Update to the Technical Drainage Study for

Balmoral Estates (APN 125-24-203-022) 100220-PMP

Prepared For

Gary Briggs
Gold Rose Construction
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PROFESSIONAL ENGINEER-STATE OF NEVADA
JERRY E. PRUITT
EXP. 12-31-23
CIVIL
No. 11902

8-9-22

Prepared By

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

August 2022

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Balmoral Estates Date: 08/09/22

Location of Development: a) Descriptive (Cross Streets) North/South: Bradley Road

East/West: Deer Springs Way

b) Section: 24 Township: 19S Range: 60E

c) APN : 125-24-203-022

Name of Owner: Falcon Crest Properties LLC

Telephone No.: (310) 276-4441 Fax No.: E-Mail Address: Joseph@plpinc.us

Address: 1960 Carla Ridge, Beverly Hills, CA 90210

Contact Person-Name: Jesse J. Patchett, P.E., CFM **Telephone No.:** (702) 790-5530

* **E-Mail Address:** jpatchett@woodrodgers.com **Fax No.:** (916) 341-7767

Firm: Wood Rodgers, Inc.

Address: 8345 W. Sunset Road, Suite 150 Las Vegas, NV 89113

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	X	Building Permit		

1. Total Owned Land Area: At Site: ± 2.01 Ac Being Developed/Disturbed: ± 2.01 Ac
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: ±0.24 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: Deer Springs and Bradley
8. Briefly describe your proposed schedule for the subject project: ASAP

PROFESSIONAL ENGINEER STATE OF NEVADA
JERRY E. PRUITT
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Engineer's Seal

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:

Wood Rodgers Project No. 3810005

STANDARD FORM 1

Updated 05/01/2008

August 9, 2022

Mr. Albert Sung, P.E.
Flood Control Project Engineer
Department of Public Works
495 S. Main St.
Las Vegas, NV 89101

SUBJECT: Technical Drainage Study Update for Balmoral Estates (DS5542A)

Dear Mr. Sung,

The purpose of this letter is to serve as the **Update** to subject project. The *Technical Drainage Study for* **Balmoral Estates** (hereinafter referred to as the **TDS**) was conditionally approved by CLV on May 17, 2022. The **Update** included herein, is intended to supersede data contained in the previous study.

Per the conditional approval of the **TDS**, the half-street improvements for Deer Springs Way and Bradley Road have been revised. The proposed revisions include:

- Revised hydraulic street sections for the Developed and Future Condition analysis to include half-street improvements.
- Provided drop inlet, lateral, and manhole at the northwest corner along Bradley Road to collect and convey nuisance flows to the existing 18-inch RCP storm drain in Bradley Road.
- Provided drop inlet and lateral at the northwest corner along Deer Springs Way to be stubbed for future connection by others to the storm drain in Deer Springs Way.
- Provided a sidewalk underdrain at the northwest corner along Deer Springs Way to convey flows from the 10-foot public drainage easement to the Deer Springs Way right of way.

There is a CLV Public Works Improvement project (drawing no. 208-609) that will revise the intersection of Deer Springs Way and Bradley Road to a roundabout. The improvements include revision to the storm drain in Deer Springs Way. The Update improvements will be constructed prior to or concurrently with the construction of the CLV Public Works project. The Improvement Plans have been updated to reflect the future revised intersection layout by others. Pertinent reference material has been included in **Appendix C**. Please note the onsite improvements remain unchanged from the approved **TDS**.

HYDRAULICS

Developed Condition Hydraulic Calculations

The developed condition Hydraulic Sections 1 and 2 have been revised to include the half-street improvements for the north half of Deer Springs Way and west half of Bradley Road. In the

existing condition, Deer Springs Way and Bradley Road do not meet dry lane criteria; therefore, developed conditions do not meet dry lane criteria.

The revised street flow data has been presented below in **Table 1** for the developed condition**.** **Figure 5** in **Appendix A** shows the locations of the cross sections corresponding to the calculations in the table below. The hydraulic calculations can be found in **Appendix B**.

TABLE 1 – Summary of Developed Condition Flow Depth Analysis					
Section	**Q_{100}**	**D_{100}**	**V_{100}**	**$D*V_{100}$**	**Notes**
1	111	1.06	3.42	3.63	Deer Springs Way (Southeast end of site) at CPD1
2	146	0.99	4.48	4.44	Bradley Road (Southeast end of site) at CPD2

Future Condition Hydraulic Calculations

The future condition Hydraulic Sections 1 and 2 have been revised to include the half-street improvements for the north half of Deer Springs Way and west half of Bradley Road.

The revised street flow data has been presented below in **Table 2** for the future condition**. Figure 6** in **Appendix A** shows the locations of the cross sections corresponding to the calculations in the table below. The hydraulic calculations can be found in **Appendix B**.

TABLE 2– Summary of Future Condition Flow Depth Analysis					
Section	**Q_{100}**	**D_{100}**	**V_{100}**	**$D*V_{100}$**	**Notes**
F1	107	0.89	3.38	3.01	Deer Springs Way (Southeast end of site) at CPF1
F2	135	0.92	4.27	3.93	Bradley Road (Southeast end of site) at CPF2

Storm Drain Facilities

A 5-foot Type DM2 Modified Drop Inlet, 40 feet of 18-inch RCP lateral, and a 60-inch Type IA manhole have been proposed in Bradley Road at approximate Station 16+58. The proposed storm drain improvements will collect and convey nuisance flows to the existing 18-inch RCP storm drain in Bradley Road before the roundabout.

A 5-foot Type DM2 Modified Drop Inlet and a stubbed 18-inch RCP lateral have been proposed on the northeast corner in Deer Springs Way at approximate Station 18+94. The proposed storm drain improvements will be stubbed and plugged for future connection to the future storm drain by others in Deer Springs Way. The storm drain improvements have been designed to collect and convey nuisance flows in Deer Springs Way before the roundabout.

There is a 10-foot Public Drainage Easement that conveys onsite improvement flows to the Deer Springs right of way. A sidewalk underdrain has been proposed at the outlet of the drainage easement to convey onsite flows to the proposed inlet in Deer Springs Way.

In general, the revisions have minor impacts and do not change the design concept presented and approved with the **TDS**. The proposed revisions will not adversely impact adjacent or downstream properties and do not alter flow paths downstream of the site.

If you have any comments or questions, please do not hesitate to contact me at 702-704-2489.

Sincerely,

Jerry E. Pruitt, P.E.
Wood Rodgers, Inc.
725.246.2644 (office)
702-704-2489 (cell)
jpruitt@woodrodgers.com

Autumn Lyn Donovan, P.E.
Wood Rodgers, Inc.
702.623.3426
adonovan@woodrodgers.com

TABLE OF APPENDICES

APPENDIX A

- Figure 5 – Developed Condition Drainage Basin Map
- Figure 6 – Future Condition Drainage Basin Map
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APPENDIX B
(Hydraulics)

- Hydraulic Section Analysis
  - Developed Condition
    - Section 1
    - Section 2
  - Future Condition
    - Section F1
    - Section F2

APPENDIX C
(Reference Material)

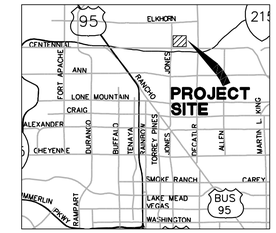
- "Roundabout at Deer Springs Way/Bradley Road" by G.C. Wallace Inc., dated April, 2022.

APPENDIX D
(Plans and Details)

- Civil Improvement Plans

APPENDIX A

- Figure 5 – Developed Condition Drainage Basin Map
- Figure 6 – Future Condition Drainage Basin Map



VICINITY MAP

NOT TO SCALE

150' 75' 0 150'

SCALE: 1" = 150'

TABLE 3 – Developed Condition Hydrology Results

Basin ID	Area (Acres)	Q_{10} (cfs)	Q_{100} (cfs)	Notes
DEVELOPED CONDITION				
REF1	-	0	71	Referenced flows in Jones Blvd. Referenced from (Jones Boulevard Northern Beltway to Elkhorn Road, G.C. Wallace March 2002).
DON1	1.75	1	3	Developed onsite basin. Flows to Bradley Road and Deer Springs Way.
DON2	0.53	0	1	Developed onsite basin. Flows to Deer Springs Way.
DOF1	1.75	1	3	Developed offsite residential homes. Flows to Deer Springs Way.
DOF2	24.20	16	41	Developed offsite residential homes. Flows to Deer Springs Way.
DOF3	20.53	12	34	Developed offsite residential homes. Flows to Deer Springs Way.
EOF4	18.29	12	33	Undeveloped offsite basin. Flows to Deer Springs Way.
ST1	0.93	2	3	Undeveloped offsite basin. Flows to Deer Springs Way.
CPD1	-	40	111	Existing condition flow in Deer Springs Way at the eastern boundary of the site. REF1 + EON1 + DOF1 + DOF2 + DOF3 + EOF4 +ST1
EOF5	38.30	25	66	Undeveloped offsite basin. Flows to Bradley Road.
DOF6	44.93	28	74	Developed offsite residential homes. Flows to Bradley Road.
DOF7	7.31	6	15	Developed offsite residential homes. Flows to Bradley Road.
CPD2	-	55	146	Existing condition flow in Bradley Road at the eastern boundary of the site. EOF5 + DOF6 + DOF7
CPD3	-	93	256	Existing condition flow in Bradley Road at the eastern boundary of the site. CPD1 + CPD2

TABLE 5B – Summary of Developed Condition Flow Depth Analysis

Section	Q_{100}	D_{100}	V_{100}	$D*V_{100}$	Notes
1	111	1.06	3.42	3.63	Deer Springs Way (Southeast end of site) at CPD1
2	146	0.99	4.48	4.44	Bradley Road (Southeast end of site) at CPD2
3	256	1.10	5.22	5.74	Bradley Road at CPD3
4	1	0.11	1.55	0.17	DON2 (West Cul-de-Sac)
5	4	0.24	1.38	0.33	DOF1 + DON2 (Private Street)
6	1	0.11	1.58	0.17	10 ft. Drainage Easement

DRAINAGE LEGEND

▬▬▬	DRAINAGE AREA BOUNDARY
➡	DRAINAGE AREA FLOW DIRECTION
OND1	AREA DESIGNATION
($Q_{10/100}$)	PEAK 10 YR FLOW / PEAK 100 YR FLOW
● CPD1	CONCENTRATION POINT

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: 1:150
DRAWN BY: AD
DESIGNED BY: JP
CHECKED BY: JP

WOOD RODGERS
DEVELOPING INNOVATIVE DESIGN SOLUTIONS
2190 East Pebble Road Ste. 200 Tel 702.220.9660
Las Vegas, NV. 89123

BALMORAL ESTATES

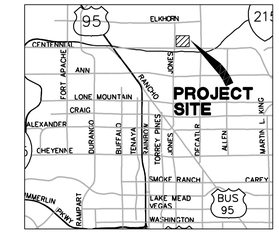
APN: 125-24-203-022

DEVELOPED CONDITION DRAINAGE BASIN MAP

PROJECT NO. 3869

DRAWING
FIGURE 5

J:\3000-s\3869_Gold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Studies\Drainage\JP\Docs_Figures\FIGURE 5 - Developed Conditions Basin Map.dwg 8/9/2022 12:27 PM Autumn Lyn Donovan



VICINITY MAP

NOT TO SCALE

150' 75' 0 150'

SCALE: 1" = 150'

TABLE 4 – Future Condition Hydrology Results

Basin ID	Area (Acres)	Q_{10} (cfs)	Q_{100} (cfs)	Notes
DEVELOPED CONDITION				
REF1	-	0	71	Referenced flows in Jones Blvd. Referenced from (Jones Boulevard Northern Beltway to Elkhorn Road, G.C. Wallace March 2002).
DON1	1.75	1	3	Developed onsite basin. Flows to Bradley Road and Deer Springs Way.
DON2	0.53	0	1	Developed onsite basin. Flows to Deer Springs Way.
DOF1	1.75	1	3	Developed offsite residential homes. Flows to Deer Springs Way.
DOF2	24.20	16	41	Developed offsite residential homes. Flows to Deer Springs Way.
DOF3	20.53	12	34	Developed offsite residential homes. Flows to Deer Springs Way.
DOF4	18.29	10	29	Undeveloped offsite basin. Flows to Deer Springs Way.
ST1	0.93	2	3	Undeveloped offsite basin. Flows to Deer Springs Way.
CPF1	-	37	107	Existing condition flow in Deer Springs Way at the eastern boundary of the site. REF1 + EON1 + DOF1 + DOF2 + DOF3 + EOF4 +ST1
DOF5	38.30	20	58	Undeveloped offsite basin. Flows to Bradley Road.
DOF6	44.93	28	74	Developed offsite residential homes. Flows to Bradley Road.
DOF7	7.31	6	15	Developed offsite residential homes. Flows to Bradley Road.
CPF2	-	47	135	Existing condition flow in Bradley Road at the eastern boundary of the site. EOF5 + DOF6 + DOF7
CPF3	-	83	237	Existing condition flow in Bradley Road at the eastern boundary of the site. CPF1 + CPF2

TABLE 5C – Summary of Future Condition Flow Depth Analysis

Section	Q_{100}	D_{100}	V_{100}	$D*V_{100}$	Notes
F1	107	0.89	3.38	3.01	Deer Springs Way (Southeast end of site) at CPF1
F2	135	0.92	4.27	3.93	Bradley Road (Southeast end of site) at CPF2
F3	237	1.1	5.06	5.57	Bradley Road at CPF3
F4	1	0.1	1.55	0.16	DON2 (West Cul-de-Sac)
F5	4	0.2	1.38	0.28	DOF1 + DON2 (Private Street)
F6	1	0.1	1.58	0.16	10 ft. Drainage Easement

DRAINAGE LEGEND

▬	DRAINAGE AREA BOUNDARY
➡	DRAINAGE AREA FLOW DIRECTION
OND1	AREA DESIGNATION
($Q_{10/100}$)	PEAK 10 YR FLOW / PEAK 100 YR FLOW
● CPF1	CONCENTRATION POINT

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: 1:150
DRAWN BY: AD
DESIGNED BY: JP
CHECKED BY: JP

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2180 East Pebble Road Ste. 200 Tel 702.220.9660
Las Vegas, NV. 89123

BALMORAL ESTATES

APN: 125-24-203-022

FUTURE CONDITION DRAINAGE BASIN MAP

PROJECT NO. 3869

DRAWING
FIGURE 6

J:\3000-s\3869_Cold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Studies\Drainage\JP\Docs_Figures\FIGURE 6 - Future Conditions Basin Map.dwg 8/9/2022 12:57 PM Autumn Lyn Donovan

APPENDIX B
(Hydraulics)

- Hydraulic Section Analysis
  - Developed Condition
    - Section 1
    - Section 2
  - Future Condition
    - Section F1
    - Section F2

Worksheet for Section 1 - Deer Springs - Developed 10 yr (CPD1)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.600 %
Discharge	40.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.01
0+05.00	0.91
0+13.50	0.74
0+14.00	0.72
0+14.00	0.24
0+15.50	0.37
0+15.50	0.41
0+40.00	0.90
0+70.00	0.42
0+74.00	0.00
0+80.00	1.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.01)	(0+05.00, 0.91)	0.013
(0+05.00, 0.91)	(0+13.50, 0.74)	0.025
(0+13.50, 0.74)	(0+70.00, 0.42)	0.016
(0+70.00, 0.42)	(0+80.00, 1.00)	0.025

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	0.84 ft
Roughness Coefficient	0.018
Elevation	0.84 ft
Elevation Range	0.00 to 1.01 ft
Flow Area	16.2 ft²
Wetted Perimeter	65.18 ft
Hydraulic Radius	0.25 ft

Worksheet for Section 1 - Deer Springs - Developed 10 yr (CPD1)

Results	
Top Width	64.55 ft
Normal Depth	0.84 ft
Critical Depth	0.82 ft
Critical Slope	0.801 %
Velocity	2.47 ft/s
Velocity Head	0.10 ft
Specific Energy	0.94 ft
Froude Number	0.871
Flow Type	Subcritical

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	0.84 ft
Critical Depth	0.82 ft
Channel Slope	0.600 %
Critical Slope	0.801 %

Worksheet for Section 1 - Deer Springs - Developed 10 yr (CPD1)

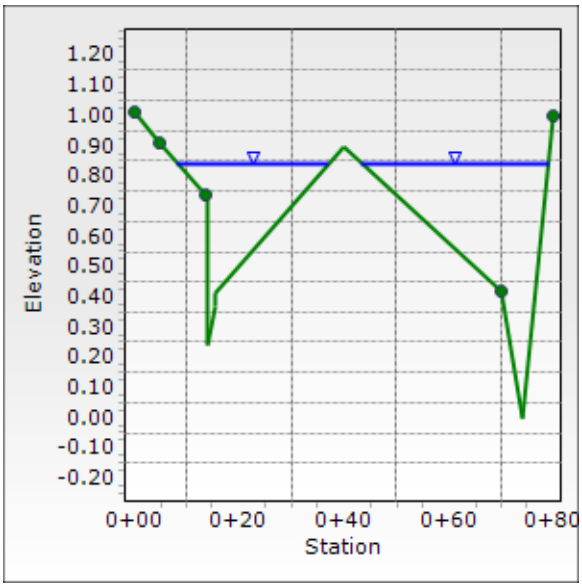
Messages:

Flow is divided.

Cross Section for Section 1 - Deer Springs - Developed 10 yr (CPD1)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.600 %
Normal Depth	0.84 ft
Discharge	40.00 cfs



Worksheet for Section 1 - Deer Springs - Developed 100 yr (CPD1)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.600 %
Discharge	111.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.10
0+00.00	1.01
0+05.00	0.91
0+13.50	0.74
0+14.00	0.72
0+14.00	0.24
0+15.50	0.37
0+15.50	0.41
0+40.00	0.90
0+70.00	0.42
0+74.00	0.00
0+80.00	1.00
0+80.00	1.10

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.10)	(0+05.00, 0.91)	0.013
(0+05.00, 0.91)	(0+13.50, 0.74)	0.025
(0+13.50, 0.74)	(0+70.00, 0.42)	0.016
(0+70.00, 0.42)	(0+80.00, 1.10)	0.025

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	1.06 ft
Roughness Coefficient	0.018
Elevation	1.06 ft
Elevation Range	0.00 to 1.10 ft
Flow Area	32.5 ft²

Worksheet for Section 1 - Deer Springs - Developed 100 yr (CPD1)

Results	
Wetted Perimeter	80.75 ft
Hydraulic Radius	0.40 ft
Top Width	80.00 ft
Normal Depth	1.06 ft
Critical Depth	1.05 ft
Critical Slope	0.677 %
Velocity	3.42 ft/s
Velocity Head	0.18 ft
Specific Energy	1.24 ft
Froude Number	0.946
Flow Type	Subcritical

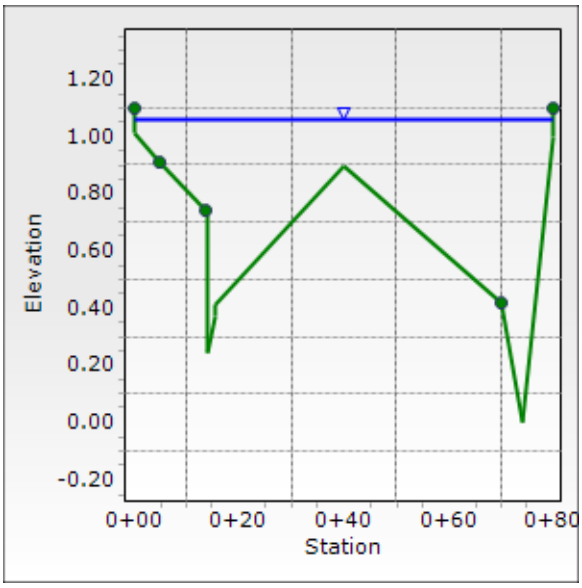
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

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	1.06 ft
Critical Depth	1.05 ft
Channel Slope	0.600 %
Critical Slope	0.677 %

Cross Section for Section 1 - Deer Springs - Developed 100 yr (CPD1)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.600 %
Normal Depth	1.06 ft
Discharge	111.00 cfs



Worksheet for Section 2 - Bradley - Developed 10 yr (CPD2)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.910 %
Discharge	55.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.00
0+05.00	0.90
0+15.00	0.70
0+15.50	0.68
0+15.50	0.20
0+17.00	0.33
0+17.00	0.37
0+40.00	0.83
0+73.00	0.17
0+73.00	0.13
0+74.50	0.00
0+74.50	0.48
0+75.00	0.50
0+80.00	0.60
0+80.00	1.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.00)	(0+05.00, 0.90)	0.013
(0+05.00, 0.90)	(0+15.00, 0.70)	0.025
(0+15.00, 0.70)	(0+80.00, 1.00)	0.016

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	0.77 ft
Roughness Coefficient	0.017
Elevation	0.77 ft
Elevation Range	0.00 to 1.00 ft

Worksheet for Section 2 - Bradley - Developed 10 yr (CPD2)

Results	
Flow Area	16.1 ft²
Wetted Perimeter	63.40 ft
Hydraulic Radius	0.25 ft
Top Width	62.17 ft
Normal Depth	0.77 ft
Critical Depth	0.81 ft
Critical Slope	0.635 %
Velocity	3.42 ft/s
Velocity Head	0.18 ft
Specific Energy	0.95 ft
Froude Number	1.186
Flow Type	Supercritical

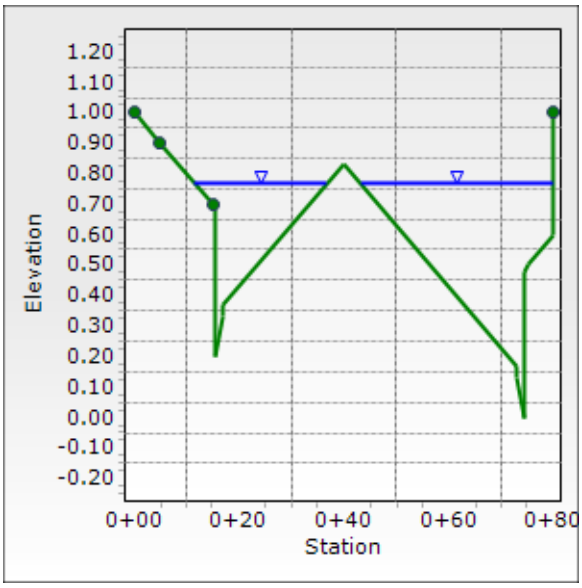
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

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	0.77 ft
Critical Depth	0.81 ft
Channel Slope	0.910 %
Critical Slope	0.635 %

Cross Section for Section 2 - Bradley - Developed 10 yr (CPD2)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.910 %
Normal Depth	0.77 ft
Discharge	55.00 cfs



Worksheet for Section 2 - Bradley - Developed 100 yr (CPD2)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.910 %
Discharge	146.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.00
0+05.00	0.90
0+15.00	0.70
0+15.50	0.68
0+15.50	0.20
0+17.00	0.33
0+17.00	0.37
0+40.00	0.83
0+73.00	0.17
0+73.00	0.13
0+74.50	0.00
0+74.50	0.48
0+75.00	0.50
0+80.00	0.60
0+80.00	1.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.00)	(0+05.00, 0.90)	0.013
(0+05.00, 0.90)	(0+15.00, 0.70)	0.025
(0+15.00, 0.70)	(0+80.00, 1.00)	0.016

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	0.99 ft
Roughness Coefficient	0.017
Elevation	0.99 ft
Elevation Range	0.00 to 1.00 ft

Worksheet for Section 2 - Bradley - Developed 100 yr (CPD2)

Results	
Flow Area	32.6 ft²
Wetted Perimeter	81.13 ft
Hydraulic Radius	0.40 ft
Top Width	79.67 ft
Normal Depth	0.99 ft
Critical Depth	1.06 ft
Critical Slope	0.571 %
Velocity	4.48 ft/s
Velocity Head	0.31 ft
Specific Energy	1.31 ft
Froude Number	1.235
Flow Type	Supercritical

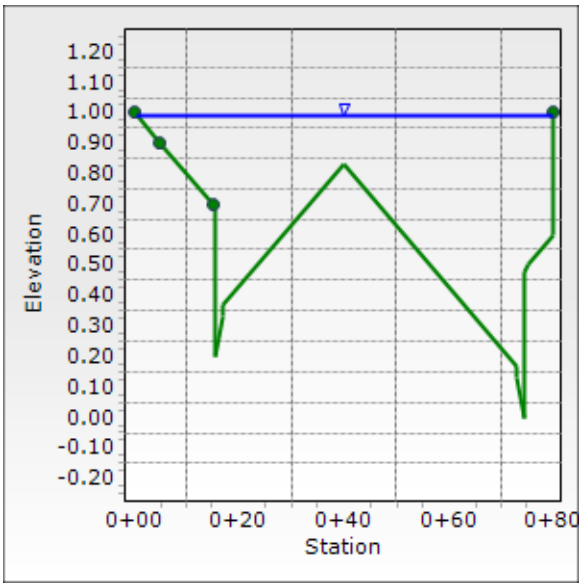
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

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	0.99 ft
Critical Depth	1.06 ft
Channel Slope	0.910 %
Critical Slope	0.571 %

Cross Section for Section 2 - Bradley - Developed 100 yr (CPD2)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.910 %
Normal Depth	0.99 ft
Discharge	146.00 cfs



Worksheet for Section F1 - Deer Springs - Future 10 yr (CPF1)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.600 %
Discharge	37.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.77
0+05.00	0.67
0+13.50	0.50
0+14.00	0.48
0+14.00	0.00
0+15.50	0.13
0+15.50	0.17
0+40.00	0.66
0+63.00	0.20
0+63.00	0.16
0+64.50	0.03
0+64.50	0.51
0+65.00	0.53
0+75.00	0.73
0+80.00	0.83

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.77)	(0+05.00, 0.67)	0.013
(0+05.00, 0.67)	(0+13.50, 0.50)	0.025
(0+13.50, 0.50)	(0+65.00, 0.53)	0.016
(0+65.00, 0.53)	(0+75.00, 0.73)	0.025
(0+75.00, 0.73)	(0+80.00, 0.83)	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	0.68 ft
Roughness Coefficient	0.018
Elevation	0.68 ft

Worksheet for Section F1 - Deer Springs - Future 10 yr (CPF1)

Results	
Elevation Range	0.00 to 0.83 ft
Flow Area	15.9 ft²
Wetted Perimeter	69.48 ft
Hydraulic Radius	0.23 ft
Top Width	68.42 ft
Normal Depth	0.68 ft
Critical Depth	0.66 ft
Critical Slope	0.848 %
Velocity	2.33 ft/s
Velocity Head	0.08 ft
Specific Energy	0.77 ft
Froude Number	0.853
Flow Type	Subcritical

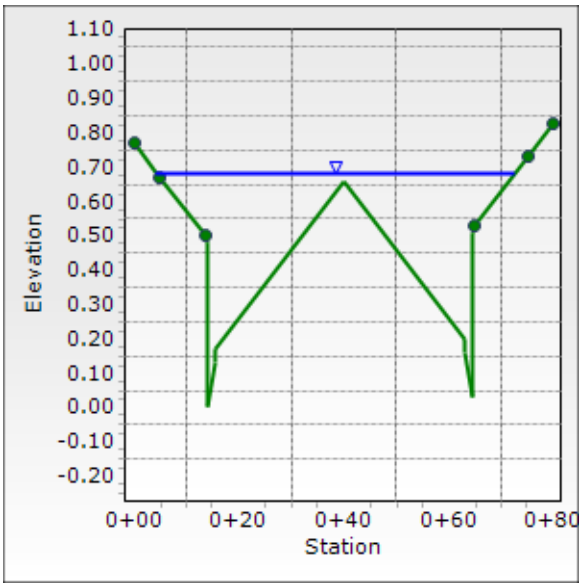
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

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	0.68 ft
Critical Depth	0.66 ft
Channel Slope	0.600 %
Critical Slope	0.848 %

Cross Section for Section F1 - Deer Springs - Future 10 yr (CPF1)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.600 %
Normal Depth	0.68 ft
Discharge	37.00 cfs



