

<b>CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM</b>		<b>DATE:</b> December 18, 2019
<b>TO:</b> Land Development Services Department of Building & Safety		<b>FROM:</b> Jennifer Shinn, P.E. Flood Control, Engr. Associate Department of Public Works
<b>SUBJECT:</b>	Drainage Study for:	<b>COPIES TO:</b>
	<b>Deer Springs – Durango Apartments</b>	Impulse Civil Engineering
<b>Cross Streets:</b>	SWQ of Deer Springs Way and Durango Dr	Deer Springs Durango Apts, LLC
<b>File Number:</b>	F:\Depot\DSMemos\DS05224A.doc	Bart Anderson, P.E., DevCo
<b>Parcel Number:</b>	125-20-301-008, -020	CCRFCD
<b>Zoning Action:</b>	SDR-76995	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	11/26/2019	12/17/2019	See Comments Below	\$400.00	3657908: \$400
<b>TOTAL FEES (LDDRS):</b>				<b>\$400.00</b>	<b>----</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 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 (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 submittals. Follow the link below for specific guidance.

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

2. The site is also adjacent to the Clark County Beltway. The engineer must coordinate with Clark County Department of Public Works (CCPW) and incorporate any concerns for boundary conditions along the south border. CCPW concurrence is required prior to final acceptance of the study.
3. Per SDR-7699, the dedication of Echelon Point Drive as an 80-foot right-of-way is required. Revise plans to show the required right-of-way.
4. Sites with a grade difference of 2 feet above or below existing grades are required to have approval from the *City of Las Vegas 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 *City Planning* approval with the next submittal.

5. Show and label the existing upstream and downstream storm drain systems in Deer Springs. Reference CLV Drawings 107Y-4698 and 107Y4971, respectively.
6. Per the Northwest Neighborhood Study, an 18" RCP shall be extended along the development within Deer Springs Way to tie into the existing upstream and downstream storm drain systems. Revise the plans and provide hydraulic calculations to support the design.
7. The western entrance to the site from Echelon Pointe Drive is not humped a minimum of 6-inches above the Q100 water surface elevation thus allowing offsite flows to enter the site. It appears all the flows in Echelon Pointe will enter the site through this entrance, be conveyed through the drive aisle via valley gutter, and discharge south through the site—not back to Echelon Pointe east as depicted and analyzed. Review and revise the grading plans and hydraulic analyses.
8. The site accepts offsite flows and conveys them through the site via Echelon Pointe Drive public right-of-way. For areas where offsite flows are conveyed through the site and are not contained within the public right-of-way, provide a "Public Drainage Easement to be Privately Maintained" and show the easement on the grading plan. Public drainage easements must be recorded by separate document prior to the final acceptance of the improvement plans unless they are to be recorded by parcel or final map. Note that permanent structures are not allowed in public right-of-ways and public drainage easements.
9. 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 on the final map. The minimum width for a public drainage easement is 10-feet if the 100-year flow is less than 20 cfs.
10. The City Council of the City of Las Vegas adopted an amendment to Title 20 of the Municipal Code in which Section 20.10.030 requires all public drainage easements to be concrete lined. Revise all pertinent plans and construction notes accordingly.
11. The existing flows in Deer Springs overtop the curb and are erosive. It appears landscaping is proposed between the back of curb and sidewalk. 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 grading plan and sections accordingly.
12. It appears there is a potential for the 100-year flows in Deer Springs to overtop the sidewalk and enter onto private property. Provide an onsite public drainage easement for the areas where offsite flows are not contained within the right-of-way and are conveyed onsite. In addition, provide grades to demonstrate the site is flood protected along Deer Springs.
13. The following finish floors do not meet the Regional Flood Control District minimum criteria of twice the  $Q_{100}$  depth of flow up to 18-inches above the water surface elevation (CCRFCD Manual Section 304.4.E.1) or 6-inch minimum above the highest adjacent top of curb (CCRFCD Manual Section 1602 304.4.E.1). The following finish floors should be revised or alternate flood protection provided
 

Building #	FF Shown	Min FF
Building 1	2587.9'	2590.00' (High Side TC in Deer Springs) + 6" = 2590.50'
14. Provide additional FlowMaster sections for the drive aisles where the offsite flows from Echelon Pointe appear to be conveyed through the site
15. Locate the building roof drains and provide a drainage path for the discharge.
16. The plans call out for the existing chain link fence along the southern property line to be removed and replaced with wall and wrought iron fencing. Provide a connection for the existing chain link fence to the proposed wall/wrought iron fence.
17. Provide detailed grading for the valley gutter tying into the existing channel.
18. Call out the wrought iron fence detail at the southern discharge point.

19. There appears to be a low point at the grade break along the drive aisle east of Building 2, just south of the southern entrance. Review and revise accordingly.
20. Provide grading in the landscape areas at the entries. Landscape areas are not allowed to drain over the sidewalk. Provide flow lines with grades and sidewalk under drains for all landscape areas draining to the street. Revise all pertinent details and call outs accordingly.
21. The wrought iron fence proposed on the western edge of the site at Echelon Pointe Drive must utilize RTC Uniform Standard Drawing 425.S1.

**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**

JKS

T/R/S: T19S/R60E/S20

AREA G-20