

<b>CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM</b>		<b>DATE:</b> April 27, 2023
<b>TO:</b> Land Development Services Department of Building & Safety		<b>FROM:</b> Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
<b>SUBJECT:</b>	Drainage Study for:	<b>COPIES TO:</b>
<b>Grand Canyon &amp; Washburn</b>		Westwood Professional Services
<b>Cross Streets:</b>	SWQ of Ann Road & Grand Canyon Drive	Greystone Nevada, LLC
<b>File Number:</b>	F:\Depot\DSMemos\DS5667A.doc	Bart Anderson, P.E., DevCo
<b>Parcel Number:</b>	125-31-201-010 & 125-31-301-014	CCRFCFCD
<b>Zoning Action:</b>	22-0666-GPA1; 22-0666-TMP1; 22-0666-VAC1 & 22-0666-VAR1 to -VAR33	CCPW
<b>FEMA Flood Zone</b>	YES NO <b>X</b>	
<b>Proposed Storm Drain</b>	YES <b>X</b> NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 <sup>st</sup> Submittal	3/30/2023	4/26/2023	See Comments Below	\$400.00	5204535: \$400
<b>TOTAL FEES (LDDRS):</b>				<b>\$400.00</b>	----

**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:
<b>X</b>	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. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFCFCD) master planned facility. Therefore, CCRFCFCD concurrence is required prior to final approval of the drainage study.

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

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

2. The site is also adjacent to the jurisdiction of *Clark County*. The engineer must coordinate with *Clark County Public Works Department* (CCPW) and incorporate any concerns for boundary conditions along the south border. CCPW concurrence is required prior to final acceptance of the study.
3. Sites with a grade difference of 2 feet above or below existing are required to have approval from the *City Planning and Development Department*. The engineer must submit copies of the grading plans and detail sheet with a letter justifying the grade difference to the *City Planning Department* (229-6301). The engineer must provide Planning approval with the next submittal.

4. Per the County GIS aerial and recent site visit by the reviewer, the development project of **Ann & 215** at the southwest corner of *Ann Road* and *Hualapai Way* has been constructed with houses versus vacant land as shown in the exhibits of the last submittal.  
Revise *Exhibit G*, *Exhibit H*, *Exhibit I* and *Exhibit J* to reflect the true and current site features accordingly.
5. **Exhibit G, Existing Condition Map:** Provide flows on the flow split arrows as indicated on the legend.
6. **Exhibit G, Existing Condition Map:** Provide drainage study reference number to indicate where the reference flows come from (Ex: **FS1E** through **FS4S**).
7. **Exhibit J, Developed Condition Map:** Add more hydraulic cross sections. For Example: provide a cross section on *Moonlit Haze Drive* to determine the street flow depth.
8. **Exhibit J, Developed Condition Map:** *Hydraulic Section 2* does not appear to have the correct flow. It is not likely Lots 43-46 will produce 66 cfs. Revise accordingly.
9. **Exhibit J, Developed Condition Map:** Provide a quality check for the flow totals on the *Flow Rate Summary Table*. For example, CP2 shows 95 cfs however the components (FS1S+CP2.1+BAS6E) add up to 96 cfs.
10. **Sheet D-1, Phase 1 Grading Plans:** Detail Sheet I: Detail H for *Grand Canyon Drive* improvements calling out earthen swale is not acceptable. Revise to provide 6'-wide concrete valley gutter per *USD Standard Drawing No. 244.11* in the next submittal.
11. Same comment for Detail A (*Washburn Road*), Detail B (*Rosada Way*), Details C & D (*La Madre Way*), Detail G (*Fisher Avenue*) per *USD Standard Drawing No. 244.10*. Install concrete gutter accordingly in the next submittal.
12. Beside concrete valley gutter vs. earthen swale, Detail G (*Fisher Avenue*) section as shown on the *Detail Sheet I* does not match with *Standard Drawing No. 244.10*, in particular, there is no 4'-strip of land zone between the pavement and the swale as in the subject plan versus none in the standard drawing. Revise to match the standard accordingly.
13. Same comment for other street sections: Double check to make sure the sections match with the standard.
14. Provide street intersections design at *Grand Canyon Drive* at *Fisher*, *Washburn*, *Rosada* and *La Madre*. Address if there are any low points at the intersections and how the low flows drain across *Grand Canyon Drive* without any drop inlets?
15. All the inlets at the major street intersections such as *Grand Canyon* and *Fisher* are indicated as "Future" but shown as to be constructed by the project. If it is not built by the subject project, revise the line type to be broken, not solid as shown which will cause confusion.
16. **Sheet D-1, Phase 1 Grading Plans:** Cross section 11 reference Lot 75, however on sheet G-21 the cross section corresponds to Lot 113. Revise accordingly.
17. **Sheet G-21, Phase 1 Grading Plans:** Provide rip rap for erosion protection along *Rosada Way* near Lot 113.
18. **Sheet G-3, Phase 2 Grading Plans:** Identify and delineate the proposed 20'-public drainage easement and common lot (privately maintained by the HOA) adjacent to Lot 4 on the plan.
19. **Sheet G-7, Phase 2 Grading Plans:** Lot 62 does not meet the Regional Flood Control District minimum criteria of 6-inch minimum above the highest adjacent top of curb (CCRFCD Manual Section 1602 304.4.E.1)

20. **Sheet G-11 to Sheet G-14, Phase 2 Grading Plans:** It appears that the front yards of Lots 93, 94, Lots 84, 85 and 86 encroach into the 80'-wide NVE Easement. Provide documentation that this is acceptable to *Nevada Energy Company* and the *City Planning Department* prior to the final approval of the subject drainage study.
21. **Sheet G-14, Phase 2 Grading Plans:** Identify and call out the two dashed line running parallel (on both sides) to the proposed 80' NVE Easement.
22. **Sheet D-1, Detail Sheet I:** Detail H1 and H2 are for *Eula Street* improvements calling out earthen swale on the side. However, per condition of the tentative map, the swales shall be concrete valley gutter, not dirt. Review and revise accordingly.
23. Same comment for *Washburn Road, Fisher Avenue* and *Rosada Way*. Install concrete gutter accordingly.
24. **Sheet D-2, Detail Sheet II:** Detail 15 (Wall Section): It was specified 1-3 courses of solid grouting adjacent to the houses lower than the street. However, it was not clear where exactly the 1 to 3 courses apply. To simplify things, just call out "3 courses" uniformly instead of 1-3 courses.
25. **Sheet D-2, Detail Sheet II:** Cross section 24 is not representative of what is shown on G-7. Lot 62 is not shown on cross section.
26. Label existing finished floor elevations of all adjacent houses on all pertinent grading plans in the next submittal.
27. Provide preliminary plan and profile sheets for all proposed perimeter streets. Plan and profile sheets must show existing and proposed grade at centerline, but may be preliminary in all other aspects. These plans are necessary to determine the effect of the proposed development on the adjacent properties.
28. 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 HOA."
29. All drainage easements must be public drainage easements to be privately maintained by the HOA and common lots to be labeled on the grading plans and to be dedicated as such in the final map.
30. 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.
31. The proposed wrought iron fence/gate must utilize RTC Uniform Standard Drawing 425.S1. Review and revise all pertinent construction note and details accordingly.
32. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).
33. Add the following note as *Standard Note No. 6* to the "*Las Vegas Valley Construction Site Map Guidelines*" column on all grading plans:

**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.**

**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.

**END OF REMARKS**  
HDR/AYS

T/R/S: T19S/R60E/31  
AREA G-31