Worksheet for Section F1 - Deer Springs - Future 100 yr (CPF1)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.600 %
Discharge	107.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.00
0+00.00	0.77
0+05.00	0.67
0+13.50	0.50
0+14.00	0.48
0+14.00	0.00
0+15.50	0.13
0+15.50	0.17
0+40.00	0.66
0+63.00	0.20
0+63.00	0.16
0+64.50	0.03
0+64.50	0.51
0+65.00	0.53
0+75.00	0.73
0+80.00	0.83
0+80.00	1.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.00)	(0+05.00, 0.67)	0.013
(0+05.00, 0.67)	(0+13.50, 0.50)	0.025
(0+13.50, 0.50)	(0+65.00, 0.53)	0.016
(0+65.00, 0.53)	(0+75.00, 0.73)	0.025
(0+75.00, 0.73)	(0+80.00, 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	0.89 ft

Worksheet for Section F1 - Deer Springs - Future 100 yr (CPF1)

Results	
Roughness Coefficient	0.018
Elevation	0.89 ft
Elevation Range	0.00 to 1.00 ft
Flow Area	31.7 ft²
Wetted Perimeter	81.25 ft
Hydraulic Radius	0.39 ft
Top Width	80.00 ft
Normal Depth	0.89 ft
Critical Depth	0.88 ft
Critical Slope	0.675 %
Velocity	3.38 ft/s
Velocity Head	0.18 ft
Specific Energy	1.07 ft
Froude Number	0.948
Flow Type	Subcritical

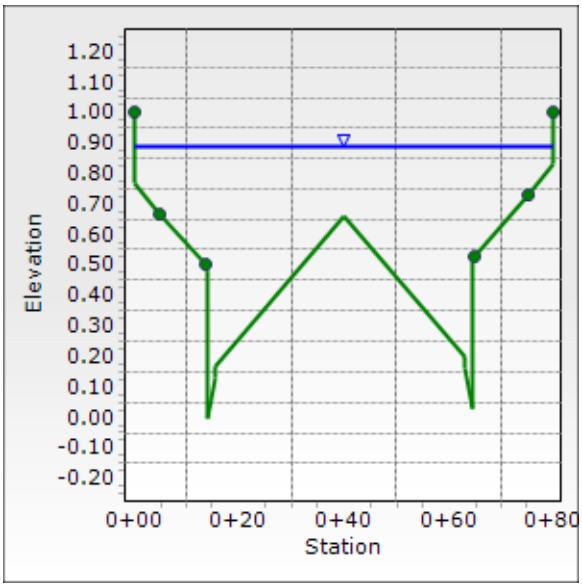
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

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	0.89 ft
Critical Depth	0.88 ft
Channel Slope	0.600 %
Critical Slope	0.675 %

Cross Section for Section F1 - Deer Springs - Future 100 yr (CPF1)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.600 %
Normal Depth	0.89 ft
Discharge	107.00 cfs



Worksheet for Section F2 - Bradley - Future 10 yr (CPF2)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.910 %
Discharge	47.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	0.90
0+05.00	0.80
0+15.00	0.60
0+15.50	0.58
0+15.50	0.10
0+17.00	0.23
0+17.00	0.27
0+40.00	0.73
0+68.00	0.17
0+68.00	0.13
0+69.50	0.00
0+69.50	0.48
0+70.00	0.50
0+75.00	0.60
0+80.00	0.70
0+80.00	0.90

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 0.90)	(0+05.00, 0.80)	0.013
(0+05.00, 0.80)	(0+15.00, 0.60)	0.025
(0+15.00, 0.60)	(0+70.00, 0.50)	0.016
(0+70.00, 0.50)	(0+75.00, 0.60)	0.025
(0+75.00, 0.60)	(0+80.00, 0.90)	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	0.71 ft
Roughness Coefficient	0.017

Worksheet for Section F2 - Bradley - Future 10 yr (CPF2)

Results	
Elevation	0.71 ft
Elevation Range	0.00 to 0.90 ft
Flow Area	15.7 ft²
Wetted Perimeter	70.07 ft
Hydraulic Radius	0.22 ft
Top Width	68.99 ft
Normal Depth	0.71 ft
Critical Depth	0.73 ft
Critical Slope	0.735 %
Velocity	2.99 ft/s
Velocity Head	0.14 ft
Specific Energy	0.85 ft
Froude Number	1.105
Flow Type	Supercritical

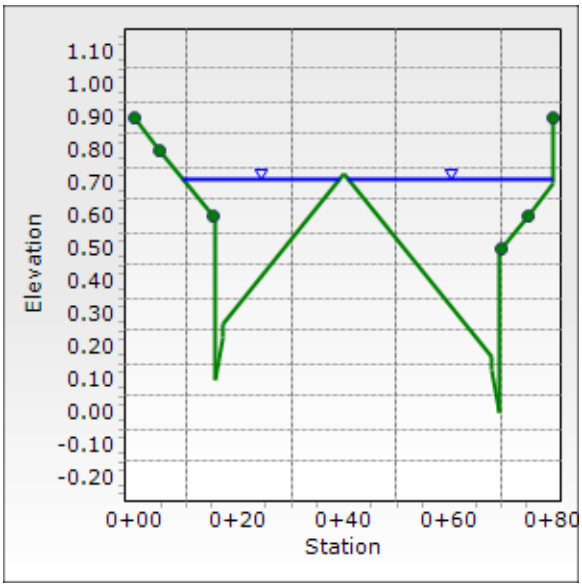
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

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	0.71 ft
Critical Depth	0.73 ft
Channel Slope	0.910 %
Critical Slope	0.735 %

Cross Section for Section F2 - Bradley - Future 10 yr (CPF2)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.910 %
Normal Depth	0.71 ft
Discharge	47.00 cfs



Worksheet for Section F2 - Bradley - Future 100 yr (CPF2)

Project Description

Friction Method	Manning Formula
Solve For	Normal Depth

Input Data

Channel Slope	0.910 %
Discharge	135.00 cfs

Section Definitions

Station (ft)	Elevation (ft)
0+00.00	1.00
0+00.00	0.90
0+05.00	0.80
0+15.00	0.60
0+15.50	0.58
0+15.50	0.10
0+17.00	0.23
0+17.00	0.27
0+40.00	0.73
0+68.00	0.17
0+68.00	0.13
0+69.50	0.00
0+69.50	0.48
0+70.00	0.50
0+75.00	0.60
0+80.00	0.70
0+80.00	0.90
0+80.00	1.00

Roughness Segment Definitions

Start Station	Ending Station	Roughness Coefficient
(0+00.00, 1.00)	(0+05.00, 0.80)	0.013
(0+05.00, 0.80)	(0+15.00, 0.60)	0.025
(0+15.00, 0.60)	(0+70.00, 0.50)	0.016
(0+70.00, 0.50)	(0+75.00, 0.60)	0.025
(0+75.00, 0.60)	(0+80.00, 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

Worksheet for Section F2 - Bradley - Future 100 yr (CPF2)

Results	
Normal Depth	0.92 ft
Roughness Coefficient	0.018
Elevation	0.92 ft
Elevation Range	0.00 to 1.00 ft
Flow Area	31.6 ft²
Wetted Perimeter	81.31 ft
Hydraulic Radius	0.39 ft
Top Width	80.00 ft
Normal Depth	0.92 ft
Critical Depth	0.97 ft
Critical Slope	0.611 %
Velocity	4.27 ft/s
Velocity Head	0.28 ft
Specific Energy	1.21 ft
Froude Number	1.196
Flow Type	Supercritical

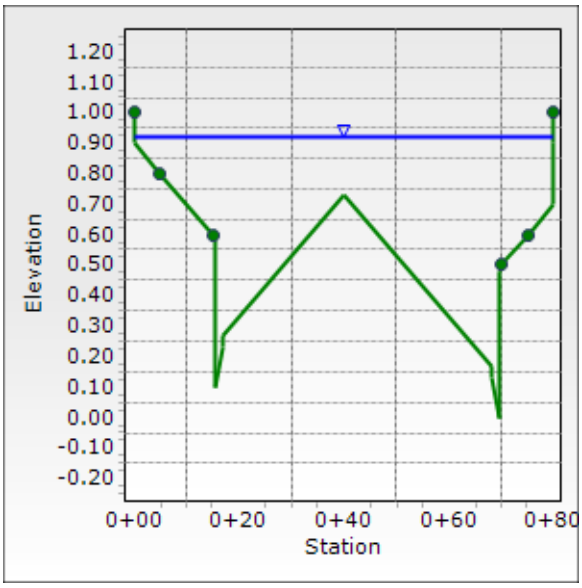
GVF Input Data	
Downstream Depth	0.00 ft
Length	0.00 ft
Number Of Steps	0

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	0.92 ft
Critical Depth	0.97 ft
Channel Slope	0.910 %
Critical Slope	0.611 %

Cross Section for Section F2 - Bradley - Future 100 yr (CPF2)

Project Description	
Friction Method	Manning Formula
Solve For	Normal Depth

Input Data	
Channel Slope	0.910 %
Normal Depth	0.92 ft
Discharge	135.00 cfs



APPENDIX C
(Plans and Details)

- "Roundabout at Deer Springs Way/Bradley Road" by G.C. Wallace Inc., dated April, 2022

DEPARTMENT OF PUBLIC WORKS

Mayor:
CAROLYN G. GOODMAN

City Council:
STAVROS S. ANTHONY (Mayor Pro-Tem)
MICHELE FIORE
CEDRIC CREAR
BRIAN KNUDSEN
VICTORIA SEAMAN
OLIVIA DIAZ

City Manager:
JORGE CERVANTES, P.E., P.T.O.E.

Executive Director of Infrastructure:
MIKE JANSSEN, P.E., P.T.O.E.

Acting City Engineer:
ROSA A. CORTEZ, P.E.

ROUNDABOUT AT DEER SPRINGS WAY/BRADLEY ROAD

Funded By:
REGIONAL TRANSPORTATION COMMISSION
OF SOUTHERN NEVADA

Willie Felkins

Digitally signed by Willie Felkins
DN: C=US, E=wfelkins@gcwengineering.com, O="GCW, Inc.", CN=Willie Felkins
Reason: I am the author of this document
Date: 2022.04.28 10:28:37-07'00'

Reviewed By:

CLV CITY ENGINEER DATE

CLV PROJECT MANAGER DATE

CLV CITY TRAFFIC ENGINEER DATE

CLV CONSTRUCTION MANAGER DATE

REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA DATE

SOUTHWEST GAS CORPORATION DATE

CENTRAL TELEPHONE COMPANY d/b/a CENTURYLINK DATE
THE AFFIXED CENTURYLINK NEVADA APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION STANDARD REGULATIONS.

COX COMMUNICATIONS LAS VEGAS, INC. DATE

NV ENERGY – DISTRIBUTION DATE
NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT TO THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS.

NV ENERGY - TRANSMISSION DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES
PROJECT NO. 136160 FIRST APPROVED DATE:
SHEETS: CV, GN-1, DM-1, RD-1, RD-2, SD-1, SD-2, SD-3, SD-4, W-1, W-2, W-3, W-4, SL-1

THE SIGNATURE ABOVE ACKNOWLEDGES THAT THE UTILITY COMPANY REPRESENTATIVE HAS REVIEWED THE PLANS, AND THAT TO THE BEST OF HIS OR HER KNOWLEDGE THE UTILITY LINES ARE SHOWN IN THE CORRECT LOCATIONS AND ARE THE CORRECT SIZES. WHILE SUCH DATA HAS BEEN COLLECTED WITH REASONABLE CARE, THERE IS NO EXPRESSED OR IMPLIED GUARANTEE THAT THE LOCATIONS ARE EXACT. THE CONTRACTOR SHALL BEAR THE RESPONSIBILITY OF OBTAINING THE ACTUAL FIELD LOCATIONS.

THE SIGNATURE ABOVE FURTHER ACKNOWLEDGES THAT THE UTILITY COMPANY DOES NOT ANTICIPATE CONSTRUCTION OR MAINTENANCE IN THE PROJECT AREA FOR FIVE (5) YEARS IN CONFORMANCE WITH THE CLV NO-CUT POLICY.

NO.	DATE	REVISIONS

PREPARED BY
GCW ENGINEERS\SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

PREPARED FOR
CITY OF LAS VEGAS

MW# A512 | BID# 21.MWA512
DATE: 4/27/2022 | DESIGNED BY: JRT
SUBMITTAL STAGE: FINAL | DRAWN BY: DSH
CHECKED BY: WLF

TITLE
ROUNDABOUT AT DEER SPRINGS WAY/BRADLEY ROAD

SHEET
COVER SHEET

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIE L. FELKINS
Exp. 6/30/2023
CIVIL
No. 19632
4/27/2022

SHEET
CV
1 OF 21
DRAWING NO.
208-609

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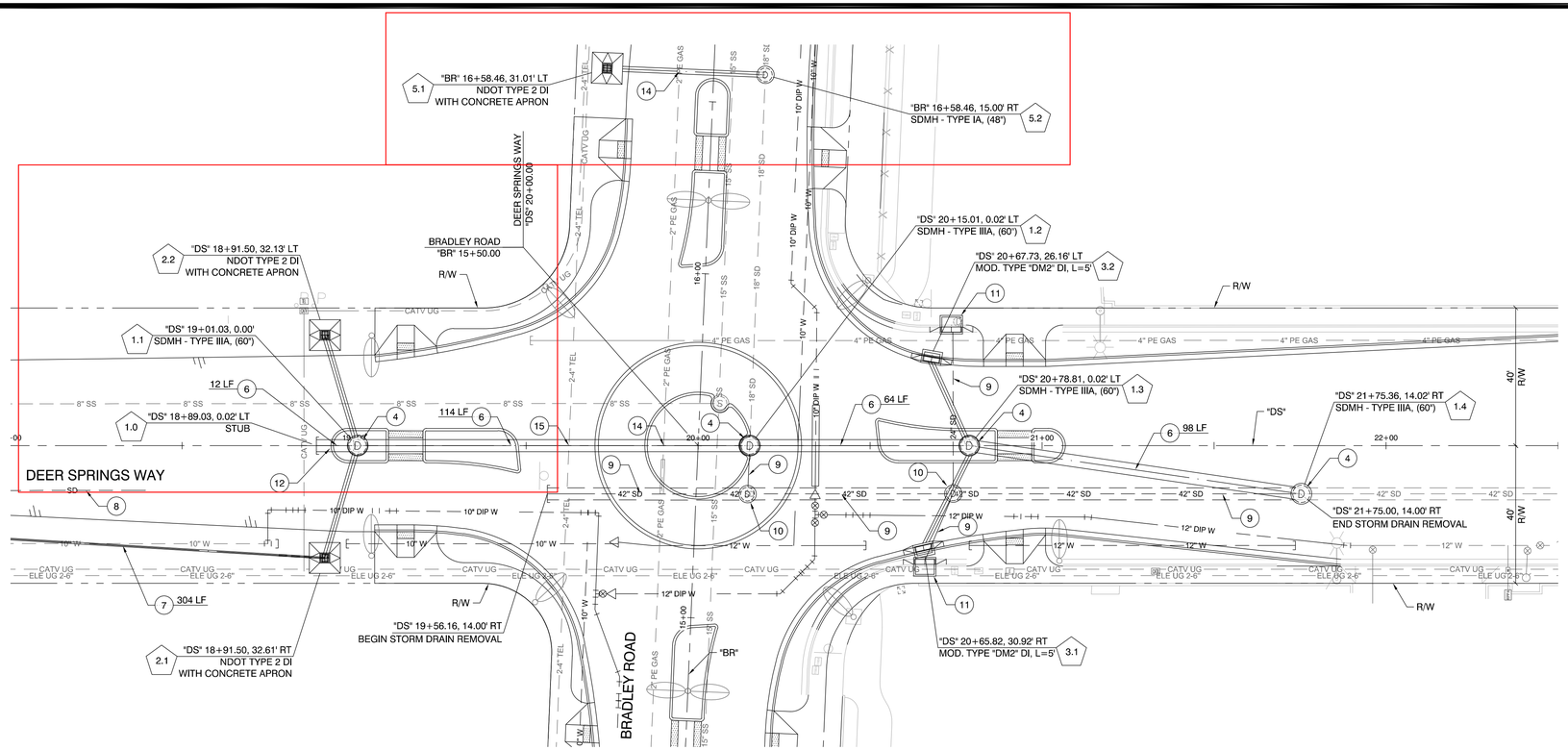

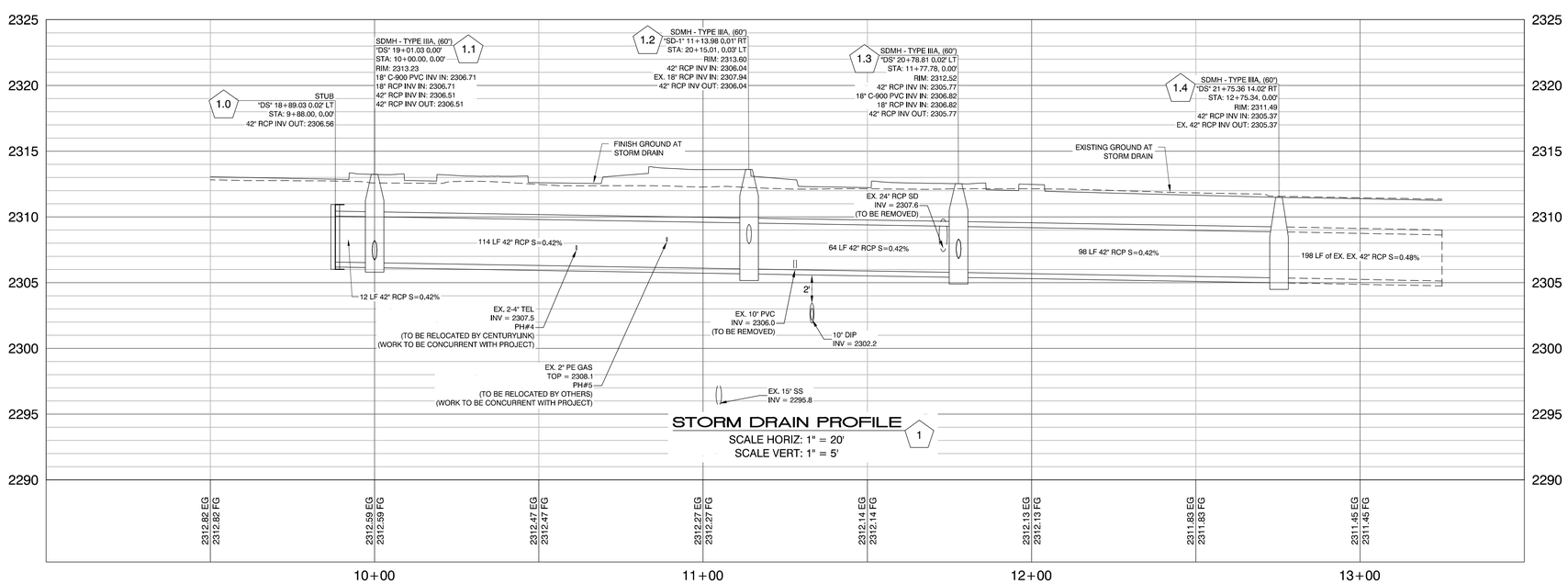

STORM DRAIN NOTES

1. CONSTRUCT TYPE 2 DROP INLET W/ CONCRETE APRON (NDOT STD. PLAN DS-32 AND DS-42) (USDCCA STD. DWG. NO. 421)
2. CONSTRUCT TYPE "DM2" MODIFIED DROP INLET (L=5-FT) (USDCCA STD. DWG. NO. 412.1 AND NO. 421)
3. INSTALL 48-INCH TYPE I MANHOLE (USDCCA STD. DWG. NO. 403.1)
4. INSTALL 60-INCH TYPE III MANHOLE (USDCCA STD. DWG. NO. 406.1)
5. INSTALL 18-INCH RCP
6. INSTALL 42-INCH RCP
7. INSTALL 6-INCH C900 PVC PIPE
8. REMOVE CONCRETE APRON AND 6" DIA PVC PIPE (SEE SHEET DM-1)
9. REMOVE STORM DRAIN PIPE
10. REMOVE STORM DRAIN MANHOLE
11. REMOVE DROP INLET
12. INSTALL 42-INCH RCP PLUG
13. INSTALL 18-INCH C900 PVC
14. RELOCATE GAS LINE (BY OTHERS) (WORK TO BE CONCURRENT WITH PROJECT)
15. RELOCATE TELEPHONE CONDUITS (BY CENTURYLINK) (WORK TO BE CONCURRENT WITH PROJECT)

P. PROTECT IN PLACE

UTILITY NOTES:

1. EXISTING UTILITIES SHOWN HEREIN ARE APPROXIMATE ONLY AND MAY NOT SHOW ALL EXISTING FACILITIES WITHIN THE PROJECT AREA. CONTRACTOR MUST FIELD VERIFY AND POTHOLE EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO BEGINNING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE PROTECTED IN PLACE DURING CONSTRUCTION.
2. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22.

STORM DRAIN MANHOLE AND DROP INLET NOTE:
WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICAL:
CAST IN PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

NOTE

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

NORTH

SCALE 20 0 20 40 FEET

APPROVED FOR CONSTRUCTION

SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES
PROJECT NO. 136160 FIRST APPROVED DATE: _____.

CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-227-2600
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511
	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

NO.	DATE	REVISIONS

PREPARED BY
GCW ENGINEERS\SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

PREPARED FOR
CITY OF LAS VEGAS

MW# A512 | BID# 21.MWA512
DATE: 4/27/2022 | DESIGNED BY: WLF
SUBMITTAL STAGE: FINAL | DRAWN BY: CDW
CHECKED BY: WLF

TITLE
ROUNDABOUT AT DEER SPRINGS WAY/BRADLEY ROAD

SHEET
STORM DRAIN PLAN AND PROFILE

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIE L. FELKINS
Exp. 6/30/2023
CIVIL
No. 19652
4/27/2022

SHEET
SD-1
11 OF 21
DRAWING NO.
208-609

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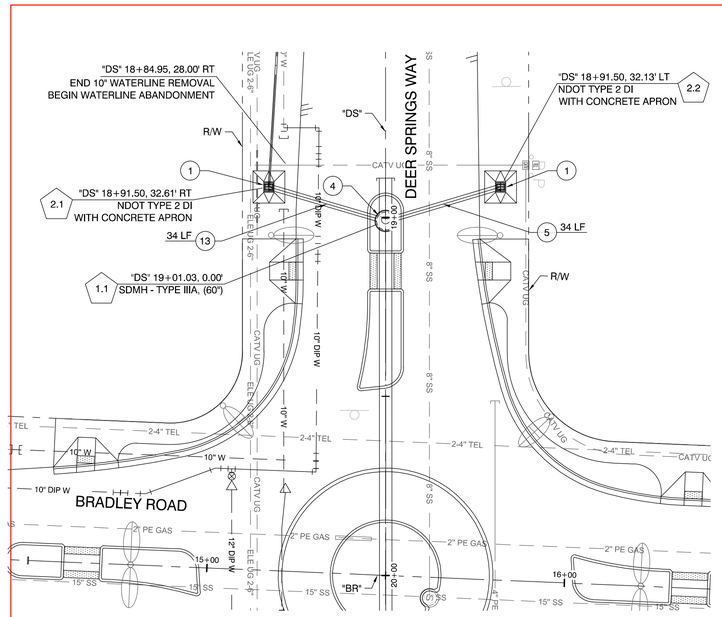
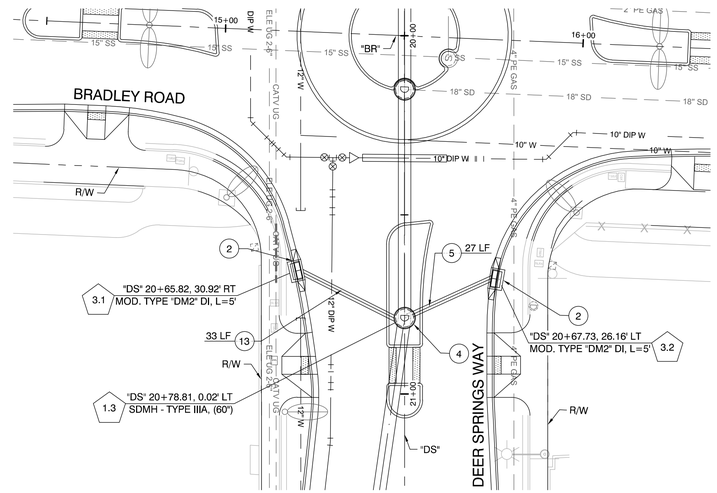
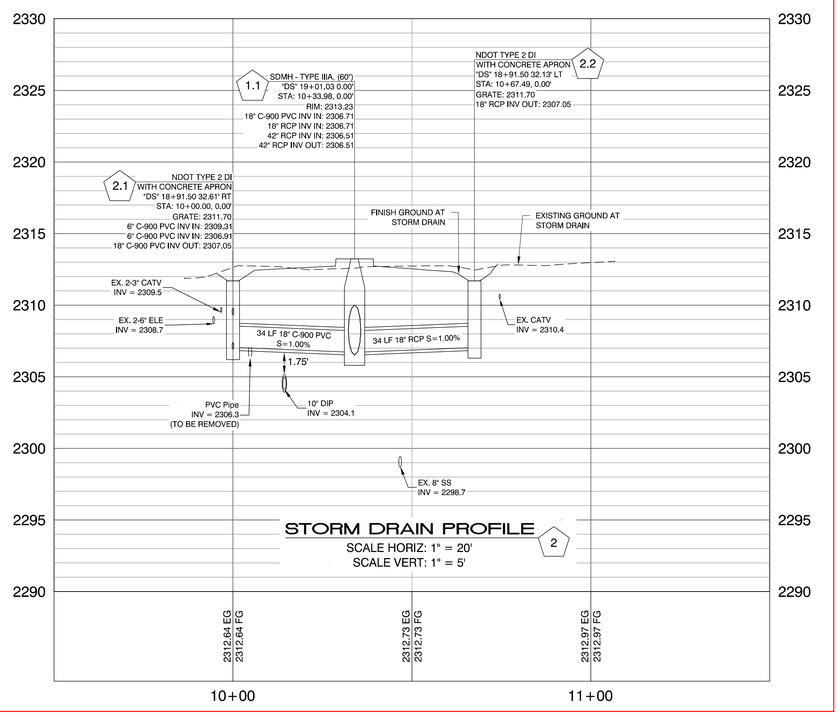
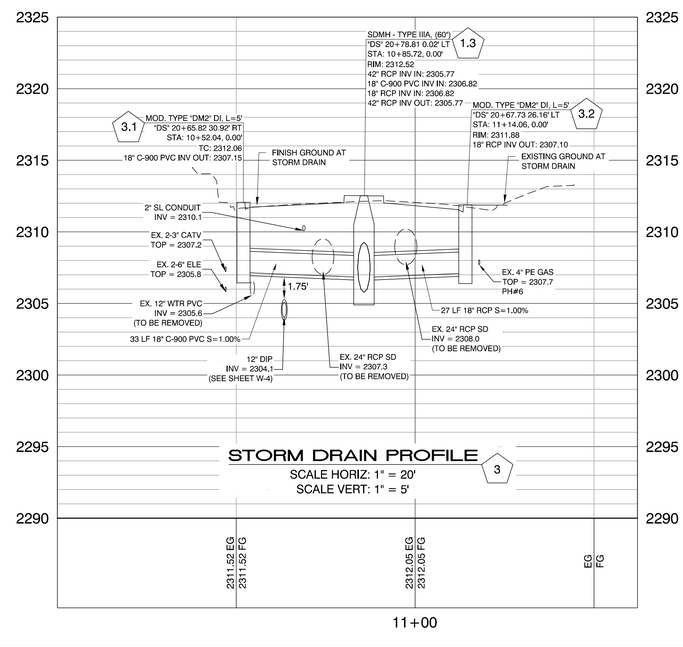








STORM DRAIN NOTES

1. CONSTRUCT TYPE 2 DROP INLET W/ CONCRETE APRON (NDOT STD. PLAN DS-32 AND DS-42) (USDCCA STD. DWG. NO. 421)
2. CONSTRUCT TYPE "DM2" MODIFIED DROP INLET (L=5-FT) (USDCCA STD. DWG. NO. 412.1 AND NO. 421)
3. INSTALL 48-INCH TYPE I MANHOLE (USDCCA STD. DWG. NO. 403.1)
4. INSTALL 60-INCH TYPE III MANHOLE (USDCCA STD. DWG. NO. 406.1)
5. INSTALL 18-INCH RCP
6. INSTALL 42-INCH RCP
7. INSTALL 6-INCH C900 PVC PIPE
8. REMOVE CONCRETE APRON AND 6" DIA PVC PIPE (SEE SHEET DM-1)
9. REMOVE STORM DRAIN PIPE
10. REMOVE STORM DRAIN MANHOLE
11. REMOVE DROP INLET
12. INSTALL 42-INCH RCP PLUG
13. INSTALL 18-INCH C900 PVC
14. RELOCATE GAS LINE (BY OTHERS) (WORK TO BE CONCURRENT WITH PROJECT)
15. RELOCATE TELEPHONE CONDUITS (BY CENTURYLINK) (WORK TO BE CONCURRENT WITH PROJECT)

P. PROTECT IN PLACE

UTILITY NOTES:

1. EXISTING UTILITIES SHOWN HEREIN ARE APPROXIMATE ONLY AND MAY NOT SHOW ALL EXISTING FACILITIES WITHIN THE PROJECT AREA. CONTRACTOR MUST FIELD VERIFY AND POTHOLE EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO BEGINNING CONSTRUCTION. ALL EXISTING UTILITIES MUST BE PROTECTED IN PLACE DURING CONSTRUCTION.
2. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22.

