DS #: 5204-1

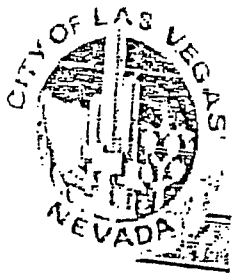
APN: 137-23-101-002

PROJECT: Summerlin West Village 22 - Kettle Bend Road - Update #1
(Sunset Run Drive to Kestrel Creek Road)

SUBMITTAL: 3rd

SCANNED BY/DATE:

CHECKED BY/DATE:



CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: September 17, 2020
TO: **Land Development Services** Department of Building & Safety			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT: Drainage Study for: **Summerlin West Village 22 - Kettle Bend Road – Update #1 (Sunset Run Drive to Kestrel Creek Road)**			**COPIES TO:** VTN Nevada
Cross Streets:	Kettle Bend Road & Summerlin Parkway		The Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5204E.doc		Bart Anderson, P.E., DevCo
Parcel Number:	137-23-101-002		CCRFCD
Zoning Action:	N/A		
FEMA Flood Zone	YES	NO **X**	
Proposed Storm Drain	YES **X**	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	10/15/2019	11/20/2019	Not Approved	$400.00	3611329: $400
2nd Submittal	1/14/2020	2/5/2020	Not Approved	$400.00	3705772: $400
Supplement	2/13/2020	2/20/2020	Conditional Approval	N/C	N/C
CCRFCD	8/3/2020	8/17/2020	Concurrence Recv'd	N/C	N/C
3rd Submittal	9/1/2020	9/17/2020	See Comments Below	$100.00	3975318: $100
			TOTAL FEES (LDDRS):	**$900.00**	----

REMARKS:

3rd Submittal: Update #1 to package the portion of 8'x8' RCB west of I-215 from Summerlin West V21 Summerlin Parkway Extension Project to the subject Kettle Bend Road (Sunset Run Drive to Kestrel Creek Road) Improvement Project

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

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. The project proposes to build temporary drainage facilities including drainage berms/swales along the west side of the proposed *Kettle Bend Road* and a 20'-wide *Interim Berm*. Prior to final plan approval the developer must complete a ***Maintenance & Liability Agreement*** for the interim drainage improvements and post a minimum maintenance bond of $50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities to *City of Las Vegas Flood Control* for approval. Once the drainage study is conditionally approved, the engineer should contact the *City's Land Development Section* (229-6371) to begin the agreement process.

   In order for the maintenance bond to be released in the future, a drainage update / letter will be required to justify that the offsite berms / channels are no longer necessary and can be removed.

2. Since the portion of 8'x8' RCB is re-packaged from the Summerlin West V21 Summerlin Parkway Extension project to the subject project, the pertinent residual condition related to the regional box in *Sunset Run Drive* is transferred and repeated as below:

   Sheet UT1 to Sheet UT5: *The regional facility 8'x8' RCB in Sunset Run Drive is too close to the northern curb. In case of needing repair and maintenance in the future, the staging area will break into the curb area which is costly and problematic. Relocate the RCB to the center of the street as far as possible.*

   The response was to maintain the original proposed location for the proposed regional facility 8'x8' RCB in *Sunset Run Drive*.

   In the final map, dedicate the amenity zone behind the northern curb of *Sunset Run Drive* and east of *Kettle Bend Road* as a Public Drainage Easement to be Privately Maintained by the *Summerlin Master HOA*.

3. The street and the associated storm drain facilities will eventually be transferred to the *City of Las Vegas*, the engineer/developer must coordinate with *City of Las Vegas Streets & Sanitation Department* for their review and approval prior to the final acceptance of the subject improvement plans.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section*. Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the Nevada Division of Environmental Protection a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see http://ndep.nv.gov/bwpc/storm01.htm or call (775) 687-9429.

END OF REMARKS
HDR/AYS

T/R/S: T20S/R59E/23
AREA K-23

Update #1 to the Technical Drainage Study for

Summerlin West Village 22
Kettle Bend Road

Las Vegas, Nevada

Prepared for:
Howard Hughes Company, LLC

Submitted to:
City of Las Vegas
Public Works

HYDROLOGIC CRITERIA AND DRAINAGE MANUAL

DRAINAGE STUDY INFORMATION FORM

Name of Development: Summerlin West Village 22 Kettle Bend Road Date: August 31, 2020

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

East/West: Summerlin Parkway

b) Section: 23 Township: 20S Range: 59E

c) APN : 137-23-101-002

Name of Owner: The Howard Hughes Company, LLC

Telephone No.: (702) 791-4336 Fax No.: (702) 791-4453 E-Mail Address: chris.anderson@howardhughes.com

Address: 10801 W. Charleston Blvd. LV, NV, 89135

Contact Person-Name: Aaron Yup **Telephone No.:** (702)-873-7550

* **E-Mail Address:** ayup@vtnnv.com **Fax No.:** (702)-362-2597

Firm: VTN Nevada

Address: 2727 S. Rainbow Blvd, LV, NV, 89146

Type of Land Development/Land Disturbance Process:

