



Addendum to the Technical Drainage Study

for

DEER SPRINGS EULA

Date Prepared:
September 2022

Prepared for:
Greystone Nevada, LLC
9725 W. Russel Road
Suite 400
Las Vegas, NV 89148

Prepared by:
Kimley-Horn and Associates, Inc.
6671 Las Vegas Boulevard South, Suite 320
Las Vegas, NV 89119
702.862.3600

Kimley»»Horn

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Deer Springs Eula Date: September 2022

Location of Development: a) Descriptive (Cross Streets) North/South: Eula Street

East/West: Deer Springs Way

b) Section: 19 Township: 19 Range: 60

c) APN : 125-19-202-007

Name of Owner: Greystone Nevada, LLC

Telephone No.: N/A Fax No.: N/A E-Mail Address: _____

Address: 9725 W. Russell Rd. Suite 400 Las Vegas, NV 89148

Contact Person-Name: Michael Schwab, P.E. Telephone No.: 702.790.0206

* E-Mail Address: michael.schwab@kimley-horn.com Fax No.: N/A

Firm: KIMLEY-HORN

Address: 6671 Las Vegas Boulevard South, Suite 320 Las Vegas, NV 89119

Type of Land Development/Land Disturbance Process:

<input type="checkbox"/> Rezoning	<input type="checkbox"/> Subdivision Map	<input type="checkbox"/> Clearing and Grading Only
<input type="checkbox"/> Parcel Map	<input checked="" type="checkbox"/> Planned Unit Development	<input checked="" type="checkbox"/> Other (Please specify below)
<input type="checkbox"/> Large Parcel Map	<input type="checkbox"/> Building Permit	GRADING PERMIT

1. Total Owned Land Area: At Site: +/- 5.09 acres Being Developed/Disturbed: +/- 5.09 acres

2. Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? Yes** No

3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? Yes** No

4. Proposed type of development (Residential, Commercial, Etc.): Residential

5. Approximate upstream land area which drains to the subject site: +/- 0 sq-mi

6. Has the site drainage been evaluated in the past? YES NO If yes, please identify documentation: _____

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: 1. Eula Street 2. Deer Springs Way

8. Briefly describe your proposed schedule for the subject project: ASAP

Submit this form as part of the required drainage study to the local entity which has jurisdiction over the subject property. This form may provide sufficient information to serve as the Conceptual Drainage Study.

***New Required Field**

****Review and concurrence of the Clark County Regional Flood Control District is required.**

	Revision	Date

Engineer's Seal

Local Entity File No.

REFERENCE:

STANDARD FORM 1



September 1, 2022

Mr. Albert Sung, P.E.
City of Las Vegas – Flood Control Division
495 S. Main Street
Las Vegas, NV 89101

RE: *Addendum to the Technical Drainage Study for Deer Springs Eula*

Dear Mr. Sung

This letter certifies that all items provided on the *Addendum to the Technical Drainage Study for Deer Springs Eula* electronic submittal matches the paper version bound into the study.

With Kimley-Horn, you should expect more and will experience better. Please contact me at (702) 790-0206 or michael.schwab@kimley-horn.com should you have any questions or concerns.

Sincerely,

Michael E. Schwab, P.E.

David Harvey, P.E.

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: August 23, 2022
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: Deer Springs Eula	COPIES TO: Kimley Horn & Associates
Cross Streets:	NWC of Deer Springs Way & Eula Street	Greystone Nevada, LLC
File Number:	F:\Depot\DSMemos\DS5599A.doc	Bart Anderson, P.E., DevCo
Parcel Number:	125-19-202-007	CCPW
Zoning Action:	22-0084-TMP1; 22-0084-GPA1; 22-0084-ZON1; 22-0084-VAC1 & 22-0084-VAR1	
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	8/2/2022	8/22/2022	See Comments Below	\$400.00	4895166: \$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. Provide a copy of the zoning/planning conditions associated with this site (**22-0084-TMP1; 22-0084-GPA1; 22-0084-ZON1; 22-0084-VAC1 & 22-0084-VAR1**) with the next submittal to verify compliance with conditions. *Flood Control* will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the *City Council*). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.
2. The site is adjacent to the jurisdiction of *Clark County* to the east. The engineer must coordinate with *Clark County Public Works Department* (CCPW) and incorporate any concerns for boundary conditions along the east boundary. CCPW concurrence is required prior to the final approval of the subject drainage study.
3. 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.

