

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: February 22, 2024
TO: Land Development Services Department of Building & Safety		FROM: Tyler Key Flood Control Engineering Associate Department of Public Works
SUBJECT:	Drainage Study for:	COPIES TO:
Kyle Canyon Gateway West		KBHome
Cross Streets:	Alpine Ridge Way & Rockey Ave	Westwood
File Number:	F:\Depot\DSMemos\DS05713B.doc	NDOT
Parcel Number:	126-01-601-(001-006)	
Zoning Action:	23-0239-ZON1, 23-0239-MOD1, 23-0239-VAC1, 23-0239-SDR1, 23-0239-TMP1	
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	10/26/2023	11/9/2023	Not Approved	\$400	5494441: \$400
2 nd Submittal	1/29/2024	2/22/2024	See Comments Below	\$400	5608737: \$400
TOTAL FEES (LDDRS):				\$800	----

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.

The following are comments pertaining to the subject site specific drainage study and grading plans:

1. An approved Technical Drainage Study Update for the Kyle Canyon Gateway East development, regarding the interim storm drain facilities, is required upon final approval of this development.
2. The project requires NDOT concurrence prior to drainage study approval. The project proposes to increase flows within *Nevada Department of Transportation (NDOT)* right-of-way.
3. The ultimate condition will require a drainage study update to facilitate the required modifications to the interim storm drain system to meet the intent of the MPU.
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. The improvement plans show improvements within a Patent Easement (*Alpine Ridge Way*). The engineer must supply the *City of Las Vegas ROW* section with patent easement documents, legal descriptions and coordinate a Declaration of Utilization with the *City of Las Vegas ROW* prior to approval of improvement plans.

6. The grading plan indicates offsite grading. Secure a notarized letter of permission from the property owner allowing the grading. This letter is required prior to final acceptance of the drainage study.
7. Structural plans for the storm drain improvements must be submitted for review. Provide a soils report, structural calculations and specifications, two wet stamped structural sets, and a grading plan to the *Building Department* for processing. The engineer must provide a copy of *Building Department* approval of the structures to *Flood Control* prior to final acceptance of the drainage
8. The project proposes to build a temporary drainage facility at (Alpine Ridge Way). Prior to final plan approval the developer must complete a maintenance and liability agreement for the interim drainage improvements (off-site berms or channels and detention basin) and post a minimum maintenance bond of \$50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facility and an exhibit that adequately shows the location and limits of the drainage facility to *City of Las Vegas Flood Control* for approval. Once the drainage study is conditionally approved, the engineer should contact the City's Land Development Section (229-6371) to begin the agreement process.

In order for the maintenance bond to be released in the future, a drainage update / letter will be required to justify that the offsite berms / channels are no longer necessary and can be removed.

9. Provide conceptual details for junction structures in the next submittal. Full junction structure will need approval from Flood Control prior to the approval from the Building and Safety Division. **Sheet PP-18:** Grading Note SD7 & SD11 does not provide a sheet number for the structural details. Provide the sheet number of where the structural details of the junction structure are located.
10. During the interim phase, all interim facilities are to be maintained by the master developer.
11. The proposed detention basin must be designated as "Flood Control Right-of-Way."
12. Update the solid grouting note for Section 13 on Sheet D2 to read, "8-inch minimum solid grouted CMU block three courses above the highest adjacent finish grade with all joints mortared," where three coursed is 18-inches or twice the depth above the calculated water surface elevation.
13. **Exhibit I:** Show the changes of rerouting 1 cfs on Section 2, as the proposed flow in Section 2 still shows that it is over capacity.
14. **Exhibit I:** Provide a cross section of the interim valley gutter and Piton Anchor St to show the hydraulic analysis of these areas.
15. **Exhibit I:** Add a cross section C3 for the north end of the rip-rap channel to show the 9.90% slope.
16. The north side of Arete Avenue is still called out as roll curb. Extend the L-curb to the property line between Lots 13 and 14. Use Standard Drawing 223 for the driveways of the affected lots.
17. **Unit 1: Sheet G-1 and G-4:** The proposed cutoff wall is now blocking the flow of the proposed channel from entering the storm drain system. Review and revise accordingly.
18. **Sheet PP-19:** Provide 18" minimum separation between sanitary sewer, storm sewer and water lines. Where crossing have less than 18" of separation, provide mitigation per DCSWCS.
19. There are two low flow channels in the detention basin to mitigate the nuisance flow. With the steep longitudinal slope, the low flow channel cannot contain the high inflow velocity at the bottom of the detention basin. Add additional erosion protection at the bottom of the 30" RCP inlet pipe.
20. The elevation difference of the detention basin is approximately 8 ft. A fence is required for safety and is shown on grading plans, but not in the detailed cross sections. Add fencing callouts to the detailed cross sections for clarity.
21. Clearly identify the emergency spillway on Exhibit I and the detention basin sheets. Provide cross sections and detail at the emergency spillway location.

***** 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:

1st Submittal DS and Plans (for first and original submittal);

2nd Submittal DS and Plans (for second submittal (addendum #1)) etc.

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

1st Submittal DS (for the report of the drainage study)

1st Submittal Plan 1 (could be the drainage condition maps)

1st 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

T/R/S: T19S/R590E/S1
AREA F-01