

**SUPPLEMENT TO THE
UPDATE #2 TO THE
TECHNICAL DRAINAGE STUDY
FOR
RACEL AND TIOGA
RESIDENTIAL DEVELOPMENT**

ADV-18-101

CITY OF LAS VEGAS

JULY 2021

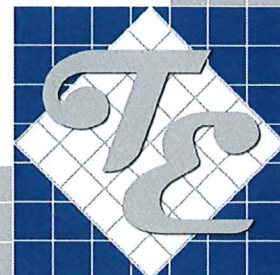
Prepared for:

Andrew Acuna
Adaven Homes
10091 Park Run Drive, Suite 110
Las Vegas, NV 89145
(702) 365-8588



7-27-2021

TANEY & ENGINEERING



6030 S. Jones Blvd.
Las Vegas, NV 89118
Phone (702) 362-8844
Fax (702) 362-5233

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Racel & Tioga Development Date: July 27, 2021

Location of Development: a) Descriptive (Cross Streets) North/South: Racel
East/West: Tioga

b) Section: 10 Township: 19S Range: 60E

c) APN : 125-10-402-001 & 005

Name of Owner: Adaven Homes

Telephone No.: (702) 365-8588 Fax No.: _____ E-Mail Address: _____

Address: 10091 Park Run Drive, #110 Las Vegas, NV 89145

Contact Person-Name: Lee Gong, P.E. Telephone No.: (702) 362-8844

* E-Mail Address: LeeG@taneycorp.com Fax No.: (702) 362-5233

Firm: Taney Engineering

Address: 6030 S. Jones, Suite 100, Las Vegas NV. 89118

Type of Land Development/Land Disturbance Process:

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

1. Total Owned Land Area: At Site: 4.56+/- acres Being Developed/Disturbed: 5.34 +/- 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

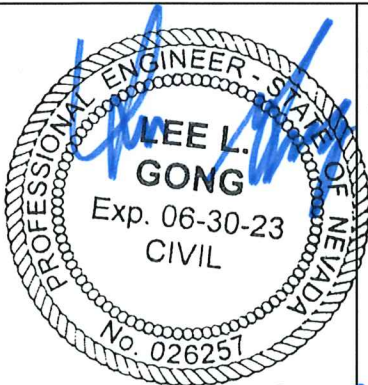
4. Proposed type of development (Residential, Commercial, Etc.): Residential

5. Approximate upstream land area which drains to the subject site: 750+/- acres

6. Has the site drainage been evaluated in the past? YES NO If yes, please identify documentation: HTE: 13-46531

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: The site has two discharge points, the first discharge point will be to Racel St. and the second discharge point will be to an existing drainage easement in Verona Estates.

8. Briefly describe your proposed schedule for the subject project: A.S.A.P



Engineer's Seal

7-27-2021

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.**

Local Entity File No. _____

Revision

Date

REFERENCE:

STANDARD FORM 1



TANEY ENGINEERING

6030 S. JONES BLVD. LAS VEGAS, NV 89118
PHONE: (702) 362-8844 | FAX: (702) 362-5233
TANEYCORP.COM

Job No. ADV-18-101

Date: July 27, 2021

JURISDICTION:

Albert Sung, P.E.
Flood Control
City of Las Vegas Public Works
333 N. Rancho Drive
Las Vegas, NV 89106

Supplement to the Update #2 to the Technical Drainage Study for Racel and Tioga

Dear Mr. Sung,

Taney Engineering is submitting supplement in response to comments and questions on the Technical Drainage Study for **Racel and Tioga**. A response to each comment from City of Las Vegas review memorandum dated on July 26, 2021 is provided below.

Comment 1: The engineer must obtain concurrence from Clark County Public Works Department again for the proposed revision prior to the final approval of the subject drainage update.

Acknowledged. Concurrence from Clark County Public Works Department will be provided prior to the final approval of the drainage update.

Comment 2: The proposed U-channel at the intersection of Ackerman Avenue and Tioga Way will cause problem for motorists making a right turn at the intersection. Consult with Mr. Victor Bolanos of City Traffic Eng-Operations Division for review and approval prior to the conditional approval of the drainage update.

Acknowledged. The traffic issue has been resolved and the email coordination has been attached.

Comment 3: The revised portion in the grading plan must be highlighted in "Clouds" with update number and explained in the "Revisions Block" of the grading plan.

Acknowledged. The grading plan has been revised per the issued comment.

