

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: July 26, 2023
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	COPIES TO:
Alia at Sunstone		RCI Engineering
Cross Streets:	NWC Sunstone Pkwy & Skye Canyon Park Dr	Lennar Homes of Nevada
File Number:	F:\Depot\DSMemos\DS5685A.doc	CCRFCD
Parcel Number:	125-06-510-003	
Zoning Action:	22-0237-TMP1 & 22-0237-VAC1	
FEMA Flood Zone	YES NO X	
Proposed Storm Drain	YES X NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	6/29/2023	7/26/2023	See Comments Below	\$400.00	5329607: \$400
TOTAL FEES (LDDRS):				\$400.00	----

REMARKS:

The Drainage Study for the subject project has been reviewed and:

	is approved subject to conformance to all City standards and the following conditions:
X	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. Provide a copy of the zoning/planning conditions associated with this site (**22-0237-TMP1 & 22-0237-VAC1**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. The grading plans and details showed *Moccasin Road* will not be improved with curb and gutter and sidewalk. Unless this is not required in the Tentative Map, otherwise, construct *Moccasin* with standard half-street improvements in the next submittal.
3. The study is premised on the full construction of *Skye Canyon Park Drive* and the associated storm drain and stubs being in place for flood perpetuation. No occupancy permit of the residential units will be issued prior to the substantial buildout of the perimeter facilities.
4. The site is adjacent to or crosses an existing or proposed Clark County Regional Flood Control District (CCRFCD) master planned facility. Therefore, CCRFCD concurrence is required prior to final approval of the drainage study.

Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

<http://gustfront.ccrfcd.org/LandDev/LandDev.aspx>

5. The grading plan indicates offsite grading to the north (*Moccasin* alignment) and west (within the *Future Sunstone Parcel A* and within the *Future Park*). Secure notarized letter of permission from each of the pertinent property owners allowing the proposed offsite grading. The letters are required prior to final approval of the subject drainage study.
6. **Figure 5, Figure 6 and Figure 7:** The basin area for ENP (in Figure 5) and DOF2 (in Figures 6 & 7) is 3.5 acres and yet the 100-year flow is less than 1 cfs which is unreasonable. Review and revise the model and all pertinent hydrologic and hydraulic calculations in the next submittal.
7. **Figure 5 - Existing Conditions Map:** Provide street names on map exhibit.
8. **Figure 5 - Existing Conditions Map:** Provide flow arrows to indicate the direction of flow from basins EFA1 and EFA2.
9. **Figure 6 - Ultimate Conditions Map, 100-Year Hydraulic Sections Summary:** Contributing basins for multiple sections (19, 21, 24, 26) did not include basin DOF2. Review and revise all hydrologic and hydraulic calculations accordingly.
10. **Figure 7 - Interim Conditions Map, 100-year Hydraulic Sections Summary:** The slope for Section 15 corresponds to Section 16A and vice versa. Perform an overall quality control check for the next submittal.
11. Explain how **DOF1** discharges in the interim and ultimate conditions in the next submittal.
12. It appears that the subject development accepts offsite flows from **DOF1** and **DOF2**, therefore all onsite storm drains will be PUBLICLY maintained. Revise the labels on all pertinent grading plans and Plan & Profile sheets accordingly.
13. **In the report, Section VII Ultimate Conditions,** states "The site has been graded to drain to the southwest corner of the site which matches the existing drainage patterns for the Project site", however, in *Figure 6 - Ultimate Conditions Map*, it shows the site draining to the northeast and southeast corner of the site, which matches the existing conditions drainage patterns. Revise the report statement accordingly.
14. **Weir-Emergency Flow Calculations:** For the easement between Lots 30 and 76 it shows a design flow of 71 cfs; however, on *Figure 6 -Ultimate Conditions Map*, the corresponding cross sections flow prior to this easement add up to 17 cfs. Similar comment applies for easement between Lots 181 and 182. Address these discrepancies accordingly.
15. **Grading Plans - Unit 1, Sheet G-8:** Clarify callout 1 (hexagon shaped) next to construction note 15 for DI#1 represents.
16. **Grading Plans - Unit 1, Sheet G-11:** It appears that a low point is created in the adjacent property, *Future Capella at Sunstone Parcel A*. Review and revise the grading accordingly.
17. **Storm Drain Lateral – Unit 1, Sheet P-21:** DI #15 is deeper than 10'. All storm drain inlets that are more than 10'-deep require a special structural detail and calculations. Submit structural design and calculations to *City Building & Safety Department* for review and approval prior to the final approval of the drainage study.
18. **Grading Plans - Unit 2, Sheets G2 & G3:** The detail for Section 23 should refer to Sheet D-2 and not Sheet D-1. Revise accordingly.
19. **Grading Plans - Unit 2, Sheet G-13, Section 5:** Label and revise the grading plan, Sheet G-13 and Detail Section 5 to a 5-foot valley gutter for the proposed drainage easement.
20. **Grading Plans - Unit 2, Sheet P-1:** Provide a finished grade elevation along the drainage easement so we may verify the emergency overflow and to ensure there is appropriate ponding for DI#12.

21. **Grading Plans - Unit 2, Sheet P-1, SD Easement:** All provided computations state that DI#11 and DI#12 both collect 22.5 CFS, however the listed flow in the improvement plans state that both inlets collect 19.5 CFS. Review and revise accordingly.
22. **Grading Plans - Unit 2, Sheet P-1, SD Easement:** Ensure the connection of existing pipe to proposed pipe is sealed with a concrete collar or equivalent.
23. Provide an overall exhibit that primarily shows and labels all proposed “**Public Drainage Easements (Privately Maintained by the HOA)**” in the next submittal. All drainage easements must be recorded in the *Final Map* as such.
24. Revise all sections showing solid grouting for flood control to indicate “8-inch minimum solid grouted CMU block 3 courses above finish grade with all joints mortared,” where 3 courses is 18-inches or twice the depth above the calculated water surface elevation.
25. Private streets must be public drainage easements. Provide a note on the grading plans “Note: All private streets are P.U.E., Public Sewer Easements and Public Drainage Easements to be privately maintained by the HOA”.
26. The engineer must provide a table on the grading plans that shows a quantity estimate of all drainage improvements within Public Drainage Easements. All drainage improvements within Public Drainage Easements must be bonded and inspected.
27. All drainage easements must be public drainage easements to be privately maintained and common lots to be labeled on the grading plans and to be dedicated as such in the final map.
28. Add the note below as the Standard Note #6 to the “*Stormwater Runoff Management*” note block in all pertinent General Notes Sheets.

Post-Construction BMPs (PCBMPs) / Control Measures noted on the Grading Plans are mandatory permanent regulatory stormwater pollution controls. These PCBMPs must be installed per the approved plans and must be permanently maintained.

***** The City of Las Vegas Flood Control is standardizing the file naming of drainage studies and plans during the digitizing process. When saving the project files in the CD or thumb drive, please follow the system below:**

If drainage study only contains one combined file, use the following naming convention in Document Title:

1st Submittal DS and Plans (for first and original submittal);

2nd Submittal DS and Plans (for second submittal (addendum #1)) etc.

If drainage study contains multiple files, use the following naming convention in Document Title:

1st Submittal DS (for the report of the drainage study)

1st Submittal Plan 1 (could be the drainage condition maps)

1st Submittal Plan 2 (could be the improvement plans) etc.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the Nevada Division of Environmental Protection a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, final approval of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

END OF REMARKS
HDR/AYS

T/R/S: T19S/R60E/06
AREA G-06