STORM DRAIN MANHOLE AND DROP INLET NOTE:
WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICAL:
CAST IN PLACE MONOLITHIC POUR WITH WATERSTOP BETWEEN SLAB AND WALLS. BASE, WALLS AND TOP TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP. (VINYLEX, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL)

NOTE

PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

NORTH

SCALE 20 0 20 40 FEET

APPROVED FOR CONSTRUCTION

SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES
PROJECT NO. 136160 FIRST APPROVED DATE: _____.

CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-227-2600
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511
	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

NO.	DATE	REVISIONS

PREPARED BY
GCW ENGINEERS\SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

PREPARED FOR
CITY OF LAS VEGAS

MW# A512 | BID# 21.MWA512
DATE: 4/27/2022 | DESIGNED BY: WLF
SUBMITTAL STAGE: FINAL | DRAWN BY: CDW
CHECKED BY: WLF

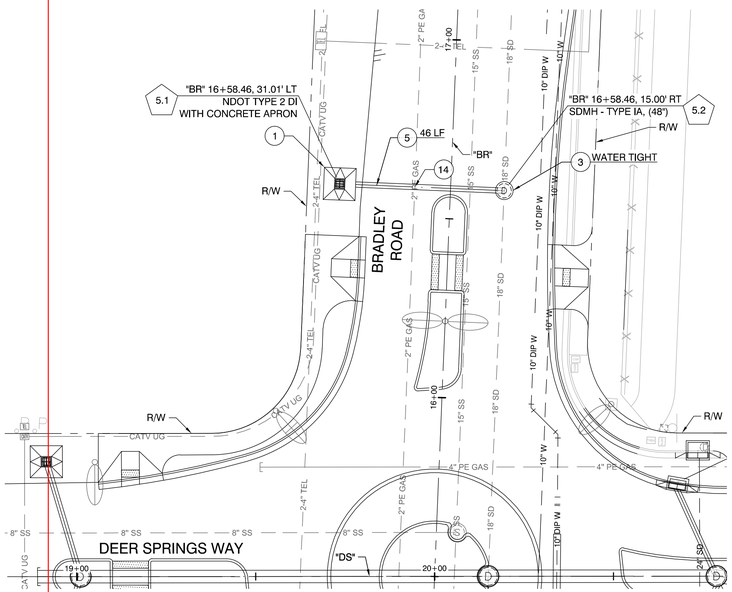
TITLE
ROUNDABOUT AT DEER SPRINGS WAY/BRADLEY ROAD
STORM DRAIN PLAN AND PROFILES

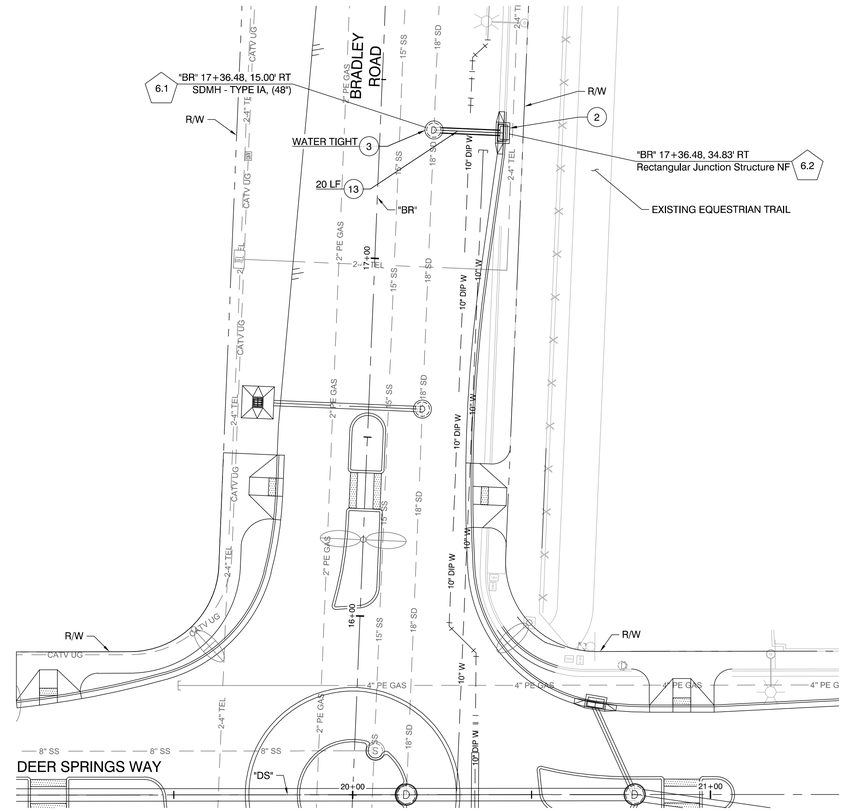
SHEET

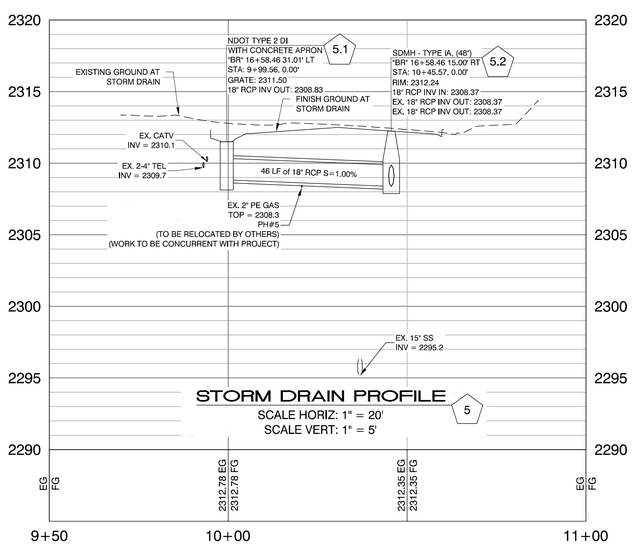
PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIE L. FELKINS
Exp. 6/30/2023
CIVIL
No. 19632
4/27/2022

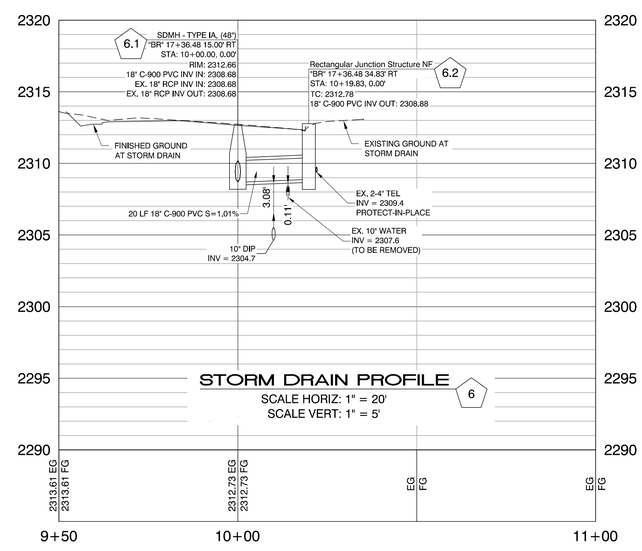
SHEET
SD-2
12 OF 21
DRAWING NO.
208-609

4/27/2022 2:12 PM F:\PROJECTS\400\412-665B\DWG\PRODUCTION\DEER SPRINGS & BRADLEY RAB\06_DB_SD-SHEETS.DWG TREVOR SMITH









STORM DRAIN NOTES

1. CONSTRUCT TYPE 2 DROP INLET W/ CONCRETE APRON (NDOT STD. PLAN DS-32 AND DS-42) (USDCCA STD. DWG. NO. 421)
2. CONSTRUCT TYPE "DM2" MODIFIED DROP INLET (L=5-FT) (USDCCA STD. DWG. NO. 412.1 AND NO. 421)
3. INSTALL 48-INCH TYPE I MANHOLE (USDCCA STD. DWG. NO. 403.1)
4. INSTALL 60-INCH TYPE III MANHOLE (USDCCA STD. DWG. NO. 406.1)
5. INSTALL 18-INCH RCP
6. INSTALL 42-INCH RCP
7. INSTALL 6-INCH C900 PVC PIPE
8. REMOVE CONCRETE APRON AND 6" DIA PVC PIPE (SEE SHEET DM-1)
9. REMOVE STORM DRAIN PIPE
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P. PROTECT IN PLACE

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NOTE

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NORTH

SCALE 20 0 20 40 FEET

APPROVED FOR CONSTRUCTION

SOUTHWEST GAS CORPORATION DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES
PROJECT NO. 136160 FIRST APPROVED DATE: _____.

CALL BEFORE CONSTRUCTION

BEFORE YOU DIG	USA NORTH	811 OR 800-227-2600
BEFORE YOU UNDERGROUND	CLARK COUNTY TRAFFIC OPERATIONS	702-455-7511
	CITY OF LAS VEGAS T.E.F.O.	702-229-6331
BEFORE YOU OVERHEAD	NV ENERGY	702-227-2929

NO.	DATE	REVISIONS

PREPARED BY
GCW ENGINEERS\SURVEYORS
1555 S. RAINBOW BLVD.
LAS VEGAS, NV 89146
T: 702.804.2000
F: 702.804.2299
gcwengineering.com

PREPARED FOR
CITY OF LAS VEGAS

MW# A512 | BID# 21.MWA512
DATE: 4/27/2022 | DESIGNED BY: WLF
SUBMITTAL STAGE: FINAL | DRAWN BY: CDW
CHECKED BY: WLF

TITLE
ROUNDABOUT AT DEER SPRINGS WAY/BRADLEY ROAD

SHEET
STORM DRAIN PLAN AND PROFILES

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIE L. FELKINS
Exp. 6/30/2023
CIVIL
No. 19632
4/27/2022

SHEET
SD-4
14 OF 21
DRAWING NO.
208-609

4/27/2022 2:12 PM F:\PROJECTS\400\412-665B\DWG\PRODUCTION\DEER SPRINGS & BRADLEY RAB\06_DB_SD-SHEETS.DWG TREVOR SMITH

APPENDIX D
(Plans and Details)

- Civil Improvement Plans

BALMORAL ESTATES
DEER SPRINGS WAY & BRADLEY ROAD
APN: 125-24-203-022
(100220-PMP)

OWNER
GOLD ROSE GROUP LLC
9775 SEVERENCE LANE
LAS VEGAS, NV 89149
GARY.B@GOLDROSECONSTRUCTION.COM
702-619-0509

DEVELOPER
GOLD ROSE GROUP LLC
9775 SEVERENCE LANE
LAS VEGAS, NV 89149
GARY.B@GOLDROSECONSTRUCTION.COM
702-619-0509

SITE DATA
APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT
(R-E)

BASIS OF BEARINGS
GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS ZONE (LOW DISTORTION PROJECTION), NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

THE BEARING EQUATION FOR THIS PROJECT WOULD BE THE CENTERLINE OF DEER SPRINGS WAY AND THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, HAVING A BEARING OF N 87° 03' 32" E, ALSO BEING N 87° 25' 33" E AS SHOWN ON MAP THEREOF ON FILE IN FILE 159 OF SURVEYS, PAGE 26, OFFICIAL RECORDS, CLARK COUNTY NEVADA.

LINEAR UNIT: US SURVEY FOOT (SFT)
DATUM (REFERENCE FRAME): NAD 1983 (2011) EPOCH 2010
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36° 15' 00" N
LONGITUDE OF CENTRAL MERIDIAN: 114° 58' 00" W
NORTHING AT GRID ORIGIN: 656,166.6667 SFT (200,000.000 M)
EASTING AT CENTRAL MERIDIAN: 328,083.3333 SFT (100,000.000 M)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.0001 (EXACT)
NOTES:
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK
CITY OF LAS VEGAS BENCHMARK "5LV9024C4", BEING A RIVET PLATE IN THE TOP OF CURB, NE CORNER OF BRADLEY AND DEER SPRINGS.

ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LINE LOCATE NOTE
SUB SURFACE INFORMATION PROVIDED, IF ANY, HAS BEEN SHOWN ON THIS SURVEY. NO REPRESENTATION IS MADE AS TO THE ACCURACY, CURRENCY OR COMPLETENESS OF SAID INFORMATION. VISIBLE AT GRADE UTILITIES HAVE BEEN LOCATED HEREON.
LINE LOCATE SERVICES PROVIDED BY DIAMONDBACK LINE LOCATING SERVICES, LLC

CIVIL ENGINEER:

MARK J. FAKLER, P.E.
MFAKLER@WOODRODGERS.COM

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 TEL 702.220.3680
LAS VEGAS, NV 89113 Fax 916.341.7767

ENGINEERS STATEMENT
THESE PLANS, SHEETS 1 THROUGH 11, HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUES, CITY ORDINANCES, STANDARDS, TENTATIVE MAP CONDITIONS, AND CITY COUNCIL CONDITIONS. IN THE EVENT OF A CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND CLARK COUNTY STANDARDS, THE STANDARDS SHALL APPLY.

LEGAL DESCRIPTION
APN: 125-24-203-022
A PORTION OF THE SOUTH HALF (S1/2) AT THE SOUTH EAST QUARTER (SE1/4) AT THE SOUTH EAST QUARTER (SE1/4) AT THE NORTH WEST QUARTER (NW1/4) AT SECTION 24, TOWNSHIP 20, RANGE 60 EAST

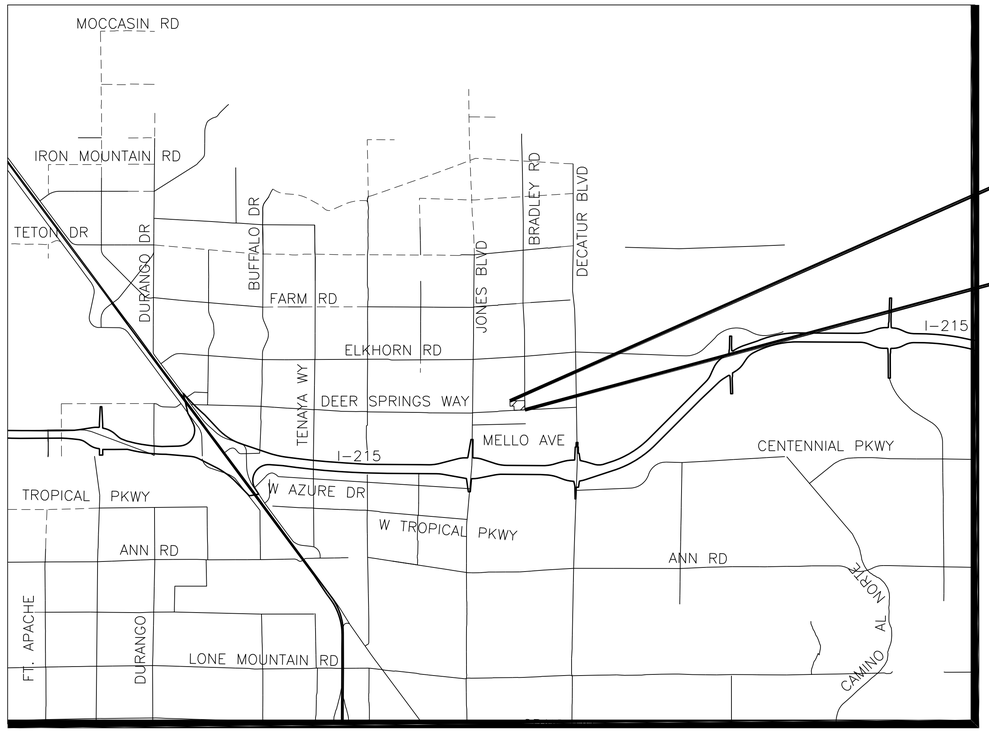
FLOOD ZONE NOTE
AS SHOWN BY FLOOD INSURANCE RATE MAP NO. 32003C1765F, DATED NOVEMBER 16, 2011. THIS SITE IS LOCATED IN ZONE "X" WHICH ARE AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAN.

DISCLAIMER NOTE:
UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND OR OVERHEAD 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 CONTRACTOR TO NOTIFY ENGINEER OF LOCATION. ANY CHANGES OR DISCREPANCIES.

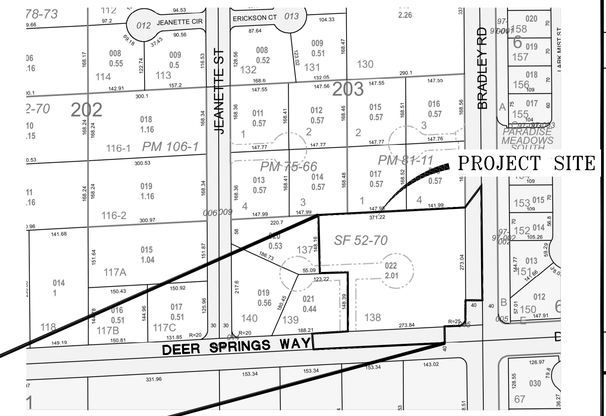
CALL BEFORE YOU DIG
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
CALL 811 OR 1-800-227-2600

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD WORK
CALL 1-702-227-2929

FAST
CALL BEFORE YOU UNDERGROUND
CALL 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION



SITE MAP
NTS



VICINITY MAP
NTS

SHEET INDEX

SHEET	DRAWING ID	DRAWING DESCRIPTION
1	C1.01	TITLE SHEET
2	C1.02	GENERAL NOTES 1
3	C1.03	GENERAL NOTES 2
4	C1.51	HORIZONTAL CONTROL, FIRE ACCESS, STREET LIGHT, & TRAFFIC PLAN
5	C2.01	GRADING PLAN
6	C3.01	UTILITY PLAN
7	C5.01	PRIVATE ROAD PLAN & PROFILE 1
8	C5.02	PRIVATE ROAD PLAN & PROFILE 2
9	C5.03	DEER SPRINGS WAY PLAN & PROFILE 3
10	C5.04	DEER SPRINGS WAY PLAN & PROFILE 4
11	C5.05	BRADLEY ROAD PLAN & PROFILE 5
12	C5.06	BRADLEY ROAD PLAN & PROFILE 6
13	C6.01	DETAILS

Mark J Fakler
Digitally signed by Mark J Fakler
DN: c=US, st=Nevada, l=Las Vegas, o=Wood Rodgers, Inc., cn=Mark J Fakler, email=mfakler@woodrodgers.com
Date: 2022.08.10 10:42:55-07'00'

QUANTITY ESTIMATES
DESCRIPTION	PUBLIC	PRIVATE
8" SDR-35 (SEWER)	338 LF	---
4" SDR-35 (SEWER)	---	151 LF
48" MANHOLE (SEWER)	3 EA	---
SEWER MANHOLE ADJUSTMENT	1 EA	---
1" TYPE K COPPER (WATER)	132 LF	---
6" C900 (WATER)	50 LF	---
8" C900 (WATER)	300 LF	---
8"X6" REDUCER	1 EA	---
1" WATER METER	4 EA	---
WATER MAIN TAP ASSEMBLY WITH GATE VALVE	1 EA	---
WATER MAIN SERVICE TO LOTS	4 EA	---
FIRE HYDRANT ASSEMBLY	1 EA	---
2.5" AC PAVEMENT	---	928 SY
3.5" AC PAVEMENT	---	423 SY
4.5" AC PAVEMENT	2,366 SY	---
2" AC PAVEMENT (TEMPORARY)	319 SY	---
TYPE II GRAVEL BASE	973 CY	275 CY
30" ROLL CURB	---	520 LF
CROSS GUTTER	544	521 SF
4" SIDEWALK	1038 SF	---
SIDEWALK RAMP	1 EA	---
SIDEWALK UNDERDRAIN	1 EA	---
"A" CURB	---	55 LF
"L" CURB	439 LF	---
6" RCP (STORM)	48 LF	---
5.0' TYPE "DM2" DI	2 EA	---
48-INCH TYPE 1 MANHOLE (STORM)	1 EA	---
UTILITY PULLBOX	3 EA	---
UTILITY CONDUIT - ONE(1) 1"	309 LF	---
UTILITY CONDUIT - TWO(2) 4"	290 LF	---
STREET/STOP SIGNS	---	1 EA
STREETLIGHT (STANDARD BASE)	3 EA	---
STREETLIGHT FOUNDATION (STANDARD BASE)	3 EA	---
ADJUST UTILITY BOX	1 EA	---
ADJUST PULLBOX	2 EA	---

NOTE:
QUANTITIES SHOWN ON THESE PLANS ARE FOR PLAN CHECKING PURPOSES ONLY AND SHOULD NOT BE USED BY CONTRACTORS TO DETERMINE FINAL QUANTITIES OR USED FOR BIDDING PURPOSES. EARTHWORK ESTIMATES ARE THE DIFFERENCE BETWEEN THE EXISTING GROUND AND THE FINISHED GRADE ELEVATIONS SHOWN ON THESE PLANS AND DOES NOT MAKE ADJUSTMENTS FOR FOUNDATION/FOOTING DEPTHS, PAVEMENT THICKENESSES, ETC. THE CONTRACTOR SHALL SATISFY THEMSELVES OF ACTUAL QUANTITIES NEEDED FOR CONSTRUCTION.

UTILITY AND GOVERNING AGENCIES LIST
WATER
LAS VEGAS VALLEY WATER DISTRICT
1001 SOUTH VALLEY VIEW BOULEVARD
LAS VEGAS, NV 89153
PHONE # (702) 870-2011

POWER
NV ENERGY
2215 E. LONE MOUNTAIN RD
LAS VEGAS, NV 89031
PHONE # (702) 402-8400

DEVELOPMENT REVIEW
CITY OF LAS VEGAS
495 S MAIN STREET
LAS VEGAS, NV 89106
PHONE # (702) 229-6301

SEWER
CITY OF LAS VEGAS
495 S MAIN STREET
LAS VEGAS, NV 89101
PHONE # (702) 229-6272

TELEPHONE
CENTRYLINK
6700 VIA AUSTI PARKWAY
LAS VEGAS, NV 89119
PHONE # (702) 244-8004

BUILDING DEPARTMENT
CITY OF LAS VEGAS
495 S MAIN STREET
LAS VEGAS, NV 89106
PHONE # (702) 229-6251

GAS COMPANY
SOUTHWEST GAS CORPORATION
6355 SHATZ STREET
NORTH LAS VEGAS, NV 89115
PHONE # (702) 651-2111

CABLE TV
COX CABLE
1700 VEGAS DRIVE
LAS VEGAS, NV 89106
PHONE # (702) 384-8084

FIRE DEPARTMENT
CITY OF LAS VEGAS
500 N. Casino Center Blvd
LAS VEGAS, NV 89101
PHONE # (702) 383-2888

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.
LVVWD APPROVED FIRE FLOW: TOTAL 1500 GPM 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

SHEETS: C1.01, C1.02, C1.03, C3.01, C5.01, C5.02, C5.03, C5.04, C5.05, C5.06

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NV ENERGY RESERVES THE RIGHT TO ADDRESS ANY EXISTING OR FUTURE CONFLICTS ONCE THE FINAL DESIGN IS COMPLETED. THE NEW SERVICE AND THE RESOLUTION OF ANY CONFLICTS WILL BE ACCOMPLISHED PURSUANT THE THE NEVADA PUBLIC UTILITY COMMISSION'S RULES AND REGULATIONS

NV ENERGY DATE

THE AFFIXED CENTURYLINK CORPORATION APPROVAL DOES NOT ASSUME OR GUARANTEE LIABILITY FOR KNOWN OR UNKNOWN CONFLICTS WITH EXISTING OR PROPOSED IMPROVEMENTS. RESOLUTION OF ANY CONFLICT WILL BE ACCOMPLISHED PURSUANT TO LOCAL ORDINANCES, NEVADA REVISED STATUTES AND/OR PUBLIC UTILITY COMMISSION RULES AND REGULATIONS.

CENTRAL TELEPHONE CO. C/B/A CENTURY LINK DATE

COX COMMUNICATIONS, LAS VEGAS, INC. DATE

SOUTHWEST GAS CORPORATION SWG UID# DATE

APPROVALS:

CITY OF LAS VEGAS ENGINEERING DATE

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT.

DEPARTMENT OF PLANNING DATE

LAS VEGAS FIRE & RESCUE DATE

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H:N/A V:N/A
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 TEL 702.220.3680
LAS VEGAS, NV 89113 Fax 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002

TITLE SHEET

PROJECT NO. 3869004

SHT 1 OF 13

DRAWING C1.01

CLV#-TBD

J:\3000-s\3869_Gold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Dwg\SHEETS\C1.01_BE.dwg 8/10/2022 10:30 AM George Hanna

CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 9/16UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA5/8, LATEST ISSUE; THE 9/16UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA5/8, LATEST REVISED EDITION; THE 9/16SUMMERLIN IMPROVEMENT STANDARDS5/8 FOR WORK IN THE SUMMERLIN AREA; AND OTHER APPLICABLE APPROVED STANDARDS ISSUED BY THE CONTROLLING AGENCY; THE UNIFORM BUILDING CODE; AND ALL LOCAL CITY CODES AND ORDINANCES APPLICABLE, EXCEPT AS NOTED ON THIS SHEET AS 9/16DEVIATIONS FROM STANDARDS5/8.
2. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. EXISTING UTILITIES AS SHOWN FROM CLV PLANS LIBRARY ARE APPROXIMATE AND FOR RECORD PURPOSES. EXISTING UTILITIES ARE LOCATED ON PLANS ONLY FOR THE CONVENIENCE OF THE CONTRACTOR. EXISTING UTILITY SERVICE LATERALS MAY NOT BE SHOWN ON THE PLANS. THE CONTRACTOR SHALL, AT HIS OWN EXPENSE, LOCATE ALL UNDERGROUND AND OVERHEAD INTERFERENCE½S WHICH MAY AFFECT HIS OPERATION DURING CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT, AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.
3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING UTILITY LINES, STRUCTURES AND STREET IMPROVEMENTS WHICH ARE TO REMAIN IN PLACE, FROM DAMAGE, AND ALL SUCH IMPROVEMENTS OR STRUCTURES DAMAGED BY THE CONTRACTOR½S OPERATIONS SHALL BE REPAIRED OR REPLACED SATISFACTORY TO THE CITY ENGINEER AND OWNING UTILITY COMPANY AT THE EXPENSE OF THE CONTRACTOR.
4. ALL CONSTRUCTION SHALL BE AS SHOWN ON THESE PLANS, ANY REVISIONS SHALL HAVE THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.
5. TYPE V CEMENT SHALL BE USED IN ALL OFF-SITE CONCRETE WORK. CONCRETE TO BE 3000 P.S.I. MINIMUM @ 28 DAYS. MIX DESIGNS TO BE APPROVED BY THE CITY, PRIOR TO THE USE ON THE PROJECT.
6. PERMITS ARE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL SECURE ALL PERMITS AND INSPECTIONS REQUIRED FOR THIS CONSTRUCTION.
7. EXPANSION JOINTS REQUIRED, MAXIMUM EVERY 300½ IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½5/8) ABOVE LIP OF ALL GUTTERS AFTER COMPACTION, EXCEPT AT SIDEWALK RAMPS AND CROSS GUTTERS.
9. CURB AND GUTTER FOUND TO BE UNACCEPTABLE TO THE CITY OF LAS VEGAS SHALL BE REMOVED AND REPLACED PER STANDARD DRAWING 216.
10. SIDEWALK RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS MAY BE ADJUSTED IN THE FIELD BY A CITY INSPECTOR.
11. CONTRACTOR SHALL PROVIDE ALL NECESSARY HORIZONTAL AND VERTICAL TRANSITIONS BETWEEN NEW CONSTRUCTION AND EXISTING SURFACES TO PROVIDE FOR PROPER DRAINAGE AND FOR INGRESS AND EGRESS TO NEW CONSTRUCTION. THE EXTENT OF THE TRANSITIONS TO BE AS SHOWN ON PLANS.
12. ALL GRADING WORK SHALL CONFORM TO THE SOILS REPORT AS PREPARED BY THE (COMPANY, REPORT #, DATE) APPROVED BY THE CITY ENGINEER, AND AS SHOWN ON THESE PLANS.
13. EXACT LOCATION OF ALL SAWCUT LINES MAY BE ADJUSTED OR DETERMINED IN THE FIELD BY A CITY OF LAS VEGAS INSPECTOR IF LOCATION ON PLANS IS NOT CLEARLY SHOWN, OR EXISTING PAVEMENT CONDITION REQUIRES RELOCATIONS.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PROTECT EXISTING PERMANENT SURVEY MONUMENTS. ANY MONUMENTS DISTURBED SHALL BE REPLACED AND ADJUSTED PER AVAILABLE RECORDS IN ACCORDANCE WITH N.R.S. STATUTE NO. 625.380 & CITY OF LAS VEGAS TITLE 18, APPENDIX D.
15. UTILITY COMPANY METER BOXES, MANHOLE LIDS, VALVE COVERS, ETC., SHALL BE LOCATED OUT OF DRIVEWAYS, DRIVEWAY APRONS, FLOWLINES, AND CROSS GUTTERS UNLESS WRITTEN APPROVAL IS GRANTED BY THE UTILITY COMPANY AND THE CITY ENGINEER.
16. WALL NOTES: ALL WALLS, NEW OR EXISTING, ARE ONLY SHOWN ON CIVIL PLANS FOR THE PURPOSE OF REVIEWING GRADING RELATIONSHIPS; FLOOD CONTROL AND SIGHT DISTANCE AT INTERSECTIONS. NEW WALLS REQUIRE A SEPARATE PERMIT AND INSPECTION BY THE BUILDING DEPARTMENT.
17. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PLACEMENT OF ASPHALT WITHIN CITY RIGHT OF WAY.
18. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING INLETS, VALVE BOXES, MANHOLE RIMS, AND SEWER CLEAN OUTS, ETC. TO FINISH GRADE AS APPLICABLE WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
19. MATERIALS, HANDLING AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF NDOT OR THE CLARK COUNTY AREA SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
20. WHEN INSTALLING UNDERGROUND FACILITIES THAT REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS MARKER BALLS, LOCATING RIBBON, ETC, THE CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION TO OFFSITE INSPECTION AND TESTING CERTIFYING THAT ALL DEVICES HAVE BEEN PLACED AND VERIFIED TO BE IN GOOD WORKING CONDITION PRIOR TO THE CONSTRUCTION OF ANY ROAD BASE.
21. AFTER HAUNCHING AND PRIOR TO BACKFILL OPERATIONS WHICH WOULD COVER SANITARY SEWER AND STORM DRAIN FACILITIES, CONTRACTOR IS REQUIRED TO SCHEDULE CLV OPEN-TRENCH UTILITY SURVEY INSPECTION FOR DETERMINATION OF FINAL LOCATION COORDINATES. FACILITIES TO BE LOCATED BY CLV SHALL INCLUDE AT A MINIMUM THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS.