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

1. Total Owned Land Area: At Site: +/-17 Acres Being Developed/Disturbed: +/-17 Acres
2. Is a portion or all of the subject property located in a designated FEMA Flood Hazard Area? ☐ **Yes**** ☒ **No**
3. Is the property bordered or crossed by an existing or proposed Clark County Regional Flood Control District Master Planned Facility? ☒ **Yes**** ☐ **No**
4. Proposed type of development (Residential, Commercial, Etc.): Roadway
5. Approximate upstream land area which drains to the subject site: +/- 376 acres
6. Has the site drainage been evaluated in the past? ☒ **YES** ☐ **NO** If yes, please identify documentation: SWPA MPU (DS4926)
7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Existing 30" RCP southeast of the project in Carriage Hill Drive, Existing RCB in Desert Foothills Drive South of the project, Existing Western Beltway Channel east of the project
8. Briefly describe your proposed schedule for the subject project: As soon as possible



8/31/2020

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:

STANDARD FORM 1

Updated 05/01/2008

PROVIDING QUALITY PROFESSIONAL
SERVICE SINCE 1960

August 31, 2020

Albert Sung, P.E.
Flood Control Division
Department of Public Works
CITY OF LAS VEGAS
333 N. Rancho Blvd, 7th Floor
Las Vegas, NV 89106

Subject: **Update #1 to the Technical Drainage Study for Summerlin West Village 22 Kettle Bend Road**

Mr. Sung:

This letter certifies that all items on the **Update #1 to the Technical Drainage Study for Summerlin West Village 22 Kettle Bend Road** electronic submittal matches the paper version bound into the study.

Respectfully submitted,

Brian Ruiz, P.E.

UPDATE #1

TO THE TECHNICAL DRAINAGE STUDY

FOR

SUMMERLIN VILLAGE 22

KETTLE BEND ROAD

SUNSET RUN DRIVE TO KESTREL CREEK ROAD

CLARK COUNTY, NEVADA

W.O. # 7861

Prepared for:
HOWARD HUGHES COMPANY LLC

Submitted to:
CITY OF LAS VEGAS
333 N. Rancho Drive
Las Vegas, Nevada 89106

PROVIDING QUALITY PROFESSIONAL
SERVICE SINCE 1960

August 31, 2020
W.O. #7861

City of Las Vegas
Department of Public Works
333 N. Rancho Blvd, 7th Floor
Las Vegas, NV 89106

Attention: Albert Sung, P.E.
Flood Control Project Engineer

SUBJECT: UPDATE #1 TO THE TECHNICAL DRAINAGE STUDY FOR SUMMERLIN WEST VILLAGE 22 KETTLE BEND ROAD (SUNSET RUN DRIVE TO KESTREL CREEK ROAD)

Mr. Sung:

This *Update #1 to the Technical Drainage Study for Village 22 Kettle Bend Road (Sunset Run Drive to Kestrel Creek Road)* is being submitted to the City of Las Vegas Department of Public Works to address improvement plan revisions. The length of the 8'x8' RCB storm drain west of the I-215 from the conditionally approved *Technical Drainage Study for Village 21 Summerlin Parkway Extension* is now being proposed within this study in order to allow for construction of the Kettle Bend project site.

This plan revision does not alter the previously approved drainage patterns. Sheets depicting the 8'x8' RCB now proposed within this study are labelled UT1-UT5. A revised WSPG calculation "KBBC.WSW" modeling the combined 8'x8' RCB systems from Kindle Rise to the Beltway Channel has been provided to show the revision will have no adverse impacts to the proposed storm drain and roadway improvements. No changes are being made to the storm drain geometry of both of the approved design sections of the 8'x8' RCB. The WSPG calculation and the previously approved Summerlin Parkway Extension profile sheets for the pertinent RCB have been provided in the *Appendix*.

I hope this addresses your concerns regarding this project. If there are any questions or any additional information is required, please contact this office.

Respectfully Submitted,

VTN Consulting

Aaron Yup, E.I.

