



# Department of Public Works

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Denis Cederburg, P.E., Director • E-Mail: dlc@ClarkCountyNV.gov



## Drainage Study Comment Letter

**Date:** April 15, 2024  
**Firm:** Moreno PEC  
**Engineer:** Timoteo S Moreno, P.E.  
**Address:** 12273 Terrace Verde Avenue, Las Vegas, NV 89138  
**Phone:** (702) 682-7041  
**Fax:**  
**E-mail:** tim@morenopec.com

**Subject:** Technical Drainage Study for Michelli and Bright Angel  
**Location:** NEC or Michelli Crest Way and Bright Angel Way  
**APN:** 126-25-601-002  
**Sec, Township, Range:** S25, T19S, R59E  
**Flood Zone & Panel:** Zone X, panel 1750E, dated September 27, 2002  
**Application Number:** PW24-12544

Submittals	Date Received	Date Returned	Reviewer	Miscellaneous
Technical	04/01/2024	04/15/2024	RV	

Concurrence Required: (Must be obtained prior to permit issuance)		Reason Concurrence is Required
	Boulder City	Adjacent to or Impacts Jurisdiction
	City of Mesquite	Adjacent to or Impacts Jurisdiction
	City of Henderson	Adjacent to or Impacts Jurisdiction
x	City of Las Vegas	Adjacent to or Impacts Jurisdiction
	City of North Las Vegas	Adjacent to or Impacts Jurisdiction
	Nevada Department of Transportation	Adjacent to or Impacts NDOT Facility
	Union Pacific Rail Road	Adjacent to or Impacts a UPRR Facility
	US Army Corps of Engineers	Impacts a USACE Facility
	Clark County Regional Flood Control District	Regional Significance, Adjacent to or Impacts CCRFCD MPU Facility or in a SFHA

Responses to the following comments must be addressed and provided with the next submittal. Incomplete responses may result in further review and time delays to the drainage study approval. CCPW Development Review will not be held responsible for project delays due to incomplete responses.

**CCPW – Development Review Comments:**

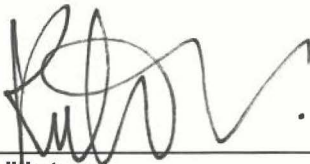
1. This project requires a Minor Sub-division Map (MSM) to subdivide the parcel. It is unclear if this study is meant to address this issue. If the study is meant to satisfy the MSM requirements, then the MSM number must be included in the drainage study and grading plan titles along with a parcel map figure showing the proposed parcel limits and necessary drainage easements.
2. Neither table 602 from HCDDM or 2018 MPU curve number matrix was provided to show how curve numbers were determined. Provide necessary tables and clearly circle the curve number under soil type and land use.
3. Label contours on all drainage figures.
4. Provide the 6-hour storm distribution table 503 with SND3 circled as indicated on the HEC-1.
5. Keep combination points the same in the interim and developed as in the existing conditions.
6. It is unclear why curve numbers are higher in the existing conditions and much lower in the developed conditions. Development typically increases the curve number due to higher impervious percentage. Using a curve number of 51 in developed conditions going based on table 602 for assumptions (unclear what was used) under soil type A assumes only 20 percent impervious which is unlikely. The actual development should be checked, and curve numbers adjusted accordingly.
7. This study concurs with the conservative approach taken by referenced study 20-14975 for (Azure Crest 4 Lot Improvement) assumes flows will continue East on Azure and a flow split does not occur at the intersection of Azure and Michelli Crest Way. However, there may be significant flows in Azure that may need to be quantified. Address if a flow split is necessary.
8. It is required to provide street depth calculations for the “Non-Urban Standard” perimeter streets utilizing a fully developed street section including curb, gutter and sidewalk. This is because future conditions may require full offsite improvements and the site needs to be flood protected to meet criteria. Provide the revised street flow calculations with the worst-case flow and verify that the proposed flood protection (i.e., solid grouted blockwalls) meets criteria.

9. It appears flows being conveyed in the proposed 10' drainage easement along the north property line are proposing to be discharged onto Bright Angel Way. This is altering the historic flow path. Ensure water on that easement discharges east on Lot 1. The 4 lot subdivision south of this project site may not have seen that water before and those existing homes should not be negatively impacted by additional flows being discharged onto Bright Angel Way.
10. Provide TF and TRW elevations for retaining walls on plans.
11. The grading plans have been red-lined. Provide highlighter marks and responses on plans to show the issues are addressed. Do not use post-it notes to reply.

The drainage/grading plans have been red-lined and require modifications prior to the next submittal. Failure to resubmit the red-lined grading plan will require an additional \$400 review fee.

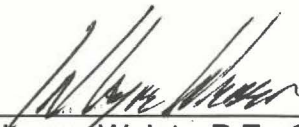
The County's review is solely based on the information submitted by the Engineer of Record. The County's review is strictly limited to compliance with minimum County Codes and Standards. The Engineer of Record is responsible for researching and addressing situations that may require designs above and beyond the minimum codes for issues of public safety and impacts to upstream, downstream and adjacent properties. The County assumes no liability for information, data, designs or conclusions of the Engineer of Record.

If you have any questions about the provided comments, please contact the reviewer\* below.



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Development Review  
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Principal Engineer  
Development Review  
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