



V3 -- CID-23-06

September 12, 2023

Town of Rolesville, NC
Michael Elabarger

RE: Parker Ridge
CID 23-06, **Response to comments**

We have received comments for the above referenced project and offer the following information and responses for your consideration:

Sheet C0-0

1. Sheets C4-7 and C4-8 in the sheet list table are showing additional text in their sheet titles that should be removed.

Response: This has been updated.

Sheet 4/4

1. Please label the linework that appears to be a dirt road running through the site. This is a repeat comment.

Response: Dirt road has been labelled throughout.

2. The property information of the property on the top left of the sheet is cut off. Please adjust the text so it can be read.

Response: Text has been adjusted.

3. There are several places throughout these plans where leaders are not pointing to the correct item. Please ensure all leaders are in the correct locations.

Response: Leaders have been adjusted.

Sheet C1-4

4. The title block is not showing up correctly on this sheet, please update.

Response: This has been updated.

Sheet C1-6

5. There is an existing easement shown on this sheet that is not shown on the existing conditions sheets. Please label easement and make sure existing conditions are consistent across sheets.

Response: The easement has been updated on the survey.

Sheet C2-0

6. There are multiple places where text is cut off or overlapping. Please adjust text so it is clearly shown and easy to read.

Response: The sheet has been updated so the labeling is more clear.

Sheet C2-2

7. Please label the dashed line going through lot 33.

Response: This is an existing COR sewer easement.

8. Easements are required around public greenways. This should be added and labeled to the proposed greenway along the east side of Redford Place Drive.

Response: The easement has been added.

Sheet C2-4

9. The adjacent property labels to the south of the site are not in the correct locations and should be adjusted accordingly.

Response: These have been revised.

10. The connections of Alley 2 and 3 into Redford Place Drive show existing sidewalk going through them. Please remove this walk and ensure this removal is called out in the demolition plans.

Response: This has been removed and called out on the demolition plan.

Sheet C3-0

11. There is a lot of overlapping text on this page, making it hard to read and understand. Please adjust or remove text so it can easily be read.

Response: The sheet has been revised to be more clear.

Sheet C3-1

12. The silt fence shown on these plans is not necessary to keep once construction is completed. Please remove linework from utility sheets and grading plan sheets.

Response: The silt fence has been removed from these sheets.

13. The existing cleanouts should be abandoned in place if not being used for this development; the City of Raleigh will provide final approval for the sewer. This is a repeat comment.

Response: This was shown to be abandoned on the previous submittal.

14. Site distance triangle lines should be removed or labeled on utility plans. Suggest removing to help clean it up and make it easier to read.

Response: These have been removed.

Sheet C3-3

15. All utilities and storm networks are required to meet minimum horizontal separation requirements. Per the COR Public Utilities Handbook, a minimum horizontal separation of 10' is required between water and sewer and 5' is required from storm sewer. Please update plans to meet minimum requirements. This is a repeat comment.

Response: The sewer has been revised to have the minimum 10' separation where possible even if the vertical separation is met.

Sheet C4-1

16. All proposed contours need to connect into existing contours. This is a repeat comment.

Response: The contours now tie into existing.

17. Please show how drainage at all walls will be handled. For walls where drainage pipes/structures are proposed please make sure those structures are labeled. This applies to all grading sheets.

Response: The small ADs at the walls have been added and labeled.

18. Please review the angle of the pipes with the storm system and the direction of flow. Redirecting flow less than 90 degrees is not ideal. Reverse flow conditions can be considered if a detailed study is provided and the drop between inverts is equal to or greater than the diameter of the pipe out. This is a repeat comment and applies to all grading sheets.

Response: These have been adjusted where possible and in each case, it doesn't adversely impact the HGL of the pipe.

19. Ensure all storm structures are labeled on all grading sheets so it is possible to understand what the storm tables are referencing. If they are not included in the storm tables, please add them. This is a repeat comment.

Response: All structures have been labeled.

20. Please verify and update the grading by the structure and existing pipe east of lots 195 and 196. Contours should be connecting into existing and the low point should be at the structure inlet rather than slightly behind it.

Response: Contours are tying in and the structure is now labeled.

21. Grades should not be steeper than 3:1 unless sufficient stabilization measures are taken. Please adjust grading as necessary.

Response: Grades have been adjusted where it was steeper than 3:1.

22. Structure YI-3002 is right up against the wetland. How will this be constructed without interfering with the wetland? If the wetland is to be impacted, please indicate and show on demolition plans. The easement and limits of disturbance also need to be adjusted to reflect the location of this structure, as they are not currently encompassing it.