APPENDIX

APPENDIX C
HYDRAULIC CALCULATIONS

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T1 SUMMERLIN PARKWAY EXTENSION
T2 MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
T3 KETTLE BEND - KINDLE RISE TO I-215 WESTERN BELTWAY CHANNEL
SO   1000.00 3250.320  1      .015                 3256.974
R    1333.41 3260.988  1      .015                                  0.00    0.00  0
R    1411.95 3263.502  1      .015                                 90.00    0.00  0
R    1471.12 3265.395  1      .015                                  0.00    0.00  0
R    1601.28 3269.560  1      .015                                -82.86    0.00  0
R    1778.31 3284.077  1      .015                                 11.30    0.00  0
R    2047.72 3306.168  1      .015                                 17.12    0.00  0
R    2300.65 3308.698  1      .015                                -20.34    0.00  0
R    2300.65 3308.698  1      .015                                  0.00   15.00  0
R    2304.65 3308.738  1      .015                                  0.00   15.00  0
R    2308.65 3308.778  1      .015                                  0.00   15.00  0
R    2363.00 3309.321  1      .015                                  0.00   15.00  0
R    2367.00 3309.341  1      .015                                  0.00   15.00  0
R    2371.00 3309.361  1      .015                                  0.00   15.00  0
R    2505.90 3310.040  1      .015                                  0.00    0.00  0
R    2542.90 3310.220  1      .015                                 10.63    0.00  0
R    2576.90 3310.390  1      .015                                  2.88    0.00  0
R    2632.50 3310.670  1      .015                                  0.00    0.00  0
R    2705.60 3311.030  1      .015                                  0.00    0.00  0
R    2793.10 3311.470  1      .015                                  0.00    0.00  0
R    2929.90 3312.150  1      .015                                  0.00    0.00  0
R    3095.20 3312.980  1      .015                                  0.00    0.00  0
R    3164.30 3313.330  1      .015                                  0.00    0.00  0
R    3222.40 3313.620  1      .015                                  0.00    0.00  0
R    3455.20 3314.780  1      .015                                  0.00    0.00  0
R    3527.90 3315.140  1      .015                                  0.00    0.00  0
R    3764.00 3316.330  1      .015                                  0.00    0.00  0
R    3833.80 3316.680  1      .015                                  0.00    0.00  0
R    3837.80 3316.700  1      .015                                  0.00  -15.00  0
R    3841.80 3316.720  1      .015                                  0.00  -15.00  0
R    3878.80 3316.900  1      .015                                  0.00  -15.00  0
R    3882.80 3316.920  1      .015                                  0.00  -12.00  0
R    3886.80 3316.940  1      .015                                  0.00  -15.00  0
R    3915.10 3317.080  1      .015                                  0.00  -15.00  0
R    4000.30 3317.510  1      .015                                  0.00    0.00  0
SH   4000.30 3317.510  1      .015
CD   1  3   0   0.00     8.00     8.00  0.00  0.00
Q           747.000   .0
```

SUMMERLIN PARKWAY EXTENSION
MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
KETTLE BEND - KINDLE RISE TO I-215 WESTERN BELTWAY CHANNEL

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	3250.320	3.403	3253.723	747.00	27.44	11.69	3265.41	.00	6.47	8.00	8.000	8.000	.00	0 .0
199.879	.0320					.0359	7.17	3.40	2.62	3.48	.015	.00	.00	BOX
1199.879	3256.716	3.280	3259.996	747.00	28.47	12.58	3272.58	.00	6.47	8.00	8.000	8.000	.00	0 .0
133.531	.0320					.0403	5.38	3.28	2.77	3.48	.015	.00	.00	BOX
1333.410	3260.988	3.127	3264.115	747.00	29.86	13.84	3277.96	4.43	6.47	8.00	8.000	8.000	.00	0 .0
78.540	.0320					.0455	3.57	7.56	2.98	3.48	.015	.00	.00	BOX
1411.950	3263.502	3.002	3266.504	747.00	31.11	15.03	3281.53	.00	6.47	8.00	8.000	8.000	.00	0 .0
59.170	.0320					.0508	3.01	3.00	3.16	3.48	.015	.00	.00	BOX
1471.120	3265.395	2.886	3268.281	747.00	32.35	16.25	3284.54	2.89	6.47	8.00	8.000	8.000	.00	0 .0
30.304	.0320					.0554	1.68	5.78	3.36	3.48	.015	.00	.00	BOX
1501.424	3266.365	2.819	3269.184	747.00	33.12	17.04	3286.22	3.03	6.47	8.00	8.000	8.000	.00	0 .0
53.791	.0320					.0612	3.29	5.85	3.48	3.48	.015	.00	.00	BOX
1555.215	3268.086	2.688	3270.774	747.00	34.74	18.74	3289.51	3.33	6.47	8.00	8.000	8.000	.00	0 .0
46.065	.0320					.0700	3.22	6.02	3.73	3.48	.015	.00	.00	BOX
1601.280	3269.560	2.563	3272.123	747.00	36.43	20.61	3292.74	.37	6.47	8.00	8.000	8.000	.00	0 .0
63.070	.0820					.0731	4.61	2.93	4.01	2.48	.015	.00	.00	BOX
