

DS #:

5102.3

APN:

138-07-103-006 , 138-07-201-001 S 002

PROJECT:

Hualapai S. Alexandre Townhomes - Update #2

SUBMITTAL:

742

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		March 24, 2020
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:	
	Hualapai & Alexander Townhomes – Update #2	
Cross Streets:	SEC of Alexander Road & Hualapai Way	COPIES TO:
File Number:	F:\Depot\DSMemos\DS5102G.doc	GCV Engineering
Parcel Number:	138-07-103-006, 138-07-201-001 & -002	Nevada Development Assoc LP
Zoning Action:	TMP-75640; SDR-75639; VAR-75755; VAR-75756 & VAC-75645	Bart Anderson, P.E., DevCo
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES X	NO

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	2/19/2019	3/7/2019	Not Approved	\$400.00	503266: \$400
2 nd Submittal	4/24/2019	5/15/2019	Not Approved	\$400.00	3102875: \$400
3 rd Submittal & Supplement	5/22/2019 & 6/3/2019	6/3/2019	Conditional Approval	\$400.00	3142096: \$400
CCRFC	7/25/2019	-----	-----	-----	-----
4 th Submittal	9/17/2019	9/26/2019	Developer / Engineer Pulled the Update and Did not Pay the Fee	Not Paid	Not Paid
5 th Submittal	12/18/2019	1/8/2020	Not Approved	\$100.00	3680872: \$100
6 th Submittal	2/4/2020	2/19/2020	Approved	N/C	N/C
7 th Submittal	3/9/2020	3/24/2020	See Comments Below	\$100.00	3771978: \$100
TOTAL FEES (LDDRS):				\$1,400.00	----

REMARKS:

7th Submittal: Update #2 for a Pool House

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

X	is approved subject to conformance to all City standards and the following conditions:
	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.

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.

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
WSP/AYS/JKS

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

**UPDATE #2 TO THE
TECHNICAL DRAINAGE STUDY
FOR
HUALAPAI & ALEXANDER**

798-003

March 2020

Prepared for:

**Touchstone Living
9205 West Russell Road, Suite 235
Las Vegas, Nevada 89148
Phone: (702) 929-3124**

GCV
ENGINEERS \ SURVEYORS

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Hualapai and Alexander (Update #2) Date: March 2020

Location of Development: a) Descriptive (Cross Streets) North/South: Hualapai Way

East/West: Alexander Road

b) Section: 07 Township: 20 S Range: 60 E

c) APN : 138-07-114-033

Name of Owner: Touchstone Alexander LLC

Telephone No.: 702.929.3124 Fax No.: Not Available E-Mail Address: _____

Address: 9205 W. Russell Road, Suite 235 Las Vegas, NV 89148

Contact Person-Name: Cameron Bencini, P.E. Telephone No.: 702.804.2000

* E-Mail Address: CBencini@gcwengineering.com Fax No.: 702.804.2299

Firm: GCW, Inc.

Address: 1555 S. Rainbow Boulevard Las Vegas, NV 89146

Type of Land Development/Land Disturbance Process:

☐	Rezoning	☐	Subdivision Map	☐	Clearing and Grading Only
☐	Parcel Map	☐	Planned Unit Development	☐	Other (Please specify below)
☐	Large Parcel Map	☒	Building Permit	☐	

1. Total Owned Land Area: At Site: +/- 7.5 Being Developed/Disturbed: +/- 7.5

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: +/- 5.12 sq. mi

6. Has the site drainage been evaluated in the past? ☒ YES ☐ NO If yes, please identify documentation: DS #4039 and DS# 3708

7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: The southern portion of the site discharges into the existing CCRFCD Facility (GOLM0162), and the north portion discharges to the Hualapai Way ROW.

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



Engineer's Seal 3-5-20

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

798-003

March 2, 2020

Oh Sang Kwon, P.E.
City of Las Vegas, Public Works
333 N. Rancho Drive, 7th Floor, Las Vegas, NV 89106

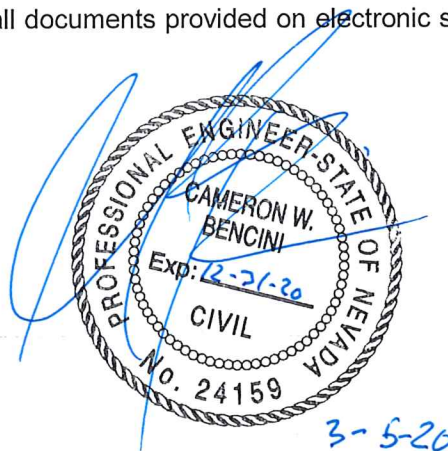
Re: Update #2 to the Technical Drainage Study for Hualapai and Alexander

Dear Mr. Kwon,

This letter is to certify that all documents provided on electronic submittal (CD) match the hardcopy version of the study.

