

August 2, 2021

Ariana Muca
City of Aurora
Planning Division
15151 E. Alameda Parkway, Ste. 2300
Aurora, CO 80012

RE: MCRE Apartments – Site Plan Amendment (DA-2270-00; 1982-6017-06)

Dear Ariana,

Please find below responses to 1st review comments to the Drainage Report for the proposed MCRE Apartments Site Plan Amendment. This letter is to address comments we received from you on 07-09-2021. To facilitate your review, we have included the original comments in *italicized* font and have provided our responses in **bold**.

Drainage Report Comments:

PAGE 1 COMMENTS

1. *Drainage Plan must be uploaded as separate full size (24"x36") PDF.*

Response: Acknowledged, separate document provided and uploaded

2. *1st Review - please contact Rifka Wine with any questions. rwine@bhinc.com.*

Response: Acknowledged.

3. *Advisory Note: PDR approval is required prior to Civil Plan Approval*

Response: Acknowledged

4. *Please provide responses to the provided comments to expedite the next review. Related to parking ponding depth, please review comments and email and/or call to discuss this prior to resubmitting the revised drainage report.*

Response: Acknowledged, this comment letter has been created to provide responses. Call with Rifka and City Staff was held on July 13th to discuss these and other questions from the comments provided.

5. *Cover should include the full subdivision plat name. Refer to Section 2.31 of SSDTC Manual for required size of approval block.*

Response: Provided and block adjusted to reflect SDDTCM requirements

6. *Approval block needs to be larger. Refer to Section 2.35, p. 2-17 of SSDTC Manual for required size of approval block.*

Response: Approval block sizing has been updated to reflect SDDTCM requirements.

7. *Per Section 2.31 of SSDTC Manual include engineer's phone number & owner contact name and phone number.*



Response: Provided as requested. Primary contact for the project is Emily Black from Jones Land Lasalle.

8. Please add page numbers to report. Cover will be page 1 (please include page numbers on all pages - must match PDF page numbers).

Response: Page numbers added to report and appendices sheets.

PAGE 3 COMMENTS

9. Revise Table of Contents and section/subsection headings as needed to match PDR outline in SDDTC Section 2.32.

Response: Table has been modified and covers the applicable sections highlighted in the SDDTCM.

PAGE 4 COMMENTS

10. Please spell out SWC.

Response: SWC spelled out

11. Per SDDTC, Section 2.31, please describe adjacent streets.

Response: Described as requested

12. Per SDDTC, Section 2.31, please describe adjacent developments.

Response: Included in the Legal Description and Location subsection

13. Per SDDTC, Section 2.31, please describe topography.

Response: Added within the Existing Site Description and Topography sub-section of the Historic Drainage Section

14. Per SDDTC, Section 2.31, please include composite percent of impervious area.

Response: Added within the Existing Site Description and Topography sub-section of the Historic Drainage Section

15. Mention that the project is located in the Urban Center TOD Abilene.

Response: Added within the Existing Site Description and Topography sub-section of the Historic Drainage Section

16. NRCS soils data - Soils map & FEMA Firm needs to be included in appendix with site boundaries delineated.

Response: Has been included within Appendix G of the PDL

17. Please include airport buffer boundary map in the appendix and identify the site to show that site is located outside of airport buffers. Here is a GIS web path that can be used: <https://arcg.is/1j8eH0>

Response: Has been included within Appendix H of the PDL

18. Please update - Site is located in a Transit Oriented Development (TOD). See COA SDDTC Manual Section 3.31. In TODs, the minor storm is not evaluated, however, the 2-year storm may be needed for WQ analysis.

Response: Criteria Section modified per SDDTCM section 3.31 to outline the comments mentioned

19. located in E. 6th Ave.

Response: Sentence rephrased to include mention of existing on-site discharge to storm sewer along E 6th Ave.

20. describe drainage pattern of the street

Response: Drainage pattern described.

PAGE 5 COMMENTS

21. These offsite basins need to be shown and additional documentation provided to show they do not enter your property. Suggest you review Value Place Hotel final drainage plan and report.

Response: Acknowledged. Excerpts of the report and maps shall be included in Appendix I of the PDL

22. original

Response: Added to sentence

PAGE 6 COMMENTS

23. Please analyze and provide the parking lot detention depths for the surveyed conditions with the existing outflow (1.8 cfs, not changing the existing restrictor plate). The current depths shown in the parking lot are a safety concern. We would like to understand how much lower the parking lot depths are in existing conditions. Please email and/or call to discuss this prior to resubmitting the revised drainage report.

