

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: January 10, 2023
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for:	COPIES TO:
Centennial Durango - Phase 3		Southwest Hydrology & Hydraulics
Cross Streets:	NEC of Centennial Parkway & Kevin Way	Copper Cart, LLC
File Number:	F:\Depot\DSMemos\DS5638A.doc	Bart Anderson, P.E., DevCo
Parcel Number:	125-20-402-015, 008 & 125-20-499-007, 012	CCPW
Zoning Action:	22-0615-MOD1; 22-0615-SDR1; 22-0615-TMP1; 22-0615-SUP1 to -SUP4 & 22-0615-ZON1	
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES X	NO

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	12/22/2022	1/10/2023	See Comments Below	\$400.00	5081952: \$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.

- Per Item #18 of 22-0615-SDR1 conditions, quote: "Contact the City Engineer's Office at 702-229-6272 to coordinate the development of this project with the <Gowan Road North El Capital Branch – Ann Road to Centennial Parkway>, the <Centennial Parkway – Alpine Ridge Way to Durango Drive> project and any other public improvement projects adjacent to this site. Comply with the recommendations of the City Engineer" – end quote.
- The site is adjacent to the Clark County Beltway project. The engineer must coordinate with *Clark County Public Works Department (CCPW)* and incorporate any concerns for boundary conditions along the north border. CCPW concurrence is required prior to final acceptance of the study.
- The development is also adjacent to the jurisdiction of Clark County to the west and to the south. Concurrence from *Clark County Public Works Department* must be obtained prior to the final approval of the drainage study.
- Figure 5 (Existing Conditions Hydrology):** The area of Basin XF2A is comparable to Basin DF2B. However, the acreage shown in the *Existing Storm Flow Summary Table* as 0.2 acre and 3.6 acre is seemingly not correct. Revise the area of *Basin XF2A* in all drainage maps and double check all the subsequent hydrologic and hydraulic calculations and results in the next submittal.

5. **Figure 5 (Existing Conditions Hydrology):** Show and identify existing storm drain facilities. For example, existing 3' x 3' grate drop inlet and 18" RCP at the northwest corner of the site.
6. Per the proposed diversion of offsite flows, in the developed condition, there is 9 cfs of additional flow that is conveyed to *Centennial Parkway* via *Kevin Way*. Provide hydraulic analysis for the impacts of this additional flow to *Centennial Parkway*.
7. In the developed condition offsite basin **DF1** and combination point **C5** is shown to divert into *Kevin Way*. However, per the grading plans there is no grade break, flowline, or grading feature that would prevent the flow from splitting into the flowline that runs along the north of the site. Provide updated hydrologic analysis that represents a flow split or update the grading plans to prevent C5 flow from splitting.
8. **Figure 7 - Hydraulics Summary: Cross Section D/U H9** is analyzed in the flow master but not included in the flow depth summary table. Revise accordingly.
9. **Developed Conditions HEC-1:** In the *Schematic Diagram of System Network* is showing the routing for Basin **DN4** longer than **DN1B** to get to combination point **C2**, however it should be the opposite, as **DN4** is located closer to **C2** than **DN1B**.
10. **Developed Conditions HEC-1:** Basin areas for **DN4** and **DF2A** do not match **Standard Form 4**.
11. Provide a copy of the Final Map of the commercial subdivision in the next submittal. The Final Map shall contain the following statement: **"ALL SUBDIVIDED PARCELS COMPRISING THIS COMMERCIAL SUBDIVISION SHALL PROVIDE PERPETUAL INTERSITE COMMON DRAINAGE RIGHTS ACROSS ALL EXISTING AND FUTURE PARCEL LIMITS"**.
12. **Sheet C2.01:** Identify and delineate the proposed drainage easement located at the cul-de-sac of *Kevin Way*. Provide a cross section for the easement which must be concrete lined.
13. **Sheet C2.01:** All drainage easements must be public drainage easements to be privately maintained by the property owner.
14. **Sheet C2.01:** Provide a sidewalk underdrain at the cul-de-sac of *Kevin Way* for low flow discharge from the concrete drainage easement.
15. **Sheet C2.01:** Properly indicate there is a grate break/HP where the slope split in the grading plan southwest of the site.
16. **Sheet C2.01:** It is not clear how the area around the **EX. BLDG. C** drains. Provide more grade elevations in the vicinity of **BLDG. C** to verify positive drainage away from the building in the next submittal.
17. **Sheet C5.01:** Verify the Finish Floor elevation shown in *Detail Cross Sections D, E and F* match the finished floors shown on the grading plans. For example, *Detail Cross Section D* shows FF=1858.30 and grading plans show FF=2558.30.
18. **Sheet C5.01:** Revise the note for the retaining wall on *Detail Cross Section G* to add **"3-COURSE SOLID GROUTED CMU WALL"**.
19. Provide a note on the grading plan to state that the proposed NDOT Type 2A inlet at the northeast corner of the site is privately owned and to be privately maintained by the property owner.
20. Provide BMP design calculations and BMP facilities such as landscape swales or sand/oil interceptors for the proposed site parking lot and LIDs per Section 1500 from the *Clark County Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual*.
21. Provide a note 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/20
AREA G-20