

# ADDENDUM#1 TO THE TECHNICAL DRAINAGE STUDY FOR CHALLENGER AT LONE MOUNTAIN

**Project Number:** NV-2024-0154

**Prepared For:** Challenger School  
9424 S 300W  
Sandy, UT, 84070

**Prepared By:** Horrock LLC  
1401 N Green Valley Pkwy., Ste 160  
Henderson NV, 89074

**Date:** March 18, 2025

**Submitted To:** City of Las Vegas Department of Public Works

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL  
**DRAINAGE STUDY INFORMATION FORM**

Name of Development: CHALLENGER AT LONE MOUNTAIN Date: 03-18-2025  
 Location of Development: a) Descriptive (Cross Streets) North/South: Hualapai Way  
 East/West: Gowan Road  
 b) Section: 07 Township: 20S Range: 60E  
 c) APN : 138-07-301-036

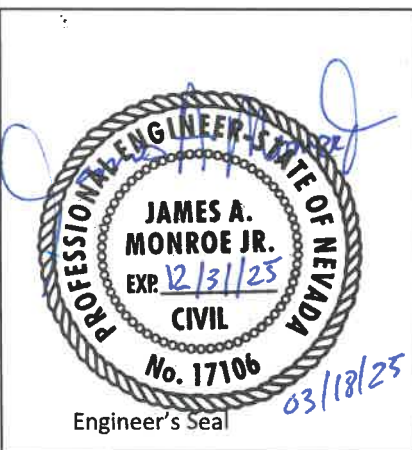
Name of Owner: CHALLENGER SCHOOL  
 Telephone No.: 801-569-2700 Fax No.: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_  
 Address: 9424 S 300 W, Sandy, UT, 84070

Contact Person-Name: Olivia Sorenson Telephone No.: 385.488.5486  
 \* E-Mail Address: Olivia.sorenson@horrocks.com Fax No.: \_\_\_\_\_  
 Firm: Horrocks Engineers  
 Address: 4246 S Riverboat Rd., Ste 200, Salt Lake City, UT, 84123

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 type="checkbox"/>	Other (Please specify below)
<input type="checkbox"/>	Large Parcel Map	<input type="checkbox"/>	Building Permit	<input type="checkbox"/>	

1. Total Owned Land Area: At Site: 22.3+/- acres Being Developed/Disturbed: 1.65+/- 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.): Commercial - (School)  
 5. Approximate upstream land area which drains to the subject site: 0 acres  
 6. Has the site drainage been evaluated in the past?  YES  NO If yes, please identify documentation:  
Shiloh Christian School - DS 2128 (Original Study) CLV Police Park - DS 5673  
 7. If known, please briefly identify the proposed discharge point(s) of runoff from the site:  
CLV Police Park and Gowan Road  
 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

Local Entity File No. \_\_\_\_\_

REFERENCE:

STANDARD FORM 1

DS 05837A

March 18, 2025

Neil Wacaser, PE  
City of Las Vegas Department of Public Works  
495 S Main St  
Las Vegas, NV, 89101

**RE: Addendum #1 to the Technical Drainage Study for Challenger at Lone Mountain**

Dear Mr. Wacaser,

The purpose of this letter is to address your comments dated March 10, 2025, regarding the above-referenced project. The comments are individually addressed as follows:

**COMMENT:** “1. Show the existing improvements on the existing condition drainage map.”

**RESPONSE:** The existing improvements have been incorporated into the existing condition drainage map with addition of aerial imagery. Refer to revised Figure 5 attached to this letter.

**COMMENT:** “2. Ensure that all surface types are represented by a unique hatch pattern. For example, at the west side of sheet CG101, construction note 13 indicates “playground access section 2/CP502”. The playground access section appears to consist of two separate surface types. Provide a corresponding hatch for each individual surface type. Also, ensure that all hatch patterns used are shown in the hatch pattern legend on sheet G003 (3 of 17) and are the same scale and line weight as the corresponding hatch patterns used in the rest of the plans.”

**RESPONSE:** A unique hatch pattern has been provided for each surface type on the plans. Additionally, it has been confirmed that all hatch patterns used are now shown in the hatch pattern legend on sheet G003 with the same scale and line weight as corresponding hatch patterns used in the rest of the plans.

