

   Response: The NPDES Plans have been revised and only reflect areas within the project. A note has been added to the legend to clarify this is only within the project limits.

Sheet CE-140:

8. NEW: The temporary pipe crossing is missing; please add into the profile.

   Response: Temporary pipe crossing has been added to the profile as requested.

9. NEW: The dimension near the stream crossing between MH-119 and MH-118 doesn't appear to be labeling anything; please adjust.

   Response: This Qdimension has been fixed.

10. NEW: Add stationing to the profiles.

    Response: Stations have been added to the profiles.

Sheet CE-211:

11. REPEAT: Label all easements on all sheets.

    Response: Easement labels have been added to all enlargement sheets within the plan submittal.

Sheet CS-101:

12. REPEAT: Please confirm if a construction and/or maintenance easement is needed since the sidepath is outside of the right-of-way.
    a. This comment applies to all portions of the sidepath outside of the right-of-way.

    Response: The sidepath is located within the Right of Way.

13. REPEAT: Label the length of the taper as Fowler Road approaches the entrance of the subdivision.
    Response: Length of taper has been added to sheet CS-101.

Sheet CS-200:

14. REPEAT: Confirm if a storm drainage easement will be needed where the storm pipe comes close to the right-of-way / property line.

    Response: A Storm Drainage Easement has been added to this storm pipe.

15. REPEAT: Label the existing water line size and material. Consider revising the line type so it is clear that it is a water line.

    Response: 12" DIP Waterline label has been added to the plan and profile. Linetype has been revised.

16. REPEAT: Is Fowler Road being constructed to the centerline of the existing roadway? Please end the profile where actual construction will start/stop.

    Response: The profile has been revised to stop the Fowler Road profile at the edge of pavement of Rolesville Road.

17. REPEAT: Add labels for the offsets to specify the minimum separation; specifically near Station 35+25, Sheet CS-202, but review all profiles.

    Response: Labels have been added as requested.

18. REPEAT: Label all pipes on all profile sheets (sewer, water, storm) and label all pipe crossings.
    a. This comment applies to all profile sheets.
    b. NEW: It appears CS-200 to CS-202 is still missing storm labels; they appear on other sheets.

    Response: All pipes have been labeled on all profile sheets as requested.

Sheet CS-210:

19. REPEAT: Please provide more information on the water line connection at the Merritt Reserve Drive entrance, as to how the connection will occur/fittings/etc., through descriptive labeling and/or reference to appropriate details.

    Response: Labels have been added for the water line connection.

20. REPEAT: Label the existing water line size and material. Consider revising the line type so it is clear that it is a water line.

    Response: Existing waterline has been labeled as requested.

21. REPEAT: It appears the storm crossing near Station 20+75 may be in conflict with sewer. Please confirm and adjust accordingly.
    a. NEW: According to the profile, it appears there is still a conflict for the crossing pipe. The storm pipe schedule says the pipe is 375.5 to 375.70 and the sanitary sewer at this location is approximately 376.

    Response: The sewer has been lowered to eliminate this conflict.

22. REPEAT: Please confirm if the profile reflects the actual grading intention of the roundabout. Usually, the roundabouts have a crown/high point in the center for drainage.
    a. There does not appear to be any roundabout design information provided in the plan set. Please provide either plan/profile or spot grading detailed information.

    Response: The profile has been revised to show more defined grading for the roundabout.

23. REPEAT: Is Merritt Reserve Drive being constructed to the centerline of the existing roadway? Please end the profile where actual construction will start/stop.
    Response: The profile has been revised to stop the Merritt Reserve Drive profile at the edge of pavement of Rolesville Road.

Sheet CS-211:

24. REPEAT: Update stationing for all sewer and storm structures on all sheets.

    Response: Stationing has been updated for all sewer and storm structures on all sheets.

25. REPEAT: Review and adjust the waterline offsets along Merritt Reserve Drive at approximate Stations 31+75 and 33+75.
    a. NEW: According to the profile, it appears there is still a conflict for the crossing pipe. The storm pipe schedule says the pipe is 335.40 to 3350.78 and the water at this location is approximately 335; check near Station 33+75 as well.

    Response: The storm pipe has been lowered to eliminate conflicts.