Respectfully submitted,

Cameron Bencini, P.E.
Flood Control Division



**UPDATE #2 TO THE
TECHNICAL DRAINAGE STUDY
FOR
HUALAPAI & ALEXANDER**

798-003

March 2020

Authored By:

**Nelson Baggs, E.I.
Cameron Bencini, P.E.**

Prepared By:

**GCW, Inc.
1555 S. Rainbow Blvd.
Las Vegas, Nevada 89146
Phone: (702) 804-2000
Fax: (702) 804-2299**

798-003

March 5, 2020

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

**Re: Update #2 to the Technical Drainage Study for Hualapai and Alexander Townhomes
(DS5102F)**

Dear Mr. Sung:

The purpose of this letter is to update the above-referenced project by addressing the implementation of the pool and pool house to the project site. Details regarding the newly proposed portion of the development are addressed below.

Since the previous approval, a pool and pool house have been designed for the development. An onsite street section adjacent to the newly proposed finished floor elevations has been provided using the entire flow from basin ON2. Note that the proposed finished floors are above twice the depth of flow. Due to a high point in Hualapai Way only minor flows are anticipated adjacent to the proposed development and 3 courses of solid grout are provided in the perimeter wall, therefore the finished floors are protected. The street normal depth calculation along with an annotated Developed Condition Drainage Map from the previously approved study have been included in the appendix.

Cordially,

GCW, INC.



Nelson Baggs, E.I.
Flood Control Division

APPENDIX



CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		February 19, 2020
TO: Land Development Services Department of Building & Safety		FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
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END OF REMARKS
WSP/AYS/JKS

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

Worksheet for Section P

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	1.00	%
Discharge	7.00	ft ³ /s
Section Definitions		

Station (ft)	Elevation (ft)
--------------	----------------

0+00.00	0.38
0+00.98	0.08
0+01.00	0.00
0+02.00	0.13
0+02.00	0.17
0+15.00	0.43
0+28.00	0.17
0+28.00	0.13
0+29.00	0.00
0+29.02	0.08
0+30.00	0.38

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.38)	(0+02.00, 0.13)	0.013
(0+02.00, 0.13)	(0+28.00, 0.13)	0.016
(0+28.00, 0.13)	(0+30.00, 0.38)	0.013

Options

Current Roughness weighted Method	Pavlovskii's Method
Open Channel Weighting Method	Pavlovskii's Method
Closed Channel Weighting Method	Pavlovskii's Method

Worksheet for Section P

Results

Normal Depth		0.37	ft
Elevation Range	0.00 to 0.43 ft		
Flow Area		2.98	ft ²
Wetted Perimeter		24.53	ft
Hydraulic Radius		0.12	ft
Top Width		24.21	ft
Normal Depth		0.37	ft
Critical Depth		0.39	ft
Critical Slope		0.00703	ft/ft
Velocity		2.35	ft/s
Velocity Head		0.09	ft
Specific Energy		0.46	ft
Froude Number		1.18	
Flow Type	Supercritical		

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.37	ft
Critical Depth	0.39	ft
Channel Slope	1.00	%
Critical Slope	0.00703	ft/ft

Cross Section for Section P

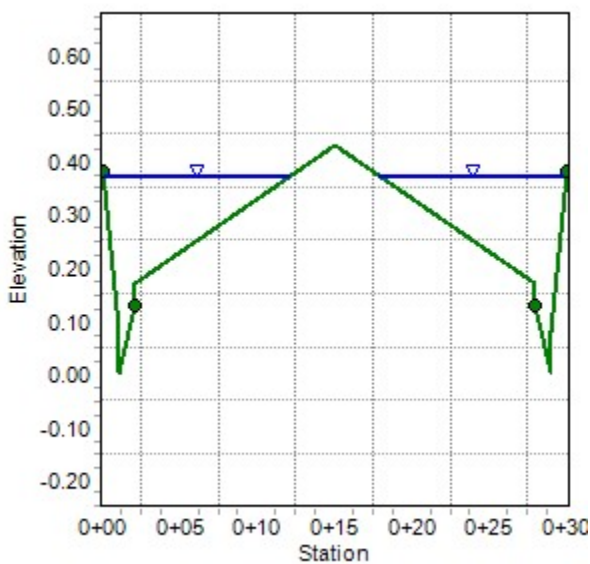
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Solve For	Normal Depth

