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| CITY OF LAS VEGAS | | DATE: |
| INTER-OFFICE MEMORANDUM | | December 21, 2022 |
| TO: Land Development Services Department of Building & Safety | | FROM: Caitlyn Alcantara, P.E. <i>CA</i> Engineering Associate Department of Public Works |
| SUBJECT: | Drainage Study for: | COPIES TO: |
| Durango and 95 – Parcel 3 | | Rick Engineering Company |
| Cross Streets: | Rancho Drive & U.S. 95 and Durango Drive | Durango MB Partners LLC |
| File Number: | F:\Depot\DSMemos\DS5616B.doc | Bart Anderson, P.E., DevCo |
| Parcel Number: | 125-17-702-001 | |
| Zoning Action: | 22-0373-VAR1 & 22-0373-SDR1 | |
| FEMA Flood Zone | YES | NO X |
| Proposed Storm Drain | YES | NO X |

| HISTORY | DATE RECEIVED | DATE REVIEWED | COMMENTS | REVIEW FEES | FEES PAID Payment Trn # |
|----------------------------|---------------|---------------|--------------------|--------------|----------------------------|
| 1 st Submittal | 10/20/2022 | 11/1/2022 | Not Approved | \$400 | 5004392:\$400 |
| 2 nd Submittal | 11/30/2022 | 12/21/2022 | See Comments Below | \$400 | 5062175:\$400 |
| TOTAL FEES (LDDRS): | | | | \$400 | ---- |

REMARKS:

The Drainage Study for the subject project has been reviewed and:

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| | 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 grading plan indicates offsite grading north. Secure a notarized letter of permission from the property owner, Farm & Durango Investors LLC, allowing the grading. This letter is required prior to final acceptance of the drainage study.
- It is unclear where the *Nevada Department of Transportation* (NDOT) right-of-way easement begins and ends. The engineer must decipher who will dedicate the easements on the property. Contact NDOT for concurrence of the proposed project.
- Figure 9 - Future Conditions Drainage Map:** Label where the concentration points are occurring on the exhibit.
- The R-type curb is not properly modeled in the FlowMaster section. The lip of the curb is at 1.5" not 1", the flow line raises by 1" after the zero elevation, and the section should not dip down at the back of the curb. It is noted that the change will not affect the drainage of the system, however, in the future and on the next submittal use agency approved Uniform Standard Drawings (Residential Curb & Gutter, R-Type, DWG NO. 217.3.S1).
- Provide an emergency overflow computation for the backyard wall openings.
- List the lower end of the sloped garage finished floor as all of the garage finished floor must be protected. Also provide garage finished floor computations verifying that all garage finished floors are protected against twice the depth of flow.

7. Label the existing pipes below the US 95 NE off ramp. Show the pipe, size of pipe, and the plan number on both the exhibits and the improvement plans.
8. **Sheet 7:** On the west end of the cul-de-sac of Private Drive A, a small portion of C.E. "F" drains west to the wall. Review and revise accordingly.
9. **Sheet 7:** In the southern corner of the project site there are what looks like three line types overlapping with each other. Clean up the improvement plans.
10. **Sheet 8, Detail J:** Make the provided wall opening 16" X 24" instead of 12" X 24".
11. The following comments apply to **Sheet 8, Section P:**
 - a. **Note 2:** List Detail J, Sheet 8 in this note.
 - b. **Note 4:** Point directly to the pipe to ensure clarity for those referencing the detail.
 - c. **Note 4:** Explain why it is noted as '4" Area (Corrugated Flex Drain)'. Should it be noted as 4" Corrugated Flex Drain?
 - d. **Note 5:** Is there only one outlet to both flex drains? If so, please show what precisely is happening at the flex drain outlet.
 - e. Clarify what the "top" elevation is provided with the "FL" elevation.
12. **Sheet 10, Section V:** The detail references Detail J on Sheet 10 but Detail J is on Sheet 8. The section also mentions a 16" X 48" wall opening but the wall opening mentioned is 16" X 24". Review and revise accordingly.
13. The two computations for the southern block wall openings of basins FN3 and FN4, state that it is 16" X 24", but the plan marks both block wall opening as 16" X 48". Review and revise accordingly. Note that the "Sideyard Block Wall Opening", Detail J, may only apply to the backyard of the lots for emergency overflow, not as the main course of flow.
14. In the construction notes, the listed dimension of the wall opening is only the width, show both dimensions of the wall openings in the construction notes.
15. Make the line type consistent on the improvement plans. The existing pipes, contours, and contour labels should be dashed and/or faded.
16. Show the project boundary with the right line type on the improvement plans.
17. The cross fall on the interior streets create a pond on the upper curb of the section in certain areas. One of those areas is the south end of the parking area draining north and the other is the north half of Private Street B intersecting with the entrance and Private Drive A. Create and show a design that will properly drain the nuisance flow and not create a pond.
18. The current four inch storm drain is likely to become clogged and will require frequent cleaning. Upsize the 4" area drain inlets and corrugated flex drain to 8" area drain inlets and corrugated flex drain.
19. On the northern boundary of the project site, the project site is retaining soil and is therefore lower than existing ground. Provide three courses of solid grout on the northern wall, Section E.
20. Lots 1 – 4 according to Detail Q drains like the 3-plexes, however, it does not state how the backyard of Lots 1 and 2 drain nor does it look like a drainage easement is provided for Lot 2 or 3 to drain.
21. At the west end of Private Drive B there is what looks to be a low point with nowhere to escape. Review and revise accordingly.
22. 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.

23. The following comments apply generally to the improvement plans:

- a. Show if there are walls between lots. If so, provide wrought iron gates in their place so we many have access to the drainage easement.
- b. Correct grading of C.E. C and define why there is two sections if there is one slope.
- c. Show the sections U, V, W, and X on the plan view of the improvement plans.
- d. Label the longitudinal slope of the easements so we may determine if the flow is erosive.
- e. Label the proposed contours all pages.

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/CAA/AYS

T/R/S: T19S/R60E/S17
AREA G-17