4. *Standard Form 1* has all "Township", "Range" and "Section" numbers wrong.
5. *Standard Form 1*: Line Item #3: The subject site is NOT bordered or crossed by any existing or proposed *Clark County Regional Flood Control District Master Planned Facility* as indicated on the form.
6. *Standard Form 1*: Line Item #4: Wrong type of development is listed on the form. Review and revise in the next submittal.
7. *Standard Form 1*: Line Item #7: It is indicated that a 24"-RCP storm drain in *Main Street* is the proposed discharge point of runoff from the site. Where is *Main Street*?
8. The high number of errors as listed in the above Comments #4 to #7 on one single form is not acceptable. Provide better QA/QC in the future submittal.
9. **Sheet GD1**: Label an existing public drainage easement to the north with *City of Las Vegas* recorded document number on the plan.
10. **Sheet GD2**: Label the slope in the southern cul-de-sac of *Denton Ct.* Note that the slope in the cul-de-sac is 1% minimum.
11. **Sheet GD2**: Provide a sidewalk underdrain between the proposed public drainage easement and *Deer Springs Way*.
12. **Sheet GD2**: Label clearly the proposed public drainage easement (privately maintained by HOA) as a COMMON LOT also.
13. **Sheet XS**: The 100-year flow in *Deer Springs Way* is above the top of curb and erosive. Provide erosion protective measures in the landscape strip behind the curb in *Section Details E/XS, N/XS and Q/XS*.
14. **Sheet PP4** and **Sheet PP5**: Normally overpaving beyond the centerline is required in street improvements which is not the case in the proposed plan & profile sheets. Consult with *City Land Development Section* for overpaving requirement prior to the final approval of the drainage study.
15. 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.
16. 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.
17. Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (*Stormwater Quality Management Stamp and Sign Detail*).

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
AYS

T/R/S: T19S/R60E/19
AREA G-19

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August 23, 2022

City of Las Vegas
Flood Control – Dept. of Public Works
495 S. Main Street
LV NV 89101

RE: Technical Drainage Study for Deer Springs Eula

To: Albert Y. Sung, P.E.

This is being submitted in response to comments dated August 23, 2022. These comments have been reviewed and are addressed as follows:

Comment 1: Provide a copy of the zoning/planning conditions associated with this site (22-0084- -TMP1; 22-0084-GPA1; 22-0084-ZON1; 22-0084-VAC1 & 22-0084-VAR1) with the next submittal to verify Compliance with conditions. Flood Control will not issue conditional approval of the drainage study without the associated zoning/planning conditions (issued by the City Council). Any associated conditions of approval that revise the site drainage parameters will require that the drainage study be revised and resubmitted.

Response: The planning conditions have been included in **Appendix A**.

Comment 2: The site is adjacent to the jurisdiction of Clark County to the east. The engineer must coordinate with Clark County Public Works Department (CCPW) and incorporate any concerns for boundary conditions along the east boundary. CCPW concurrence is required prior to the final approval of the subject drainage study.

Response: Noted.

Comment 3: 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.

Response: A letter justifying the grade difference has been submitted to the City Planning Department and has been approved. The approved justification letter can be found in **Appendix A**.

Comment 4: Standard Form 1 has all “Township”, “Range” and “Section” numbers wrong.

Response: Standard Form 1 has been revised to show the correct “Township”, “Range”, and “Section”.

Comment 5: Standard Form 1: Line Item #3: The subject site is NOT bordered or crossed by any existing or proposed Clark County Regional Flood Control District Master Planned Facility as indicated on the form.