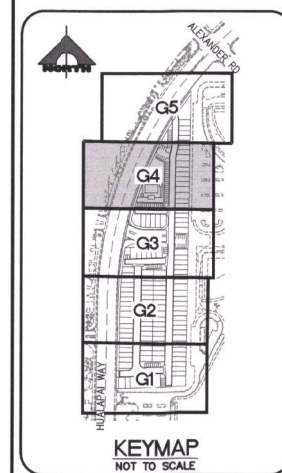
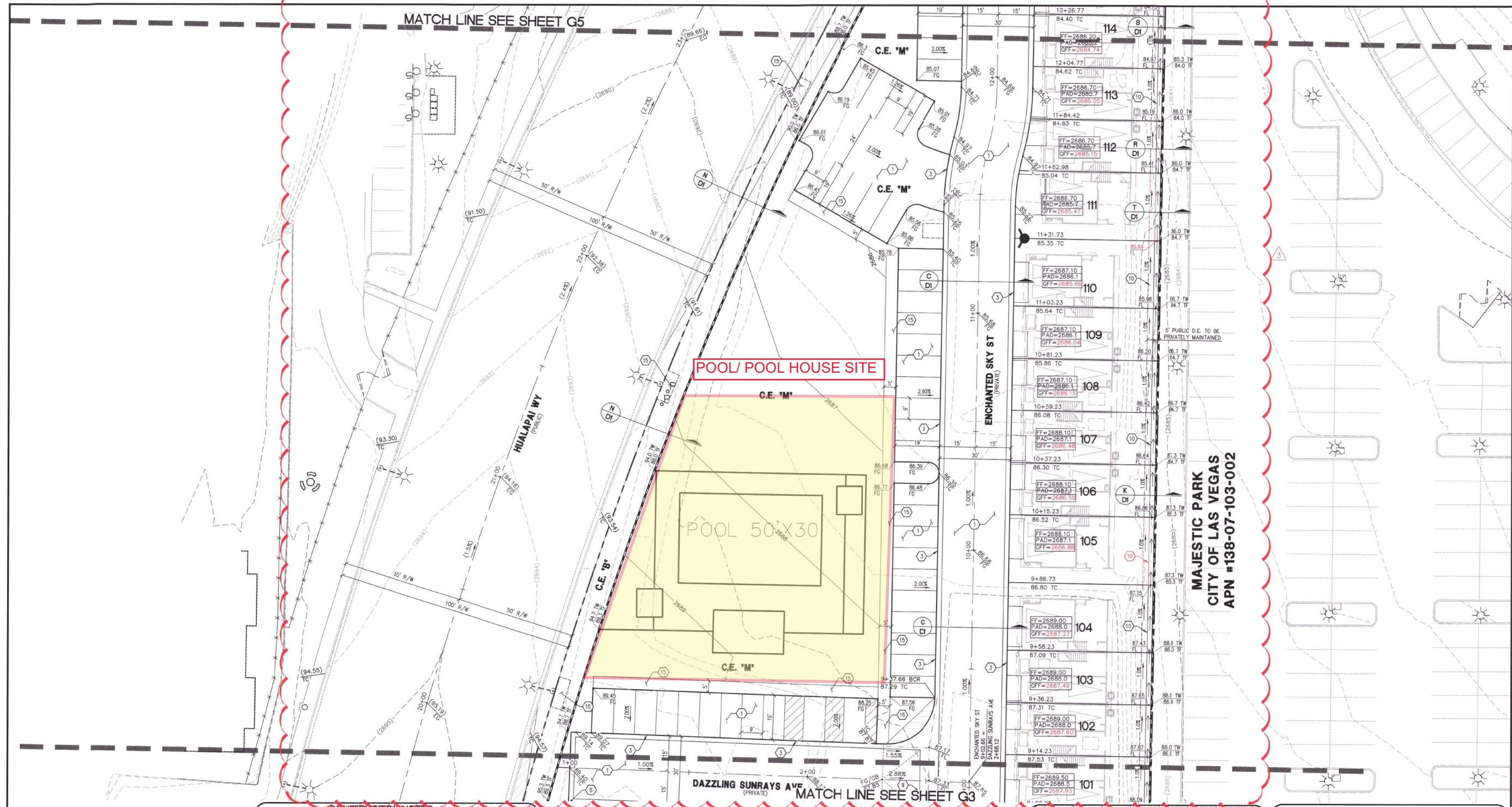
Input Data

Channel Slope	1.00	%
Normal Depth	0.37	ft
Discharge	7.00	ft ³ /s

Cross Section Image



PLAN SHEET FROM PREVIOUSLY APPROVED STUDY



FAST

Call **before you UnderGround**

1-702-432-5300

FREEWAY AND ARTERIAL
SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD
POWER LINES IT'S COSTLY

CALL BEFORE
YOU DO
OVERHEAD

1-702-227-2929

Call before you Dig
avoid cutting underground
utility lines. It's costly.