Response: YI- 3002 has been moved to avoid disturbance of the wetland.

23. Please design and show the rip rap needed at FES-350.

Response: This has been added.

24. The contours southeast of CB-316 appear to indicate some sort of wall. If a wall is intended it should be shown, otherwise contours should be updated to reflect desired grades.

Response: Grading has been revised in this area.

25. There is a swale north of lots 205 that ends right before the edge of the lot. This is not ideal, as that drainage is being directed into this lot without a means to collect it. Consider adding a structure at the end of the swale to collect the stormwater before it reaches lot 205.

Response: Grading has been revised in this area.

Sheet C4-2

26. Please update the contours along the walk by lot 22. That area is not currently meeting minimum slope requirements.

Response: These have been updated.

27. A proposed drainage easement is required on swales crossing more than two lots. This is a repeat comment that applies to all relevant grading sheets.

Response: Drainage easements have been added.

28. There is a significant amount of grade going across lots 25 and 26. This will make it difficult to flatten out enough for building slabs and driveways. Please adjust grading so buildings will be possible to place in these lots.

Response: The building pad has been graded in this area now.

29. Please add additional contour labels along the greenway going through Parcel A and ensure proposed contours are properly connecting into existing contours.

Response: Additional contour labels have been added.

30. To provide clarity as to where the water is draining, additional contour labels should be added, particularly at high and low points. This comment applies to both proposed and existing contours on all sheets that have contours shown. This is a repeat comment.

Response: Additional contour labels have been added as well as low and high points in spots that aren't as clear.

Sheet C4-3

31. The rip rap and storm drainage easement shown where HW-4000 is are not centered around the pipe outlet. Please adjust both the rip rap and easement, as well as the limits of disturbance.

Response: This has been adjusted.

32. The grade along Long Melford Drive where it meets the property line is incredibly steep. Please adjust grading to meet minimum requirements.

Response: This has been revised and the street stopped at the buffer line as discussed with the Town. It is proposed to be included in the developer agreement for a fee in lieu.

Sheet C4-4

33. There is a low point label by lot 9 that does not appear to be located at a low point. Please adjust label location or remove the "LP" delineation from the spot elevation label. If a low point is to be located here a storm structure should be placed so water doesn't pool up.

Response: This was in error and has been updated.

34. Please clean up the contours along the greenway by FES-1000.

Response: The contours have been revised.

35. There are several contours around the crossing of Street E and Alleys 2 and 3 that do not need minimum requirements. Please adjust the grading so slopes aren't too steep. If walls are needed, please ensure they are shown and called out on plans.

Response: These areas have been adjusted.

36. Proposed retaining wall #1 is currently located in the greenway easement. Please adjust plans to keep wall out of easement.

Response: The wall has been moved out of the greenway easement.

Sheet C4-5

37. Contours indicate a low point in the middle of lot 123 with no drainage to collect it. Please adjust grading or provide stormwater design to collect this water so it doesn't pool up.

Response: The grading has been revised here.

38. A 10' minimum access around SCM 2 should be provided for maintenance. Access must extend to both forebays so the pond can be maintained. This is a repeat comment.

Response: Access has been provided to both inlets and forebays by access along the top of dam.

39. Please adjust the storm easement from FES-200 to CB-201 to be centered around storm pipes.

Response: The easement has been revised.

Sheet C4-7

40. A minimum 2' of cover, measured from top of pipe, is required for storm pipes in paved areas. A minimum 0.5' of cover is required outside of this. There are several pipes that do not currently meet this requirement.

Response: This has been updated.

41. There are structures shown in the storm tables that are not currently labeled in the grading sheets. Make sure structures are easily identifiable in the grading sheets and ensure that all structures and pipes shown in grading sheets are also shown on the storm tables.

Response: These have been checked and additional tables added where they are missing.

42. Minimum allowable slope for storm pipes is 0.5%. There are several pipes that do not currently meet this requirement and need to be adjusted.

Response: The slopes have been revised.

43. Per note at the bottom left of the sheet, rim elevations are given at top of curb. Several rim elevations shown in the tables don't appear to match the elevations shown in the plans. Please verify that all elevations are correct and up to date.

Response: This has been verified.

44. Please ensure minimum drop requirements are met. A 0.2' drop is required when change in alignment is between 45-90 degrees or when pipe size increases. A 0.1' is allowable if the alignment change is between 0-45 degrees.

Response: The drop requirements have been met

45. Avoid using duplicate numbers for structure names to avoid any confusion.

Response: The duplicate #s have been revised.

46. The pipe tables under SCM 2 are duplicates of the SCM 1 pipe tables. Please change these tables to reflect the pipes going to SCM 2.

