

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: June 6, 2022		
TO: Land Development Services Department of Public Works			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works		
SUBJECT:		Drainage Study for:		COPIES TO:	
		Lamb & Owens Townhomes		Taney Engineering	
Cross Streets:		SWQ of Owens Avenue & Lamb Boulevard		WLCL Lending, LLC	
File Number:		F:\Depot\DSMemos\DS5569A.doc		Bart Anderson, P.E., DevCo	
Parcel Number:		140-30-503-001 and -002; 140-30-520-017 thru -033		CCPW	
Zoning Action:		21-0599-TMP1; 21-0599-ZON1 & 21-0599-VAR1			
FEMA Flood Zone		YES	NO		
Proposed Storm Drain		YES	NO	X	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIE W FEES	FEES PAID Transaction #
1 st Submittal	5/12/2022	6/4/2022	See Comments Below	\$400.00	4785108: \$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. 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.
2. The site is adjacent to the jurisdiction of Clark County to the north. The engineer must coordinate with *Clark County Public Works Department* (CCPW) and incorporate any concerns for boundary conditions along Owens Avenue. CCPW concurrence is required prior to the final approval of the drainage study.
3. The referenced flows in the two adjacent studies to the west (*Innovation at Nellis Station "DS1317"* and *Owens Condominiums "DS921"*) are not adequate. Those studies were done about thirty years ago. The methodology and the rainfall intensity parameters had been changed. As a rough estimate, the 100-year flow rate generated from a basin is about 2.7cfs/acre. The referenced flows of $Q_{100}=18\text{cfs}$ from *Innovation* and $Q_{100}=13\text{cfs}$ from *Owens Condo* are not acceptable in current criteria. Review and revise the *Existing* and *Ultimate Drainage Conditions Maps* and all pertinent hydrologic and hydraulic calculations accordingly in the next submittal.

4. The drainage study for the apartment complex located directly to the east (*Las Fiesta*) must be reviewed to valuate and confirm the ultimate flow condition. Verify the fully developed condition flow of the *La Fiesta* planned which must be larger than the proposed discharge from the subject development.
5. **Existing Conditions Map:** Provide a quality check on basin acreage. For example, XON1 shows 0.8 acre on the summary table but appears as 6.8 acres on the map exhibit. Discrepancy for XON2 also.
6. **HEC-1 Existing Condition** output is labeled as "Developed" in the HEC-1 model output. Revise to match each other.
7. **HEC-1 Developed Condition** basin areas for DON2 and DON3 do not match with *Standard Form 4*. Review and revise accordingly.
8. **Sheet G1:** The 100-year flow in *Owens Avenue* is above the back of sidewalk and is erosive. Provide erosion protection for the landscape area in the form of a stem wall, riprap or approved alternate as required in the *Regional Flood Control District Manual* in Section 904.3. Revise the pertinent grading plans and section details accordingly.
9. Per **Figure 7** and **Sheet G2:** Clearly identify the size of the existing wall opening at the *Concentration Point CDA*. If the existing opening is like 16"x48", then obviously it is not sizeable to convey the proposed flow. Consider to replace the wall opening to a wrought iron fence/gate.
10. **Sheet G2:** Per City policy, the 100-year flow is more than 20cfs, therefore, the proposed drainage easement at CDA must be fully concrete lined. Review and revise accordingly.
11. **Sheet G2:** It appears that a couple proposed parking spaces at the end of the drainage easement need to be eliminated. No parking cars can impede the flow of drainage during a major storm event.
12. **Sheet G3:** Identify clearly the elements between Lots 4 and 5 and adjacent to the south of Lot 22 as *Public Drainage Easement to be Privately Maintained by the HOA*. If the 100-year flow is more than 20cfs, the minimum width of the drainage easement is 20'. The drainage easement must be fully concrete lined. Review and revise all pertinent plans, detail sections and construction notes accordingly.
13. The following garage finish floors do not meet the Hydrologic Criteria and Drainage Design Manual minimum criteria of twice the Q_{100} depth of flow up to 18-inches above the water surface (CCRFCD HCDDM Section 304.4.E.1). The following garage finish floors should be revised, or an alternate flood protection must be provided.

Lot	GFF SHOWN	TC SHOWN	MIN GFF
91	1795.53	1795.48	1795.78

14. Clarify the lot-to-lot drainage design and flow patterns and how the drainage is conveyed between lots. Provide a typical lot drainage detail.
15. Show and label an existing storm drain in *Owens Avenue* with size and *City of Las Vegas* recorded plan number on the grading plan.
16. 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."

17. 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.

18. 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.

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: T20S/R62E/30
AREA N-30