If there are any question or you need any additional information, please do not hesitate to contact our office.

Sincerely,
TANEY ENGINEERING

Gaurang Mistry, E.I.



Email Coordination

Gaurang Mistry

From: Lee Gong
Sent: Tuesday, July 27, 2021 12:30 PM
To: Gaurang Mistry
Subject: FW: Racel and Tioga Update #1 DS05127-1-UPDT CLV drainage review comments

From: Victor Bolanos <vbolanos@LasVegasNevada.GOV>
Sent: Tuesday, July 27, 2021 10:57 AM
To: Brian Myers <BrianM@taneycorp.com>; Albert Sung <YSung@LasVegasNevada.GOV>
Cc: Robert Cunningham <RobertC@taneycorp.com>; Lee Gong <LeeG@taneycorp.com>
Subject: RE: Racel and Tioga Update #1 DS05127-1-UPDT CLV drainage review comments

[EXTERNAL E-MAIL]

Brian,

Thank you for the clarification. I was under the impression the Ackerman could possible continue to the east.

Albert,

Thank you for following up with the Brian with my concerns. Traffic is okay with the current design.

Victor

From: Brian Myers <BrianM@taneycorp.com>
Sent: Tuesday, July 27, 2021 7:16 AM
To: Albert Sung <YSung@LasVegasNevada.GOV>; Victor Bolanos <vbolanos@LasVegasNevada.GOV>
Cc: Robert Cunningham <RobertC@taneycorp.com>; Lee Gong <LeeG@taneycorp.com>
Subject: FW: Racel and Tioga Update #1 DS05127-1-UPDT CLV drainage review comments

CAUTION: This email originated from an **External Source**. Please **use caution** before opening attachments, clicking links, or responding to this email. **Do not sign-in with your City of Las Vegas account credentials.**

Thank you for your comments. We are a little confused as to why CLV Traffic would need to be involved with this TDS update. The remaining right of way on Ackerman was vacated by CCPW (see attached aerial). There will not be any cars turning right onto Ackerman into our proposed concrete flume. Please advise, thanks!



Brian Myers, PE Project Manager

Taney Engineering | 6030 S. Jones Blvd | Las Vegas, NV 89118 | USA

T 702-362-8844 | brianm@taneycorp.com | TaneyCorp.com | [Get to Know Us!](#)



Please consider the environment before printing this e-mail.

From: Heather Britz <HeatherB@taneycorp.com>

Sent: Tuesday, July 27, 2021 7:00 AM

To: Lee Gong <LeeG@taneycorp.com>; Brian Myers <BrianM@taneycorp.com>; Ryan Beavers <RyanB@taneycorp.com>; Janna Felipe <JannaF@taneycorp.com>; Ashlyn Spreitzer <AshlynS@taneycorp.com>
Subject: FW: Racel and Tioga Update #1 DS05127-1-UPDT CLV drainage review comments

Please see the attached comments.

From: Albert Sung <YSung@LasVegasNevada.GOV>
Sent: Monday, July 26, 2021 5:59 PM
To: Heather Britz <HeatherB@taneycorp.com>; Lee Gong <LeeG@taneycorp.com>
Subject: RE: Racel and Tioga Update #1 DS05127-1-UPDT CLV drainage review

[EXTERNAL E-MAIL]

Here you go!

Albert Y. Sung

Project Engineer
Public Works Dept. / Flood Control
(702) 229-6541
495 S. Main Street
Las Vegas, NV 89101



lasvegasnevada.gov



Your opinion is important! Click [here](#) to take a short survey.

From: Heather Britz <HeatherB@taneycorp.com>
Sent: Monday, July 26, 2021 9:25 AM
To: Jennifer Shinn <jshinn@LasVegasNevada.GOV>; Albert Sung <YSung@LasVegasNevada.GOV>
Cc: Janna Felipe <JannaF@taneycorp.com>; Ashlyn Spreitzer <AshlynS@taneycorp.com>; Brian Myers <BrianM@taneycorp.com>; Lee Gong <LeeG@taneycorp.com>
Subject: RE: Racel and Tioga Update #1 DS05127-1-UPDT CLV drainage review

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Will you issue the CLV drainage review comments on Monday 8/2/21 or possibly this week? Can you please advise on the subject drainage review?

Thank you for your time.