**COMMENT:** “3. Note #2 on sheet CU101 for the storm drain pipe & trench directs to detail 2 on sheet CP503. Said detail 2 then shows a 3" bituminous surface on one side of the trench and backfilled & compacted excavated material on the other side of the trench. The plan view of the same area on sheet CU101 and sheet GC101 do not show the difference in the two surfaces. Provide clarification on the plans regarding the finished surface of the trench.”

**RESPONSE:** The typical trench detail 2 on sheet CP503 has been modified to keep the surface



general with a note to see plans for surface materials.

**COMMENT:** “4. Label FFE of adjacent existing buildings.”

**RESPONSE:** The FF for adjacent building has been labeled on the plans.

**COMMENT:** “5. 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 submittal. Follow the link below for specific guidance.”

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

**RESPONSE:** Upon conditional approval of the study by CLV, the study will be submitted to CCRFCD for concurrence. We appreciate the link provided for specific guidance.

**COMMENT:** “6. The City of Las Vegas does not allow HDPE pipe in public right-of-ways or public drainage easements. Note that City of Las Vegas only allows the use of HDPE storm drain pipes for privately owned and privately maintained storm drain systems which serve and are located exclusively on private properties. Any proposed HDPE storm drain pipes must also meet all design criteria established by the Clark County Regional Flood Control District and must be installed per Clark County Regional Transportation Commission Uniform Standard Drawings and Specifications.”

**RESPONSE:** Noted. All proposed HDPE storm drain will be privately owned, privately maintained and located exclusively on private property. A note has been added to the plans that stated all HDPE storm drain pipes will be installed the manufacturer’s specifications. Additionally, the trenching detail has been revised to not include HDPE since pipe will be installed per the manufacturer specifications.

**COMMENT:** “7. Provide the latest stormwater management note on the next submittal. Contact CLV Flood Control for a copy of the correct notes if necessary.”

**RESPONSE:** The latest stormwater management notes have been updated on revised Sheet G002.



If you have any questions or require additional information, please contact our office at 702-966-4063.

Cordially,  
Horrocks, LLC

James A. Monroe Jr., PE, LEED AP  
Senior Engineer

c: Reed Scow, Horrocks, LLC  
Olivia Sorenson, Horrocks, LLC  
Sal Limbu, Horrocks, LLC



# Attachments

CLV Comment Letter

Figure 5 – Existing Condition Drainage Map

Grading Plans



CLV Comment Letter

<b>CITY OF LAS VEGAS</b>		<b>DATE:</b>	
<b>INTER-OFFICE MEMORANDUM</b>		<b>March 10, 2025</b>	
<b>TO:</b> Land Development Services Department of Building & Safety		<b>FROM:</b> Neil Wacaser, P.E. <i>NW</i> Sr. Engineering Associate Department of Public Works	
<b>SUBJECT:</b>	Drainage Study for:	<b>COPIES TO:</b>	
<b>Challenger at Lone Mountain</b>		Horrocks Engineers	
<b>Cross Streets:</b>	Hualapai Way & Gowan Road	Challenger School	
<b>File Number:</b>	F:\Depot\DSMemos\DS05837A.doc		
<b>Parcel Number:</b>	138-07-301-036		
<b>Zoning Action:</b>			
<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	01/27/2025	02/26/2025	See Comments Below	\$400	\$400
<b>TOTAL FEES (LDDRS):</b>				<b>\$400</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 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. Show the existing improvements on the existing condition drainage map.
2. Insure that all surface types are represented by a unique hatch pattern. For example, at the west side of sheet CG101, construction note 13 indicates "playground access section 2/CP502". The playground access section appears to consist of two separate surface types. Provide a corresponding hatch for each individual surface type. Also, insure that all hatch patterns used are shown in the hatch pattern legend on sheet G003 (3 of 17) and are the same scale and line weight as the corresponding hatch patterns used in the rest of the plans.
3. Note #2 on sheet CU101 for the storm drain pipe & trench directs to detail 2 on sheet CP503. Said detail 2 then shows a 3" bituminous surface on one side of the trench and backfilled & compacted excavated material on the other side of the trench. The plan view of the same area on sheet CU101 and sheet GC101 do not show the difference in the two surfaces. Provide clarification on the plans regarding the finished surface of the trench.
4. Label FFE of adjacent existing buildings.
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Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

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

6. The City of Las Vegas does not allow HDPE pipe in public right-of-ways or public drainage easements. Note that City of Las Vegas only allows the use of HDPE storm drain pipes for privately owned and privately maintained storm drain systems which serve and are located exclusively on private properties. Any proposed HDPE storm drain pipes must also meet all design criteria established by the Clark County Regional Flood Control District and must be installed per Clark County Regional Transportation Commission Uniform Standard Drawings and Specifications.
7. Provide the latest stormwater management notes on the next submittal. Contact CLV Flood Control for a copy of the correct notes if necessary.