Call
811
THE
NATIONAL
SYSTEM
OF
TRANSPORTATION

OR
1-800-297-2600

- | GRADING | |
|---------|--|
| 1 | CONSTRUCT 2" AC OVER 4" TYPE II AB. |
| 2 | CONSTRUCT L TYPE CURB AND GUTTER PER USDOCA DWG NO. 216. |
| 3 | CONSTRUCT RESIDENTIAL CURB AND GUTTER R-TYPE PER USDOCA DWG NO. 217.3.51. |
| 4 | CONSTRUCT "A" TYPE ISLAND CURB PER USDOCA DWG NO. 219. |
| 5 | CONSTRUCT R-TYPE CURB OPENING PER DETAIL 4 ON SHEET D2. |
| 6 | CONSTRUCT MEDIAN ISLAND PER USDOCA DWG NO. 218. |
| 7 | CONSTRUCT HANDCAP RAMP USING ASHORE TILE TRUNCATED DOMES OR EQUIVALENT PER USDOCA DWG NO. 219. CASE 1, 4 AND 6 UNLESS OTHERWISE NOTED ON PLAN. |
| 8 | CONSTRUCT COMMERCIAL AND INDUSTRIAL DRIVEWAY (OPTION A) PER USDOCA DWG NO. 224. |
| 9 | CONSTRUCT 8" WIDE CROSS GUTTER PER USDOCA DWG NO. 218. |
| 10 | CONSTRUCT 2" WIDE CONCRETE CROSS GUTTER PER DETAIL 6 ON SHEET D2. |
| 11 | REMOVE EXISTING CURB AND SIDEWALK. |
| 12 | RELOCATE. |
| 13 | CONSTRUCT WALL OPENING PER DETAIL 2 ON SHEET D2. |
| 14 | CONSTRUCT 5.5" AC OVER 6" TYPE II AB. |
| 15 | CONSTRUCT SIDEWALK PER USDOCA DWG NO. 234. |
| 16 | SAW CUT AND WATCH EXISTING. |
| 17 | CONSTRUCT FENCE PER CCAUSD #425.51 |
| 18 | CONSTRUCT SLIDING GATE PER PLAN BY OTHERS |
| 19 | FRENCH AND PAVEMENT REPAIR/RESTORATION PER CCAUSD #500.3, 500.5, & 503 |
| 20 | CONSTRUCT MODIFIED CASE III SIDEWALK RAMP PER CCAUSD #235. |
| 21 | CONSTRUCT SIDEWALK RAMP PER DETAIL 9 ON SHEET D2 |
| 22 | CONSTRUCT SIDEWALK RAMP PER DETAIL 10 ON SHEET D2 |
| 22 | CONSTRUCT 4" PCC OVER 4" TYPE II AB |
- NOTE: SEE SHEET C2 & C3 FOR ABBREVIATIONS AND QUANTITIES

- # CONSTRUCTION NOTES
- ## STORM DRAIN

 - ① CONSTRUCTION 12.5" TYPE "CMI" DRAIN INLET PER USDOCA DWG NO. 412.1 AND 421.
 - ② STORM DRAIN PIPE PENETRATION PER DETAILS 1 AND 2 ON SHEET S1.
- NOTE: SEE SHEET C2 & C3 FOR ABBREVIATIONS AND QUANTITIES
- ## NOTE

ALL ONSITE STORM DRAINS AND ASSOCIATED STORM FACILITIES ARE PUBLICLY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOA.

ALL PRIVATE STREETS ARE P.U.E., PUBLIC DRAINAGE EASEMENT AND PUBLIC SEWER EASEMENTS TO BE PRIVATELY MAINTAINED BY HOA.
- ## GENERAL NOTES

 1. REPLACE ALL TRAFFIC CONTROL DEVICES (SIGNS AND/OR PAVEMENT MARKINGS), UNDER CITY OF LAS VEGAS'S JURISDICTION, THAT ARE DISTURBED, DESTROYED, MOVED OR MODIFIED BY TRENCING ACTIVITIES TO CITY OF LAS VEGAS'S SATISFACTION. ALL MATERIAL USED SHALL MEET CITY OF LAS VEGAS'S SPECIFICATIONS OR WILL WILL BE AN APPROVED EQUIVALENT.
 2. IN THE EVENT THAT THE TRAFFIC SIGNAL CONDUITS, LOOP DETECTORS OR ASSOCIATED EQUIPMENT ARE DAMAGED BY CONTRACTOR, THE CONTRACTOR WILL HIRE AN IMSA LEVEL II ELECTRICAL CONTRACTOR TO MAKE REPAIRS PER UNIFORM SPECIFICATION NO. 623.G.01.02
 3. ALL STORM/STORM DRAIN CROSSING WATER LINES SHALL CONFORM TO SECTION 2.22 OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.
 4. THE CONTRACTOR IS TO VERIFY THE ACTUAL FIELD CONDITIONS OF ALL LOTS AND INSTALL SEWER CHECK VALVES WHERE REQUIRED PER THE LATEST EDITION OF THE UNIFORM PLUMBING CODE.

20' 0' 10' 20'



SCALE: 1" = 20'

NORTH

NOTE TO CONTRACTOR

EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

NOTE

1. GEOTECHNICAL EVALUATION FOR HUALAPAI AND ALEXANDER, A 14.02± ACRE RESIDENTIAL DEVELOPMENT LOCATED ON THE SOUTHWEST CORNER OF HUALAPAI AND ALEXANDER LAS VEGAS, NEVADA AS PREPARED BY GEOTEK PROJECT NUMBER 14489-LVR DATED DECEMBER 27, 2016.
2. CONSTRUCTION FOR BLOCK WALLS REQUIRES A SEPARATE BUILDING PERMIT AND APPROVAL BY THE BUILDING SAFETY AND MAINTENANCE DEPARTMENT.
3. WALLS CONSTRUCTED OTHER THAN THOSE AS DETAILLED ON THIS SHEET ARE TO BE CONSTRUCTED BY WALL SUB-CONTRACTOR, DETAILS AND STRUCTURAL CALCULATIONS AS PREPARED BY OTHERS.
4. NO OBJECT OVER 24" OTHER THAN TRAFFIC CONTROL DEVICES AND STREET LIGHT POLES CAN BE CONSTRUCTED OR INSTALLED WITHIN THE SIGHT VISIBILITY ZONE.
5. ALL PRIVATE STREETS ARE TO BE DEDICATED AS PUBLIC DRAINAGE EASEMENT AND PUBLIC UTILITY EASEMENT TO BE PRIVATELY MAINTAINED.