Response: This has been revised.

Sheet C4-8

47. What are the FES rim elevations representing? These elevations don't seem to correspond with the invert in elevations shown in the storm tables.

Response: There are no rim elevations on the

48. Please be sure to include structures and pipes not routing to ponds in the storm tables as well.

Response: The missing structures have been added.

Sheet C5-1

49. Please ensure all proposed contour labels are matching the design shown in the legend. There are a few labels in the existing contour style that are placed on top of proposed contours.

Response: These labels have been updated.

50. There are several points along the silt fence where water will flow towards that don't have silt fence outlets. Please include silt fence outlets at appropriate points along the silt fence to ensure erosion control measures will work as intended. This is a repeat comment.

Response: SF Outlets have been added.

51. Please include existing contour labels and well as labels to all buffers on all the erosion control sheets.

Response: Labels have been added.

Sheet C5-2

52. The silt fence outlet by the culvert in the northwest portion of this site should be adjusted to the low point.

Response: This will be adjusted for the Wake County submittal.

Sheet C5-3

53. There is a thick black line by the diversion ditch on the top left of this page that should be labeled or removed.

Response: This will be adjusted for the Wake County submittal.

Sheet C5-4

54. RB #1 contours should be labeled. This is a repeat comment.

Response: This will be adjusted for the Wake County submittal.

55. There is an unlabeled line along TD #2, please label or remove.

Response: This will be adjusted for the Wake County submittal.

Sheet C5-5

56. Some of the slopes on the west side of RB #2 appear to be very steep. It is recommended to keep grades less than 3:1. This is a repeat comment.

Response: The grades have been adjusted.

Sheet C5-8

57. Please show silt fence for protection until construction is done. This applies to all erosion control sheets.

Response: Silt fence has been added.

58. Ensure all structures and pipes that are to be put in are showing on plans. Inlet protection should be placed around any added structures. This applies to all erosion control sheets.

Response: Inlet protection is now showing up on the plans.

Sheet C5-9

59. There are some inlet protection devices that are not currently shown around inlets. Please remove or adjust to make sure all inlets have inlet protection. This is a repeat comment.

Response: Inlet protection is now showing up on the plans.

Sheet C5-10

60. Wall drainage is not being shown on these erosion control plans. The wall drainage structures/pipes need to be put in at the same time as the wall.

Response: This will be added to the sequence for the Wake County submittal.

Sheet C6-0

61. Please make sure dimensions are in the correct locations and it is clear what is being dimensions. Some dimensions don't seem to line up with top/bottom of pipes. If crossings do not meet minimum requirements, the design will need to be adjusted. Minimum separation requirements should be shown at all pipe crossings. This comment applies to all profile sheets.

Response: Dimensions have been adjusted.

62. Waterline connections need to line up across profiles. Please ensure that the elevations at tees and crosses remain consistent between profiles. This is a repeat comment and applies across all profile sheets.

Response: This will be checked for the next submittal.

63. Please verify minimum separation between pipes is provided at all pipe crossings. There are several locations where pipes do not appear to meet separation requirements. The minimum separation should be shown and labeled on the profile view. If a concrete cradle is required, please ensure that it is clearly shown and labeled. This is a repeat comment.

Response: This has been verified or a concrete collar is proposed.

64. Adjust the pipe label on the pipe going between SMH-20 and SMH-29 so that the pipe size can be read.

Response: This has been adjected.

65. Continue the Street A profile to include the waterline connection into existing Redford Drive waterline.

Response: This has been continued.

Sheet C6-1

66. The proposed waterline is shown to end at the hydrant, yet it continues beyond the hydrant in the profile view. Please adjust the profile or plans for consistency.

Response: This has been updated.

Sheet C6-2

67. There is a crossing between CB-206 and C B-206A in which the waterline is currently conflicting with storm. There is a vertical bend shown before this crossing, but not at this crossing. Consider extending or moving the vertical bend so minimum separation requirements are met.

Response: This has been updated.

68. Please label vertical bends on all profiles. This is a repeat comment.

Response: This will be provided for the next submittal.

Sheet C6-5

69. Please show the waterline connection into the existing Redford Drive waterline.

Response: This has been shown.

70. Show the waterline tee and gate valve at the end of this profile.

Response: This is pro

Sheet C6-6

71. All structures relevant to the profile should be labeled in both plan and profile views. This comment applies to all profile sheets.

Response: This has been provided.

Sheet C6-7

72. Show and label the waterline connection into Long Melford Drive at the start of this profile.

Response: This has been labeled.