   OR

   (MAY BE USED ONLY ON PROJECTS ASSOCIATED WITH A TENTATIVE MAP CONTAINING 5 LOTS OR MORE).

   SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S) SHALL BE PROVIDED TO THE CITY AND APPROVED PRIOR TO ACCEPTANCE OF FACILITY VIDEO INSPECTION. THE MAP(S) SHALL INCLUDE THE HORIZONTAL AND VERTICAL (INVERT) LOCATION OF PUBLIC SEWER MANHOLES, STORM DRAIN MANHOLES AND TRANSITION STRUCTURES, STORM DRAIN LATERALS AT THE CONNECTION TO THE STORM DRAIN MAIN AND AT THE CONNECTION TO A DROP INLET, THE CONNECTION OF SEWER SERVICE LATERALS TO THE SEWER MAIN AND WHERE THE SEWER SERVICE LATERALS EXIT THE PUBLIC RIGHT-OF-WAY, SEWER AND STORM DRAIN MAIN ALIGNMENT, INCLUDING DEFLECTION POINTS. THE LOCATION SHALL BE DESCRIBED BY COORDINATES WHICH SHALL BE BASED ON THE OFFICIAL HORIZONTAL AND VERTICAL CONTROL NETWORKS OF THE CITY OF LAS VEGAS. FINAL LOCATION MAPS MUST BE SEALED AND CERTIFIED BY A NEVADA PROFESSIONAL LAND SURVEYOR TO HAVE POSITIONAL CERTAINTIES OF ± 0.09 METERS (± 0.3 FEET) HORIZONTALLY AND VERTICALLY. A SEPARATE ELECTRONIC COMMA DELIMITED FILE FOR THE SANITARY SEWER AND STORM DRAIN COORDINATES SHALL ALSO ACCOMPANY THE SANITARY SEWER AND STORM DRAIN FINAL LOCATION MAP(S).
22. CCTV VIDEO INSPECTION IS REQUIRED FOR ALL SEWER AND STORM DRAINS. THE CCTV VIDEO INSPECTIONS NEED TO BE PERFORMED PER THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS LATEST EDITION.
23. A SEPARATE BORING PERMIT IS REQUIRED FOR ALL BORING ACTIVITIES.

REVISED 06/04/2018
UPDATED 1/2022

STORMWATER MANAGEMENT STANDARD NOTES

1. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL EACH DAY REMOVE ALL SEDIMENT, MUD, CONSTRUCTION DEBRIS, OR OTHER POTENTIAL POLLUTANTS THAT MAY HAVE BEEN DISCHARGED TO, OR ACCUMULATED IN, THE PUBLIC RIGHTS OF WAY OF CLARK COUNTY AS A RESULT OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS SITE DEVELOPMENT OR CONSTRUCTION PROJECT. SUCH MATERIALS SHALL BE PREVENTED FROM ENTERING THE STORM SEWER SYSTEM
2. ADDITIONAL CONSTRUCTION SITE DISCHARGE BEST MANAGEMENT PRACTICES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT MEET THE PERFORMANCE STANDARDS SPECIFIED IN CLARK COUNTY TITLE 24.40 AND THE LAS VEGAS VALLEY CONSTRUCTION SITE BMP GUIDANCE MANUAL.
3. TEMPORARY OR PERMANENT STABILIZATION PRACTICES WILL BE INSTALLED ON DISTURBED AREAS AS SOON AS PRACTICABLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. SOME EXCEPTIONS MAY APPLY; REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.5.
4. AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS, AND ALL BMPS WEEKLY, AND WITHIN 24 HOURS AFTER ANY RAIN EVENT OF 0.5 INCHES OR MORE. THE CONTRACTOR OR HIS AGENT SHALL UPDATE OR MODIFY THE STORMWATER POLLUTION PREVENTION PLAN AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS SUSPENSION OF LAND DISTURBANCE ACTIVITIES. REFER TO THE NEVADA STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY NVR100000, SECTION III.A.12.
5. ACCUMULATED SEDIMENT IN BMPS SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT, WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

EXHIBIT 1
SOUTHWEST GAS CONSTRUCTION NOTES

ALL CIVIL IMPROVEMENT PLANS MUST INCLUDE SOUTHWEST GAS CORPORATION GENERAL NOTES ON THE NOTES SHEET AS INDICATED BELOW:

SOUTHWEST GAS CORPORATION GENERAL NOTES

1. IN THE EVENT OF NATURAL GAS EMERGENCIES CALL 911 AND 1-877-860-6020
2. MINIMIZE HORIZONTAL AND VERTICAL CLEARANCE BETWEEN NATURAL GAS FACILITIES AND ANY UNDERGROUND UTILITIES AND/OR STRUCTURES, INCLUDING BUT NOT LIMITED TO WATER, SEWER, STORM DRAIN, COMMUNICATIONS, AND ELECTRIC SHALL BE AT LEAST 12-INCHES OR GREATER AS DICTATED BY LOCAL CODES AND STANDARDS
   A) ANY DEVIATION FROM SPECIFIED MINIMUM CLEARANCES MUST BE APPROVED BY ALL AFFECTED UTILITIES AND/OR MUNICIPALITIES
3. FOR VALVE ADJUSTMENT CONTACT 702-528-7855 14-DAYS PRIOR TO CONSTRUCTION
4. FOR ADJUSTMENT OF CATHODIC PROTECTION TEST POINTS CONTACT 702-528-7873 14 DAYS PRIOR TO CONSTRUCTION
5. IN THE EVENT OF A NATURAL GAS CONFLICT WITH PROPOSED UTILITIES AND STRUCTURES CONTACT 702-365-2099
6. FOR STANDBY WHEN EXCAVATING (INCLUDING SAW CUTTING AND PAVEMENT REMOVAL) OVER OR NEAR HIGH PRESSURE GAS LINES CONTACT 702-278-8451 48 HOURS PRIOR TO CONSTRUCTION

CITY OF LAS VEGAS TRAFFIC NOTES

1. ALL CONSTRUCTION SIGNING, BARRICADING, AND TRAFFIC DELINEATION SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION.
2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
3. BEFORE ANY WORK IS STARTED IN THE RIGHT-OF-WAY, THE CONTRACTOR SHALL INSTALL ALL ADVANCE WARNING SIGNS FOR THE CONSTRUCTION ZONE. THE CONTRACTOR SHALL INSTALL TEMPORARY STOP SIGNS AT ALL NEW STREET ENCROACHMENTS INTO EXISTING CITY STREETS WHERE WARRANTED IMMEDIATELY AFTER FIRST GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SUGGESTED ROUTE TO SCHOOL" IS ENCROACHED UPON BY A CONSTRUCTION WORK ZONE AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING THROUGH THAT WORK ZONE, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE A QUALIFIED "CROSSING GUARD". THE GUARD SHALL BE PRESENT FOR THE FULL DURATION OF TIME THAT CHILDREN ARE LIKELY TO BE PRESENT.
5. IF THE IMPROVEMENTS NECESSITATE THE OBLITERATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SUCH PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH LIKE MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWN ON THE PLANS. ALL NEW TRAFFIC SIGNS SHALL UTILIZE TYPE XI RETROREFLECTIVE SHEETING IN ACCORDANCE WITH CCAUSS 627 AND 716 AND SHALL HAVE AN ANTI-GRAFFITI PROTECTIVE OVERLAY FILM THAT IS A MATCHING COMPONENT TO, AND OF THE SAME MANUFACTURER AS THE RETROREFLECTIVE SHEETING TO WHICH IT IS APPLIED. STREET NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE STANDARD SIZE UNLESS OTHERWISE SPECIFIED ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.
7. WHEN A PROPOSED STREET LIGHT STANDARD IS LOCATED WITHIN FIVE (5') FEET OF ANY PROPOSED SIGN SHOWN ON THE PLANS TO BE MOUNTED ON A SIGNPOST, THE SIGN SHALL BE MOUNTED ON THE STREET LIGHT STANDARD AND THE SIGNPOST SHALL BE ELIMINATED.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HERE UNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. STREET SIGNS AND STOP SIGNS SHALL BE INSTALLED PER CITY STANDARD SPECIFICATIONS FOR PLACEMENT OF STREET NAME SIGNS.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY TRAFFIC CONTROL DEVICES AND FLAGGERS TO INSURE THE SAFETY OF THE PUBLIC IN OR AROUND THE WORK AREA. THE CONTRACTOR SHALL HAVE A CERTIFIED ATSSA TRAFFIC CONTROL TECHNICIAN OR IMSA WORK ZONE SAFETY SPECIALIST SET UP, MAINTAIN AND/OR REMOVE ALL TRAFFIC CONTROL DEVICES IN THE CITY OF LAS VEGAS RIGHT OF WAY.
11. WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE EXPEDITED TO COMPLETION SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING REGIONAL TRANSPORTATION COMMISSION OF SOUTHERN NEVADA (RTC). IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.
13. GUARDS SHALL BE OBTAINED BY CONTACTING THE METROPOLITAN POLICE DEPARTMENT SPECIAL EVENTS UNIT (PHONE # 828-3442) WHO WILL PROVIDE OFFICERS PROPERLY TRAINED IN TRAFFIC CONTROL. FEES FOR THE USE OF THESE OFFICERS SHALL BE SET BY METRO AND WILL BE PAID BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL ARRANGEMENTS WITH METRO.
14. ANY WORK WITHIN 300' OF A SIGNALIZED INTERSECTION WILL BE NIGHT WORK, UNLESS DIRECTED BY THE CITY OF LAS VEGAS TRAFFIC ENGINEER.
15. THE CONTRACTOR SHALL CONTACT THE TRAFFIC ENGINEERING DIVISION (TRANSPORTATION SECTION) THROUGH THE PROJECT'S OFFSITE INSPECTOR PRIOR TO INITIATING PAVING TO RECEIVE DIRECTION FOR ANY PERMANENT OR TEMPORARY MODIFICATIONS TO THE APPROVED DRAWINGS REGARDING FINAL PAVEMENT TRANSITIONS, MARKINGS AND SIGNING THAT ARE REQUIRED TO MATCH ADJACENT ROADWAY SEGMENTS. THE CONTRACTOR SHALL PROVIDE A DRAWING FOR APPROVAL BY THE TRAFFIC ENGINEERING DIVISION DEPICTING ANY ADJUSTMENTS TO THE FINAL PAVEMENT MARKINGS AND SIGNAGE, WHICH MAY INCLUDE OMITTING, ADDING OR MODIFYING PAVEMENT MARKINGS AND TRAFFIC CONTROL SIGNS SUCH THAT ADEQUATE TRANSITIONS AND LANE TERMINATIONS BETWEEN ADJACENT ROADWAY SEGMENTS ARE CONSTRUCTED.

REVISED JUNE 4, 2018
Updated 1/2022

CITY OF LAS VEGAS GRADING NOTES

1. IN THE EVENT THAT ANY UNFORESEEN CONDITIONS NOT COVERED BY THESE NOTES ARE ENCOUNTERED DURING GRADING OPERATIONS, THE OWNER/ENGINEER SHALL BE IMMEDIATELY NOTIFIED FOR DIRECTION.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES AND SLOPES SHOWN.
3. CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ALL EXCAVATION. ADEQUATE SHORING SHALL BE DESIGNED AND PROVIDED BY THE CONTRACTOR TO PREVENT UNDERMINING OF ANY ADJACENT FEATURES OR FACILITIES AND/OR CAVING OF THE EXCAVATION.
4. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT.
6. CONTRACTOR SHALL GRADE TO THE LINES AND ELEVATIONS SHOWN ON THE PLANS WITHIN THE FOLLOWING HORIZONTAL AND VERTICAL TOLERANCES AND DEGREES OF COMPACTION, IN THE AREAS INDICATED:

		HORIZONTAL	VERTICAL	COMPACTION
A.	PAVEMENT AREA SUBGRADE	0.1'+	+0.0' TO -0.1'	SEE SOILS REPORT
B.	ENGINEERED FILL	0.5'+	+0.1' TO -0.1'	SEE SOILS REPORT

   COMPACTION TESTING WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE.
7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
8. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
9. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC SHALL BE MAINTAINED IN A CLEAN, SAFE AND USABLE CONDITION.
10. IN THE EVENT THAT ANY TEMPORARY CONSTRUCTION ITEM IS REQUIRED THAT IS NOT SHOWN ON THESE DRAWINGS, THE OWNER AGREES TO PROVIDE AND INSTALL SUCH ITEM AT HIS OWN EXPENSE AND AT THE DIRECTION OF THE CITY ENGINEER. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

REVISED 04/15/10
UPDATED 1/2022

CITY OF LAS VEGAS SEWER NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS½ CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR½S RESPONSIBILITY TO PERFORM CONSTRUCTION AS PER PLANS. ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL "S" OR "G" IN CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET ASTM D-3034 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF TYPE II AGGREGATE BASE.
5. ALL MANHOLES PAVED IN STREETS EIGHTY (80') FOOT R/W AND LARGER SHALL HAVE CONCRETE COLLARS. STREETS LESS THAN EIGHTY (80') FOOT R/W WILL REQUIRE RETROFIT IF PAVING DOES NOT CONFORM TO CITY STANDARDS AT THE MANHOLE.
6. TEE SADDLES SHALL BE USED TO CONNECT SEWER LATERALS TO EXISTING MAIN LINES UP TO TWELVE INCH (12") DIAMETER. CONNECTIONS TO FIFTEEN INCH (15") OR LARGER MAINS SHALL REQUIRE SPECIAL PROCEDURES. IN LINE "Y" 'S SHALL BE USED ON LINES TWELVE INCHES (12") OR ABOVE.
7. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH LVVWD STANDARDS WHENEVER A SEWER MAIN CROSSES OVER A WATER MAIN OR THE SEWER IS LESS THAN EIGHTEEN INCH (18") UNDER A WATER MAIN.
8. ALL CONTRACTORS INSTALLING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONTRACTORS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1) OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS FOUND TO EXCEED THIS TOLERANCE WILL HAVE TO BE REPAIRED OR REMOVED OR REPLACED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO ACCEPTANCE BY THE CITY OF LAS VEGAS.
10. INSTALLATION OF CURVED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.
11. SEWER SERVICES AS APPROVED ON THIS PLAN, ARE INTENDED SPECIFICALLY FOR THE LOT AND USE SHOWN, AND ARE NOT INTENDED TO SERVE ADDITIONAL PARCELS OR STRUCTURES WHICH MAY BE CREATED IN THE FUTURE. IN THE EVENT THAT THE PARCEL AND/OR LOTS SHOWN ON THIS PLAN ARE FURTHER DIVIDED TO CREATE ADDITIONAL PARCELS OR LOTS, THE OWNER IS REQUIRE TO PROVIDE SEPARATE SEWER SERVICES TO EACH.

REVISED 09/16/20
UPDATED 1/2022

GENERAL NOTES

1. INSPECTIONS ARE REQUIRED. CALL 24 HOURS IN ADVANCE (702) 455-4610. THE PERMIT, APPROVED PLANS, AND BARRICADE PLANS FOR THIS WORK MUST BE ON THE JOB SITE AT ALL TIMES.
2. EXACT LOCATION OF ALL SAW-CUT LINES SHALL BE DETERMINED IN THE FIELD BY A CLARK COUNTY INSPECTOR.
3. CURB AND GUTTER WITH A GRADE OF LESS THAN 4/10 OF ONE PERCENT SHALL BE CONSTRUCTED BY FORMING. EACH JOINT SHALL BE CHECKED FOR GRADE PRIOR TO CONSTRUCTION AND WATER TESTED AS SOON AS POSSIBLE AFTER CONSTRUCTION.
4. FINAL ASPHALTIC CONCRETE (AC) PAVEMENT SURFACES SHALL BE ONE-HALF (1/2") INCH ABOVE THE LIP OF THE GUTTER (INCLUDING OPEN GRADE).
5. ALL OFF-SITE IMPROVEMENT CONSTRUCTION SHALL CONFORM TO THE UNIFORM STANDARD SPECIFICATIONS AND STANDARD DRAWINGS CLARK COUNTY AREA NEVADA AND CLARK COUNTY SUPPLEMENT TO UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, LATEST REVISION EXCEPT FOR LUMINAIRES. REFER TO CLARK COUNTY PUBLIC WORKS QUALIFIED PRODUCTS LIST "QPL" FOR LED LUMINAIRES. QPL CAN BE FOUND ONLINE HTTPS://WWW.CLARKCOUNTYNV.GOV/GOVERNMENT/DEPARTMENTS/PUBLIC_WORKS_DEPARTMENT/PROGRAMS_AND_SERVICES/LED_UPGRADE.PHP
6. PRIVATE STREETS CURB & GUTTER AND VALLEY GUTTERS REFLECTED ON THESE PLANS ARE TO BE INSPECTED BY A CLARK COUNTY INSPECTOR.
7. WHEEL CHAIR RAMPS SHALL BE CONSTRUCTED IN EACH QUADRANT OF AN INTERSECTION PER STANDARD DRAWING 235. EXACT LOCATION OF RAMPS SHALL BE DETERMINED IN THE FIELD BY A CLARK COUNTY INSPECTOR.
8. PROPER SIGNS, BARRIERS, BARRICADES AND LIGHTS SHALL BE PLACED AND MAINTAINED IN ACCORDANCE WITH THE LATEST "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS." TRAFFIC, SCHOOL, OR STREET SIGNS OF ANY KIND ARE NOT TO BE MOVED FOR ANY REASON WITHOUT FIRST COORDINATING WITH THE DEPARTMENT OF PUBLIC WORKS INSPECTOR AT (702)455-4610.
9. THIS PLAN DOES NOT AUTHORIZE CLOSURE OF ANY ROAD OR STREET.
10. NO OPEN TRENCH SHALL BE ALLOWED ACROSS ANY STREET OR WITHIN TEN (10') FEET OF ANY TRAVEL-WAY, EXCEPT WHEN WORK IS IN ACTUAL PROGRESS. AREAS COVERED BY ACCEPTABLE STEEL PLATE ARE NOT TO BE CONSTRUED AS A TRENCH. NO OPEN TRENCH IS PERMITTED IN EXCESS OF 500 FEET OR LENGTH NECESSARY TO ACCOMMODATE PIPE INSTALLATION IN A SINGLE DAY, WHICHEVER IS GREATER. ALL TRENCH CROSSINGS AND BACKFILL SHALL MEET THE STANDARD SPECIFICATION UNLESS OTHERWISE STATED.
11. A TEMPORARY PATCH IS TO BE IN PLACE AT THE END OF EACH WORK DAY WHERE THE BACKFILL IN THE TRENCH HAS BEEN COMPLETED AND PRIOR TO OPENING THE WORK AREA BACK TO TRAFFIC AND IS TO BE MAINTAINED BY THE PERMITTEE. A PERMANENT PATCH IS TO BE IN PLACE WITHIN THIRTY (30) DAYS AFTER THE INSTALLATION OF THE TEMPORARY PATCH.
12. COMPACTION TESTS ARE REQUIRED.

UPDATED 10/23/2020

LAS VEGAS VALLEY WATER DISTRICT (LVVWD) STANDARD NOTES (PROJECT#:139869)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR THE CONSTRICTION BY THE LVVWD. FOLLOWING WATER PLAN APPROVAL, NOTICE SHALL BE GIVEN TO THE LVVWD COMMUNICATION SUPPORT CENTER (258-7171) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. FOR FUTURE INSPECTIONS, NOTICE MUST BE GIVEN BY 2:00 PM THE BUSINESS DAY PRIOR TO THE REQUESTED LVVWD INSPECTION. WHEN REQUESTING INSPECTIONS, PLEASE REFER TO THE PROJECT # IDENTIFIED ABOVE.
2. ALL WORK SHALL CONFORM TO LVVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATION AND TO THE 2010 EDITIONS OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS IN THE APPROVED DRAWINGS AND/OR SPECIPICATIONS.
3. ALL WORK, EXCEPT AS MODIFIED THESE PLANS OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT OR EDITION OF THE UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, CLARK COUNTY AREA.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVVWD.
5. ALL SERVICE LATERALS TWO (2) INCHES IN DIAMETER AND SMALLER SHALL BE TYPE K COPPER TUBING WITH LVVWD APPROVED SERVICE SADDLES.
6. ALL WATER METER BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.
7. ALL VALVES SHALL BE LOCATED OUTSIDE OF DRIVEWAYS, VALLEY GUTTERS AND CURB GUTTERS.
8. ALL WATER AND STORM DRAIN OR SANITARY SEWER CROSSINGS SHALL CONFORM TO SECTION 2.22 OF THE 2010 EDITION OF THE UDACS.
9. ALL WATER FACILITIES AND APPURTENANCES SHALL BE DISINFECTED, PRESSURE TESTED, AND HAVE AN ACCEPTABLE PASSING HEALTH WATER SAMPLE OBTAINED, PRIOR TO OPERATION AND USE.
10. THE CONTRACTOR MUST OBTAIN ALL METERS TWO (2) INCHES AND SMALLER FROM LVVWD CENTRAL STORES. TELEPHONE 258-3152 OR 258-3802, TWO (2) WORKING DAYS PRIOR TO METER PICKUP.
11. ANY INTERRUPTIONS OF SERVICE MUST BE PERFORMED IN ACCORDANCE WITH UDACS SECTION 3.14.01, AND APPROVED BY THE LVVWD INSPECTION DIVISION PRIOR TO SHUTDOWN. PROPER WRITTEN NOTIFICATION MUST BE GIVE TO ALL AFFECTED CUSTOMERS.
12. ALL WATER FACILITY CONSTRUCTION MATERIALS USED MUST BE AS LISTED ON THE LVVWD APPROVED PRODUCT'S LIST FOR NEW FACILITIES, LATEST REVISION, OR SPECIFICALLY APPROVED ON THESE PLANS BY SUBMITTING SHOP DRAWINGS.
PROJECT#: 139869
13. TELEPHONE "CALL BEFORE YOU DIG" AT "811" OR 1-800-227-2600.
14. THE INSTALLATION OF LAS VEGAS VALLEY WATER DISTRICT (LVWD) MUNICIPAL WATER FACILITIES WITHIN ALL STREETS IS ASSUMED TO BE IN COMPLIANCE WITH THE UNIFORM STANDARDS, INCLUDING THE PLACEMENT OF ASPHALT PAVING STREET SURFACES. ANY REPAIR WORK DONE BY THE LVVWD TO THE MUNICIPAL WATER FACILITIES WILL INCLUDE THE PLACEMENT OF AN APPROPRIATELY SIZED ASPHALT REPAIR PATCH ON THE STREET SURFACE.

    ANY DECORATIVE PAVING SURFACE WITHIN THE STREET IS THE RESPONSIBILITY OF THE OWNER'S ASSOCIATION, OR THE INDIVIDUAL PROPERTY OWNERS IF NO OWNER'S ASSOCIATION IS IN EXISTENCE, OR THE AGENCY HAVING JURISDICTION. DECORATIVE SURFACE MATERIALS PLACED WITHIN THE TEN FOOT EASEMENT ABUTTING A PUBLIC OR PRIVATE STREET, IF DISTURBED BY THE LVVWD DURING THE REPAIR OR OPERATION OF ITS FACILITIES, WILL BE REPLACED BY LVVWD WITH AN APPROPRIATELY SIZED PLAIN FINISH CONCRETE PATCH. THE LVVWD WILL NOT RESTORE, AND WILL NOT BE RESPONSIBLE FOR THE RESTORATION OF, ANY DECORATIVE PAVING SURFACE WITHIN THE STREET. THE LVVWD WILL NOT ATTEMPT TO MATCH COLOR OF FINISH OF ANY ADJACENT MATERIALS.
15. NO LEAD COMPLIANCE NOTE:
    TO COMPLY WITH THE FEDERAL SAFE DRINKING WATER ACT, ALL WATER WORKS BRASS PRODUCTS PROPOSED TO BE RELOCATED, OR INSTALLED AS NEW MUST BE INSTALLED WITH THE LEAD FREE APPROVED PRODUCT. THE OLD LEADED PRODUCT MAY NOT BE REUSED.
16. PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS PLATES. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.
17. DRY UTILITIES NOTES: MAINTAIN A MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSINGS. MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.