APPENDIX

APPENDIX A

Comment Letter

APPENDIX B

Hydraulic Calculations

APPENDIX C

Improvement Plans



APPENDIX A

Comment Letter

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM		DATE: July 26, 2021
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:	COPIES TO:
	Racel & Tioga Residential Development - Update	Taney Engineering
Cross Streets:	SEC of Racel Street & Tioga Way	Adaven Homes
File Number:	F:\Depot\DSMemos\DS5127D.doc	Bart Anderson, P.E., DevCo
Parcel Number:	125-10-402-001 & 125-10-402-005	CCPW
Zoning Action:	PMP-76693	
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	4/22/2019	5/14/2019	Not Approved	\$400.00	3099486: \$400
2 nd Submittal	6/25/2019	7/17/2019	Conditional Approval	\$400.00	3464712: \$400
CCPW & 2'-Approval	5/18/2020	6/3/2020	Concurrence Recv'd	N/C	N/C
3 rd Submittal	7/13/2021	7/26/2021	See Comments Below	\$100.00	4369495: \$100
TOTAL FEES (LDDRS):				\$900.00	----

REMARKS:

3rd Submittal: Update to revise the section of a public drainage easement along the north side of the subject development with a U-channel

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. The engineer must obtain concurrence from *Clark County Public Works Department* again for the proposed revision prior to the final approval of the subject drainage update.
2. The proposed U-channel at the intersection of *Ackerman Avenue* and *Tioga Way* will cause problem for motorists making a right turn at the intersection. Consult with Mr. Victor Bolanos of *City Traffic Eng-Operations Division* for review and approval prior to the conditional approval of the drainage update.
3. The revised portion in the grading plan must be highlighted in "Clouds" with update number and explained in the "Revisions Block" of the grading plan.

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, conditional acceptance 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
ays

T/R/S: T19S/R60E/10
AREA G-10



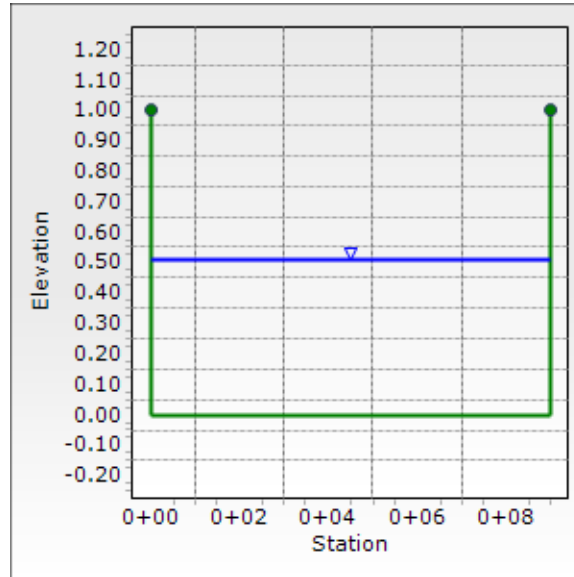
APPENDIX B

Hydraulic Calculations

Cross Section for 9' Concrete Flume

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	1.07 %
Normal Depth	0.51 ft
Discharge	32.00 cfs



Worksheet for 9' Concrete Flume

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth
Input Data	
Channel Slope	1.07 %
Discharge	32.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.0	1.00
0+00.0	0.00
0+09.0	0.00
0+09.0	1.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.0, 1.00)	(0+09.0, 1.00)	0.013

Options	
Current Roughness Weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Results	
Normal Depth	0.51 ft
Roughness Coefficient	0.013
Elevation	0.51 ft
Elevation Range	0.0 to 1.0 ft
Flow Area	4.6 ft ²
Wetted Perimeter	10.0 ft
Hydraulic Radius	0.46 ft
Top Width	9.00 ft
Normal Depth	0.51 ft
Critical Depth	0.73 ft
Critical Slope	0.33 %
Velocity	7.01 ft/s
Velocity Head	0.76 ft
Specific Energy	1.27 ft
Froude Number	1.734
Flow Type	Supercritical

GVF Input Data

Worksheet for 9' Concrete Flume

GVF Input Data

Downstream Depth	0.00 ft
Length	0.0 ft
Number Of Steps	0

GVF Output Data

Upstream Depth	0.00 ft
Profile Description	N/A
Profile Headloss	0.00 ft
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	0.51 ft
Critical Depth	0.73 ft
Channel Slope	1.07 %
Critical Slope	0.33 %



APPENDIX C

Improvement Plans