26. REPEAT: On all profiles, stop the alignment/profile at the center/center and show proposed grades. The proposed grades don't seem to be the correct grades. If they are, 5% is too steep for the sidewalk.
    a. This comment applies to multiple profiles, specific to cul-de-sacs, dead-ends, tie-ins to existing.

    Response: This has been corrected.

Sheet CS-212:

27. REPEAT: Confirm that Station 16+63.95 is the end of the alignment where it ties into Merritt Reserve Drive.
    Response: The profile has been revised to show the end of the profile at 16+30. This is where this profile intersects the other profile for Old Millstone Court, which is shown on this same sheet.

Sheet CS-220:

28. REPEAT: Since the Fowler Road, as planned in this plan set, is a temporary condition (it will eventually be widened), show how tying into the existing grade will occur.

    Response: Tie back to existing grade is now shown in this profile.

29. REPEAT: The profile ends here but picks up on Sheet CS-221 at station 17+25.89. Please fill in the missing profile for the stretch of alignment between Station 16+05.89 and Station 17+25.89 or provide a separate profile/design for the roundabout.
    Response: The grade has been added between these stations.

Sheet CS-222:

30. NEW: Add labels for offsets and crossings to ensure separation is being met.

    Response: Labels have been added as requested.

31. NEW: An effort needs to be made to meet the Town's requirements on this project for the K values. This is a repeated conversation and the Town's requirements are clearly defined in the Town's Standards Manual. While we understand this was not enforced prior to this document being published, it is the Town's requirement and will be upheld.

    a. For a roadway to be defined as rolling, the grades have to be shown (in an exhibit if needed) to meet rolling grades.

    b. As of now, all comments related to K-values are repeat comments and have not been removed until an effort has been made to meet the Town's requirements.

Response: The plans have been revised to meet the K value requirements.

32. REPEAT: The minimum K-value for vertical curves is 30 for "level" roadways; the minimum K-value for stopping conditions on a "level" roadway is 14. Please revise design accordingly to meet minimum design requirements.

    a. This comment applies to multiple sheets.

Response: The plans have been revised to meet the K value requirements.

Sheet CS-260:

33. REPEAT: Ensure the proposed grade is tying into the existing grade where Strips Drive connects to the offsite roadway.
    a. NEW: A response was provided that the design "should be tying to the existing road profile based on design profile information received from the Point plans." This information should be reflected in the plans.

    Response: Strips Drive is shown tying to the existing road profile and this is reflected in the plans.

Sheet CS-280:

34. REPEAT: Consider trying to get the K value to a minimum of 30 along Split Granite Court; due to the steep grades on the right, we understand if this can't occur, but please check.
    a. NEW: Your response states that you believe this area is considered rolling terrain, and yet you are showing grades less than 3%.

    Response: The vertical curves have been revised to have a min. K value of 30.

35. REPEAT: Since the end of Strips Drive is a dead-end, please try to get a minimum K-value that would meet the stopping condition to provide a smoother condition for users. Due to the "rolling conditions" this would be a minimum K-value of 9.
    a. This comment also applies to Toothed Chisel Way on Sheet CS-295 and Deep Canyon Court on Sheet CS-298. For "level conditions" the minimum K-value is 14.

    Response: The vertical curves on these roads have been revised so K values are no less than 9 for rolling conditions and no less than 14 for level conditions.

36. REPEAT: Provide invert information for MH 120 in the profile view.
    Response: Invert information has been added to the profile view

Sheet CS-291:

37. REPEAT: Dead-ending a roadway with an 11% grade could be potentially dangerous, especially in the winter. While barricades are normally required at a dead-end roadway, this specific condition may need something more (such as a guardrail) to prevent cars from going off the roadway. While the existing conditions are shown at or greater than the 11% grade, consider grading/usability of this roadway with the steep grades and the driveways off this roadway.

    Response: This has been revised to add end of roadway signage and guardrail.

38. REPEAT: A retaining wall is referenced in the profile but not shown or labeled in the plan view. Please add to the plan view for clarification of location; this retaining wall should also be shown on the grading plan with top and bottom of wall elevations.

    a. NEW: Adding a sheet reference would be extremely helpful for navigating the plans since you are showing different information on different sheets.

    Response: The retaining wall is now shown and a reference to the grading sheet has been added.

