

<b>CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM</b>		<b>DATE:</b> December 18, 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>
LV Medical District Mixed Use		Reynolds Engineering Co.
<b>Cross Streets:</b>	SEC of Shadow Lane & Wellness Way	Nevada System of Higher Education
<b>File Number:</b>	F:\Depot\DSMemos\DS5719A.doc	Bart Anderson, P.E., DevCo
<b>Parcel Number:</b>	139-33-402-014, 015, 034 and a portion of 139-33-406-006	CCRFCD
<b>Zoning Action:</b>	22-0727-TMP1 & 23-0069-SDR1	
<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 (Paid on 12/5/2023)	11/22/2023 & 12/5/2023	12/18/2023	See Comments Below	\$400.00	5549022: \$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. Provide a copy of the zoning/planning conditions associated with this site (**22-0727-TMP1 & 23-0069-SDR1**) 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.

The last submittal provided NOFA for 22-0727-TMP1 but not 23-0069-SDR1. Provide the NOFA for **23-0069-SDR1** in the next submittal.

2. The site is adjacent to an existing 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>

3. **Sheet D1 - Interim and Future Conditions:** This exhibit shows existing conditions drainage map, however, is it labeled as "Interim and Future Conditions".
4. **Sheet D1:** Reevaluate basin boundary delineation for **OFX3**. It appears there is a high point (54.41 TC) at the southeast corner of the *Shadow Lane* and *Wellness Way* intersection which should extend the basin up to the point.
5. **Sheet D1:** Add an offsite basin between **ONX3** and **ONX4** and show on the map whether it drains to the street or drains to the subject site. Quantify the basin and add all pertinent data to the *Peak Flow Summary* table.

This comment applies to *Sheet D2 (Interim and Future Conditions)* also. Review and revise accordingly.

6. **Sheet D1:** Per the routing of the drainage map, **Concentration Point CPX2** shall be the algebraic sum of "**CPX1 + ONX2 + OFX2**" which equals to  $Q_{10}/Q_{100} = 7\text{cfs}/13\text{cfs}$ . Revise the *Peak Flow Summary* table and all subsequent hydrologic and hydraulic calculations accordingly.

This comment applies to *Sheet D2 (Interim and Future Conditions)* at **Concentration Point CPP2** also.

7. **Sheet D1:** Provide a combination point at the northeast corner of the site along *Wellness Way* to verify no flow is impacting **OND4**.
8. **Sheet D1:** Provide basin delineation and depth and velocity calculations for the offsite flow on *Shadow Lane*. Properly indicate how much flow is being conveyed in the existing CCRFCD RCB facility and how much is street surface flow.
9. **Sheet D1:** The 10-YR and 100-YR flows for basin **OFX3** do not match the HEC-1.
10. **Sheet D1:** Provide a quality check in the addition of flows for all combination points in the *Peak Flow Summary*. For example, the flow on CPX1 adds up to 6 cfs not 5 cfs.
11. **Sheet D2 - Interim and Future Conditions:** Provide a street flow cross section on *Shadow Lane* to check FF criteria.
12. **Sheet D2 - Interim and Future Conditions:** Cross section D is shown near the high point of the basin limit. This section should be at the driveway where the flow is entering into *Wellness Way*.
13. **Sheet C3.01:** The proposed elevation of **BLDG-A** cannot be verified to meet criteria since the  $d_{100}$  in *Shadow Lane* had not been provided in the submittal. For the same reason, erosion control materials may be required at the back of sidewalk in *Detail Section D/C6.00* upon the next review.
14. **Sheet C3.02:** It is unclear what the purpose of the proposed onsite DI #1 and HDPE pipe is, provide discussion describing the purpose.
15. Note that *City of Las Vegas* only allows the use of HDPE storm drain pipes for privately owned and privately maintained storm drain systems which serve and are located exclusively on private properties. Any proposed HDPE storm drain pipes must also meet all design criteria established by the *Clark County Regional Flood Control District* and must be installed per *Clark County Regional Transportation Commission Uniform Standard Drawings and Specifications*.
16. **Sheet C3.02:** Connect the proposed onsite storm drain to a sidewalk underdrain discharging to the adjacent *Wellness Way*. The proposed daylight and discharge over sidewalk is not acceptable. Review and revise in the next submittal.
17. **Sheet C3.02:** Construction Note #9 indicates to "CONSTRUCT ROCK LINED BMP SWALE". However, the proposed swale located at the north side of the proposed parking structure is not shown as rock lined.

18. **Sheet C3.02:** It is unclear to what is being proposed on the east side of the proposed parking structure ("PROPOSED T.I."). If this is a proposed building, clearly indicate the FG elevation and flow arrows around the edge wall of the building to ensure no flow is impacting the building.
19. **Sheet C6.01:** Rip Rap sizing in *Detail 6* does not match rip rap calculations. Address and revise accordingly.

**\*\*\* 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:**

**1<sup>st</sup> Submittal DS and Plans (for first and original submittal);**

**2<sup>nd</sup> Submittal DS and Plans (for second submittal (addendum #1)) etc.**

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

**1<sup>st</sup> Submittal DS (for the report of the drainage study)**

**1<sup>st</sup> Submittal Plan 1 (could be the drainage condition maps)**

**1<sup>st</sup> 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: T20S/R61E/33  
AREA M-33