Sheet C6-8

73. Verify the extents of the waterline are properly shown in the profile view. Per the plan view, the waterline should not be extending beyond the tee connecting into Long Melford Drive.

Response: This has been verified.

74. Please show and label the blowoff assembly at the end of this waterline in the profile view.

Response: This has been labeled.

Sheet C6-10

75. The fire hydrant around sta. 17+80 appears to be connecting in right where a vertical bend in. Please verify that this connection will not interfere with the bend, or update plans as needed.

Response: This will be verified this the next submittal.

76. There are two labels for CB-237, despite there being two different structures shown in that location. Please update one label to reflect the other structure rather than having two duplicate labels.

Response: Labels have been updated.

Sheet C6-11

77. At least 3' of cover is required for sanitary sewer. If cover is less than 5', DIP will need to be used. Please adjust design to ensure this requirement is being met.

Response: The depths have been modified.

Sheet C6-12

78. Storm should be designed to meet minimum slope requirements of 0.5%. This is a repeat comment.

Response: The slopes have been modified.

Sheet C6-13

79. The end of Long Melford Drive that is ending at the property line has very steep slopes. These slopes will need to be updated to meet minimum requirements. Please ensure when the grade

here gets updated that the profile grade is adjusted to reflect the proposed grade. It currently does not match what is in the plan view.

Response: This has been updated.

Sheet C6-15

80. Please show the crossing of the existing sanitary sewer and storm between CB-116 and DI-117 in the plan view.

Response: This crossing is shown.

81. Around sta. 10+20, show the existing sanitary crossing as well as the storm pipe crossing (pipe between CB-116 and CB-116A). Label minimum separation at all crossings.

Response: This has been labeled.

82. There appears to be a water and storm crossing around sta. 10+40 where separation requirements aren't being met. There is a vertical bend shown after this crossing, but not at this crossing. Consider extending or moving the vertical bend so minimum separation requirements are met.

Response: This will be updated.

83. A minimum cover of 24" is required for storm. Please adjust storm as needed to meet minimum requirements. This is a repeat requirement.

Response: This has been updated.

Sheet C6-26

84. The rim of SMH-42 needs to be brought up to grade, it is currently being shown below the proposed grade.

Response: This has been updated.

85. Please include and label all pipe crossings in the outfall 3 and 4 profile views.

Response: This has been updated.

Sheet C7-1

86. The invert out elevation in the profile should match what is shown in the details. This is a repeat comment.

Response: This has been updated.

87. The title text on this sheet is not showing up properly, please adjust.

Response: This has been updated.

Sheet C7-3

88. The normal pool elevation shown in the profile view does not appear to be correct. Please update this value to the correct normal pool elevation.

Response: This has been updated.

Sheet C7-4

89. The water crossing in both the Culvert 1 and 2 profiles are not currently shown. Please show these crossings and label minimum separation to show it is being met.

Response: This has been labeled.

90. Culvert 2 is letting out below grade, please adjust pipes or grading so the culvert outlet isn't partially buried.

Response: This has been updated.

Sheet C7-5

91. The headwall in the profile view does not extend the full height of the wall that is being created (as seen by the proposed grade). Please adjust the elevation of the headwall to reflect what will be constructed.

Response: This has been updated.

Sheet L1-2

92. Please confirm there are no conflicts with trees and structures/pipes/walls and that trees remain outside of storm and utility easements. This is a repeat comment.

Response: This has been confirmed.

Drainage and Erosion Control Calculations

93. Response to our previous comment (164) refers to a separate grading plan to be completed, what is this in reference to? We are not aware of an additional grading plan.

Response: The detailed lot grading plan is what is provided to the owner but not necessary for the construction drawing approval.

94. The drainage areas shown in the SCM drainage area maps don't seem to quite line up with the proposed contours. As these are construction drawings, it is expected that the drainage areas take into account the drainage that is to occur onsite. This includes expected roof drainage as well as current proposed grading. Please look into updating the drainage areas to ensure they are accurately representing where drainage will flow so that all storm pipes and structures can be properly sized. A more thorough review can be done once contours are clearly labeled and areas updated. This is a repeat comment.

Response: Drainage updates are ongoing.

95. It is recommended that the townhome outlines are shown like they were in the previous submittal. This allows a better understanding of where the drainage will be directed.

Response: Townhome outlines have been added to drainage area maps.

96. For most accurate results, runoff coefficients should be determined for each structure (and therefore be different for each structure drainage area). See City of Raleigh Stormwater Management Design Manual for more information on how to get the composite runoff coefficient.

Response: Runoff coefficients have been updated, and are based upon values provided in the City of Raleigh stormwater manual.