1664.350	3274.732	2.601	3277.333	747.00	35.90	20.02	3297.35	.36	6.47	8.00	8.000	8.000	.00	0 .0
113.960	.0820					.0671	7.65	2.96	3.92	2.48	.015	.00	.00	BOX

SUMMERLIN PARKWAY EXTENSION
MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
KETTLE BEND - KINDLE RISE TO I-215 WESTERN BELTWAY CHANNEL

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1778.310	3284.077	2.728	3286.805	747.00	34.23	18.20	3305.00	.32	6.47	8.00	8.000	8.000	.00	0 .0
37.818	.0820					.0606	2.29	3.05	3.65	2.48	.015	.00	.00	BOX
1816.129	3287.178	2.796	3289.974	747.00	33.40	17.32	3307.30	.31	6.47	8.00	8.000	8.000	.00	0 .0
53.029	.0820					.0549	2.91	3.10	3.52	2.48	.015	.00	.00	BOX
1869.158	3291.527	2.932	3294.459	747.00	31.84	15.75	3310.21	.28	6.47	8.00	8.000	8.000	.00	0 .0
37.998	.0820					.0481	1.83	3.21	3.28	2.48	.015	.00	.00	BOX
1907.156	3294.642	3.075	3297.718	747.00	30.36	14.32	3312.03	.25	6.47	8.00	8.000	8.000	.00	0 .0
28.910	.0820					.0422	1.22	3.33	3.05	2.48	.015	.00	.00	BOX
1936.066	3297.013	3.225	3300.238	747.00	28.95	13.01	3313.25	.23	6.47	8.00	8.000	8.000	.00	0 .0
22.801	.0820					.0370	.84	3.46	2.84	2.48	.015	.00	.00	BOX
1958.866	3298.883	3.383	3302.265	747.00	27.60	11.83	3314.10	.21	6.47	8.00	8.000	8.000	.00	0 .0
18.397	.0820					.0325	.60	3.59	2.64	2.48	.015	.00	.00	BOX
1977.263	3300.391	3.548	3303.939	747.00	26.32	10.76	3314.69	.19	6.47	8.00	8.000	8.000	.00	0 .0
15.061	.0820					.0286	.43	3.74	2.46	2.48	.015	.00	.00	BOX
1992.324	3301.626	3.721	3305.347	747.00	25.09	9.78	3315.12	.17	6.47	8.00	8.000	8.000	.00	0 .0
12.438	.0820					.0251	.31	3.89	2.29	2.48	.015	.00	.00	BOX
2004.761	3302.646	3.903	3306.549	747.00	23.93	8.89	3315.44	.16	6.47	8.00	8.000	8.000	.00	0 .0
10.315	.0820					.0221	.23	4.06	2.13	2.48	.015	.00	.00	BOX

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2015.076	3303.491	4.093	3307.585	747.00	22.81	8.08	3315.67	.14	6.47	8.00	8.000	8.000	.00	0 .0
8.556	.0820					.0195	.17	4.24	1.99	2.48	.015	.00	.00	BOX
2023.632	3304.193	4.293	3308.486	747.00	21.75	7.35	3315.83	.13	6.47	8.00	8.000	8.000	.00	0 .0
7.071	.0820					.0172	.12	4.42	1.85	2.48	.015	.00	.00	BOX
2030.703	3304.773	4.503	3309.276	747.00	20.74	6.68	3315.95	.12	6.47	8.00	8.000	8.000	.00	0 .0
5.795	.0820					.0152	.09	4.62	1.72	2.48	.015	.00	.00	BOX
2036.498	3305.248	4.722	3309.970	747.00	19.77	6.07	3316.04	.11	6.47	8.00	8.000	8.000	.00	0 .0
4.685	.0820					.0134	.06	4.83	1.60	2.48	.015	.00	.00	BOX
2041.183	3305.632	4.953	3310.585	747.00	18.85	5.52	3316.10	.10	6.47	8.00	8.000	8.000	.00	0 .0
3.705	.0820					.0118	.04	5.05	1.49	2.48	.015	.00	.00	BOX
2044.888	3305.936	5.195	3311.130	747.00	17.98	5.02	3316.15	.09	6.47	8.00	8.000	8.000	.00	0 .0
2.832	.0820					.0105	.03	5.28	1.39	2.48	.015	.00	.00	BOX
2047.720	3306.168	5.448	3311.616	747.00	17.14	4.56	3316.18	.10	6.47	8.00	8.000	8.000	.00	0 .0
104.349	.0100					.0097	1.01	5.55	1.29	5.41	.015	.00	.00	BOX
2152.069	3307.212	5.494	3312.705	747.00	17.00	4.49	3317.19	.10	6.47	8.00	8.000	8.000	.00	0 .0
148.581	.0100					.0091	1.35	5.59	1.28	5.41	.015	.00	.00	BOX
2300.650	3308.698	5.762	3314.460	747.00	16.21	4.08	3318.54	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0100					.0085	.03	5.76	1.19	5.41	.015	.00	.00	BOX

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2304.650	3308.738	5.777	3314.515	747.00	16.16	4.06	3318.57	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0100					.0084	.03	5.78	1.19	5.41	.015	.00	.00	BOX
2308.650	3308.778	5.792	3314.570	747.00	16.12	4.04	3318.61	.00	6.47	8.00	8.000	8.000	.00	0 .0
18.361	.0100					.0082	.15	5.79	1.18	5.41	.015	.00	.00	BOX
2327.011	3308.961	5.881	3314.843	747.00	15.88	3.91	3318.76	.00	6.47	8.00	8.000	8.000	.00	0 .0
29.045	.0100					.0076	.22	5.88	1.15	5.41	.015	.00	.00	BOX
2356.055	3309.252	6.168	3315.420	747.00	15.14	3.56	3318.98	.00	6.47	8.00	8.000	8.000	.00	0 .0
6.945	.0100					.0068	.05	6.17	1.07	5.41	.015	.00	.00	BOX
2363.000	3309.321	6.470	3315.791	747.00	14.43	3.23	3319.03	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050					.0060	.02	6.47	1.00	7.12	.015	.00	.00	BOX
2367.000	3309.341	6.615	3315.956	747.00	14.12	3.09	3319.05	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050					.0059	.02	6.61	.97	7.12	.015	.00	.00	BOX
2371.000	3309.361	6.665	3316.026	747.00	14.01	3.05	3319.07	.00	6.47	8.00	8.000	8.000	.00	0 .0
90.968	.0050					.0052	.48	6.67	.96	7.10	.015	.00	.00	BOX
2461.968	3309.819	6.991	3316.810	747.00	13.36	2.77	3319.58	.00	6.47	8.00	8.000	8.000	.00	0 .0
43.932	.0050					.0052	.23	6.99	.89	7.10	.015	.00	.00	BOX
2505.900	3310.040	7.026	3317.066	747.00	13.29	2.74	3319.81	.11	6.47	8.00	8.000	8.000	.00	0 .0
37.000	.0049					.0051	.19	7.14	.88	7.20	.015	.00	.00	BOX

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2542.900	3310.220	7.069	3317.289	747.00	13.21	2.71	3320.00	.03	6.47	8.00	8.000	8.000	.00	0 .0