LAS VEGAS FIRE & RESCUE GENERAL NOTES

1. ALL WORK WILL BE DONE IN STRICT ACCORDANCE WITH THE CITY OF LAS VEGAS FIRE DEPARTMENT'S ORDINANCE #5667, "HYDRANT SPECIFICATIONS", AND "HYDRANT INSTALLATION SPECIFICATION".
2. AUTHORIZED FIRE HYDRANTS FOR THIS PROJECT ARE:
   A. KENNEDY - GUARDIAN MODELS K81A AND K81D
   B. MUELLER - SUPER CENTURION 250 MODEL A-423
   C. CLOW - MEDALLION MODEL F-2546LVD
   D. TROY VALVE - PATRIOT MODEL PT8100N NEVADA HYDRANT
   E. U.S. PIPE - METROFLOW/M-03
3. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND FIRE APPARATUS ACCESS ROADS SHALL BE MAINTAINED BEFORE COMMENCEMENT OF ANY COMBUSTIBLE CONSTRUCTION. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND SHALL BE CAPABLE OF DELIVERING THE REQUIRED FIRE FLOW.
4. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, CONTRACTOR SHALL PALCE A BLUE REFLECTOR MARKER AT THE CENTER LINE OF STREET ADJACENT TO THE FIRE HYDRANTS AS REQUIRED BY ORDINANCE #5667.
5. ALL UNDERGROUND INSPECATIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CALL THE CITY OF LAS VEGAS INSPECTION HOT-LINE AT (702) 229-2071 TO REQUEST AN INSPECTION BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
6. PAINTING OF THE CURBS AND FIRE HYDRANTS AND ALL OTHER WORK NECESSARY AS EREQUIRED BY ORDINACE #5667, FOR THE PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, SHALL BE COMPLETED BEFORE APPROVAL BY THE CITY OF LAS VEGAS FIRE DEPARTMENT.
7. A PERMIT IS REQUIRED FROM THE CITY OF LAS VEGAS FIRE DEPARTMENT FOR TEH ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK.
8. PRIVATE HYDRANTS SHALL BE PAINTED RED.
9. PRIOR TO THE FINAL OCCUPANCY, A FLOW TEST MUST BE WITNESSED BY THE CITY OF LAS VEGAS FIRE DEPARTMENT TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW.
10. ALL ON-SITE UNDERGROUND WATER MAINS AND MATERIALS SHALL BE U.L. LISTED, A.W.W.A. APPROVED, AND SHALL BE RATED FOR THE APPROPRIATE WORKING PRESSURE.
11. FIRE HYDRANT SPACE SHALL BE:
    RESIDENTIAL = 500' UNSPRINKLED; 600' SPRINKLED
    COMMERCIAL = 300' UNSPRINKLED 400' SPRINKLED.
12. WHERE NEW WATER MAINS ARE EXTENDED ALON STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF STRUCTIRES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM 1000' SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROIDED WITH MEDIAN DIVIDERS OR HAVE FOUR OR MORE TRAFFIC LANES AND HAVE A TRAFFIC COUNT OF MORE THAN 30,000 PER DAY, HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FEET ON AN ALTERNATING BASIS.
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE REQUIRED RADIUS OF A CUL-DE-SAC OR WITHIN 20 FEET OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FEET OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION.
15. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FEET, AS MEASAURED BY AN APPROVED ROUTE.
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FEET, AS MEASURED BY AN APPROVED ROUTE.
17. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FEET.
18. TWO SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE ARE 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGEL SYSTEM. SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN.
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS.
20. THE GRADIENT FOR TEH FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12%. ANGLES OF APPROACH AND ANGLES OF DEPARTURES SHALL NOT EXCEED 6% FOR 25 FEET PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURE GRADIENT SHALL NOT EXCEED 6%.
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCES ROADS SHALL NOT BE LESS THAN 52 FEET OURSIDE AND 28 FEET INSIDE TURNING RADIUS.
22. VERTICAL CLEARANCE OF ALL APPARATUS ACCESS ROADS SHALL BE NOT LESS THAN 13 FEET 6 INCHES.
23. FIRE DEPARTMENT ACCESS ROADS IN ALL RESIDENTIAL DEVELOPMENTS (EXCEPT FOR THE APARTMENT BUILDINGS) SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 36 FEET FLOW LINE TO THE FLOW LINE (THIS WIDTH MAY BE REDUCED T O24 FEET, IF ALL BUILDINGS FRONTING THE STREET ARE SPRINKLERED) FOR MAIN RESIDENTIAL STREET, WITH PARKING PERMITTED ON BOTH SIDES OF THE STREET. PRIVATE DRIVE AISLES, DRIVEWAYS, ETC. SHALL BE ALLOWED TO BE REDUCED TO A MINIMUM WIDTH OF 24 FEET WIDE FLOW LINE TO THE FLOW LINE WHEN SERVING NO MORE THAN 6 RESIDENCES, AND WHEN ON-STREET PARKING IS DISALLOWED.
24. ALL FIRE APPARATUS ACCESS ROADS IN COMMERCIAL DEVELOPMENTS AND APARTMENT COMPLEXES SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 24 FEET (FLOW LINE TO THE FLOW LINE), PROVIDED NO PARKING IS ALLOWED ON EITHER SIDE; 32 FEET (FLOW LINE TO THE FLOW LINE), IF PARALLEL PARKING IS ALLOWED ON ONE SIDE ONLY; AND 40 FEET (FLOW LINE TO THE FLOW LINE), IF PARALLEL PARKING IS ALLOWED ON BOTH SIDES, THESE WIDTHS MAY BE REDUCED BY 4 FEET IF ALL BUILDINGS ARE SPRINKLERED.
25. A FIRE DEPARTMENT ACCESS ROAD SHALL EXTEND TO WITHIN 50 FEET OF A SINGLE EXTERIOR DOOR PROVIDING ACCESS TO THE INTERIOR OF THE BUILDING.
26. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FEET FROM A FIRE DEPARTMENT VEHICLE ACCESS. THIS DISTANCE COULD BE INCREASED TO 250 FEET IF THE BUILDING IS SPRINKLERED.
27. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 100 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR WITH A SINGLE POINT OF ACCESS IN EXCESS OF 600 FEET, AND FOR ALL COMMERCIAL, INDUSTRIALM AND MULTI-FAMILY RESIDENTIAL DEVELOPMENTS.
28. ALL DEAD-END FIRE APPARATUS ACCESS ROADS AND OR FIRE LANESM PUBLIC OR PRIVATE, IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FEET.
29. ALL FIRE APPARATUS ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FIRE LANE, ONE SIGN AT THE END OF THE FIRE LANE AND WITH SIGNS AT INTERVALS OF 100 FEET ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESSS ROADWAYIF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FEET OR LESS THAN 6 FEET FROM ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT IF A CURB IS NOT PROVIDED SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDTITION TO THE SIGNS.
30. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF LAS VEGAS GUIDELINES OFR AUTOMATIC EMERGECNY VEHICLE ACCESS GATES.

UPDATED 1/2022

NOTICE TO CONTRACTORS

QUANTITIES SHOWN ON THESE PLANS ARE FOR PLAN CHECKING PURPOSES ONLY AND SHOULD NOT BE USED BY CONTRACTORS TO DETERMINE FINAL QUANTITIES OR USED FOR BIDDING PURPOSES. EARTHWORK ESTIMATES ARE THE DIFFERENCE BETWEEN THE EXISTING GROUND AND THE FINISHED GRADE ELEVATIONS SHOWN ON THESE PLANS AND DOES NOT MAKE ADJUSTMENTS FOR FOUNDATION/FOOTING DEPTHS, PAVEMENT THICKENESSES, ETC. THE CONTRACTOR SHALL SATISFY THEMSELVES OF ACTUAL QUANTITIES NEEDED FOR CONSTRUCTION.

SOUTHWEST GAS UTILITY NOTE

EXISTING UTILITY LOCATIONS SHOWN HEREIN ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY 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. ALL DISCREPANCIES MUST BE IMMEDIATELY REPORTED TO THE ENGINEER.

DEVIATIONS FROM STANDARDS

NONE

NOTE:
THESE PLANS SHALL NOT BE USED FOR CONSTRUCTION UNLESS: 1) THEY ARE SIGNED BY THE ENGINEER; 2) ALL APPROVAL/SIGNATURES BLOCKS ON ALL SHEETS ARE SIGNED BY THE AGENCIES HAVING JURISDICTION; 3) THE OWNER HAS RECEIVED ALL NECESSARY PERMITS REQUIRED FOR CONSTRUCTION.

SOUTHWEST GAS CORPORATION SWG UID DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: ____________.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: N/A V: N/A
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 TEL 702.220.3680
LAS VEGAS, NV 89113 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
ABBREVIATIONS & GENERAL NOTES 1

PROJECT NO. 3869004

SHT **2** OF **13**

DRAWING **C1.02**

CLV#-TBD

CITY OF LAS VEGAS STREET LIGHT NOTES

1. ALL STREET LIGHTING INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE STREET LIGHTING PLANS, THE "UNIFORM STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA", LATEST REVISION (USS), AND THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA, NEVADA" (USD), LATEST REVISION.
2. DESIGN PROFESSIONAL AND CONTRACTOR SHALL VERIFY CITY'S LATEST LED FIXTURE SPECIFICATIONS AND APPROVED FIXTURES PER CLV WEBSITE, UNDER BUILDING AND SAFETY FORMS, PRIOR TO ORDERING MATERIALS.
3. LUMINAIRES SHALL BE MARKED TO INDICATE INSTALLATION ORENTATION, AND SHALL HAVE EXTERNAL LABELS PER ANSI C136 THAT INDICATE WATTAGE AND ARE CLEARLY VISIBLE FROM STREET LEVEL.
4. NO DEVIATION OF STREET LIGHT, PULL BOX, CONDUITS, ETC., LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN APPROVAL OF THE TRAFFIC AND CITY ENGINEER. ANY DEVIATION FROM THE PLAN LOCATION WILL REQUIRE COMPLIANCE WITH SECTION 623 OF THE USS.
5. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SECTION 623 G.03.01 OF THE USS.
6. ALL EMPTY CONDUIT SHALL HAVE AT LEAST ONE GREEN No. #8 AWG WIRE INSTALLED AS TRACER WIRE IN ACCORDANCE WITH SECTION 623 G.02.01 OF THE USS PRIOR TO BACKFILLING AND FINAL INSPECTION.
7. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN COMPLIANCE WITH USD NO. 320A WHEN POLE IS INSTALLED BEHIND SIDEWALK, AND SHALL AT NO TIME COMPLETELY ENCLOSE THE STREET LIGHTING POLE.
8. AS-BUILT DRAWINGS SHALL BE SUPPLIED TO THE TRAFFIC ENGINEERING DIVISION PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWING NEEDS TO BE STAMPED AS-BUILT AND SIGNED BY THE PREPARER.
9. SERVICE POINTS SHALL BE COORDINATED WITH NV ENERGY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CIRCUIT. SERVICEPOINTS SHALL BE SHOWN ON THE PLANS.
10. NEW STREELIGHT SERVICES SHALL BE 200 AMP PADMOUNT AND SHALL PROVIDE CAPACITY FOR 20 OR 24 AVAILABLE CIRCUITS.
11. WHEREVER THERE IS AN OVERHEAD UTILITY THAT MAY CONFLICT WITH THE INSTALLATION OF STREETLIGHTING CIRCUITS AND/OR POLES, THESE CONFLICTS MUST BE RESOLVED BETWEEN THE DEVELOPER AND THE UTILITIES INVOLVED BEFORE STREETLIGHT BASES ARE INSTALLED. AT NO EXPENSE TO THE CITY OF LAS VEGAS.
12. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

REVISED MAY 19, 2020 (LD VERSION)
Updated 2/2021

LINE & SYMBOL LEGEND

EXISTING	PROPOSED	
		CENTERLINE
		RIGHT-OF-WAY
		PROPERTY LINE
		EASEMENT
		CONCRETE BLOCK WALL
		CURB & GUTTER
		EDGE OF PAVEMENT
W		WATER LINE
SS	SS	SEWER LINE
G		GAS
E(UG)		UNDERGROUND POWER
FIBOP		FIBER OPTICS
		SAWCUT
(793)	802	CONTOUR (MINOR INTERVAL)
(795)	800	CONTOUR (MAJOR INTERVAL)
		CONCRETE MONUMENT
		SANITARY SEWER MANHOLE
		STORM DRAIN MANHOLE
T		TELEPHONE VAULT
E		ELECTRIC PULL BOX
CTV		CABLE TV VAULT
FH	FH	FIRE HYDRANT
		TREE

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE PAVEMENT
ACP	ASBESTOS CEMENT PIPE
APN	ASSESSORS PARCEL NUMBER
AVRV	AIR VACUUM RELIEF VALVE
BC	BEGIN CURVE
BCR	BACK OF CURB RADIUS
BM	BENCH MARK
BVC	BEGIN VERTICAL CURVE
BOW	BACK OF WALK
BW	BOTTOM OF WALL
CB	CATCH BASIN
CCAUSD	CLARK COUNTY AREA UNIFORM STANDARD DRAWING
℄	CENTER LINE
CONST	CONSTRUCT
CR	CURB RETURN
CT	COURT
DCSWCS	DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS
DIP	DUCTILE IRON PIPE
SDMH	STORM DRAIN MANHOLE
DR	DRIVE
E	EAST
EC	END CURVE
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
EXIST	EXISTING
EVC	END OF VERTICAL CURVE
FES	FLARED END SECTION
FG	FINISH GRADE ELEVATION
FH	FIRE HYDRANT
FIBOP	FIBER OPTIC
FL	FLOW LINE
FLG	FLANGE
FM	FORCE MAIN
FVA	FLUSH VALVE ASSEMBLY
GR	GRATE
GB	GRADE BREAK
GV	GATE VALVE
HP	HIGH POINT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
JP	JOINT POLE
L	LEFT
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MLCP	MORTAR LINED CONCRETE PIPE
MON	MONUMENT
N	NORTH
NO	NUMBER
OH	OVERHEAD
OR	OUTSIDE RADIUS
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PIVC	POINT OF INTERSECTION VERTICAL CURVE
PL	PROPERTY LINE
PP	POWER POLE
R, R=	RADIUS
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
PRC	POINT OF REVERSE CURVATURE
PRV	PRESSURE-REDUCING VALVE
PVC	POINT OF VERTICAL CURVE/POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
RCW	RECLAIMED WATER
R	RIGHT
RW,ROW	RIGHT OF WAY
S	SOUTH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SE	SANITARY SEWER EASEMENT
SHT	SHEET
STA	STATION
SS	SANITARY SEWER SERVICE
SSMH	SANITARY SEWER MANHOLE
SW	SIDEWALK
T	TANGENT
TBC,TC	TOP BACK OF CURB
TOP	TOP OF PIPE
TYP	TYPICAL
TP	TELEPHONE POLE
TW	TOP OF WALL
W	WEST
WM	WATER MAIN

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H:N/A V:N/A
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

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BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
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CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
ABBREVIATIONS & GENERAL NOTES 2

PROJECT NO. 3869004

SHT 3 OF 13

DRAWING C1.03

CLV#-TBD

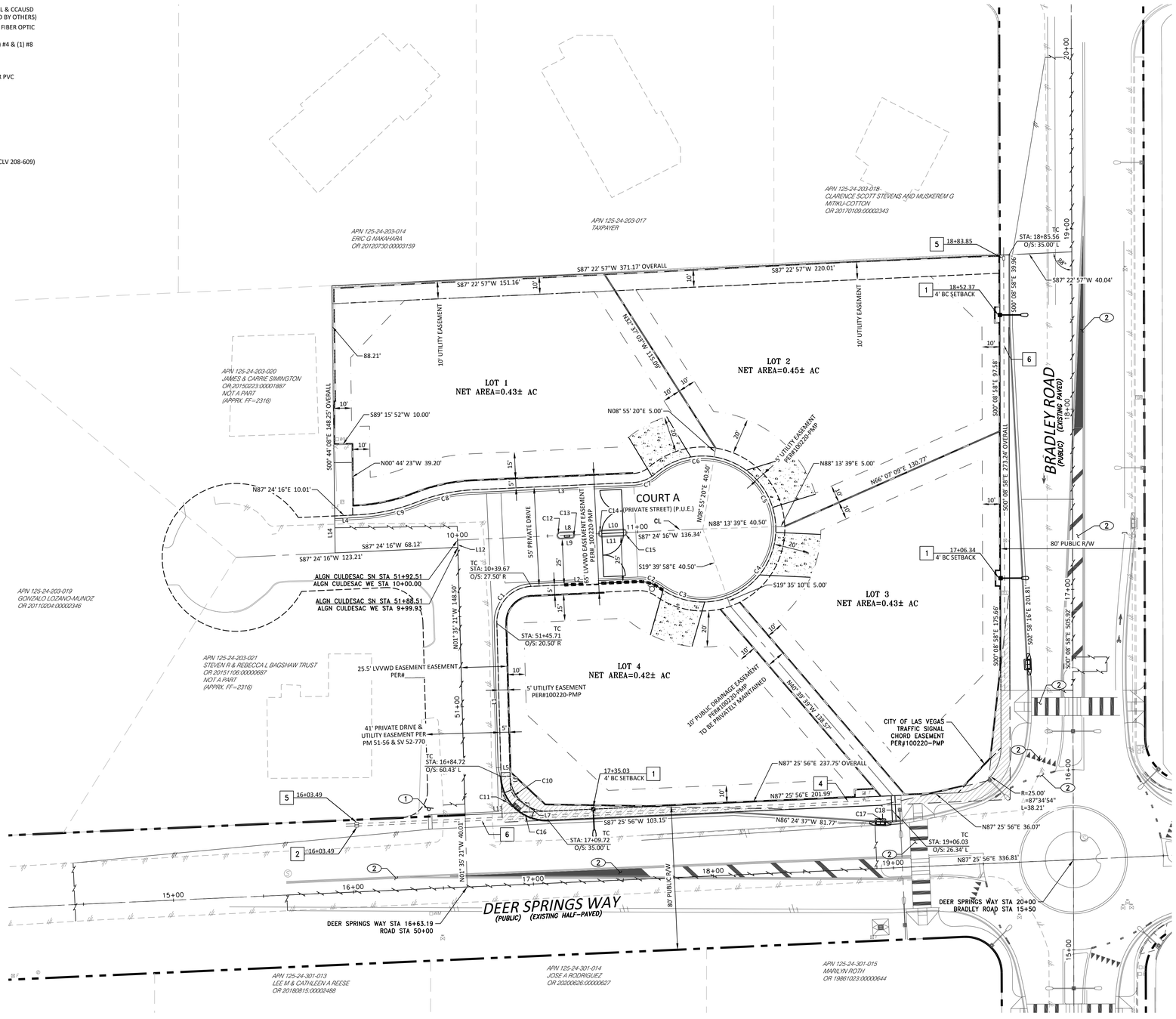
a:\3000-s\3869_Cold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Dwg\SHEETS\C1.01_BE.dwg 8/10/2022 10:30 AM George Hanna

DRY UTILITY NOTES

1. INSTALL LED STREETLIGHT FOR 80' ROW PER QPL & CCAUSD #300.53, 314, 320 & 321 (POLE TO BE INSTALLED BY OTHERS)
2. INSTALL P-30 PULLBOX PER CCAUSD #326 WITH FIBER OPTIC INSCRIBED
4. INSTALL 1-1/4" STREETLIGHT CONDUIT WITH (2) #4 & (1) #8 THW-2 COPPER CONDUCTOR WITH PULL WIRE
5. INSTALL 3'-1/2" PULLBOX PER CCAUSD #326
6. INSTALL FAST CONDUIT, 2 SETS OF 4" DIAMETER PVC CONDUITS WITH (1) 6 PAIR PE-39#22 AWG

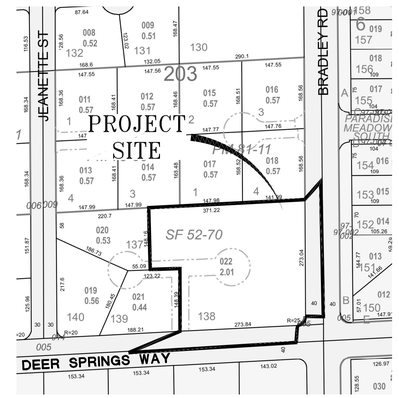
STRIPING AND SIGNAGE NOTES

1. INSTALL R1-1A STOP SIGN PER CCAUSD #249.1
2. PAVEMENT MARKING TO REMAIN BY OTHERS (CLV 208-609)



CURVE TABLE			
CURVE #	LENGTH	RADIUS	DELTA
C1	31.92'	20.03'	91°19'04"
C2	13.08'	19.50'	38°26'00"
C3	39.23'	40.50'	55°30'13"
C4	50.97'	40.50'	72°06'24"
C5	56.07'	40.50'	79°19'16"
C6	35.30'	40.50'	49°56'07"
C7	13.08'	19.50'	38°26'00"
C8	31.65'	95.00'	19°05'24"
C9	34.98'	105.00'	19°05'24"
C10	15.88'	10.00'	90°58'43"
C11	23.82'	15.00'	90°58'43"
C12	4.71'	1.50'	179°59'57"
C13	4.71'	1.50'	180°00'00"
C14	4.71'	1.50'	180°00'00"
C15	4.71'	1.50'	180°00'00"
C16	39.70'	25.00'	90°58'43"
C17	10.26'	50.00'	11°45'45"
C18	1.62'	250.00'	0°22'17"

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	85.36'	N01°35'21"W
L2	58.45'	N87°24'16"E
L3	89.05'	S87°24'16"W
L4	12.05'	S87°24'16"W
L5	5.00'	S88°24'39"W
L6	7.27'	N01°35'21"W
L7	5.00'	N02°34'04"W
L8	6.00'	N87°24'16"E
L9	6.00'	S87°24'16"W
L10	12.00'	S87°24'16"W
L11	12.00'	N87°24'16"E
L12	4.00'	N02°35'44"W
L13	30.85'	N87°25'56"E
L14	20.51'	N00°44'08"W



VICINITY MAP

NTS

30' 15' 0 30'

SCALE: 1" = 30'

SITE DATA

APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT (R-E)

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS ZONE (LOW DISTORTION PROJECTION), NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

THE BEARING EQUATION FOR THIS PROJECT WOULD BE THE CENTERLINE OF DEER SPRINGS WAY AND THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, HAVING A BEARING OF N 87° 03' 32" E, ALSO BEING N 87° 25' 33" E AS SHOWN ON MAP THEREOF ON FILE IN FILE 159 OF SURVEYS, PAGE 28, OFFICIAL RECORDS, CLARK COUNTY NEVADA.

LINEAR UNIT: US SURVEY FOOT (SFT)
DATUM (REFERENCE FRAME): NAD 1983 (2011) EPOCH 2010
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36° 15' 00" N
LONGITUDE OF CENTRAL MERIDIAN: 114° 58' 00" W
NORTHING AT GRID ORIGIN: 656,166.6667 SFT (200,000.000 M)
EASTING AT CENTRAL MERIDIAN: 328,083.3333 SFT (100,000.000 M)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.0001 (EXACT)
NOTES:

1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK "SLV9024C4", BEING A RIVET PLATE IN THE TOP OF CURB, NE CORNER OF BRADLEY AND DEER SPRINGS.

ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LEGAL DESCRIPTION

APN: 125-24-203-022
A PORTION OF THE SOUTH HALF (S1/2) AT THE SOUTH EAST QUARTER (SE1/4) AT THE SOUTH EAST QUARTER (SE1/4) AT THE NORTH WEST QUARTER (NW1/4) AT SECTION 24, TOWNSHIP 20, RANGE 60 EAST

LEGEND

4-INCH HEIGHT "NO PARKING FIRE LANE" EVERY 50' ON PAINTED RED CURB

SIGHT VISIBILITY ZONE PER CCAUSD DWG NO. 201.2

FIRE HYDRANT

STOP
R1-1A SIGN
36"x36"

DISCLAIMER NOTE:

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AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
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CALL 1-702-227-2929

FAST
CALL BEFORE YOU UNDERGROUND
CALL 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=30' V: N/A
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 TEL 702.220.3680
LAS VEGAS, NV 89113 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
HORIZONTAL CONTROL, FIRE ACCESS STREET LIGHT, & TRAFFIC PLAN

PROJECT NO. 3869004

SHT 4 OF 13

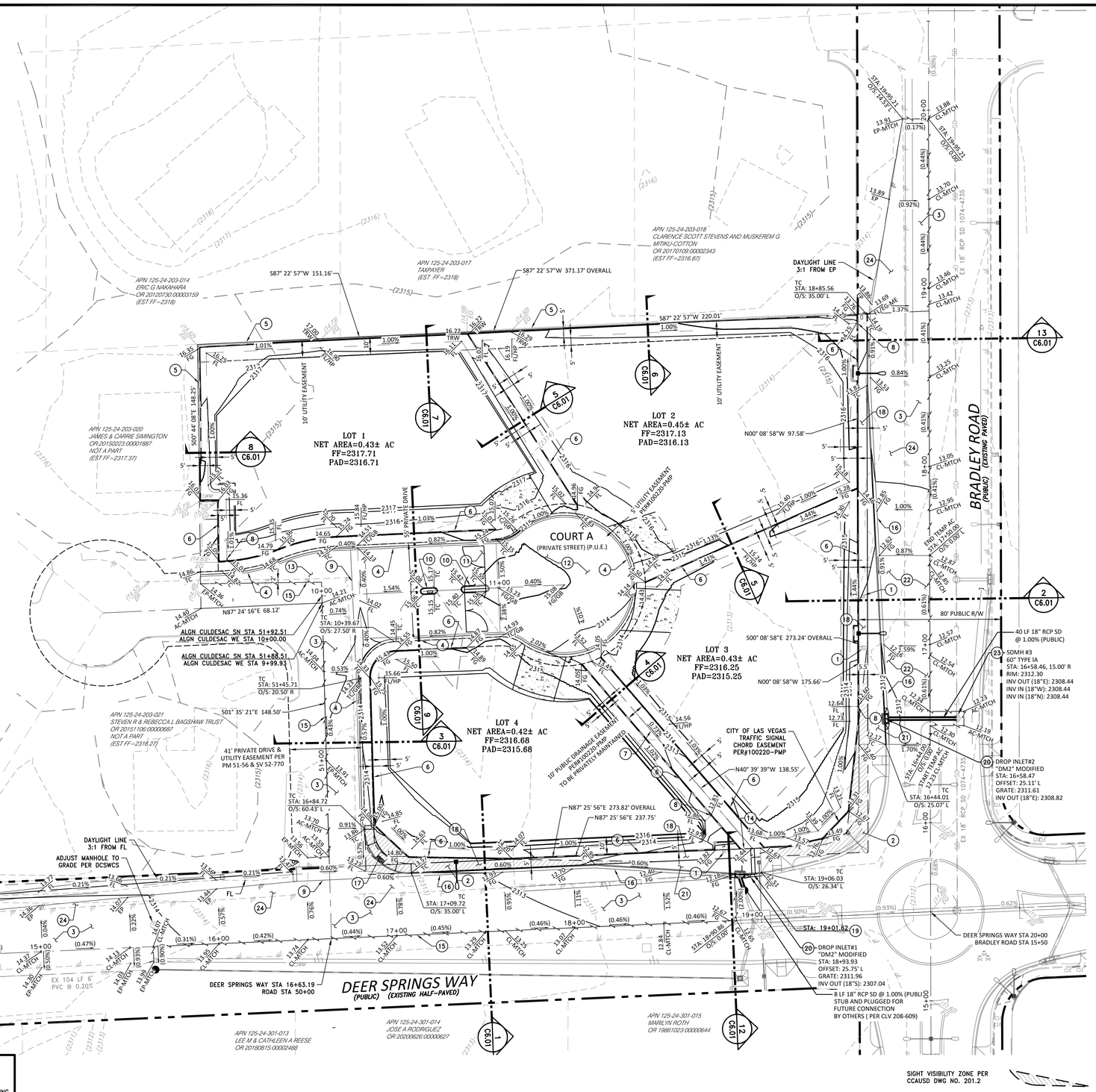
DRAWING C1.51

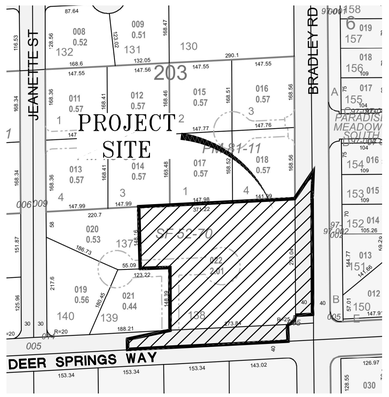
CLV#-TBD

J:\3000-s\3869_Gold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Dwg\SHEETS\C1.51_BE.dwg 8/10/2022 10:31 AM George Hanna

CONSTRUCTION NOTES

1. ADJUST TO GRADE EXISTING UTILITY BOX, UTILITY VAULT
2. SIGHT VISIBILITY ZONE PER CCAUSD #201.2
3. REMOVE & REPLACE AC PAVEMENT PER CCAUSD #500.3, #500.5. MATCH EXISTING THICKNESS
4. INSTALL 30" ROLL CURB PER CCAUSD #217.2.S1
5. INSTALL RETAINING WALL WITH 6' SCREEN WALL ON TOP (STRUCTURAL DESIGN & DETAIL BY OTHERS)
6. INSTALL 6' SCREEN WALL PER SOUTHERN NEVADA BUILDING OFFICIALS REGIONAL STANDARDS
7. INSTALL 10' CONCRETE CHANNEL PER CCAUSD DWG NO. 420, 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
8. INSTALL WALL OPENING PER DETAIL 10 ON SHEET C6.01
9. INSTALL 8' CROSS GUTTER PER CCAUSD #228
10. INSTALL MEDIAN ISLAND PER CCAUSD #218
11. INSTALL SECURITY GATE PER MECHANICAL PLANS
12. INSTALL 2.5" AC PAVEMENT OVER 7" TYPE II AGGREGATE BASE
13. INSTALL 3.5" AC PAVEMENT OVER 8" TYPE II AGGREGATE BASE
14. INSTALL IRON FENCE PER DETAIL 11 ON SHEET C6.01
15. SAWCUT AC PAVEMENT
16. INSTALL TYPE "L" CURB AND GUTTER PER CCAUSD #216
17. INSTALL CASE 1 SIDEWALK RAMP PER CCAUSD #235. "A"=8.0 & "B"=8'
18. INSTALL 5' WIDE SIDEWALK PER CCAUSD #234
19. INSTALL SIDEWALK DRAIN PER CCAUSD #236
20. CONSTRUCT TYPE "DM2" MODIFIED DROP INLET (L=5-FT) (CCAUSD #412.1 & #421)
21. LANDSCAPE
22. INSTALL TEMPORARY PAVEMENT SECTION 2" AC PAVEMENT OVER 6" TYPE II
23. INSTALL WATER TIGHT 48-INCH TYPE I MANHOLE PER CCAUSD #403.1
24. INSTALL 4.5" AC PAVEMENT OVER 14" TYPE II AGGREGATE BASE





VICINITY MAP

NTS

30' 15' 0 30'

SCALE: 1" = 30'

SITE DATA

APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT (R-E)

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS ZONE (LOW DISTORTION PROJECTION), NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

THE BEARING EQUATION FOR THIS PROJECT WOULD BE THE CENTERLINE OF DEER SPRINGS WAY AND THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, HAVING A BEARING OF N 87° 03' 32" E, ALSO BEING N 87° 25' 33" E AS SHOWN ON MAP THEREOF ON FILE IN FILE 159 OF SURVEYS, PAGE 26, OFFICIAL RECORDS, CLARK COUNTY NEVADA.