Response: Language regarding this comment has been modified based on discussions with Reviewer and City Staff on July 13th.

24. provide COA reference #

Response: COA reference # provided.

25. Please mention here that the site is located in a Transit Oriented Development (TOD). See COA SDDTC Manual Section 3.31. In TODs, the minor storm is not evaluated, however, the 2-year storm may be needed for WQ analysis.

Response: The TOD description has been added as requested and further explained.

PAGE 7 COMMENTS

26. These offsite basins need to be shown and additional documentation provided to show they do not enter your property. Suggest you review Value Place Hotel final drainage plan and report.

Response: The report has been reviewed. Assumptions of OS basins being addressed with the southern property's development have confirmed. As indicated in the included documents of Appendix I, Basin C-1 abuts the southern property boundary and is directed eastward to a detention pond on the adjacent site.

PAGE 8 COMMENTS

27. *As noted earlier - Please analyze and provide the parking lot detention depths for the surveyed conditions with the existing outflow (1.8 cfs, not changing the existing restrictor plate). The current depths shown in the parking lot are a safety concern. We would like to understand how much lower the parking lot depths are in existing conditions. Please email and/or call to discuss this prior to resubmitting the revised drainage report. The City may decide that lower depths in the parking lot are more important than meeting release rates.*

Response: Per discussions with Reviewer and City Staff on July 13th. This section has been modified to reflect no changes to the Pond A detention pond or outlet due to ponding depth safety concerns.

PAGE 9 COMMENTS

28. *The SDDTC requires that the The WQCV itself shall be increased by 20% to account for sedimentation. Please provide calculation or note that this 20% is included.*

Response: This has been further described in the report and calculations modified to include the 20% volume.

29. *should this be and?*

Response: This has been corrected and sentence restructured.

30. *what wall is this referencing? show all retaining walls in the drainage plan.*

Response: Retaining walls shown on plan. Retaining wall in question is along the southeastern edge of the pond due to slopes falling away from site.

31. *Please add a note that this re-development project does not include any modifications to Basin A-2 and only minor modifications to Basin C-1 related to regrading for ADA improvements.*

Response: Further description has been added to the Basin A-2 and C-1 description in this section.

32. *See prior notes - please complete calculations & let's discuss the existing pond depth without reducing the discharge rate and City will decide best approach considering safety of the area.*

Response: Calculations have been performed and included in the report per call with City Staff and reviewer on July 13th. Changes to Pond A are not being made due to safety concerns.

33. *Please add variance requests for 1) No detention or WQ is provided for Basin C-1 with this development. List basin area, Q2, Q100, and %I. Only minor modifications to accommodate regrading for ADA improvements are proposed in this basin. There is not existing detention or WQ provided in existing conditions and the change in runoff with the regrading is insignificant. 2) No detention or WQ is provided for Basin A-2 with this development. List basin area, Q2, Q100, and %I. There is not existing detention or WQ provided in existing conditions and there is no change to this basin with this development. 3) No detention is provided for Basins B-1A and B-1B. Only minor modifications to accommodate regrading for ADA improvements are proposed in this basin. There is not existing*

detention provided and the change in runoff with the regrading is insignificant. WQ is provided. Discuss total site discharge rate - this depends on the City's direction related to ponding depth compared to discharge rate.

Response: Per discussions on July 13th call, these variance requests are not being included as they are existing conditions that are not being modified with the site. Basin B-1B is being modified to provide additional water quality as the original basin was not constructed while basin B-1A will continue to flow offsite.

PAGE 10 COMMENTS

34. *that*

Response: Word added to sentence

35. *measures*

Response: measured changed to measures

36. *Add firm map reference to this section.*

Response: FEMA firm map reference added References Section

APPENDIX A COMMENTS

37. *Label Tollgate Creek*

Response: Tollgate Creek Labeled in the Vicinity Map

APPENDIX B COMMENTS

38. *Provide cover sheet that shows this report was approved. Provide COA EDN reference #*

Response: Cover sheet for original report has been included with COA reference number

39. *Please rotate pages and please highlight the information from this report that is pertinent to your project and analysis. Typ. - note applies to all reference pages.*

Response: Applicable pages have been rotated and applicable information has been highlighted.