34.000	.0050					.0051	.17	7.10	.88	7.12	.015	.00	.00	BOX
2576.900	3310.390	7.081	3317.471	747.00	13.19	2.70	3320.17	.00	6.47	8.00	8.000	8.000	.00	0 .0
55.600	.0050					.0051	.28	7.08	.87	7.10	.015	.00	.00	BOX
2632.500	3310.670	7.088	3317.758	747.00	13.17	2.69	3320.45	.00	6.47	8.00	8.000	8.000	.00	0 .0
73.100	.0049					.0050	.37	7.09	.87	7.16	.015	.00	.00	BOX
2705.600	3311.030	7.120	3318.150	747.00	13.12	2.67	3320.82	.00	6.47	8.00	8.000	8.000	.00	0 .0
87.500	.0050					.0050	.44	7.12	.87	7.10	.015	.00	.00	BOX
2793.100	3311.470	7.113	3318.583	747.00	13.13	2.68	3321.26	.00	6.47	8.00	8.000	8.000	.00	0 .0
136.800	.0050					.0050	.68	7.11	.87	7.14	.015	.00	.00	BOX
2929.900	3312.150	7.129	3319.279	747.00	13.10	2.66	3321.94	.00	6.47	8.00	8.000	8.000	.00	0 .0
165.300	.0050					.0050	.82	7.13	.86	7.11	.015	.00	.00	BOX
3095.200	3312.980	7.114	3320.094	747.00	13.13	2.68	3322.77	.00	6.47	8.00	8.000	8.000	.00	0 .0
69.100	.0051					.0050	.35	7.11	.87	7.08	.015	.00	.00	BOX
3164.300	3313.330	7.102	3320.432	747.00	13.15	2.68	3323.12	.00	6.47	8.00	8.000	8.000	.00	0 .0
58.100	.0050					.0050	.29	7.10	.87	7.13	.015	.00	.00	BOX
3222.400	3313.620	7.110	3320.730	747.00	13.13	2.68	3323.41	.00	6.47	8.00	8.000	8.000	.00	0 .0
232.800	.0050					.0050	1.16	7.11	.87	7.13	.015	.00	.00	BOX

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
3455.200	3314.780	7.129	3321.909	747.00	13.10	2.66	3324.57	.00	6.47	8.00	8.000	8.000	.00	0 .0
72.700	.0049					.0050	.36	7.13	.86	7.15	.015	.00	.00	BOX
3527.900	3315.140	7.137	3322.277	747.00	13.08	2.66	3324.93	.00	6.47	8.00	8.000	8.000	.00	0 .0
236.100	.0050					.0050	1.17	7.14	.86	7.10	.015	.00	.00	BOX
3764.000	3316.330	7.101	3323.431	747.00	13.15	2.68	3326.12	.00	6.47	8.00	8.000	8.000	.00	0 .0
69.800	.0050					.0050	.35	7.10	.87	7.11	.015	.00	.00	BOX
3833.800	3316.680	7.106	3323.786	747.00	13.14	2.68	3326.47	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050					.0050	.02	7.11	.87	7.12	.015	.00	.00	BOX
3837.800	3316.700	7.107	3323.806	747.00	13.14	2.68	3326.49	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050					.0050	.02	7.11	.87	7.12	.015	.00	.00	BOX
3841.800	3316.720	7.107	3323.827	747.00	13.14	2.68	3326.51	.00	6.47	8.00	8.000	8.000	.00	0 .0
37.000	.0049					.0050	.18	7.11	.87	7.20	.015	.00	.00	BOX
3878.800	3316.900	7.128	3324.028	747.00	13.10	2.66	3326.69	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050					.0050	.02	7.13	.86	7.12	.015	.00	.00	BOX
3882.800	3316.920	7.128	3324.048	747.00	13.10	2.66	3326.71	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050					.0050	.02	7.13	.86	7.12	.015	.00	.00	BOX
3886.800	3316.940	7.128	3324.068	747.00	13.10	2.66	3326.73	.00	6.47	8.00	8.000	8.000	.00	0 .0
28.300	.0050					.0050	.14	7.13	.86	7.15	.015	.00	.00	BOX

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
3915.100	3317.080	7.132	3324.212	747.00	13.09	2.66	3326.87	.00	6.47	8.00	8.000	8.000	.00	0 .0
85.200	.0050					.0050	.42	7.13	.86	7.09	.015	.00	.00	BOX
4000.300	3317.510	7.115	3324.625	747.00	13.12	2.67	3327.30	.00	6.47	8.00	8.000	8.000	.00	0 .0

APPENDIX D
REFERENCE MATERIAL

KETTLE BEND
PREVIOUSLY APPROVED STUDY

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM			DATE: August 17, 2020
TO: **Land Development Services** Department of Building & Safety			FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Summerlin West Village 22 - Kettle Bend Road (Sunset Run Drive to Kestrel Creek Road)**		**COPIES TO:** VTN Nevada
Cross Streets:	Kettle Bend Road & Summerlin Parkway		The Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5204D.doc		Bart Anderson, P.E., DevCo
Parcel Number:	137-23-101-002		CCRFCD
Zoning Action:	N/A		
FEMA Flood Zone	YES	NO **X**	
Proposed Storm Drain	YES **X**	NO	

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	10/15/2019	11/20/2019	Not Approved	$400.00	3611329: $400
2nd Submittal	1/14/2020	2/5/2020	Not Approved	$400.00	3705772: $400
Supplement	2/13/2020	2/20/2020	Conditional Approval	N/C	N/C
CCRFCD	8/3/2020	8/17/2020	Concurrence Recv'd	N/C	N/C
			TOTAL FEES (LDDRS):	**$800.00**	**----**

REMARKS:

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

X	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

1. The subject drainage study is premised on the developed *Sunset Run Drive (Summerlin Parkway Extension West Bound)* to the south. The subject improvement plans will not be approved prior to the execution of the construction bond of *Summerlin West V21 – Summerlin Parkway Extension* and the associated facilities.