LINEAR UNIT: US SURVEY FOOT (SFT)
DATUM (REFERENCE FRAME): NAD 1983 (2011) EPOCH 2010
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36° 15' 00" N
LONGITUDE OF CENTRAL MERIDIAN: 114° 58' 00" W
NORTHING AT GRID ORIGIN: 656,166.6667 SFT (200,000.000 M)
EASTING AT CENTRAL MERIDIAN: 328,083.3333 SFT (100,000.000 M)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.0001 (EXACT)
NOTES:

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BENCHMARK

CITY OF LAS VEGAS BENCHMARK "5LV9024C4", BEING A RIVET PLATE IN THE TOP OF CURB, NE CORNER OF BRADLEY AND DEER SPRINGS.

ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

FLOOD ZONE NOTE

AS SHOWN BY FLOOD INSURANCE RATE MAP NO. 32003C1765F, DATED NOVEMBER 16, 2011. THIS SITE IS LOCATED IN ZONE "X" WHICH ARE AREAS OF MINIMAL FLOOD HAZARD.

LINE LOCATE NOTE

SUB SURFACE INFORMATION PROVIDED, IF ANY, HAS BEEN SHOWN ON THIS SURVEY. NO REPRESENTATION IS MADE AS TO THE ACCURACY, CURRENCY OR COMPLETENESS OF SAID INFORMATION. VISIBLE AT GRADE UTILITIES HAVE BEEN LOCATED HEREON.

DISTURBED AREA

ONSITE: 1.93 ACRES
OFFSITE: 0.70 ACRES

TOTAL: 2.63 ACRES

EARTHWORK CALCUATION

CUT: 288 CY
FILL: 5855 CY
TOTAL: 5567 CY (IMPORT)

GEOTECHNICAL NOTES

SITE GRADING AND SITE IMPROVEMENTS SHALL BE DONE IN ACCORDANCE WITH THE APPROVED GEOTECHNICAL REPORT FOR THE PROJECT.

PREPARED BY: UNIVERSAL ENGINEERING SCIENCES
ADDRESS: 4480 W HACIENDA AVE #104, LAS VEGAS, NEVADA 89118
PROJECT NO.: 4030.2100251
DATED: NOVEMBER 1, 2021

CITY OF LAS VEGAS NOTE

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

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DRAINAGE CERTIFICATION

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE AT THE CITY OF LAS VEGAS FOR THIS PROJECT.

BY: DATE:

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=30' V: N/A
DRAWN BY: GH
DESIGNED BY: MJF & GH
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CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
GRADING PLAN

PROJECT NO. 3869004

SHT 5 OF 13

DRAWING C2.01

CLV#-TBD

J:\3000-s\3869_Cold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Dwg\SHEETS\C2.01_BE.dwg 8/10/2022 10:31 AM George Hanna

WATER CONSTRUCTION NOTES

1. INSTALL FITTING (SIZE PER PLAN) PER UDUCS PLATE NO. 31
2. FIRE HYDRANT ASSEMBLY COMPLETE WITH VALVE PER UDACS PLATE 40
3. INSTALL WATERLINE (SIZE PER PLAN). TRENCH PER UDACS PLATE NO. 17 & 19
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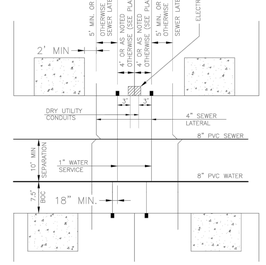
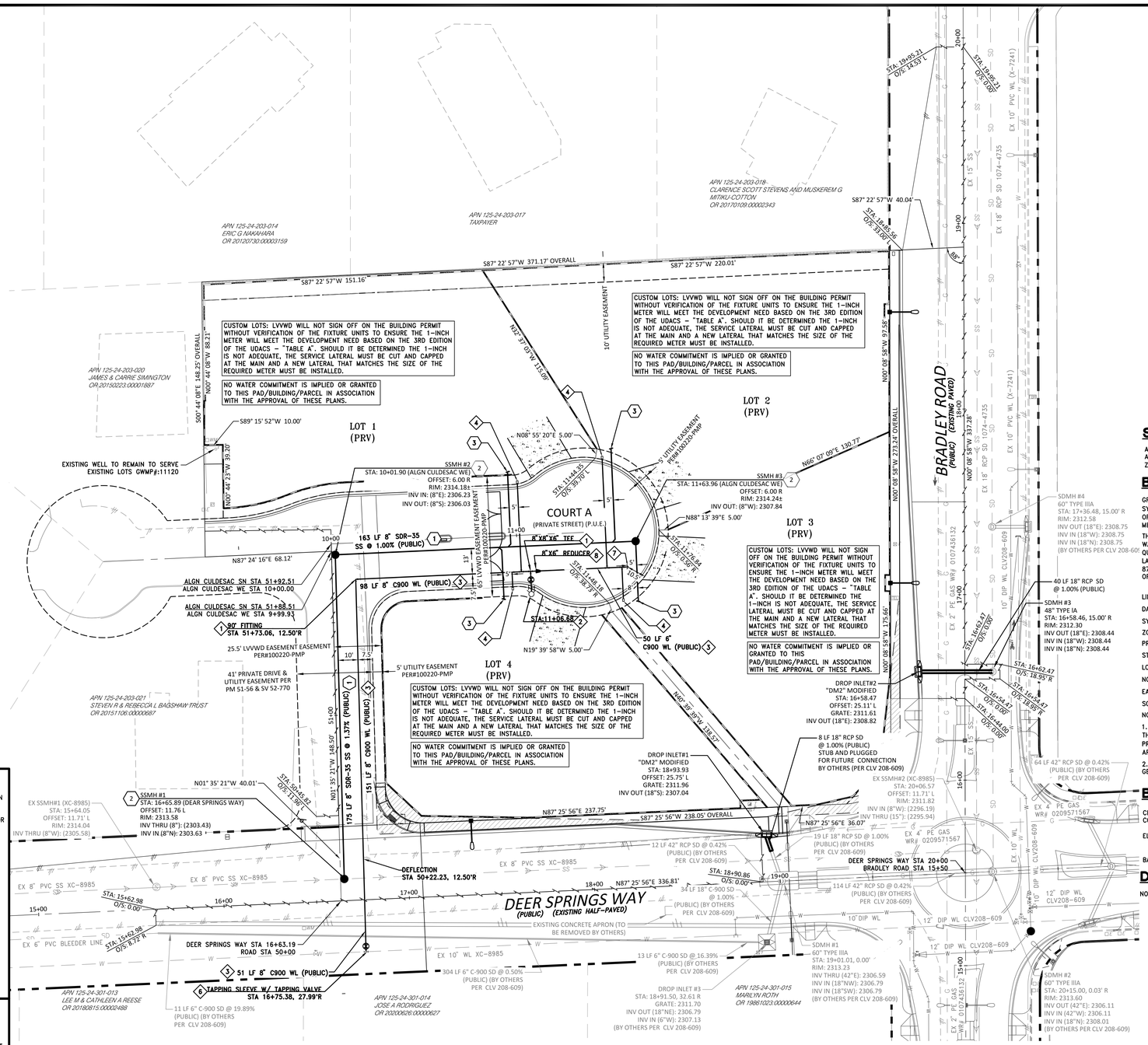
2. INSTALL 48" DIA MANHOLE WITH WATERTIGHT JOINTS PER DETAIL DCSWCS NO. SD-1
3. INSTALL 4" SDR-35 LATERAL CONNECTION PER DCSWCS DRAWING NO. SD-17 (PRIVATE) AND CONNECT TO SEWER MAIN PER SD-20

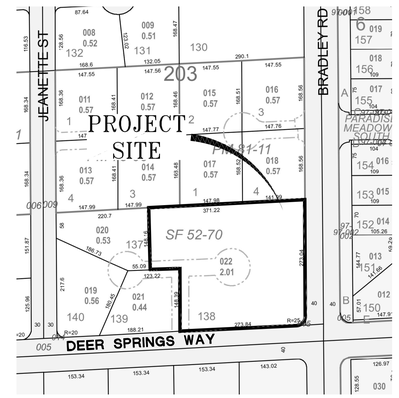


TYPICAL UTILITY LOCATION

FOR LOTS LESS THAN 70' WIDE UNLESS OTHERWISE NOTED (SIZES AS NOTED ON PLANS)

NOT TO SCALE





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ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

DAYLIGHT LINE NOTE

NO DAYLIGHT LINE OCCURS WITHIN PAD AREA

UTILITY NOTES

1. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22
2. CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING SANITARY SEWERLINE PRIOR TO CONSTRUCTION, AND DISCREPANCY TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. EXISTING GAS AND WATER UTILITY LINES TO REMAIN. CONTRACTOR RESPONSIBLE FOR ANY DAMAGE.
4. ALL FIRE SPRINKLERS SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

DEPTH OF COVER DURING CONSTRUCTION

MAINTAIN A MINIMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

DRY UTILITIES

MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.

MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.

LVVWD SURVEY NOTE

CONTRACTOR SHALL EMPLOY A NEVADA LICENSED PROFESSIONAL LAND SURVEYOR (PLS) TO FIELD STAKE THE EXTENT OF THE PROPOSED/ EXISTING LVVWD EASEMENT WITHIN THE PROJECT SITE. THESE STAKES SHALL BE CONTINUOUSLY MAINTAINED DURING THE CONTRUCTION OF THE PROJECT. THE PLS SHALL ALSO FIELD STAKE THE PROPOSED EXTENT OF ADJACENT PROJECT BUILDING IMPROVEMENTS IMMEDIATELY ADJACENT TO THE EASEMENT. CONTRACTOR SHALL NOTIFY THE LVVWD INSPECTOR AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO PROPOSED INITIAL BUILDING EXCAVATION AND FOUNDATION CONSTRUCTION ACTIVITY. LVVWD WILL INSPECT THE FIELD STAKING FOR COMPLIANCE WITH SEPARATION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY LVVWD PRIOR TO UTILITY TRENCHING OR ANY OTHER SUBGRADE EFFORTS WITHIN THE PROPOSED/EXISTING LVVWD EASEMENT.

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FAST
CALL BEFORE YOU UNDERGROUND
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

TO ENSURE LVVWD ACCESS WITHIN EASEMENT
ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO, LANDSCAPE BOULDERS, FENCES/WALL (TO INCLUDE NO FOOTINGS), AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

LVVWD NOTE:
INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO.15

LVVWD CANNOT GUARANTEE A WATERTIGHT SHUTDOWN WHERE CONNECTIONS OR REPAIRS TO EXISTING FACILITIES ARE REQUIRED. THE CONTRACTOR SHALL ENSURE ALL LABOR AND EQUIPMENT IS AVAILABLE TO REMOVE REMAINING WATER. COORDINATION WITH INSPECTION DIVISION MUST TAKE PLACE PRIOR TO ANY TRAIL SHUTDOWN.

CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

SIGHT VISIBILITY ZONE PER CCAUSD DWG NO. 201.2

[XX.XX] GRADE BY OTHERS TO MATCH THEIR ELEVATION REFERENCE PER CLV 208-609

THIS PROPERTY MAY HAVE STATIC WATER PRESSURE IN EXCESS OF 80 PSI. THE UNIFORM PLUMBING CODE REQUIRES THAT INDIVIDUAL, ON-SITE (PRIVATE), PRESSURE-REDUCING VALVES (PVR) BE INSTALLED WHENEVER HE PRESSURE EXCEEDS 50 PSI. PRV'S ARE THE DEVELOPER'S RESPONSIBILITY, AND WILL NOT BE INSPECTED OR INCLUDED IN THE ACCEPTANCE OF LVVWD FACILITIES.

CLARK COUNTY FIRE DEPARTMENT DATE

APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, ON AN APPROVAL OF ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1500 GPM, AT 20 PSI RESIDUAL.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.
LVVWD APPROVED FIRE FLOW: TOTAL 1500 GPM 20 PSI RESIDUAL
MAXIMUM AVAILABLE FIRE SPRINKLER FLOW 26 GPM

FIRE FLOW CALCULATIONS
CITY OF LAS VEGAS

FIRE FLOW REQUIREMENT IS 1,500 GALLONS PER MINUTE AT 20 POUNDS PER SQUARE INCH RESIDUAL PRESSURE.

BASED ON:

Type of Construction:	V-B
Total Living Area (residential sq ft):	5,032
Total Fire Area:	5,032
NUMBER OF STORIES	2
TYPE IA or IB CONSTRUCTION: Area of three(3) Largest Floors:	N/A
Building Height:	33'
High-Rise building:	Yes ___ No X
Mid-Rise building:	Yes ___ No X
IBC Use Group:	R-3
Sprinkler System:	Yes X No ___
If yes, specify type:	13 ___ 13R ___ 13D X
Number of Hydrants Installed:	1
Fire Flow Onsite:	
Total Fire Flow:	1,500 GPM at 20 psi
REVIEW BY:	
DATE:	

NOTE: FIRE SPRINKLERS TO BE PLUMBED TO MASTER TOILET. NO EXCEPTIONS.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=30' V: N/A
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

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BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 TEL 702.220.3680
LAS VEGAS, NV 89113 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
UTILITY PLAN

PROJECT NO. 3869004

SHT 6 OF 13

DRAWING C3.01

CLV#-TBD

J:\3000-s\3869_Cold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Dwg\SHEETS\C3.01_BE.dwg 8/10/2022 10:32 AM George Hanna

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3. INSTALL 4" SDR-35 LATERAL CONNECTION PER DCSWCS DRAWING NO. SD-17 (PRIVATE) AND CONNECTION TO SEWER MAIN PER SD-20

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13. INSTALL 3.5" AC PAVEMENT OVER 8" TYPE II AGGREGATE BASE
14. INSTALL IRON FENCE PER DETAIL 11 ON SHEET C6.01
15. SAWCUT AC PAVEMENT
16. INSTALL TYPE "L" CURB AND GUTTER PER CCAUSD #216
17. INSTALL CASE 1 SIDEWALK RAMP PER CCAUSD #235. "A"=8.0 & "B"=8'
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19. INSTALL SIDEWALK DRAIN PER CCAUSD #236
20. CONSTRUCT TYPE "DWZ" MODIFIED DROP INLET (L=5-FT) (CCAUSD #412.1 & #421)
21. LANDSCAPE
22. INSTALL TEMPORARY PAVEMENT SECTION 2" AC PAVEMENT OVER 6" TYPE II
23. INSTALL WATER TIGHT 48-INCH TYPE I MANHOLE PER CCAUSD #403.1
24. INSTALL 4.5" AC PAVEMENT OVER 14" TYPE II AGGREGATE BASE

UTILITY NOTES

1. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22
2. CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING SANITARY SEWERLINE PRIOR TO CONSTRUCTION, AND DISCREPANCY TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. EXISTING GAS AND WATER UTILITY LINES TO REMAIN. CONTRACTOR RESPONSIBLE FOR ANY DAMAGE.
4. ALL FIRE SPRINKLERS SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

DEPTH OF COVER DURING CONSTRUCTION

MAINTAIN A MINIMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

DRY UTILITIES

MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.

MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING,

LVVWD SURVEY NOTE

CONTRACTOR SHALL EMPLOY A NEVADA LICENSED PROFESSIONAL LAND SURVEYOR (PLS) TO FIELD STAKE THE EXTENT OF THE PROPOSED/ EXISTING LVVWD EASEMENT WITHIN THE PROJECT SITE. THESE STAKES SHALL BE CONTINUOUSLY MAINTAINED DURING THE CONTRUCTION OF THE PROJECT. THE PLS SHALL ALSO FIELD STAKE THE PROPOSED EXTENT OF ADJACENT PROJECT BUILDING IMPROVEMENTS IMMEDIATELY ADJACENT TO THE EASEMENT. CONTRACTOR SHALL NOTIFY THE LVVWD INSPECTOR AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO PROPOSED INITIAL BUILDING EXCAVATION AND FOUNDATION CONSTRUCTION ACTIVITY. LVVWD WILL INSPECT THE FIELD STAKING FOR COMPLIANCE WITH SEPARATION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY LVVWD PRIOR TO UTILITY TRENCHING OR ANY OTHER SUBGRADE EFFORTS WITHIN THE PROPOSED/EXISTING LVVWD EASEMENT.

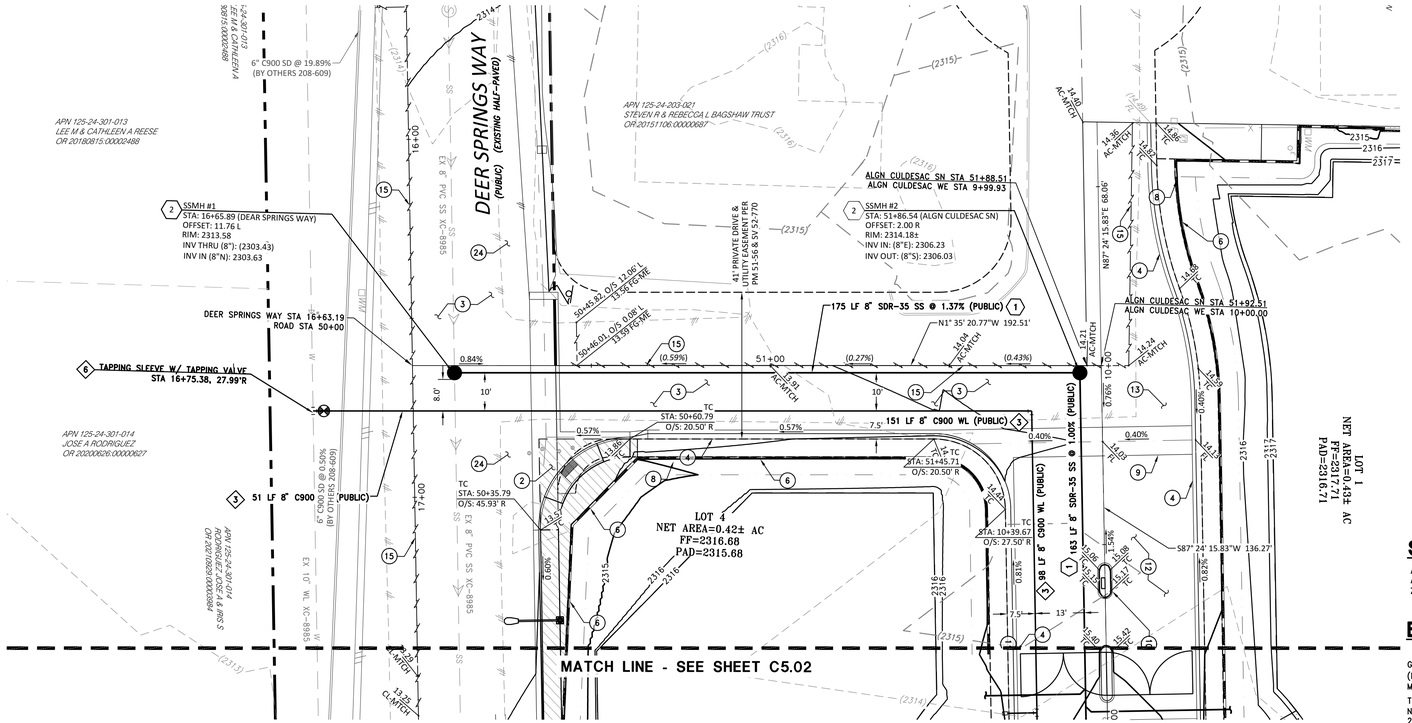
DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND OR OVERHEAD 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 CONTRACTOR TO NOTIFY ENGINEER OF LOCATION. ANY CHANGES OR DISCREPANCIES.

CALL BEFORE YOU DIG
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
CALL 811 OR 1-800-227-2600

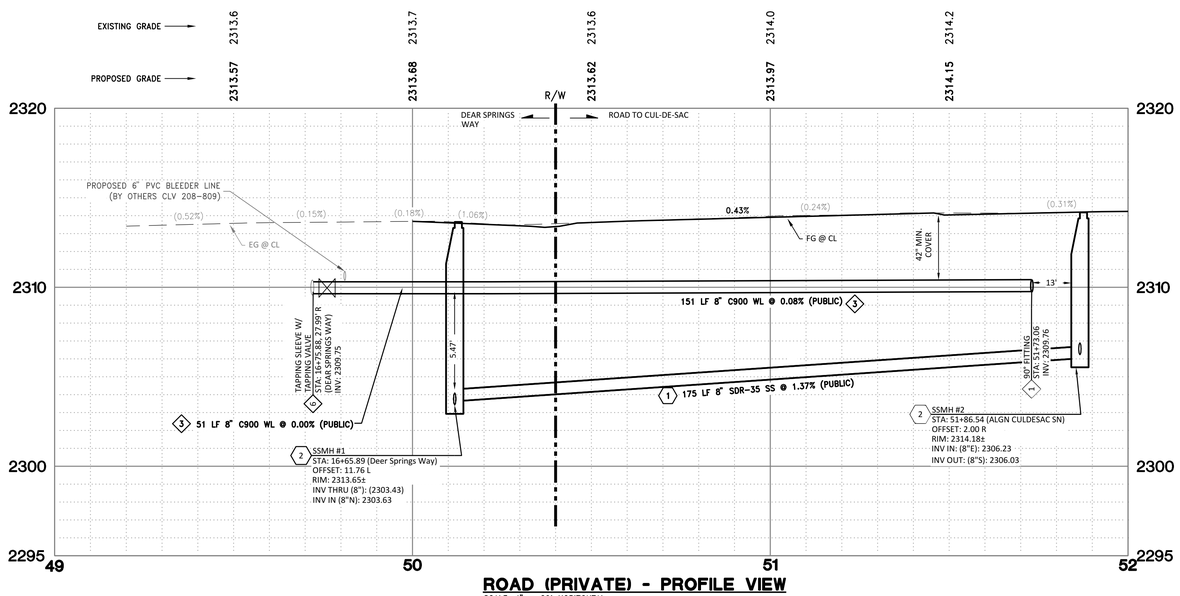
AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD WORK
CALL 1-702-227-2929

FAST CALL BEFORE YOU UNDERGROUND
CALL 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION



ROAD (PRIVATE) - PLAN VIEW

SCALE: 1" = 20'

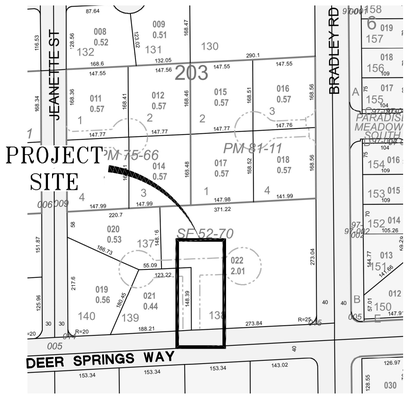


ROAD (PRIVATE) - PROFILE VIEW

SCALE: 1" = 20' HORIZONTAL
SCALE: 1" = 4' VERTICAL

DAYLIGHT LINE NOTE

NO DAYLIGHT LINE OCCURS WITHIN PAD AREA



VICINITY MAP

NTS

SCALE: 1" = 20'

SITE DATA

APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT (R-E)

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS ZONE (LOW DISTORTION PROJECTION), NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

THE BEARING EQUATION FOR THIS PROJECT WOULD BE THE CENTERLINE OF DEER SPRINGS WAY AND THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, HAVING A BEARING OF N 87° 03' 32" E, ALSO BEING N 87° 25' 33" E AS SHOWN ON MAP THEREOF ON FILE IN FILE 159 OF SURVEYS, PAGE 26, OFFICIAL RECORDS, CLARK COUNTY NEVADA.

LINEAR UNIT: US SURVEY FOOT (SFT)
DATUM (REFERENCE FRAME): NAD 1983 (2011) EPOCH 2010
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36° 15' 00" N
LONGITUDE OF CENTRAL MERIDIAN: 114° 58' 00" W
NORTHING AT GRID ORIGIN: 656,166.6667 SFT (200,000.000 M)
EASTING AT CENTRAL MERIDIAN: 328,083.3333 SFT (100,000.000 M)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.0001 (EXACT)
NOTES:

1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK "5LV9024C4", BEING A RIVET PLATE IN THE TOP OF CURB, NE CORNER OF BRADLEY AND DEER SPRINGS.

ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

SIGHT VISIBILITY ZONE PER CCAUSD DWG NO. 201.2

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=20' V: 1"=4'
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 LAS VEGAS, NV 89113
TEL 702.220.3680 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
PRIVATE ROAD
PLAN & PROFILE 1

PROJECT NO. 3869004

SHT 7 OF 13

DRAWING C5.01

CLV#-TBD

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WATER CONSTRUCTION NOTES

1. INSTALL FITTING (SIZE PER PLAN) PER UDUCS PLATE NO. 31
2. FIRE HYDRANT ASSEMBLY COMPLETE WITH VALVE PER UDACS PLATE 40
3. INSTALL WATERLINE (SIZE PER PLAN). TRENCH PER UDACS PLATE NO. 17 & 19
4. INSTALL 1" SERVICE LATERAL WITH 1" WATER METER PER UDACS PLATE NO. 3
5. INSTALL GATE VALVE (SAME SIZE AS LINE) PER UDACS PLATE NO. 30
6. INSTALL 10"X8" TAPPING SLEEVE W/ TAPPING VALVE PER UDACS PLATE NO. 34 & 39 (UDACS 2.24.01.A)
7. INSTALL 6" CAP WITHOUT BLOW-OFF PER UDACS PLATE NO. 31
8. INSTALL REDUCER (SIZE PER PLAN) PER UDACS PLAT NO.30

SEWER CONSTRUCTION NOTES

1. INSTALL SANITARY SEWER (SIZE PER PLAN), TRENCH PER DETAIL DCSWCS DRAWING NO. SD-17 (PAVED RIGHT-OF-WAY) (PUBLIC)
2. INSTALL 48" DIA MANHOLE WITH WATERTIGHT JOINTS PER DETAIL DCSWCS NO. SD-1
3. INSTALL 4" SDR-35 LATERAL CONNECTION PER DCSWCS DRAWING NO. SD-17 (PRIVATE) AND CONNECTION TO SEWER MAIN PER SD-20

CONSTRUCTION NOTES

1. ADJUST TO GRADE EXISTING UTILITY BOX, UTILITY VAULT
2. SIGHT VISIBILITY ZONE PER CCAUSD #201.2
3. REMOVE & REPLACE AC PAVEMENT PER CCAUSD #500.3, #500.5. MATCH EXISTING THICKNESS
4. INSTALL 30" ROLL CURB PER CCAUSD #217.2.S1
5. INSTALL RETAINING WALL WITH 6' SCREEN WALL ON TOP (STRUCTURAL DESIGN & DETAIL BY OTHERS)
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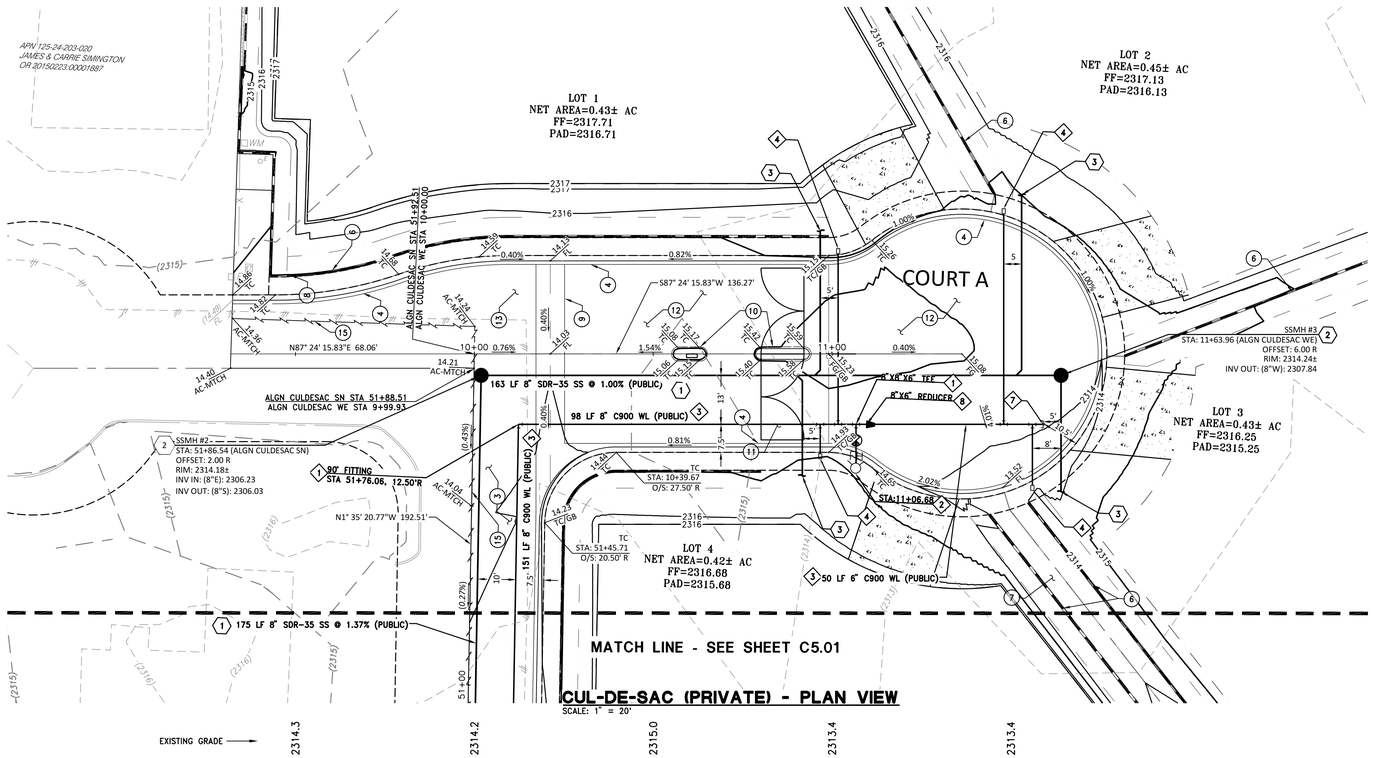
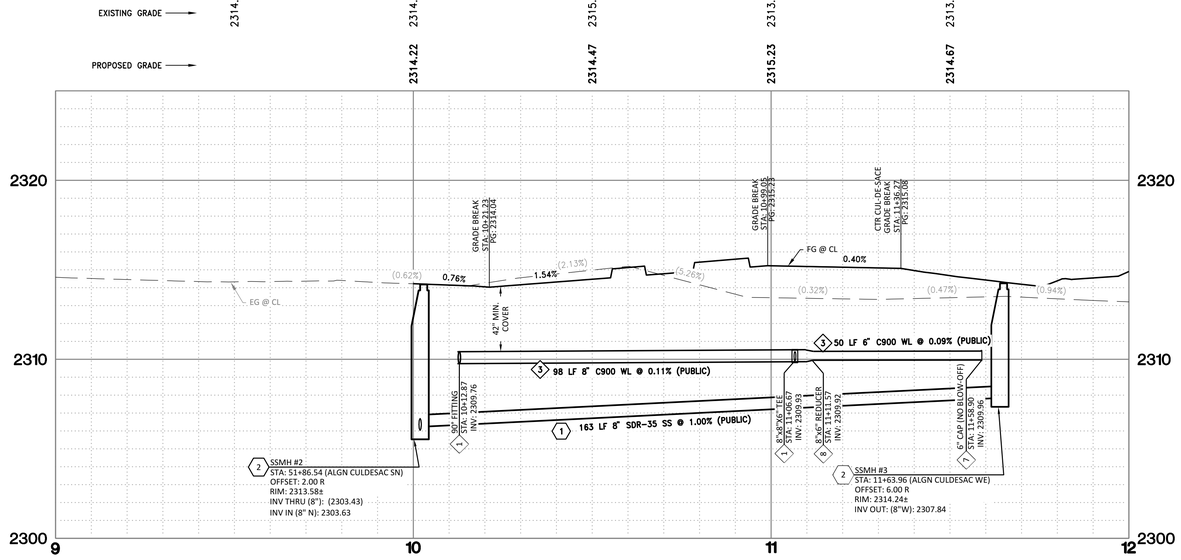


CUL-DE-SAC (PRIVATE) - PLAN VIEW

SCALE: 1" = 20'



CUL-SE-SAC (PRIVATE) - PROFILE VIEW

SCALE: 1" = 20' HORIZONTAL
SCALE: 1" = 4' VERTICAL

DAYLIGHT LINE NOTE

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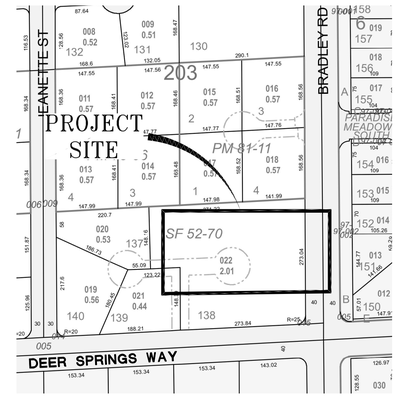

VICINITY MAP

NTS

20' 10' 0 20'
SCALE: 1" = 20'

SITE DATA

APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT (R-E)

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LINEAR UNIT: US SURVEY FOOT (SFT)
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SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
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ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

SIGHT VISIBILITY ZONE PER CCAUSD DWG NO. 201.2

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=20' V: 1"=4'
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 LAS VEGAS, NV 89113
TEL 702.220.3680 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
PRIVATE ROAD
PLAN & PROFILE 2

PROJECT NO. 3869004

SHT 8 OF 13

DRAWING C5.02

CLV#-TBD

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WATER CONSTRUCTION NOTES

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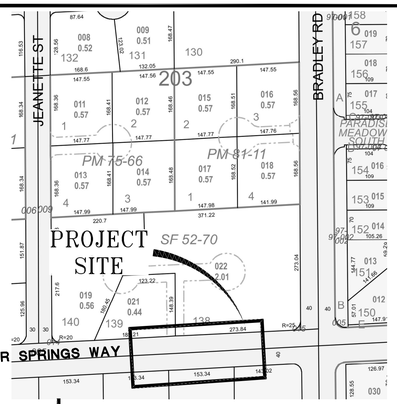
APPROVED FOR CONSTRUCTION

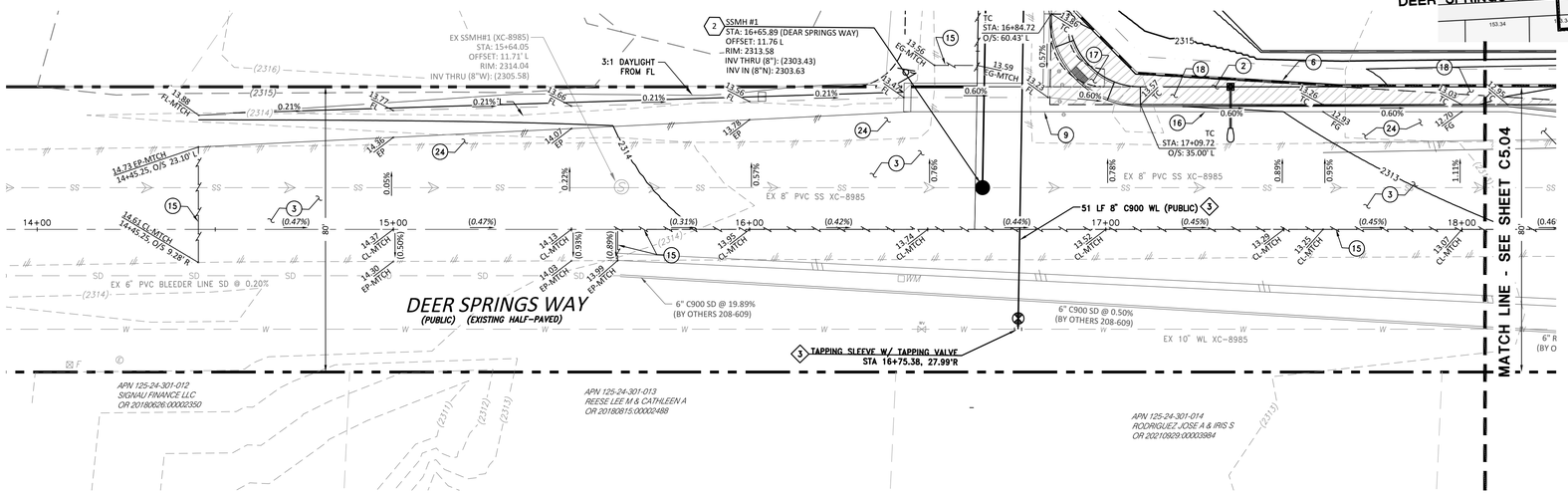
LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.



VICINITY MAP

NTS

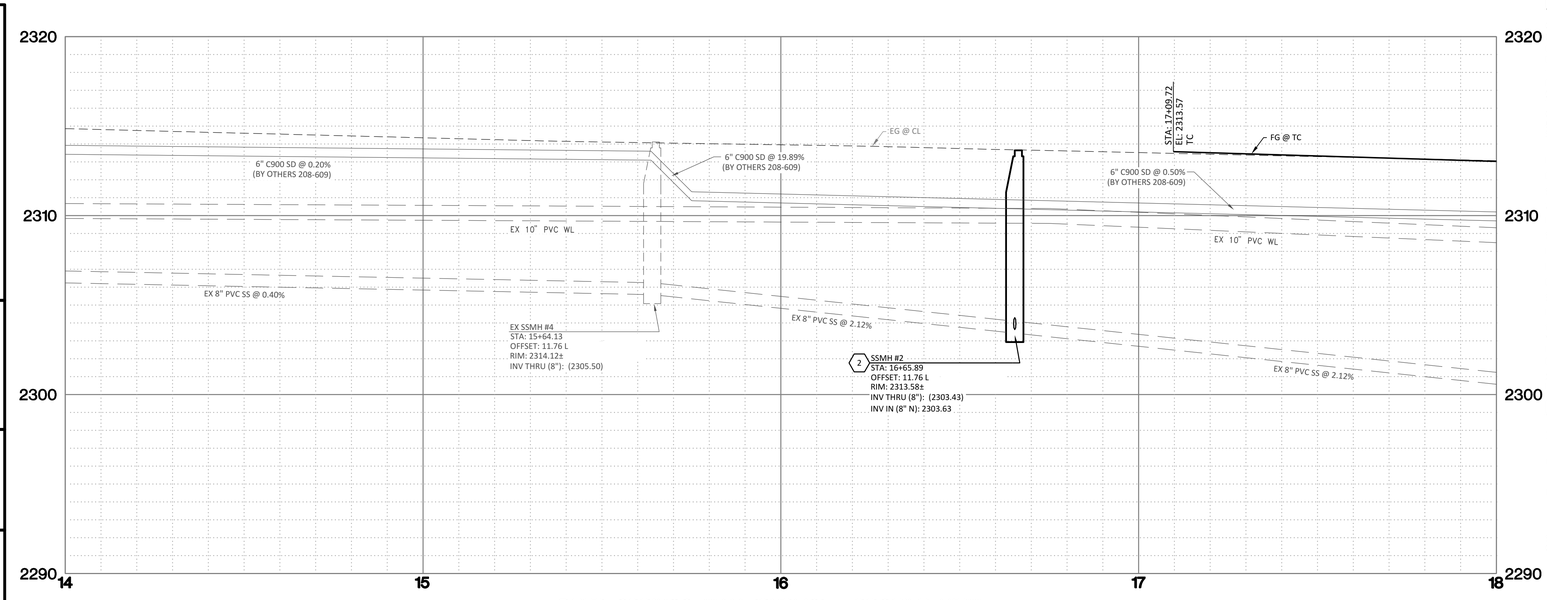


DEER SPRINGS WAY (PUBLIC) - PLAN VIEW

SCALE: 1" = 20'

EXISTING GRADE → 2314.9 2314.6 2314.3 2314.1 2314.0 2313.7 2313.5 2313.48 2313.33 2313.18 2313.03 2313.1

PROPOSED GRADE →



DEER SPRINGS WAY (PUBLIC) - PROFILE VIEW

SCALE: 1" = 20' HORIZONTAL
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UTILITY NOTES

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MAINTAIN A MINIMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

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FAST
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

DAYLIGHT LINE NOTE

NO DAYLIGHT LINE OCCURS WITHIN PAD AREA

SITE DATA

APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT (R-E)

BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS ZONE (LOW DISTORTION PROJECTION), NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

THE BEARING EQUATION FOR THIS PROJECT WOULD BE THE CENTERLINE OF DEER SPRINGS WAY AND THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, HAVING A BEARING OF N 87° 03' 32" E, ALSO BEING N 87° 25' 33" E AS SHOWN ON MAP THEREOF ON FILE IN FILE 159 OF SURVEYS, PAGE 26, OFFICIAL RECORDS, CLARK COUNTY NEVADA.

LINEAR UNIT: US SURVEY FOOT (SFT)

DATUM (REFERENCE FRAME): NAD 1983 (2011) EPOCH 2010

SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)

ZONE: LAS VEGAS

PROJECTION: TRANSVERSE MERCATOR

STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36° 15' 00" N

LONGITUDE OF CENTRAL MERIDIAN: 114° 58' 00" W

NORTHING AT GRID ORIGIN: 656,166.6667 SFT (200,000.000 M)

EASTING AT CENTRAL MERIDIAN: 328,083.3333 SFT (100,000.000 M)

SCALE FACTOR ON CENTRAL MERIDIAN: 1.0001 (EXACT)

NOTES:

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BENCHMARK

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ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

SIGHT VISIBILITY ZONE PER CCAUSD DWG NO. 201.2

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=20' V: 1"=4'
DRAWN BY: GH
DESIGNED BY: MJF & GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 TEL 702.220.3680
LAS VEGAS, NV 89113 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
DEER SPRINGS WAY
PLAN & PROFILE 3

PROJECT NO. 3869004

SHT 9 OF 13

DRAWING C5.03

CLV#-TBD

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WATER CONSTRUCTION NOTES

1. INSTALL FITTING (SIZE PER PLAN) PER UDUCS PLATE NO. 31
2. FIRE HYDRANT ASSEMBLY COMPLETE WITH VALVE PER UDACS PLATE 40
3. INSTALL WATERLINE (SIZE PER PLAN). TRENCH PER UDACS PLATE NO. 17 & 19
4. INSTALL 1" SERVICE LATERAL WITH 1" WATER METER PER UDACS PLATE NO. 3
5. INSTALL GATE VALVE (SAME SIZE AS LINE) PER UDACS PLATE NO. 30
6. INSTALL 10"X8" TAPPING SLEEVE W/ TAPPING VALVE PER UDACS PLATE NO. 34 & 39 (UDACS 2.24.01.A)
7. INSTALL 6" CAP WITHOUT BLOW-OFF PER UDACS PLATE NO. 31
8. INSTALL REDUCER (SIZE PER PLAN) PER UDACS PLAT NO.30

SEWER CONSTRUCTION NOTES

1. INSTALL SANITARY SEWER (SIZE PER PLAN), TRENCH PER DETAIL DCSWCS DRAWING NO. SD-17 (PAVED RIGHT-OF-WAY) (PUBLIC)
2. INSTALL 48" DIA MANHOLE WITH WATERTIGHT JOINTS PER DETAIL DCSWCS NO. SD-1
3. INSTALL 4" SDR-35 LATERAL CONNECTION PER DCSWCS DRAWING NO. SD-17 (PRIVATE) AND CONNECTION TO SEWER MAIN PER SD-20

CONSTRUCTION NOTES

1. ADJUST TO GRADE EXISTING UTILITY BOX, UTILITY VAULT
2. SIGHT VISIBILITY ZONE PER CCAUSD #201.2
3. REMOVE & REPLACE AC PAVEMENT PER CCAUSD #500.3, #500.5. MATCH EXISTING THICKNESS
4. INSTALL 30" ROLL CURB PER CCAUSD #217.2.S1
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18. INSTALL 5' WIDE SIDEWALK PER CCAUSD #234
19. INSTALL SIDEWALK DRAIN PER CCAUSD #236
20. CONSTRUCT TYPE "DM2" MODIFIED DROP INLET (L=5-FT) (CCAUSD #412.1 & #421)
21. LANDSCAPE
22. INSTALL TEMPORARY PAVEMENT SECTION 2" AC PAVEMENT OVER 6" TYPE II
23. INSTALL WATER TIGHT 48-INCH TYPE I MANHOLE PER CCAUSD #403.1
24. INSTALL 4.5" AC PAVEMENT OVER 14" TYPE II AGGREGATE BASE

UTILITY NOTES

1. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22
2. CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING SANITARY SEWERLINE PRIOR TO CONSTRUCTION, AND DISCREPANCY TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
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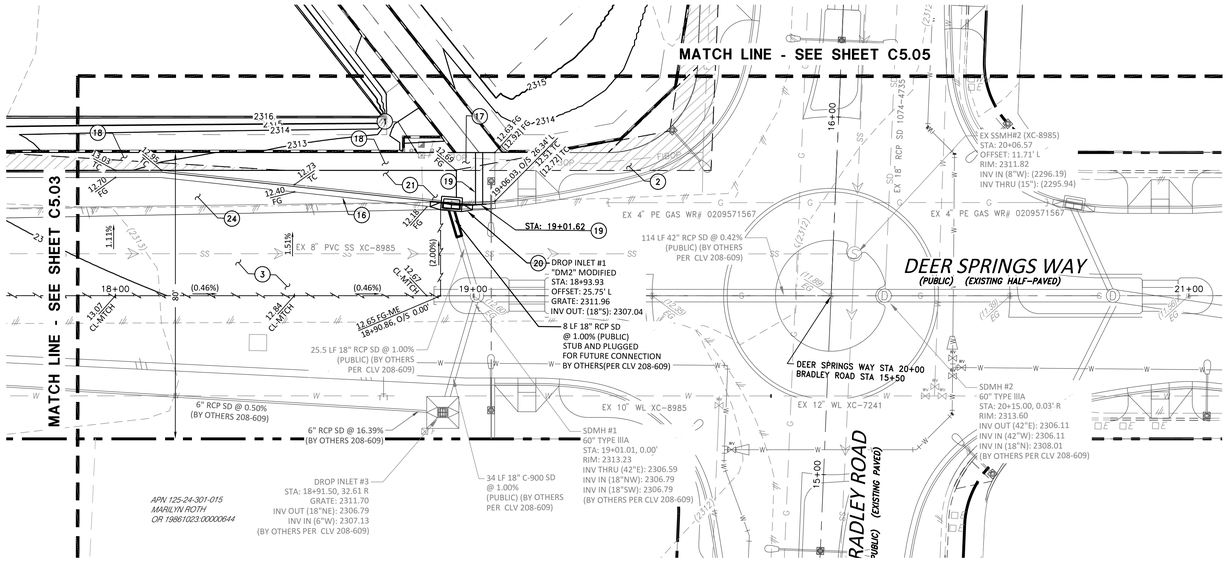
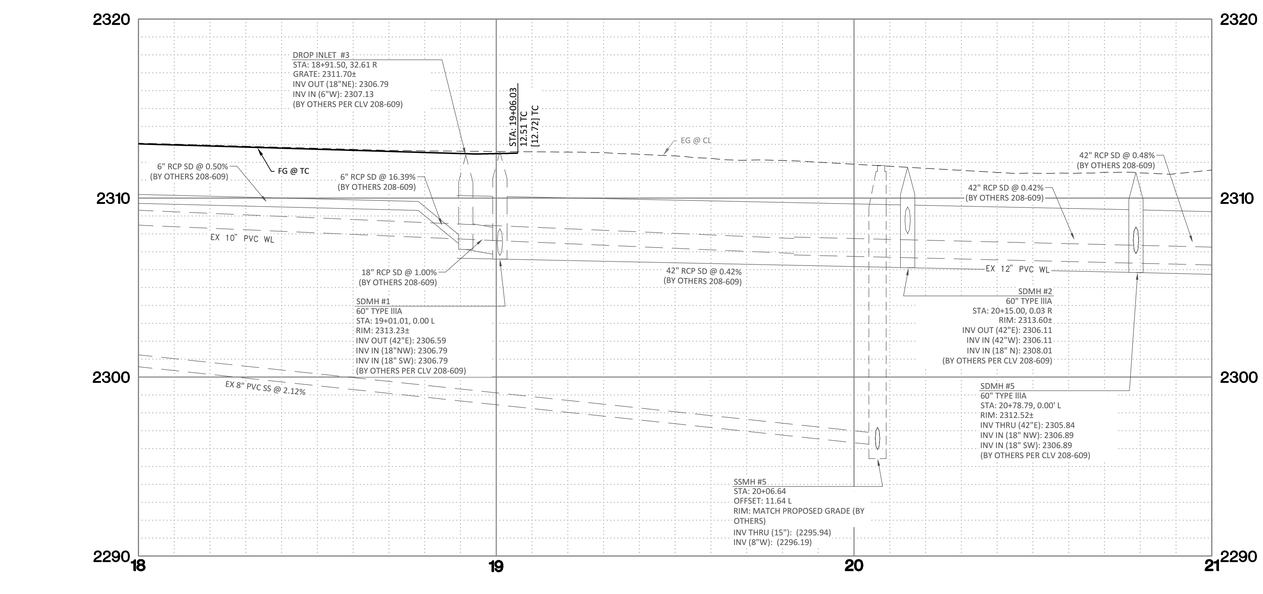
SIGHT VISIBILITY ZONE PER CCAUSD DWG NO. 201.2



DEER SPRINGS WAY (PUBLIC) - PLAN VIEW

SCALE: 1" = 20'



DEER SPRINGS WAY (PUBLIC) - PROFILE VIEW

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DAYLIGHT LINE NOTE

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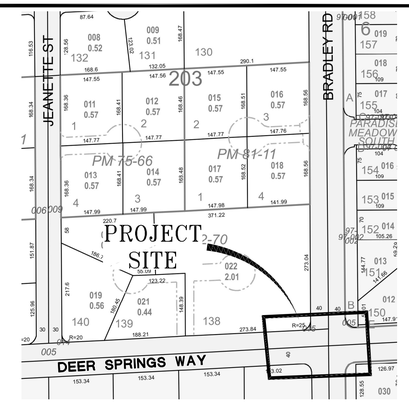

VICINITY MAP

NTS

20' 10' 0 20'

SCALE: 1" = 20'

SITE DATA

APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT (R-E)

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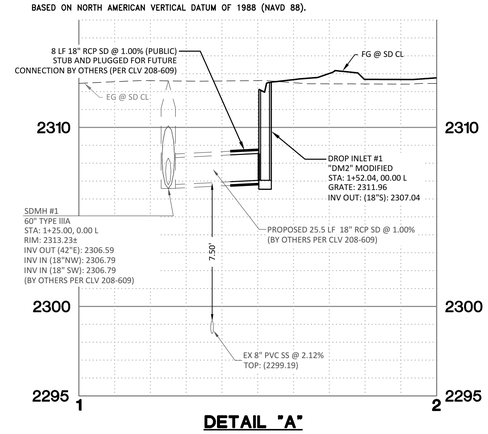

DETAIL "A"

SCALE: 1" = 20' HORIZONTAL
SCALE: 1" = 4' VERTICAL

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=20' V: 1"=4'
DRAWN BY: GH
DESIGNED BY: MJF & GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
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LAS VEGAS, NV 89113 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
DEER SPRINGS WAY
PLAN & PROFILE 4

PROJECT NO. 3869004

SHT 10 OF 13

DRAWING C5.04

CLV#-TBD

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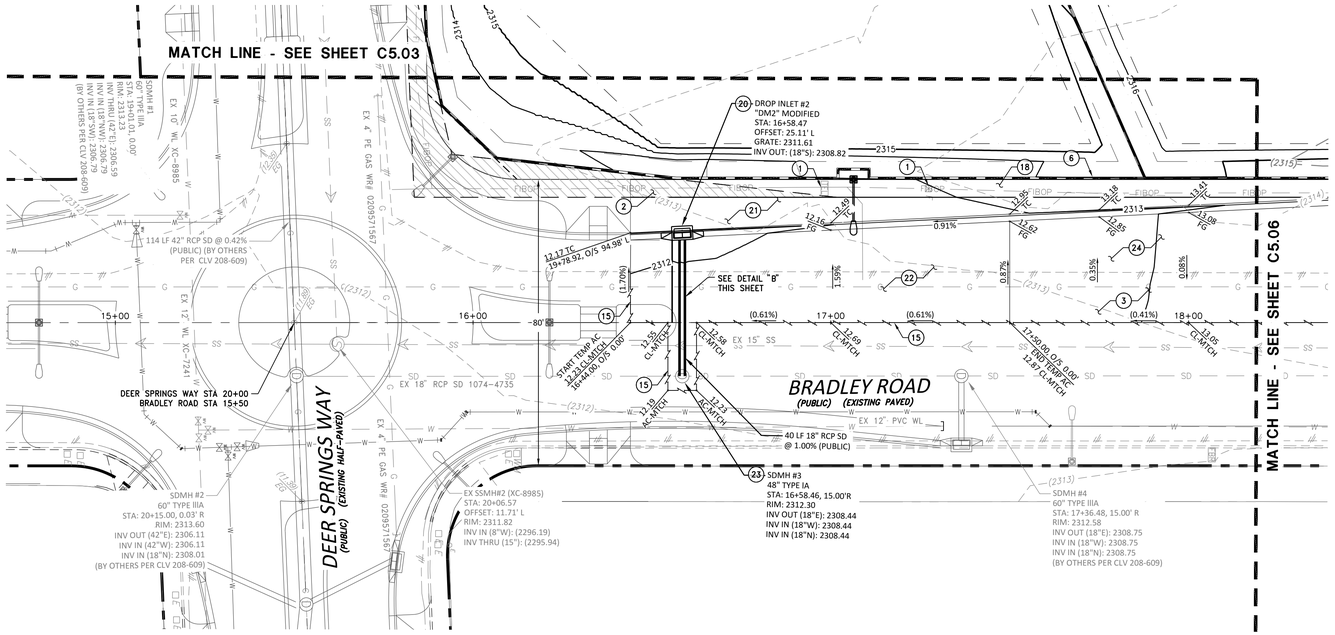
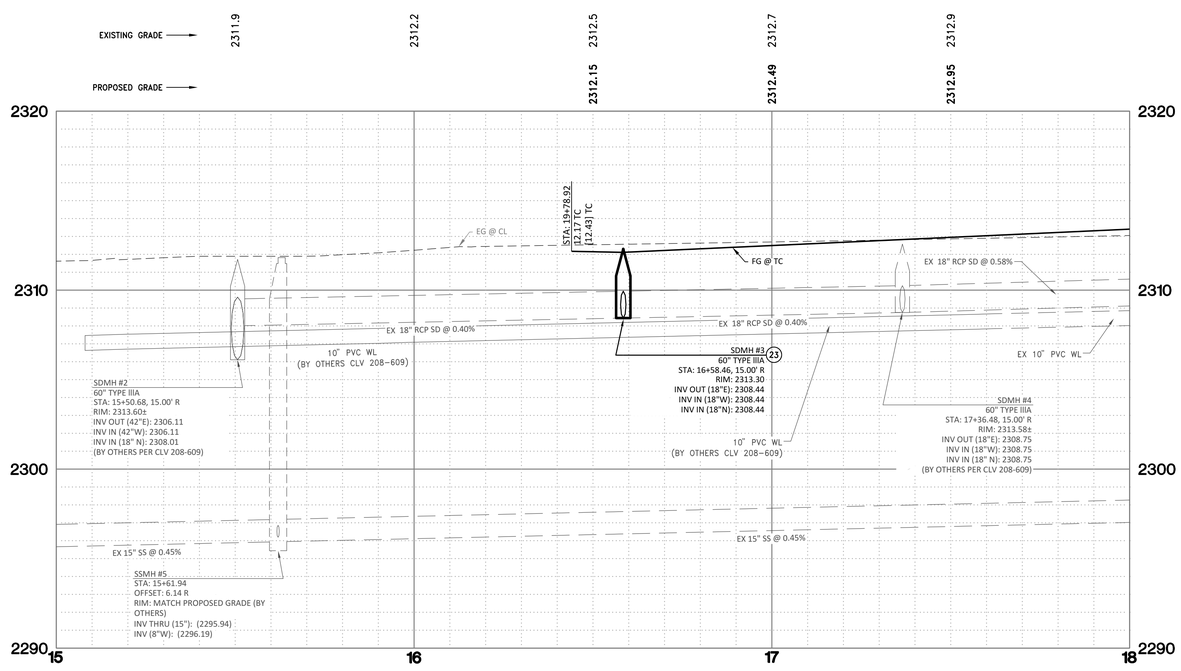


BRADLEY ROAD WAY (PUBLIC) - PLAN VIEW

SCALE: 1" = 20'



BRADLEY ROAD (PUBLIC) - PROFILE VIEW

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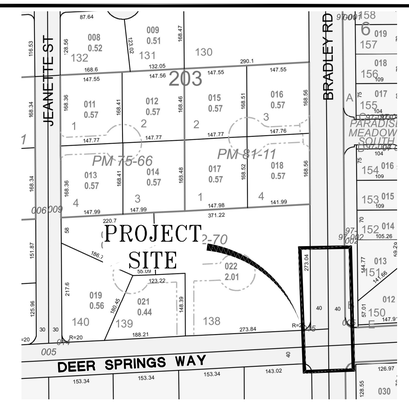

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NTS

20' 10' 0 20'

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BASIS OF BEARINGS

GRID NORTH AS DEFINED BY THE CENTRAL MERIDIAN OF THE NEVADA COORDINATE REFERENCE SYSTEM (NCRS), LAS VEGAS ZONE (LOW DISTORTION PROJECTION), NORTH AMERICAN DATUM OF 1983; SAID MERIDIAN BEING COINCIDENT WITH 114°58' WEST OF THE GREENWICH MERIDIAN.