40. *Add note that Pond B was not constructed and does not exist.*

Response: Note has been added to calculations sheet from existing report in red

41. *Add note that Pond B was not constructed*

Response: Note has been added to existing drainage map in Red.

APPENDIX C COMMENTS

42. *Drainage report mentions swale A-A - please show this on the drainage map. Label side slopes, swale slope, and flow direction.*

Response: Swale A-A has been identified by a text leader on the plan

43. *Detention will require drainage easement and access easement to the public ROW*

Response: A drainage easement is proposed and Identified on the Plan as Hex G.

44. *label as private or public. Typ.*

Response: Private and public storm sewers have been identified

45. *public or private?*

Response: Private and public sewers have been identified.

46. *C values are too small to be readable.*

Response: Size of block has been adjusted for clarity and readability.

47. *no copyright notes allowed on plans. Please remove or edit this note. These are public documents.*

Response: Copyright note has been removed from the plan

48. *Please indicate the design recurrence interval for storm pipe infrastructure*

Response: Note added to plan for the storm infrastructure and interval. No changes to existing storm sewer pipe infrastructure are being proposed with this development.

49. *Please explain in report and show on plan how B-1A reaches the rain garden. Report implies that rain garden treated Basins B-1A and B-1B.*

Response: B-1A continues to free flow per the existing condition. B-1B is captured and receives water quality before being released from the site.

50. *label and dimension ROW*

Response: ROW is called out below the street names and width varies as indicated by the note.

51. *WQ BMP will require drainage easement and access easement to the public ROW*

Response: Acknowledged, An easement has been provided and labeled with the applicable Hex leaders.

52. *Are these easements? Please label.*

Response: All easements applicable to the site are identified with Hex Leaders.

53. *Please include % I.*

Response: %Imperviousness has been included in the table

54. *Per SDDTC Section 2.34, The table above must include basin minor and major flows - clarify that the flows currently shown are accumulated (routed) flows.*

Response: Flows are provided and design points have been modified for accumulated flows.

55. *Per SDDTC Sect 2.34, show contours a min. of 50', or as far as needed to show drainage patterns, past property boundary. Comments applies to all sides of property.*

Response: Additional topography has been requested from survey. This will be updated with the next submittal

56. *Add note: NAVD 88*

Response: NAVD 88 note added to Benchmark Elevation

57. *Provide map showing historic off-site basins (full extent) and maps/analysis/other drainage reports to support your decision that these off site flows no longer enter this property. Off-site basins may be shown on 8-1/2 x 11 or 11 x 17 topographic maps bound within the drainage report.*

Response: Historic Maps have been included in the appendices of the PDL

58. *decimal point missing*

Response: Decimal point has been added.

APPENDIX D COMMENTS

59. *Please add to appendix the composite C value and % impervious calculations.*

Response: Included within Appendix D of the PDL. Only Basin B is being re-calculated, all other basins are assumed to use the Composite C-values from the original report.

60. *Add a note: Site is located in a Transit Oriented Development (TOD). Design storm frequency is the 100-year storm event, there is not a minor storm design frequency for a project within a TOD.*

Response: Note has been added at base of the calculations

61. *Use equation 5.4 in COA SDDT Manual*

Response: Regional Tc is not being used in these calculations (this is a standardized spreadsheet that cannot be edited to remove this calculation). The urbanized minimum Tc of 5.0 min is being used for these calculations.

62. *Does both Basin B-B1 & B-1A enter rain garden? Please explain better in plans and report.*

Response: Further explanation provided in report. The area calculated is for Basin B-1B only. Basin B-1A continues to flow off-site as per the existing condition.

63. *The SDDTC requires that the The WQCV itself shall be increased by 20% to account for sedimentation. Please provide calculation or note that this 20% is included.*

Response: WQCV calculations show the increase of 20% to 180 cuft volume required. The Basin Geometry has been updated and plans reflect this change.

APPENDIX E COMMENTS

64. *Please also provide an independent study/review that supports the 80% removal claim. Manufacturer should be able to supply this to you.*

Response: Cut sheets have been modified and the independent study/review has been provided for review.

MCRE Apartments – Site Plan Amendment
Application: DA-2270-00; Case Number: 1982-6017-06
8/2/21

Sincerely,
GALLOWAY

Sid Biddle
Civil Design Engineer III
(303) 962-8422
SidBiddle@GallowayUS.com