2. The project proposes to build temporary drainage facilities including drainage berms/swales along the west side of the proposed *Kettle Bend Road* and a 20'-wide *Interim Berm*. Prior to final plan approval the developer must complete a ***Maintenance & Liability Agreement*** for the interim drainage improvements and post a minimum maintenance bond of $50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities to *City of Las Vegas Flood Control* for approval. Once the drainage study is conditionally approved, the engineer should contact the *City's Land Development Section* (229-6371) to begin the agreement process.

   In order for the maintenance bond to be released in the future, a drainage update / letter will be required to justify that the offsite berms / channels are no longer necessary and can be removed.

3. The street and the associated storm drain facilities will eventually be transferred to the *City of Las Vegas*, the engineer/developer must coordinate with *City of Las Vegas Streets & Sanitation Department* for their review and approval prior to the final acceptance of the subject improvement plans.

NOTE: Any future changes to the proposed design (or design assumptions) as outlined in the approved drainage study and attached preliminary grading plan which affect drainage must be addressed in a Drainage Study Update and accepted by the *City of Las Vegas Flood Control Section.* Additionally, conditional acceptance of a drainage study is valid for a period of one (1) year. If the proposed construction has not been completed in that time period, the *City of Las Vegas* reserves the right to require additional conditions and/or submission and acceptance of a complete drainage study update prior to further construction of a project.

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the Nevada Division of Environmental Protection a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see http://ndep.nv.gov/bwpc/storm01.htm or call (775) 687-9429.

END OF REMARKS
HDR/AYS

T/R/S: T20S/R59E/23
AREA K-23

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T1 KETTLE BEND ROAD
T2 MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
T3 KETTLE BEND - KINDLE RISE TO SUNSET RUN
SO   1000.00 3309.53   3      .015
R    1136.70 3310.04   3      .015                                    0.00    0.00  0
R    1173.70 3310.22   3      .015                                   10.63    0.00  0
R    1207.70 3310.39   3      .015                                    2.88    0.00  0
R    1263.30 3310.67   3      .015                                    0.00    0.00  0
R    1336.40 3311.03   3      .015                                    0.00    0.00  0
R    1423.90 3311.47   3      .015                                    0.00    0.00  0
R    1560.70 3312.15   3      .015                                    0.00    0.00  0
R    1726.00 3312.98   3      .015                                    0.00    0.00  0
R    1795.10 3313.33   3      .015                                    0.00    0.00  0
R    1853.20 3313.62   3      .015                                    0.00    0.00  0
R    2086.00 3314.78   3      .015                                    0.00    0.00  0
R    2158.70 3315.14   3      .015                                    0.00    0.00  0
R    2394.80 3316.33   3      .015                                    0.00    0.00  0
R    2464.60 3316.68   3      .015                                    0.00    0.00  0
R    2468.60 3316.70   3      .015                                    0.00  -15.00  0
R    2472.60 3316.72   3      .015                                    0.00  -15.00  0
R    2509.60 3316.90   3      .015                                    0.00  -15.00  0
R    2513.60 3316.92   3      .015                                    0.00  -12.00  0
R    2517.60 3316.94   3      .015                                    0.00  -15.00  0
R    2545.90 3317.08   3      .015                                    0.00  -15.00  0
R    2631.10 3317.51   3      .015                                    0.00    0.00  0
SH   2631.10 3317.51   3      .015
CD   1  3   0   0.00    8.00     6.00  0.00  0.00
CD   2  3   0   0.00    8.00    10.00  0.00  0.00
CD   3  3   0   0.00    8.00     8.00  0.00  0.00
Q           747.000   .0
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Program Package Serial Number: 1513

WATER SURFACE PROFILE LISTING Date: 1-10-2020 Time: 8:46:33

KETTLE BEND ROAD
MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
KETTLE BEND - KINDLE RISE TO SUNSET RUN

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	3309.530	6.470	3316.000	747.00	14.43	3.23	3319.23	.00	6.47	8.00	8.000	8.000	.00	0 .0
9.633	.0037					.0056	.05	6.47	1.00	8.00	.015	.00	.00	BOX
1009.633	3309.566	6.786	3316.352	747.00	13.76	2.94	3319.29	.00	6.47	8.00	8.000	8.000	.00	0 .0
40.203	.0037					.0050	.20	6.79	.93	8.00	.015	.00	.00	BOX
1049.836	3309.716	7.117	3316.833	747.00	13.12	2.67	3319.51	.00	6.47	8.00	8.000	8.000	.00	0 .0
