

<b>CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM</b>		<b>DATE:</b> February 6, 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; Fisher</b>		Westwood
<b>Cross Streets:</b>	SEC of Grand Canyon Dr. & Fisher Ave.	Greystone Nevada, LLC
<b>File Number:</b>	F:\Depot\DSMemos\DS5645A.doc	Bart Anderson
<b>Parcel Number:</b>	125-31-601-014	CCRFCFCD
<b>Zoning Action:</b>	22-0547-TMP1 & 22-0547-VAR1 to -VAR11	CCPW
<b>FEMA Flood Zone</b>	YES	NO <b>X</b>
<b>Proposed Storm Drain</b>	YES	NO <b>X</b>

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 <sup>st</sup> Submittal	1/19/2023	2/6/2023	See Comments Below	\$400.00	5109515: \$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.

- Per Item #7 of the approved variance condition of **22-0547-VAR10**, quote “In accordance with Title 19.02.025.F, the applicant shall make an improvement contribution equal to 100% of the City’s bond estimate costs for all deferred improvements on *Grand Canyon Drive* and 50% of the City’s bond estimate costs for all deferred improvements on *Fisher Avenue*, *Washburn Road* and *Park Street* based on the *Regional Transportation Commission’s* (RTC) rural standards (244.10 and 244.11). If all RTC standards are followed, no deferral contribution is required.” – End Quote.
- 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>

- The site is also adjacent to the jurisdiction of *Clark County* to the north, east and south. The engineer must coordinate with *Clark County Public Works Department* (CCPW) and incorporate any concerns for boundary conditions along the mutual borders. CCPW concurrence is required prior to the final approval of the subject study.

4. **Exhibit G (Existing Condition Basin Map):** Per site visit, the **Ann & Hualapai** subdivision is under construction while the **Ann & Grand Canyon** within the **Clark County** jurisdiction has already been built-out, ie, the existing condition map should show the subdivisions layout including lots and interior streets clearly instead of the raw land as shown in the last submittal.

Review and revise all drainage condition basin maps accordingly.

5. **Exhibit G (Existing Condition Basin Map):** It is not clear how all the offsite flows are being accounted and routed to the subject development. Clearly show and label the discharging concentration points with  $Q_{10}/Q_{100}$  from all the offsite subdivisions such as **Ann & 215**, **Ann & Hualapai** and **Ann & Grand Canyon** (County jurisdiction).
6. At **Ann & 215**, label the flow quantities at the three discharge LPs in **Hualapai Way**.
7. At **Ann & Hualapai**, show the lots and the interior roadway alignments.

Per the drainage map of the **Ann & Hualapai** study, there are three discharge points from the subdivision, two at the eastern boundary discharge into the adjacent **Ann & Grand Canyon** and one at **Eula** and **Hammer**. Clearly label the  $Q_{10}/Q_{100}$  and flow directions in the next submittal.

8. At **Ann & Grand Canyon**, show the interior roadway alignments.  
Per *Figure 5* of the **Ann & Grand Canyon** drainage map, there is a concentration point "CP8" at the intersection of **Calming Waters Court** and **Hammer Lane** with  $Q_{10}/Q_{100}$  of 21cfs/79cfs and "CP11" at the intersection of **Golden Gossamer Street** and **Fisher Avenue** with  $Q_{10}/Q_{100}$  of 64cfs/236cfs.
9. Review and revise all the drainage conditions basin maps accordingly in the next submittal. Revise all subsequent hydraulic calculations with the correct  $Q_{10}/Q_{100}$ .
10. The flow rate summary tables listed in all condition basin maps appear to have not accounted for the offsite flows. Provide a narrative paragraph in the next submittal to account for the flow quantities and routing paths which eventually reaching the subject development in all perimeter streets.
11. Revise the Assessor Parcel Number (APN) in *Standard Form 1* from 125-31-301-014 to **125-31-601-014**.
12. Check the headings of report *Table 1 – Comparison of 100-year Flow Rates*. Two "Proposed Conditions" listed. Additionally, what does the "Ultimate Condition" represent?
13. **Exhibit H** and **Exhibit I:** Basin **ON1P** flow is too small to apply seven pro-rated sub basins. The sub basin flows rounded down to 0 should be rounded up to 1.
14. **Hydraulic Section 5** – why is the flow for CP5 not the same for the hydraulic section flow?
15. Provide the slope of the gutter at the cul-de-sac, minimum gutter slope is 1.00%.
16. **Sheet D-1: Detail 3/Detail 8/Detail 9/Detail 11 Wall Section** – 3 courses of solid grout is required on the screen wall. All solid grouted wall must be 8"-thickness minimum.

17. 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.
18. Provide finished floor elevations of existing houses adjacent to the subject site.

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