39. REPEAT: Add the station number to the Fetching Place "End of Roadway".

    Response: A station has been added to the end of roadway callout.

40. REPEAT: Confirm if the proposed grade shown is the future grade, and revise the callout accordingly. Show property line/limit in the profile.

    Response: The proposed grade has been corrected in this profile.

41. REPEAT: Since MH 107 is shown, please also show MH 170A.

    Response: MH 170A has been added to the profile as requested.

Sheet CS-300:

42. REPEAT: The 8.30% grade on the greenway does not provide ADA compliance; reference the Town's Standards Manual for requirements of vertical design on greenways.

    a. NEW: Your response is acceptable but landings are not currently shown, labeled, or represented in the plans or profiles. Please either add a note, or grade the landings in to ensure the greenway is constructed correctly to meet this requirement.

    Response: A note has been added to the profile stating to install landings in accordance with ADA regulations.

43. REPEAT: Label the greenway width and material and show and label the easement.

    Response: Labels for widths of greenway and easements have been added to these sheets.

44. REPEAT: Boardwalks require a 10' concrete pad on each end that is less than 2% in any direction; based on the hatching and lack of labels, it is unclear if the path is concrete or asphalt.
Response: Level concrete pads are now shown before and after the boardwalk.

Sheet CS-301:

45. REPEAT: Label the dark line (pipe?) shown in the profile.
    a. NEW: It appears the pipe(?) is being cut off in the profile as well as the newly added label.

Response:

Sheet CU-101:

46. REPEAT: Review the plans to ensure there are no conflicts with sanitary sewer services and storm.
    a. NEW: A number of locations do not appear to have been adjusted. If you are confident there are not conflicts and separation requirements are being met, then we have no further comments since we can only scale off the PDF plan. The responsibility of this design falls to the engineer on record.

Response: Conflicts with utilities have been reviewed and corrected where necessary.

47. REPEAT: Review plans to ensure the minimum separation requirements between storm and water are being provided.
    a. NEW: A number of locations do not appear to have been adjusted. If you are confident there are not conflicts and separation requirements are being met, then we have no further comments since we can only scale off the PDF plan. The responsibility of this design falls to the engineer on record.

Response: Separation between water and storm has been reviewed and corrected where necessary.

Sheet CU-201:

48. NEW: Label the separation between the sanitary and storm on the profile for MH-106 to MH-116

Response: The distance between sewer and storm is now labeled in these areas.

49. NEW: Label all pipe crossings on all CU profiles.

Response: Labels have been added to all pipe crossings as requested.

Sheet CU-300:

50. REPEAT: Label all pipes with size, length, slope, material, on all profiles.
    a. NEW: This information is provided on some profiles but not others. Provide for consistency and easy to navigate the plans. The pipes and profiles are shown. Rather than having to flip back and forth, it is easy to include the pipe labels like has been done on other sheets.
    b. NEW: Review the profiles and adjust the grade labels to align with the surface in the profiles.
        i. This comment applies to multiple sheets.

Response: Labels have been added to all pipes as requested.

Sheet CU-306:

51. REPEAT: The proposed grade does not cover the pipe between stations 4+50 and 8+00. Please revise accordingly. If an aerial sewer is intended, please add the appropriate labels, notes, details, etc.
    a. NEW: Provide labels showing/defining the cover over pipes on all profiles. It appears there is still lack of cover near the proposed grade label on CU-306.

Response: The proposed grade profile has been revised to ensure there is 1' min. cover over the pipes.

Sheet CU-307:

52. NEW: Please confirm if riprap will be provided at the outlet pipes to prevent erosion.

Response: Rip rap has been added to the outlet pipes on this sheet.

Sheet CG-101:

53. REPEAT: General comments for all grading sheets:
    a. Confirm that there is no proposed grading that is steeper than 3:1 slopes.

Response: All grading within lots and roadways do not exceed 3:1 slopes. There are some areas outside of the lots and roadways that are graded at 2:1 slopes due to perimeter constraints (where wetlands can't be disturbed, to keep grading outside of adjacent properties, etc.)

    b. Provide and label (top of wall and bottom of wall) retaining walls as needed.

Response: Retaining wall grades are now labeled on the grading and drainage plans. Retaining walls on the ponds are labeled in the SCM details sheets.

c. Label proposed and existing contours with frequency on all grading sheets.