**\*\*\* 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:**

**1<sup>st</sup> Submittal DS and Plans (for first and original submittal);**

**2<sup>nd</sup> Submittal DS and Plans (for second submittal (addendum #1)) etc.**

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

**1<sup>st</sup> Submittal DS (for the report of the drainage study)**

**1<sup>st</sup> Submittal Plan 1 (could be the drainage condition maps)**

**1<sup>st</sup> 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.

**END OF REMARKS**

HDR/nw

T/R/S: T20S/R60E/S07  
AREA L-07



Figure 5 – Existing Condition Drainage Map



**LEGEND**

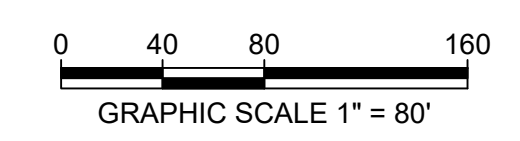
- ON1E DRAINAGE BASIN
- ON1E2 PRORATE DRAINAGE BASIN
- BASIN BOUNDARY
- PRORATE BASIN BOUNDARY
- ➔ FLOW DIRECTION
- ▲ CROSS SECTION
- PARCEL LINE
- XXXX 1 FT CONTOUR
- PROJECT AREA

**Existing Condition Basin Summary**

Basin	Area (acres)	Q <sub>100</sub> (cfs)	Q <sub>10</sub> (cfs)
ON1E	8.83	21	10

**Existing Condition Prorate Calculations**

Basin	Area (acres)	Q <sub>100</sub> (cfs)	CFS/AC	Q <sub>10</sub> (cfs)	CFS/AC
ON1E	8.83	21	2.38	10	1.13
ON1E1	5.76	13.7	2.38	6.5	1.13
ON1E2	3.07	7.3	2.38	3.5	1.13
<b>TOTAL</b>	<b>8.83</b>	<b>21.0</b>	<b>N/A</b>	<b>10.0</b>	<b>N/A</b>



Flows from the south of proposed improvement enters to police park study through 15 feet curb opening. Flows enters to police park study at other two locations further south. See referenced PDF for more detail.

**EXISTING CONDITION NORMAL DEPTH CROSS SECTION SUMMARY**

Cross Section	Description	Q <sub>100</sub> (cfs)	Slope (%)	Depth (ft)	Velocity (ft/s)	DxV
Section1_EX_100 YR	ON1E1	13.7	1.30	0.66	4.64	3.06
Section1_Capacity before overtops	Flow that drains north from section 1	6	1.30	0.50	3.87	1.94
Section2_EX_100 YR	Flow that drains north from section 1 + (ON1E2)	13.3	1.30	0.57	3.91	2.23
Section2_Capacity before overtops	Flow that drains north from section 2	8.9	1.30	0.50	3.54	1.77

**EXISTING CONDITION DRAINAGE MAP**  
**CHALLENGER AT LONE MOUNTAIN**

APN: 138-07-301-036  
 CITY OF LAS VEGAS, NEVADA

100% SUBMITTAL  
NOT FOR CONSTRUCTION

DESIGNED BY: SL  
 DRAWN BY: SL  
 CHECKED BY: JM  
 DATE: Mar 13, 2025 - 12:05pm

4246 S Riverboat Rd., Suite 200  
 Salt Lake City, UT 84123  
 Tel: 385.488.5486  
 www.horrocks.com

**SCALE**

HORIZ: 1" = 80'  
 VERT: 1" = XX'

**FIELD BOOK**

WORK ORDER XXXX-XXX  
 PROJECT No. NV-2024-0154

H-XXXX

**FIGURE 5**

XXX OF XXX  
 L-XXXX

REV No	DATE	DESCRIPTION	APPROVED



## Grading Plans