THE BEARING EQUATION FOR THIS PROJECT WOULD BE THE CENTERLINE OF DEER SPRINGS WAY AND THE NORTH LINE OF THE NORTHEAST QUARTER (NE 1/4) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION 24, TOWNSHIP 19 SOUTH, RANGE 60 EAST, M.D.M., CITY OF LAS VEGAS, CLARK COUNTY, NEVADA, HAVING A BEARING OF N 87° 03' 32" E, ALSO BEING N 87° 25' 33" E AS SHOWN ON MAP THEREOF ON FILE IN FILE 159 OF SURVEYS, PAGE 26, OFFICIAL RECORDS, CLARK COUNTY NEVADA.

LINEAR UNIT: US SURVEY FOOT (SFT)
DATUM (REFERENCE FRAME): NAD 1983 (2011) EPOCH 2010
SYSTEM: NEVADA COORDINATE REFERENCE SYSTEM (NCRS)
ZONE: LAS VEGAS
PROJECTION: TRANSVERSE MERCATOR
STANDARD PARALLEL (AND LATITUDE OF GRID ORIGIN): 36° 15' 00" N
LONGITUDE OF CENTRAL MERIDIAN: 114° 58' 00" W
NORTHING AT GRID ORIGIN: 656,166.6667 SFT (200,000.000 M)
EASTING AT CENTRAL MERIDIAN: 328,083.3333 SFT (100,000.000 M)
SCALE FACTOR ON CENTRAL MERIDIAN: 1.0001 (EXACT)
NOTES:

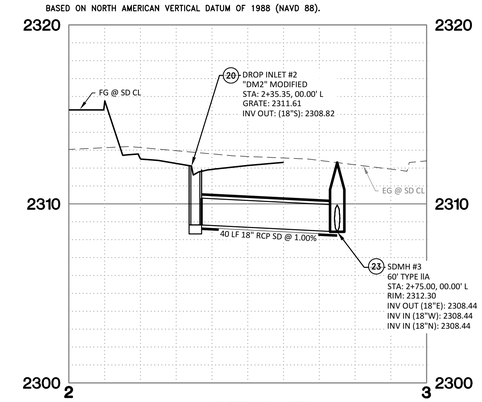
1. ALL DISTANCES AND BEARINGS SHOWN HEREON ARE PROJECTED (GRID) VALUES BASED ON THE PRECEDING PROJECTION DEFINITION. THE PROJECTION WAS DEFINED SUCH THAT PROJECTED (GRID) DISTANCES ARE EQUIVALENT TO "GROUND" DISTANCES IN THE PROJECT AREA.
2. GRID BEARINGS SHOWN HEREON (OR IMPLIED BY GRID COORDINATES) DO NOT EQUAL GEODETIC BEARINGS DUE TO MERIDIAN CONVERGENCE.

BENCHMARK

CITY OF LAS VEGAS BENCHMARK "5LV9024C4", BEING A RIVET PLATE IN THE TOP OF CURB, NE CORNER OF BRADLEY AND DEER SPRINGS.

ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).



DETAIL "B"

SCALE: 1" = 20' HORIZONTAL
SCALE: 1" = 4' VERTICAL

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: 1"=20' V: 1"=4'
DRAWN BY: GH
DESIGNED BY: MJF & GH
CHECKED BY: MJF

PROFESSIONAL ENGINEER - STATE OF NEVADA
MARK J. FAKLER
Exp. 6-30-2023
CIVIL
No. 009911
8/10/2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
8345 W. SUNSET RD. STE. 150 TEL 702.220.3680
LAS VEGAS, NV 89113 FAX 916.341.7767

CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
BRADLEY ROAD
PLAN & PROFILE 5

PROJECT NO. 3869004

SHT 11 OF 13

DRAWING C5.05

CLV#-TBD

J:\3000-s\3869_Gold_Rose_Construction\Deer_Springs_Balmoral Estates\Civil\Dwg\SHEETS\C5.01_BE.dwg 8/10/2022 10:33 AM George Hanna

WATER CONSTRUCTION NOTES

1. INSTALL FITTING (SIZE PER PLAN) PER UDUCS PLATE NO. 31
2. FIRE HYDRANT ASSEMBLY COMPLETE WITH VALVE PER UDACS PLATE 40
3. INSTALL WATERLINE (SIZE PER PLAN). TRENCH PER UDACS PLATE NO. 17 & 19
4. INSTALL 1" SERVICE LATERAL WITH 1" WATER METER PER UDACS PLATE NO. 3
5. INSTALL GATE VALVE (SAME SIZE AS LINE) PER UDACS PLATE NO. 30
6. INSTALL 10"X8" TAPPING SLEEVE W/ TAPPING VALVE PER UDACS PLATE NO. 34 & 39 (UDACS 2.24.01.A)
7. INSTALL 6" CAP WITHOUT BLOW-OFF PER UDACS PLATE NO. 31
8. INSTALL REDUCER (SIZE PER PLAN) PER UDACS PLAT NO.30

SEWER CONSTRUCTION NOTES

1. INSTALL SANITARY SEWER (SIZE PER PLAN), TRENCH PER DETAIL DCSWCS DRAWING NO. SD-17 (PAVED RIGHT-OF-WAY) (PUBLIC)
2. INSTALL 48" DIA MANHOLE WITH WATERTIGHT JOINTS PER DETAIL DCSWCS NO. SD-1
3. INSTALL 4" SDR-35 LATERAL CONNECTION PER DCSWCS DRAWING NO. SD-17 (PRIVATE) AND CONNECTION TO SEWER MAIN PER SD-20

CONSTRUCTION NOTES

1. ADJUST TO GRADE EXISTING UTILITY BOX, UTILITY VAULT
2. SIGHT VISIBILITY ZONE PER CCAUSD #201.2
3. REMOVE & REPLACE AC PAVEMENT PER CCAUSD #500.3, #500.5. MATCH EXISTING THICKNESS
4. INSTALL 30" ROLL CURB PER CCAUSD #217.2.S1
5. INSTALL RETAINING WALL WITH 6' SCREEN WALL ON TOP (STRUCTURAL DESIGN & DETAIL BY OTHERS)
6. INSTALL 6' SCREEN WALL PER SOUTHERN NEVADA BUILDING OFFICIALS REGIONAL STANDARDS
7. INSTALL 10' CONCRETE CHANNEL PER CCAUSD DWG NO. 420, 4" CONCRETE OVER 6" TYPE II AGGREGATE BASE
8. INSTALL WALL OPENING PER DETAIL 10 ON SHEET C6.01
9. INSTALL 8' CROSS GUTTER PER CCAUSD #228
10. INSTALL MEDIAN ISLAND PER CCAUSD #218
11. INSTALL SECURITY GATE PER MECHANICAL PLANS
12. INSTALL 2.5" AC PAVEMENT OVER 7" TYPE II AGGREGATE BASE
13. INSTALL 3.5" AC PAVEMENT OVER 8" TYPE II AGGREGATE BASE
14. INSTALL IRON FENCE PER DETAIL 11 ON SHEET C6.01
15. SAWCUT AC PAVEMENT
16. INSTALL TYPE "L" CURB AND GUTTER PER CCAUSD #216
17. INSTALL CASE 1 SIDEWALK RAMP PER CCAUSD #235. "A"=8.0 & "B"=8'
18. INSTALL 5' WIDE SIDEWALK PER CCAUSD #234
19. INSTALL SIDEWALK DRAIN PER CCAUSD #236
20. CONSTRUCT TYPE "DW2" MODIFIED DROP INLET (L=5-FT) (CCAUSD #412.1 & #421)
21. LANDSCAPE
22. INSTALL TEMPORARY PAVEMENT SECTION 2" AC PAVEMENT OVER 6" TYPE II
23. INSTALL WATER TIGHT 48-INCH TYPE I MANHOLE PER CCAUSD #403.1
24. INSTALL 4.5" AC PAVEMENT OVER 14" TYPE II AGGREGATE BASE

UTILITY NOTES

1. ALL SEWER/STORM DRAIN CROSSING WATER LINES MUST COMPLY WITH UDACS SECTION 2.22
2. CONTRACTOR TO VERIFY DEPTH AND LOCATION OF EXISTING SANITARY SEWERLINE PRIOR TO CONSTRUCTION, AND DISCREPANCY TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. EXISTING GAS AND WATER UTILITY LINES TO REMAIN. CONTRACTOR RESPONSIBLE FOR ANY DAMAGE.
4. ALL FIRE SPRINKLERS SHALL BE PLUMBED TO THE MASTER TOILET. NO EXCEPTIONS ALLOWED.

DEPTH OF COVER DURING CONSTRUCTION

MAINTAIN A MINIMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

DRY UTILITIES

MAINTAIN A MINIMUM 3' PARALLEL SEPARATION.

MAINTAIN MINIMUM 12" VERTICAL SEPARATION AT ALL POINTS OF CROSSING.

LVVWD SURVEY NOTE

CONTRACTOR SHALL EMPLOY A NEVADA LICENSED PROFESSIONAL LAND SURVEYOR (PLS) TO FIELD STAKE THE EXTENT OF THE PROPOSED/ EXISTING LVVWD EASEMENT WITHIN THE PROJECT SITE. THESE STAKES SHALL BE CONTINUOUSLY MAINTAINED DURING THE CONTRUCTION OF THE PROJECT. THE PLS SHALL ALSO FIELD STAKE THE PROPOSED EXTENT OF ADJACENT PROJECT BUILDING IMPROVEMENTS IMMEDIATELY ADJACENT TO THE EASEMENT. CONTRACTOR SHALL NOTIFY THE LVVWD INSPECTOR AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO PROPOSED INITIAL BUILDING EXCAVATION AND FOUNDATION CONSTRUCTION ACTIVITY. LVVWD WILL INSPECT THE FIELD STAKING FOR COMPLIANCE WITH SEPARATION REQUIREMENTS. THE CONTRACTOR SHALL NOTIFY LVVWD PRIOR TO UTILITY TRENCHING OR ANY OTHER SUBGRADE EFFORTS WITHIN THE PROPOSED/EXISTING LVVWD EASEMENT.

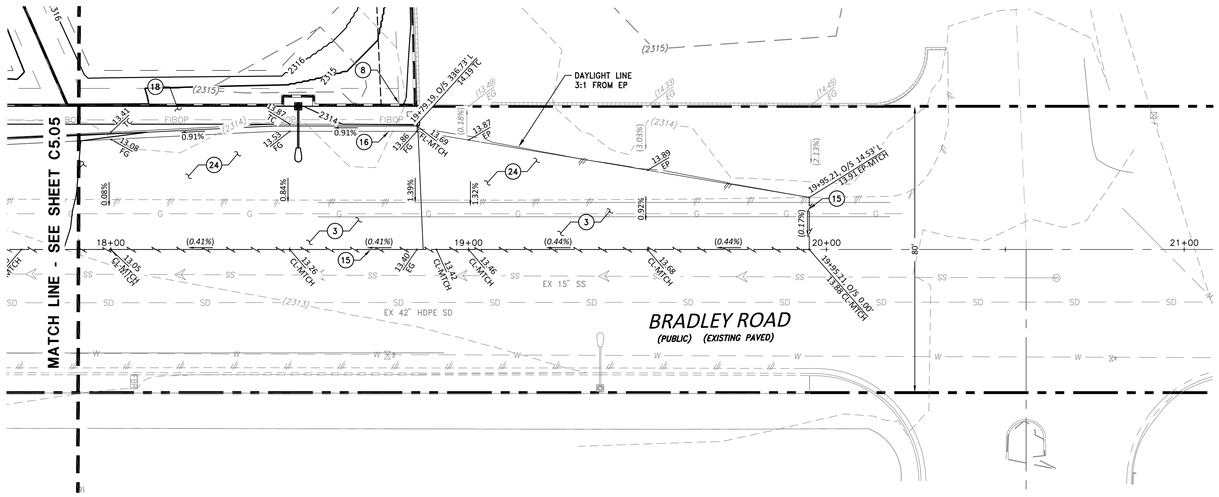
DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND OR OVERHEAD 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 CONTRACTOR TO NOTIFY ENGINEER OF LOCATION. ANY CHANGES OR DISCREPANCIES.

CALL BEFORE YOU DIG
AVOID CUTTING UNDERGROUND UTILITY LINES. IT'S COSTLY.
CALL 811 OR 1-800-227-2600

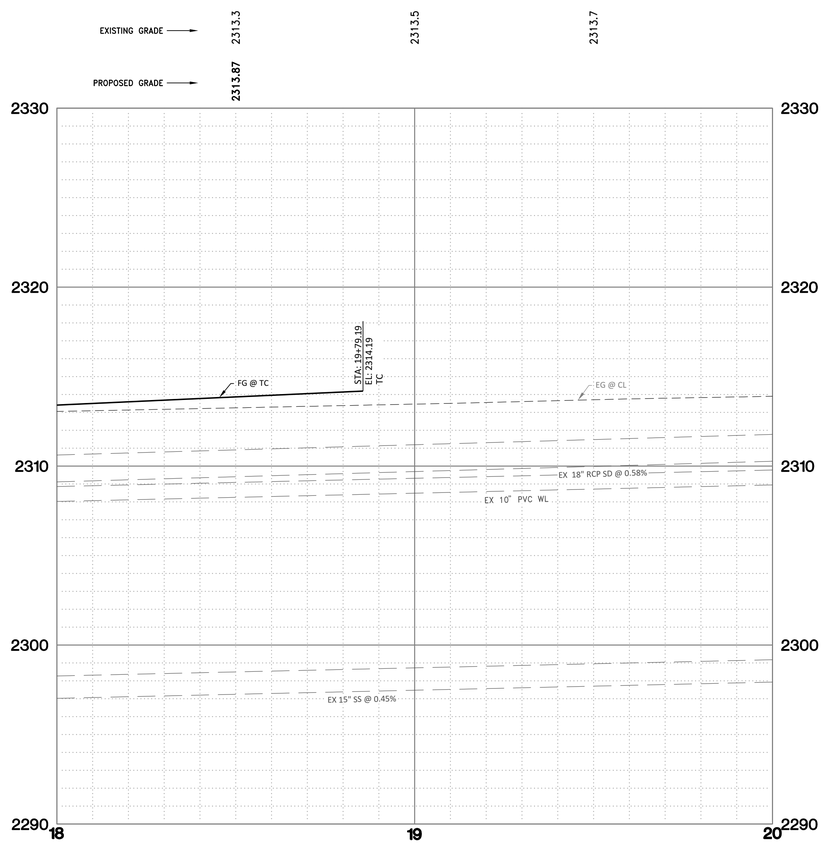
AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD WORK
CALL 1-702-227-2929

FAST
CALL BEFORE YOU UNDERGROUND
CALL 1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION



BRADLEY ROAD (PUBLIC) - PLAN VIEW

SCALE: 1" = 20'



BRADLEY ROAD (PUBLIC) - PROFILE VIEW

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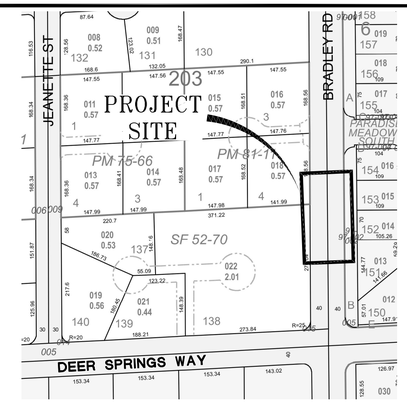
SCALE: 1" = 4' VERTICAL

DAYLIGHT LINE NOTE

NO DAYLIGHT LINE OCCURS WITHIN PAD AREA



VICINITY MAP

NTS

20' 10' 0 20'
SCALE: 1" = 20'

SITE DATA

APN: 125-24-203-022
ACREAGE: 2.01 ACRES
ZONING: RESIDENCE ESTATES DISTRICT (R-E)

BASIS OF BEARINGS

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ELEVATION: 2311.86 (US SURVEY FEET)
704.66 (METERS)

BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

SIGHT VISIBILITY ZONE PER CCAUSD DWG NO. 201.2

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT NO: 139870 FIRST APPROVED DATE: _____.

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
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CIVIL IMPROVEMENT PLANS FOR
BALMORAL ESTATES
APN 125-24-203-002
BRADLEY ROAD
PLAN & PROFILE 6

PROJECT NO. 3869004

SHT 12 OF 13

DRAWING C5.06

CLV-TBD

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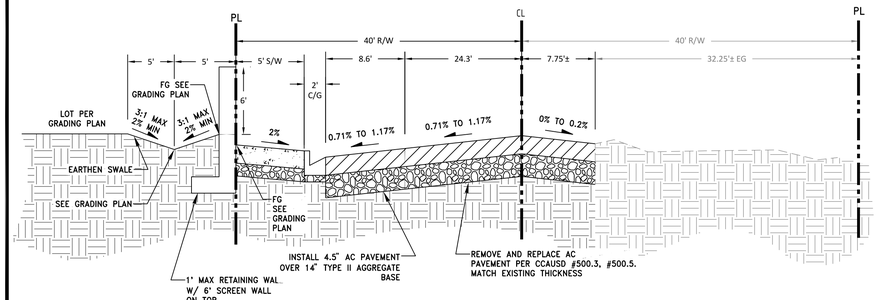
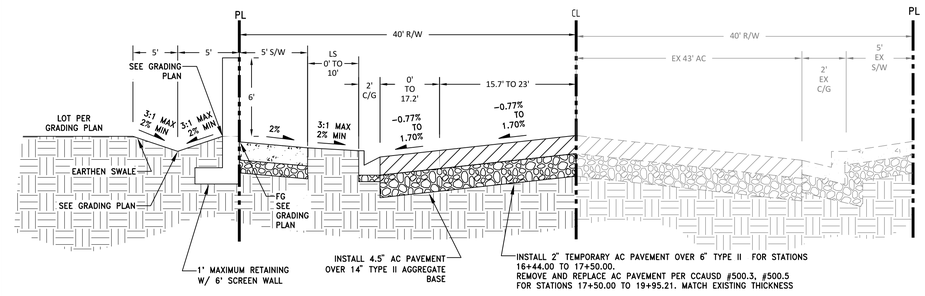


1 6.01 N.T.S.

DEER SPRINGS WAY



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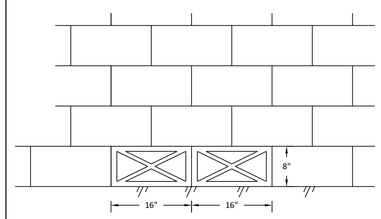
BRADLEY ROAD



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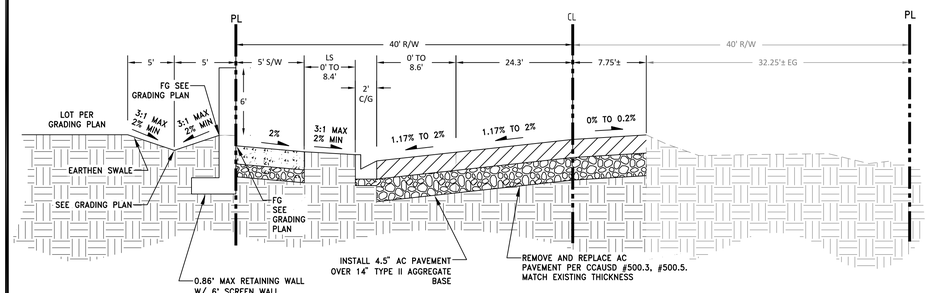
WALL OPENING



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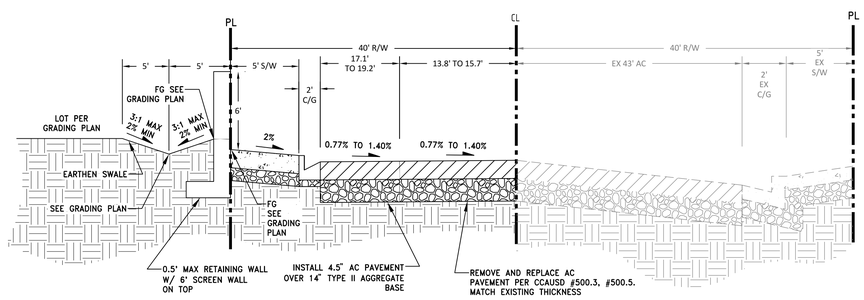
DEER SPRINGS WAY



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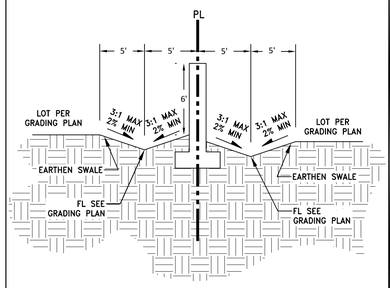
BRADLEY ROAD



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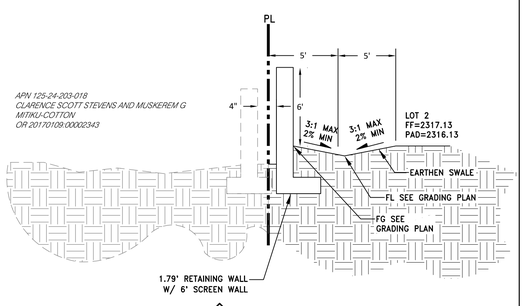

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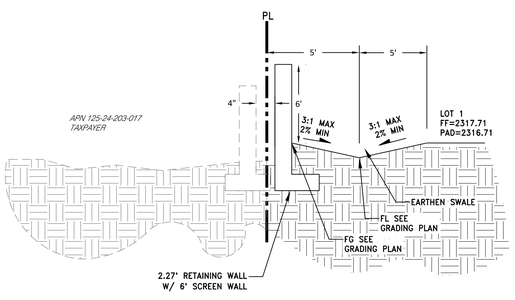

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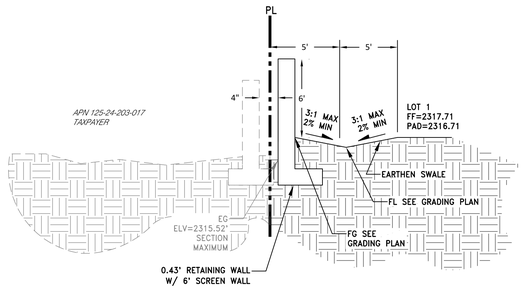

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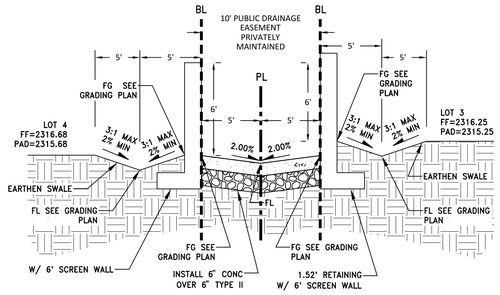

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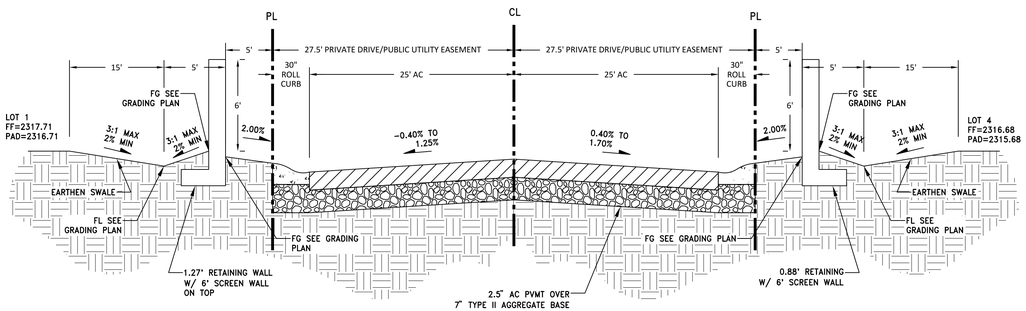

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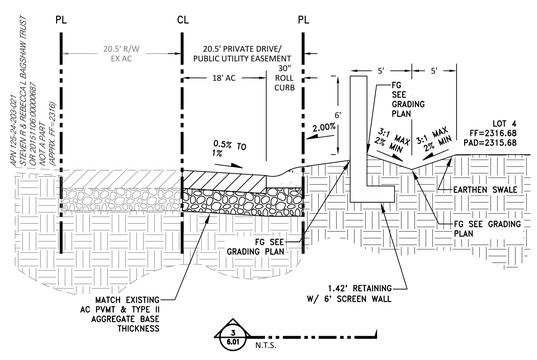

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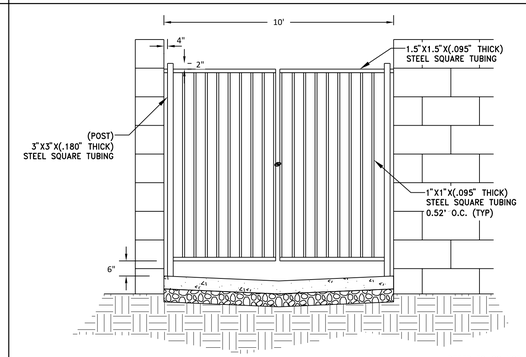

11 6.02 N.T.S.

IRON FENCE

REFER TO CCAUSD #425.51 FOR ADDITIONAL FENCE PARTS DETAILS

NO.	DESCRIPTION	ENGR INIT	DATE

DATE: AUGUST 2022
SCALE: H: N/A V: N/A
DRAWN BY: GH
DESIGNED BY: GH
CHECKED BY: MF

PROFESSIONAL ENGINEER - STATE OF NEVADA
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APN 125-24-203-002

DETAILS

PROJECT NO. 3869004

SHT 13 OF 13

DRAWING C6.01

CLV#-TBD

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