Response: Additional proposed and existing contour labels have been added to the grading and SCM detail sheets.

d. Label stormwater pipe size, length, material and slope.

Response: Storm structure names are labeled on these sheets. In order to keep these sheets clean for clarity, the storm pip size, length, material, and slope are labeled in the profiles and pipe schedules.

e. Show and label all drainage easements and access easements, including around the SCMs.

Response: In order to keep these sheets clean for clarity, the storm and access easements are labeled in the site and utility plans.

f. NEW: This comment has remained due to the on-going work of the grading plans.

Response: All these comments have been addressed with this submittal.

Sheet CT-300:

54. REPEAT: For the dedicated turn lanes, please confirm the taper lengths are correct. Generally, you see 100' tapers, or even footage requirements.
55. REPEAT: There appears to be 2 centerlines shown within Rolesville Road. If not relevant, clean up and remove unnecessary linework.
56. REPEAT: Remove any unnecessary labels throughout plans.
57. REPEAT: Dimension labels do not align with the sidewalk they seem to be dimensioning; review and adjust accordingly.
58. REPEAT: Review plans for any extra and/or extraneous lines; label any lines that are relevant and needed.
59. REPEAT: There is an existing driveway shown on the plan that encroaches into the expanded Rolesville Road. Label if it will remain and adjust linework to tie to the widened roadway.
60. REPEAT: Label all linework within the plan (underground utilities, edge of pavement, etc.; include widths and material).
    a. This comment applies to multiple sheets.
61. REPEAT: There is a section cut “B-B” on the plan, but the view is not provided; please adjust accordingly.
62. REPEAT: Consider renaming this sheet to a more clarifying sheet title like "Rolesville Road Striping Plan".
    a. Please clarify is there is a reason the striping plan is coming first / before the existing conditions and proposed improvements.

Response: These sheets are currently in progress and will ultimately be approved by NCDOT. These will be included in the plan set once complete.

Sheet CT-301:

63. REPEAT: Align labels and text to the sheet and make sure they are legible.
64. REPEAT: Please confirm if all labels currently shown are necessary. If not, remove them from the plan.
65. REPEAT: Label the existing watermain with size and material information.
66. REPEAT: Adjust the linework to show existing features. There is a dimension label that appears to be labeling an existing sidewalk, but that isn't clear.
67. REPEAT: Show the entire limits of the street improvements. Currently, the plan cuts off some of the proposed pavement.

    Response: These sheets are currently in progress and will ultimately be approved by NCDOT. These will be included in the plan set once complete.

Sheet CT-200:

68. REPEAT: The linework for the plan view hard to follow due to the multiple lines and hatches. Please try to clean up and add additional labels for clarity and legibility.
    a. This comment applies to all sight line plan views.
69. ***Response: These sheets are currently in progress and will ultimately be approved by NCDOT. These will be included in the plan set once complete.***
70. REPEAT: Show proposed roadway location on profiles. Label heights on profiles.
    a. This applies to all sight line profiles.
71. ***Response: These sheets are currently in progress and will ultimately be approved by NCDOT. These will be included in the plan set once complete.***

Drainage Report – Part 1:

Page 1:

72. Change the address from “Roseville” to “Rolesville”

    Response: This has been corrected.

Page 5:

73. Provide a drainage area map for the proposed storm drainage network.

    Response: An storm inlet drainage area map is now included in this submittal.

74. Provide page numbers for each appendix to make it easier to find and jump to different sections. Page 330:

Response: Page numbers are now provided

75. Provide road names on gutter spread calculation sheets that match the site plan (versus Road A, B, C, etc.). Applies to all gutter spread sheets.
Response: Road names have been provided on gutter spread calculations.

Drainage Report – Part 2:

Page 45:

76. The HGL drops off at the start of this pipe run. Review and revise as necessary.

Response: This has been revised.

Page 120:

77. Confirm that the HGL remains in the pipe. This comment applies to all pipes in the network for the 10-yr storm condition.
Response: The 10-year HGL calculations have been provided and the HGL is within all pipes.

Sincerely,

Jakob Klein
American Engineering Associates
4020 Westchase Blvd. Ste. 450
Raleigh, NC 27608