Response: Standard Form 1 has been revised to correctly indicate that the subject site is NOT bordered or crossed by any existing or proposed CCRFCF facilities.

Comment 6: Standard Form 1: Line Item #4: Wrong type of development is listed on the form. Review and revise in the next submittal.

Response: Standard Form 1 has been revised to correctly indicate the development type as “Residential”.

Comment 7: Standard Form 1: Line Item #7: It is indicated that a 24”-RCP storm drain in Main Street is the proposed discharge point of runoff from the site. Where is Main Street?

Response: Standard Form 1 has been revised to correctly state the proposed discharge points of runoff from the site to be Eula Street and Deer Springs Way.

Comment 8: The high number of errors as listed in the above Comments #4 to #7 on one single form is not acceptable. Provide better QA/QC in the future submittal flow.

Response: Agreed.

Comment 9: Sheet GD1: Label an existing public drainage easement to the north with City of Las Vegas recorded document number on the plan.

Response: Existing public drainage easement has been labeled with City of Las Vegas recorded document number on the plan.

Comment 10: Sheet GD2: Label the slope in the southern cul-de-sac of Denton Ct. Note that the slope in the cul-de-sac is 1% minimum.

Response: The slopes in the southern cul-de-sac were less than 1%, but have been revised and labeled to be a minimum of 1% slope. Pertinent hydraulic sections affected by this grading change have been revised and are included in **Appendix B**. The hydraulic sections summary tables on **Figure PRO** have been revised. **Figure PRO** can be found in **Appendix A**.

Comment 11: Sheet GD2: Provide a sidewalk underdrain between the proposed public drainage easement and Deer Springs Way.

Response: A sidewalk underdrain has been provided between the public drainage easement and Deer Springs Way.

Comment 12: Label clearly the proposed public drainage easement (privately maintained by HOA) as a COMMON LOT also.

Response: The proposed public drainage easement has also been labeled as a common element. Refer to the plans in **Appendix C**.

Comment 13: Sheet XS: The 100-year flow in Deer Springs Way is above the top of curb and erosive. Provide erosion protective measures in the landscape strip behind the curb in Section Details E/XS, N/XS and Q/XS.

Response: Erosion protective measures have been added to the landscape strip behind the curb along Deer Springs Way. This is reflected on sheet XS in the Improvement Plans located in **Appendix C**. Riprap calculations are provided in **Appendix B**.

Comment 14: Sheet PP4 and Sheet PP5: Normally overpaving beyond the centerline is required in street improvements which is not the case in the proposed plan & profile sheets. Consult with City Land Development Section for overpaving requirement prior to the final approval of the drainage study.

Response: We are sawcutting the existing 32' minimum width access road at centerline and doing half street improvements on the west side of Eula Street. The remaining existing overpave on the east side of Eula Street will be a minimum of 15.8' wide and is in good working condition.

Comment 15: 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.

Response: Table showing quantity estimate of all drainage improvement within Public Drainage Easements has been provided sheet GD0. The improvement plans are located in **Appendix C**.

Comment 16: 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.

Response: This had been labeled on the grading plans.

Comment 17: Add a note in all pertinent sheets for the construction of all storm drain drop inlets per a newly adopted USDCCA Drawing No. 421 (Stormwater Quality Management Stamp and Sign Detail).

Response: There are no proposed drop inlets associated with this project.

With Kimley-Horn, you should expect more and will experience better. Please contact me at (702) 790-0206 or Michael.schwab@kimley-horn.com should you have any questions or need any additional information.

Sincerely,

Michael Schwab, P.E.
Project Manager

David Harvey, P.E.

LIST OF APPENDICES

Appendix A – Documents & Figures

- PRO Proposed Condition Basin Map
- Approved Zoning/Planning Conditions
- Grading Justification Letter

Appendix B – Hydraulic Calculations

- Hydraulic Sections – Streets
- Hydraulic Sections - Onsite
- Hydraulic Sections - Easement
- Finished Floor Calculations
- Riprap Calculations

Appendix C – Improvement Plans

Appendix D – Data CD