NOTE
CURB FLOW LINES LESS THAN 0.60% GRADE SHALL BE WATER TESTED. ANY CURB THAT DOES NOT FLOW SHALL BE REMOVED AND REPLACED AT NO COST BY THE CITY.

BENCHMARK
ZLV0079WWS
CORNERS TOP CURB E. SIDE HUALAPAI WAY AT MIAMI SPRINGS AVE.
ELEVATION: 2694.63

BASIS OF BEARING
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA
COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS AND LAS VEGAS
HIGH ELEVATION ZONES, NORTH AMERICAN DATUM OF 1983, SAID
MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH
MERIDIAN.
DATUM (REFERENCE FRAME): NAD 1983 (2011) EPOCH 2010.0
ZONE: LAS VEGAS ZONE
STANDARD PARALLEL AND GRID ORIGIN: 36°16'00" N
CENTRAL MERIDIAN: 114°58'00" W
FALSE NORTING: 200,000 METERS (656,166.6667 US FT)
FALSE EASTING: 100,000,000 METERS (328,083,333.33 US FT)
STANDARD PARALLEL SCALE: 1.0001 (EXACT)
LINEAR UNIT: US SURVEY FOOT (US FT)

FLOOD ZONE NOTE
NO PORTION OF THE SITE FALLS WITHIN A FEA DESIGNATED SPECIAL FLOOD
HAZARD AREA. SITE LOCATED ON PANEL 2150 E, DATED SEPTEMBER 27, 2002, TO
REFLECT A LOMB. THIS PANEL SHOWS THAT THE PROJECT IS LOCATED WITHIN A
ZONE X AND NOT LOCATED WITHIN THE DESIGNATED 100-YEAR ZONE A OR
SPECIAL FLOOD HAZARD AREA.

DRAINAGE CERTIFICATION
I CERTIFY THAT THE GRADING PLANS ARE IN CONFORMANCE WITH THE APPROVED
DRAINAGE STUDY DSS020A ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.