97. The profiles for SCM 1 have two identical profiles both for the 10-year analysis and the 25-year analysis. Please remove duplicate sheets from this document.

Response: Duplicate sheets are removed.

98. There are several profiles that are cut off so you can't read the entire profile and labels. Please adjust these profiles so they can be easily read.

Response: Profiles have been updated so that text is easily read.

99. For the inlet spread calculations it is listed as using 4in/hr. Please verify where this value was obtained from. Per NOAA estimates, the 5 min 2 yr storm is ~5.62 in/hr. This comment applies to all inlet spread calculations.

Response: 4in/hr is based on NCDOT standards for inlet spread, it is noted that Rolesville is requesting a 2-yr storm instead.

100. Inlet spread should not exceed one half of a lane width. There are a few inlets that are not meeting these requirements. Please update design to meet minimum requirements.

Response: Noted. Drainage designs are ongoing.

101. In the SCM 2 Drainage Area Map, the contours and wall by DI-220B do not match what is shown on the grading plans. Please ensure plans remain consistent across all sheets.

Response: This has been updated.

102. Please ensure that all storm structures and pipes are taken into account in this calculation package. For example, storm tables show DI-200A, but it is not included in the structures listed for SCM 2 analysis. This comment also applies to the storm profiles, as some pipes and structures don't appear to be included in the analysis.

Response: Profiles have been added to the drainage calculations package.

103. The inlet spread table for SCM 2 is not showing any values. Please update table with data.

Response: This has been updated.

104. Profiles show DCB-324 going unnecessarily deep into the ground. Consider updating the structure size.

Response: This has been updated.

105. The culvert 1 report indicates that there should be 4 barrels, however only 3 pipes are shown on the plans. Please update as needed to keep plans consistent with calculations.

Response: Calculations have been revised to show 3 barrels on both plan and calculations.

106. Please show a drainage area map for culvert 3, similar to what was done for the other three culverts.

Response: A drainage map for culvert 3 has been added.

107. The temporary Diversion Drainage Areas map has several drainage areas that don't seem to quite match the existing contours. Please ensure drainage areas are accurately representing the water that is draining to the basins/diversion ditches. This is a repeat comment.

Response: This has been updated.

108. Please ensure the drainage areas going to all diversion ditches and ponds are clearly shown and labeled. There are some diversion ditches that don't appear to have areas going to them and it is hard to distinguish between different pond areas on the map. All areas should be clearly shown and easily distinguishable. This is a repeat comment.

Response: This has been updated.

109. The "Temporary Diversion Drainage Areas" sheet has some portions that don't match what was shown on the erosion control sheets. Please make sure plans stay consistent across all sheets.

Response: This will be updated for the Wake County submittal.

110. In the Temporary Diversion Drainage Areas map, the temporary diversion ditch numbering does not match what is shown on the table. There are also labels in some of the temporary diversion ditch areas that do not match the numbering of the diversion ditches. Please make sure all labels are consistent so calculations can be followed and reviewed. This is a repeat comment.

Response: This will be updated for the Wake County submittal.

111. Please remove text that doesn't apply to the stage of construction shown in the Temporary Diversion Drainage Areas sheet. All leaders and text should also be correctly positioned and easy to read.

Response: This will be updated for the Wake County submittal.

112. Please ensure rip rap calculations are provided for all FES's. There are several, such as FES-1000, FES-2000, etc. that are not currently being shown.

Response: This has been provided.

Stormwater Management Calculations

113. There have only been two submittals of this CID, please change submittals on the cover sheet to reflect this.

Response: Acknowledged. The report cover sheet has been updated to reflect the correct submittal dates.

114. The impervious shown in Table 1 Impervious Area does not match what is shown on the cover sheet. Please ensure values are correct and consistent.

Response: Acknowledged. The values have been updated to reflect the cover sheet.

115. Please include precipitation intensity (in/hr) NOAA rainfall data.

Response: Acknowledged. The precipitation (in/hr) NOAA rainfall data has been added into the report.

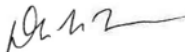
116. The drainage areas shown on the post-development drainage area map that are being routed to the ponds don't match the drainage areas shown as part of the drainage inlet maps. The areas should accurately represent the proposed conditions and be consistent throughout all sheets/calculations. This is a repeat comment.

Response: Acknowledged. The post-development drainage area map has been updated to reflect the drainage inlet area map outline as well as the bypass areas.

116. Please label what SCM the Pond Design sheets correspond to.

Response: Acknowledged. Each Pond Design sheet has been labeled with the corresponding SCM.

Sincerely,



Debbi Ferm