86.864	.0037					.0045	.39	7.12	.87	8.00	.015	.00	.00	BOX
1136.700	3310.040	7.422	3317.462	747.00	12.58	2.46	3319.92	.10	6.47	8.00	8.000	8.000	.00	0 .0
37.000	.0049					.0045	.17	7.52	.81	7.20	.015	.00	.00	BOX
---------- WARNING - Flow depth near top of box conduit ----------														
1173.700	3310.220	7.386	3317.606	747.00	12.64	2.48	3320.09	.03	6.47	8.00	8.000	8.000	.00	0 .0
34.000	.0050					.0046	.16	7.42	.82	7.12	.015	.00	.00	BOX
---------- WARNING - Flow depth near top of box conduit ----------														
1207.700	3310.390	7.344	3317.734	747.00	12.71	2.51	3320.24	.00	6.47	8.00	8.000	8.000	.00	0 .0
55.600	.0050					.0046	.26	7.34	.83	7.10	.015	.00	.00	BOX
---------- WARNING - Flow depth near top of box conduit ----------														

Program Package Serial Number: 1513

WATER SURFACE PROFILE LISTING Date: 1-10-2020 Time: 8:46:33

KETTLE BEND ROAD
MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
KETTLE BEND - KINDLE RISE TO SUNSET RUN

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1263.300	3310.670	7.280	3317.950	747.00	12.83	2.55	3320.50	.00	6.47	8.00	8.000	8.000	.00	0 .0
73.100	.0049					.0047	.35	7.28	.84	7.16	.015	.00	.00	BOX
---------- WARNING - Flow depth near top of box conduit ----------														
1336.400	3311.030	7.240	3318.270	747.00	12.90	2.58	3320.85	.00	6.47	8.00	8.000	8.000	.00	0 .0
87.500	.0050					.0048	.42	7.24	.84	7.10	.015	.00	.00	BOX
---------- WARNING - Flow depth near top of box conduit ----------														
1423.900	3311.470	7.183	3318.653	747.00	13.00	2.62	3321.28	.00	6.47	8.00	8.000	8.000	.00	0 .0
136.800	.0050					.0049	.67	7.18	.85	7.14	.015	.00	.00	BOX
1560.700	3312.150	7.155	3319.305	747.00	13.05	2.64	3321.95	.00	6.47	8.00	8.000	8.000	.00	0 .0
165.300	.0050					.0049	.82	7.16	.86	7.11	.015	.00	.00	BOX
1726.000	3312.980	7.122	3320.102	747.00	13.11	2.67	3322.77	.00	6.47	8.00	8.000	8.000	.00	0 .0
69.100	.0051					.0050	.35	7.12	.87	7.08	.015	.00	.00	BOX
1795.100	3313.330	7.107	3320.437	747.00	13.14	2.68	3323.12	.00	6.47	8.00	8.000	8.000	.00	0 .0
58.100	.0050					.0050	.29	7.11	.87	7.13	.015	.00	.00	BOX
1853.200	3313.620	7.113	3320.733	747.00	13.13	2.68	3323.41	.00	6.47	8.00	8.000	8.000	.00	0 .0
232.800	.0050					.0050	1.16	7.11	.87	7.13	.015	.00	.00	BOX

Program Package Serial Number: 1513

WATER SURFACE PROFILE LISTING Date: 1-10-2020 Time: 8:46:33

KETTLE BEND ROAD
MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
KETTLE BEND - KINDLE RISE TO SUNSET RUN

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip

L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
2086.000	3314.780	7.129	3321.909	747.00	13.10	2.66	3324.57	.00	6.47	8.00	8.000	8.000	.00	0 .0
72.700	.0049				.0050	.36	7.13	.86	7.15	.015	.00	.00	BOX	
2158.700	3315.140	7.137	3322.277	747.00	13.08	2.66	3324.93	.00	6.47	8.00	8.000	8.000	.00	0 .0
236.100	.0050				.0050	1.17	7.14	.86	7.10	.015	.00	.00	BOX	
2394.800	3316.330	7.101	3323.431	747.00	13.15	2.68	3326.12	.00	6.47	8.00	8.000	8.000	.00	0 .0
69.800	.0050				.0050	.35	7.10	.87	7.11	.015	.00	.00	BOX	
2464.600	3316.680	7.106	3323.786	747.00	13.14	2.68	3326.47	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050				.0050	.02	7.11	.87	7.12	.015	.00	.00	BOX	
2468.600	3316.700	7.107	3323.806	747.00	13.14	2.68	3326.49	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050				.0050	.02	7.11	.87	7.12	.015	.00	.00	BOX	
2472.600	3316.720	7.107	3323.827	747.00	13.14	2.68	3326.51	.00	6.47	8.00	8.000	8.000	.00	0 .0
37.000	.0049				.0050	.18	7.11	.87	7.20	.015	.00	.00	BOX	
2509.600	3316.900	7.128	3324.028	747.00	13.10	2.66	3326.69	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050				.0050	.02	7.13	.86	7.12	.015	.00	.00	BOX	
2513.600	3316.920	7.128	3324.048	747.00	13.10	2.66	3326.71	.00	6.47	8.00	8.000	8.000	.00	0 .0
4.000	.0050				.0050	.02	7.13	.86	7.12	.015	.00	.00	BOX	
2517.600	3316.940	7.128	3324.068	747.00	13.10	2.66	3326.73	.00	6.47	8.00	8.000	8.000	.00	0 .0
28.300	.0050				.0050	.14	7.13	.86	7.15	.015	.00	.00	BOX	

Program Package Serial Number: 1513

WATER SURFACE PROFILE LISTING Date: 1-10-2020 Time: 8:46:33

KETTLE BEND ROAD
MAINLINE 1 - 8'X8' RCB (ULTIMATE CONDITION)
KETTLE BEND - KINDLE RISE TO SUNSET RUN

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope				SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
2545.900	3317.080	7.132	3324.212	747.00	13.09	2.66	3326.87	.00	6.47	8.00	8.000	8.000	.00	0 .0
85.200	.0050				.0050	.42	7.13	.86	7.09	.015	.00	.00	BOX	
2631.100	3317.510	7.115	3324.625	747.00	13.12	2.67	3327.30	.00	6.47	8.00	8.000	8.000	.00	0 .0

TECHNICAL DRAINAGE STUDY FOR SUMMERLIN PARKWAY EXTENSION #DS5159

CITY OF LAS VEGAS INTER-OFFICE MEMORANDUM				DATE: August 25, 2020