HABO A. NGUYEN P.E. 19396

12-12-19

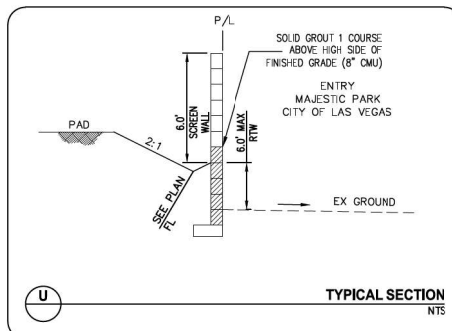
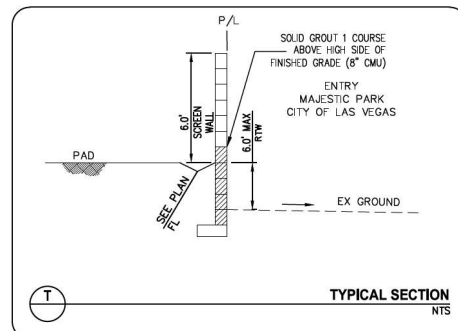
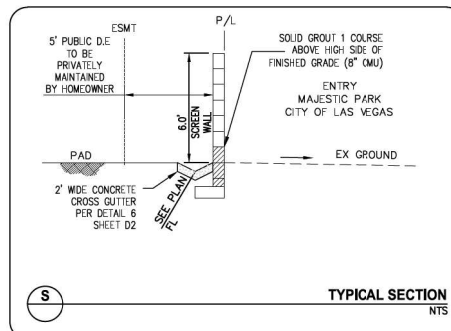
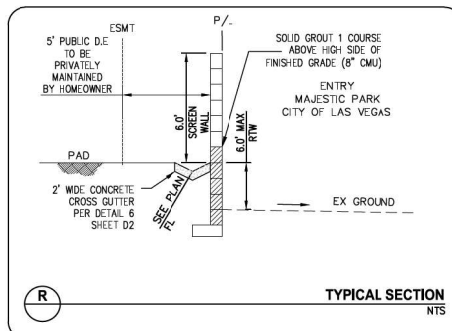
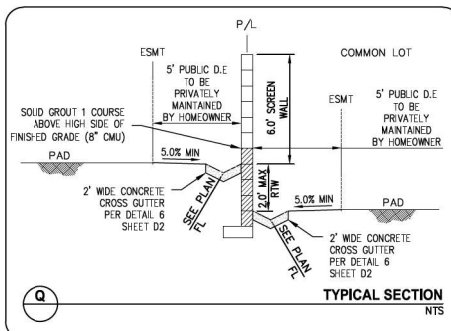
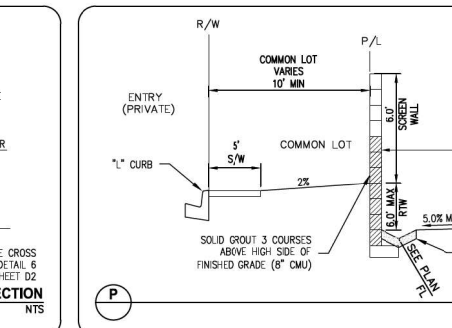
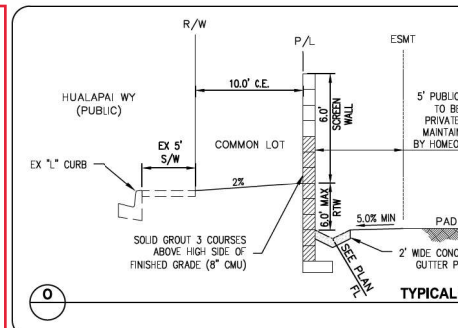
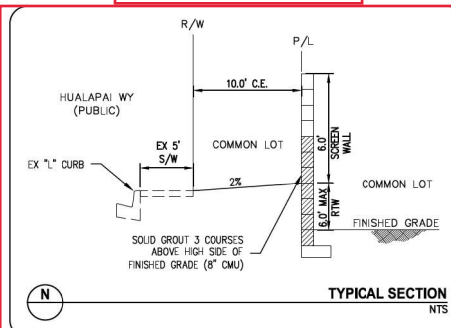
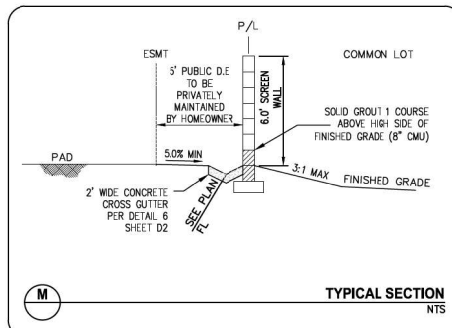
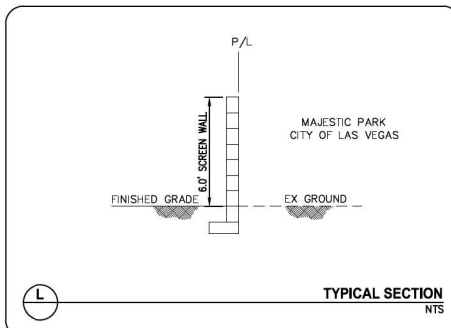
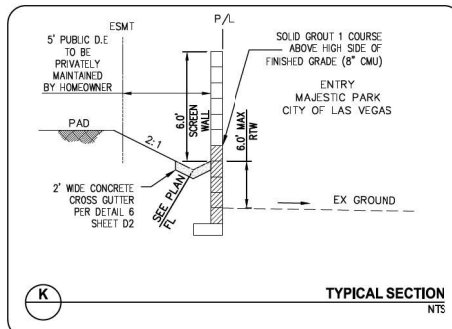
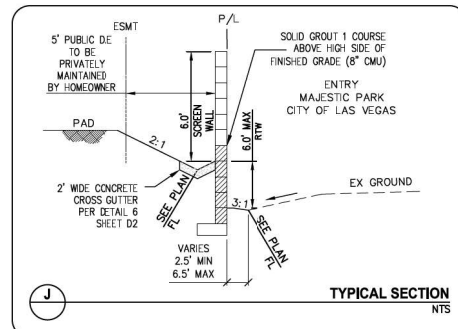
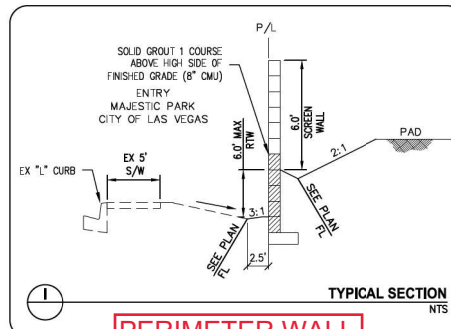
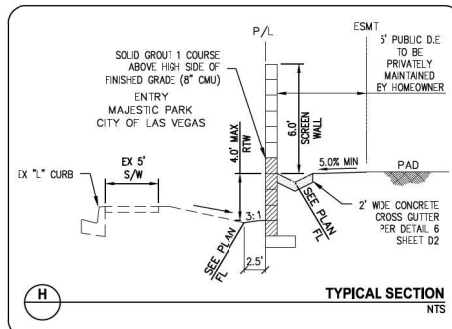
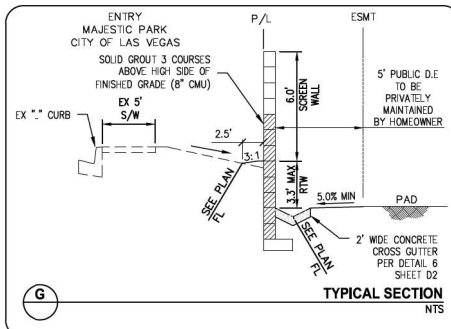
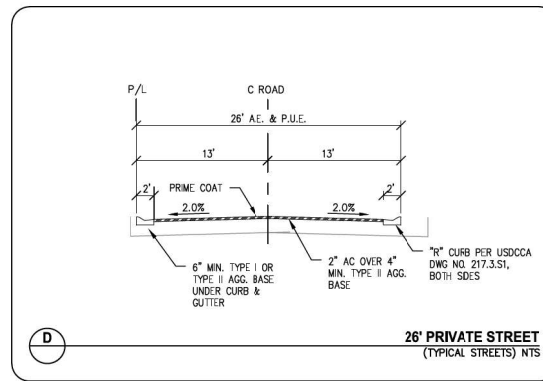
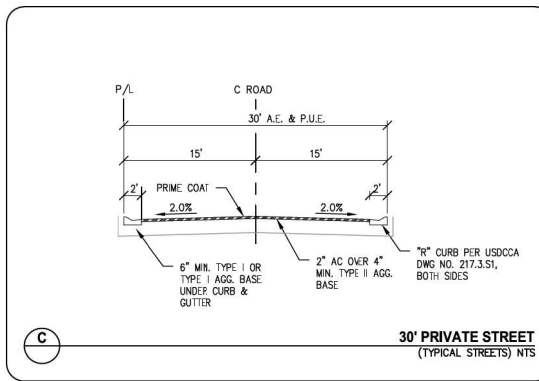
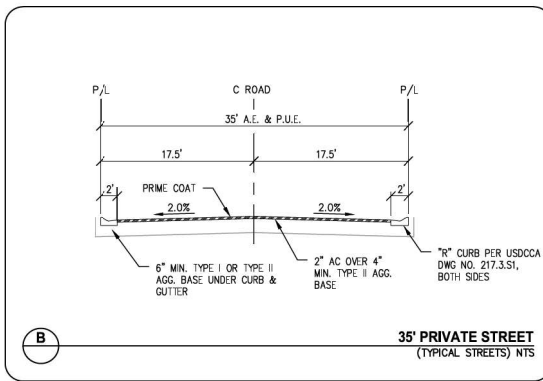
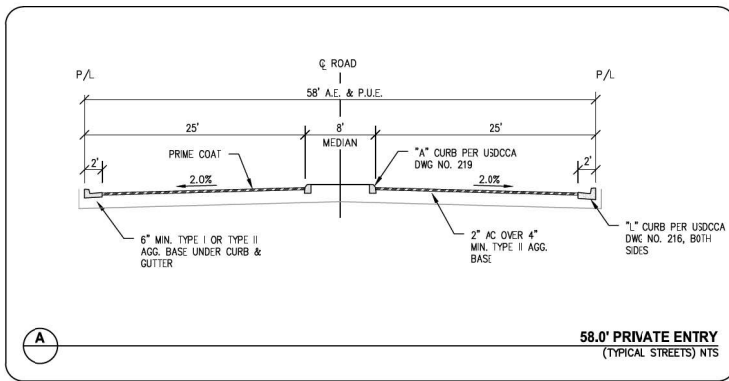
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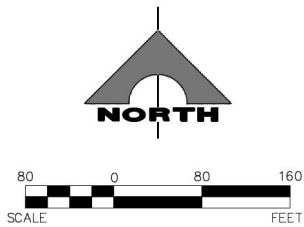
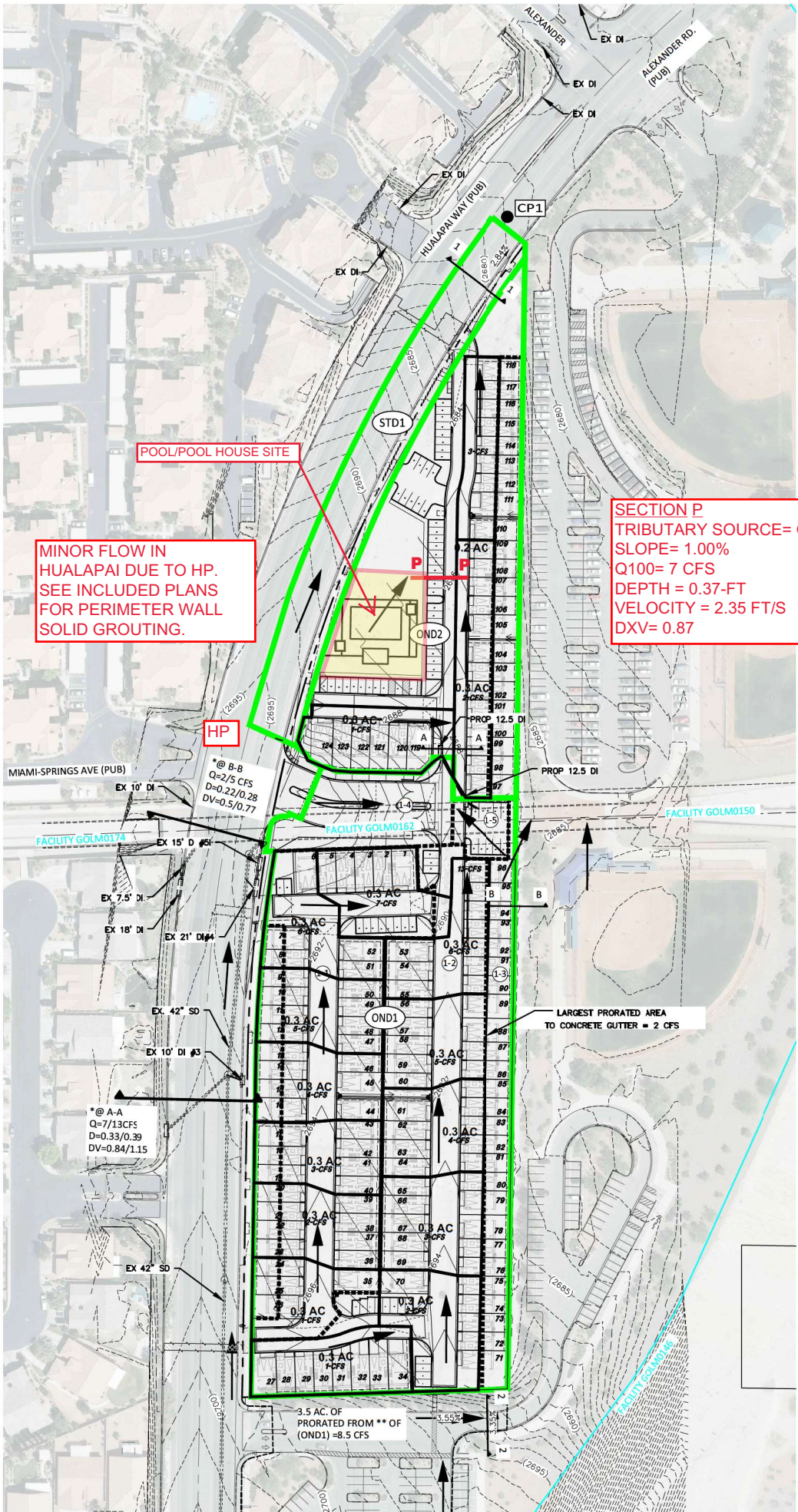
14-19-01032

CLV DMC# 107X5108

[illegible]

DETAIL SHEET FROM PREVIOUSLY APPROVED PLANS

[illegible]



- LEGEND
- ON# DRAINAGE SUBBASIN
 - CP# CONCENTRATION POINT
 - SUBBASIN BOUNDARY
 - PRORATED BOUNDARY
 - FLOW DIRECTION
 - EXISTING MP FACILITY
 - PRORATED BASIN ID
 - CROSS SECTION

PROPOSED CONDITION FLOW RATE SUMMARY			
Basin ID	Basin Area (ac)	10-Year Flow Rate (cfs)	100-Year Flow Rate (cfs)
OND1	5.0	8	18
OND2	2.3	3	7
STD1	0.9	2	4
CP1	OND2+STD1	5	11

ENTIRE BASIN FLOW RATE
USED IN STREET SECTION

Proposed Condition 100-Year Street and Onsite Flow Summary						
Section ID	Tributary Sources	Slope (%)	Q ₁₀₀ (cfs)	Depth (ft.)	Velocity (fps)	DxV
1	CP1	2.84	11	0.44	4.6	2.0
2	** PRORATED	3.55	8.5	0.43	5.4	2.3
A	OND1 - 1-3	1.00	16	0.46	3.0	1.4
B	1-3	0.66	2	0.53	3.6	-

Proposed Condition 10-Year Street Flow Summary							
Section ID	Tributary Sources	Slope (%)	Q ₁₀₀ (cfs)	Depth (ft)	Velocity (fps)	DxV	Dry Lane (ft)
1	CP1	2.84	5	0.35	3.8	1.3	34

* REPRESENTS THE LONE MOUNTAIN VILLAS CONDOMINIUMS STUDY SECTIONS (DS 4039)
* FLOW WAS TAKEN FORM ALEXANDER ROAD/HUALAPAI WAY (DS 4404)
** REPRESENTS THE ALEXANDER/HUALAPAI PARK (DS 3708)

DEVELOPED CONDITIONS PRORATED FLOW SUMMARY				
Sub basin		Q100 (cfs)	Area (acres)	cfs/acre
OND1		18	5.1	3.53
OND2		7	2.3	3.04
Prorated Basins				
Sub basin	Parent Basin	Q100 (cfs)	Area (acres)	cfs/acre
1-1	OND1	7	2.0	3.53
1-2	OND1	7	2.0	3.53
1-3	OND1	2	0.5	3.53
1-4	OND1	2	0.5	3.53
1-5	OND1	<1	0.1	3.53

NOTES:
DRAINAGE AREAS ARE PRORATED INTO 1-CFS AREAS TO
EVALUATE GARAGE FINISHED FLOORS.

ADDITIONAL SECTIONS ARE PROVIDED IN APPENDIX B.

THE ADDITIONAL SECTION TITLES ARE BASED THE LOCAL
FLOW WITHIN THE ROADWAY
(I.E. SECTION 1.1 = 1-CFS, SECTION 1.5 = 5-CFS, ETC)

PROJECT NO.
798-003

DESIGN:
DRAWN:
CHECK:
PLOT DATE: 12-13-19
PLOT TIME: 16:28:12

1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
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TOUCHSTONE LIVING
HUALAPAI AND ALEXANDER
DEVELOPED CONDITION DRAINAGE MAP

FIG 5

1 OF 1 SH'S