TO: **Land Development Services** Department of Building & Safety				FROM: Albert Sung, P.E. Flood Control Project Engineer Department of Public Works
SUBJECT:	Drainage Study for: **Summerlin West V21 – Summerlin Parkway Extention Update #2**			**COPIES TO:** VTN Nevada, Inc.
Cross Streets:	Summerlin Parkway & I-215 Western Beltway			Howard Hughes Company, LLC
File Number:	F:\Depot\DSMemos\DS5159E.doc			Bart Anderson, P.E., DevCo
Parcel Number:	137-23-410-001			CCRFCD
Zoning Action:	N/A			
FEMA Flood Zone	YES	NO **X**		
Proposed Storm Drain	YES **X**	NO		

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1st Submittal	7/18/2019	8/12/2019	Not Approved	$400.00	3494541: $400
2nd Submittal	10/3/2019	11/2/2019	Not Approved	$400.00	3597440: $400
3rd Submittal	11/27/2019 & 12/31/2019	1/2/2020	Conditional Approval	$400.00	3658793: $400
4th Submittal	3/5/2020	3/30/2020	Conditional Approval	$100.00	3770573: $100
5th Submittal	8/5/2020 (Paid on 8/7/2020)	8/25/2020	See Comments Below	$100.00	3946890: $100
			TOTAL FEES (LDDRS):	**$1,400.00**	**----**

REMARKS:

5th Submittal: Update #2 for various minor revisions

4th Submittal: Update #1 to shorten the length of a 5'x5' RCB north of Kettle Ridge & Sunset Run

***** The Conditional Approval of this Drainage Study is to allow the engineer/developer to submit the Improvement Plans to City Land Development Only**

***** Do not submit the Drainage Study to Clark County Regional Flood Control District (CCRFCD) prior to the Structural Design and Calculations being approved by the City Building & Safety Department**

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

	is approved subject to conformance to all City standards and the following conditions:
	must be resubmitted or supplemented including the following:
X	is conditionally approved subject to Clark County Regional Flood Control District concurrence.
	is conditionally approved subject to Clark County Public Works Department concurrence.

The following comments are repeated until they are complete:

1. **This drainage study is acceptable in concept;** however, *City of Las Vegas* will not formally accept the study until the *Clark County Regional Flood Control District (CCRFCD)* has issued a letter of concurrence. The engineer should contact the CCRFCD to confirm that they have begun their review.

   Please note that effective March 15, 2019, the CCRFCD adopted new requirements for drainage study concurrence submittal. Follow the link below for specific guidance.

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

2. The project proposes to build temporary drainage facilities including drainage berms/swales along the west side of the proposed *Kettle Ridge Drive* and *Desert Foothills Drive*. Prior to final plan approval the developer must complete a ***Maintenance & Liability Agreement*** for the interim drainage improvements and post a minimum maintenance bond of $50,000 or 50-percent of the construction cost for the improvements, whichever is greater. The engineer must submit an estimate of the quantities for constructing the facilities and an exhibit that adequately shows the location and limits of the drainage facilities to *City of Las Vegas Flood Control* for approval. Once the drainage study is conditionally approved, the engineer should contact the *City's Land Development Section* (229-6371) to begin the agreement process.

   In order for the maintenance bond to be released in the future, a drainage update / letter will be required to justify that the offsite berms / channels are no longer necessary and can be removed.

3. For the two proposed *Modified Type A* drop inlets in *Desert Foothills Drive*, make sure that the L-bracket used in the modified Type CM inlets is used. Provide structural design and calculations to *City Building Department* for review and approval prior to the final approval of the subject drainage study.

4. All special structures and mainline storm drain connection require details and structural calculations to be reviewed by the *City of Las Vegas Building & Safety Department*. Approval by the *Building Department* must be obtained prior to the final approval of the subject drainage study.

5. The street and the associated storm drain facilities will eventually be transferred to the *City of Las Vegas*, the engineer/developer must coordinate with *City of Las Vegas Streets & Sanitation Department* for their review and approval prior to the final acceptance of the subject improvement plans.

6. **Previous Comment #12: *Sheet GR5 to Sheet GR7 and Sheet UT5 to Sheet UT7****: The regional facility 8'x8' RCB in Sunset Run Drive is too close to the northern curb. In case of needing repair and maintenance in the future, the staging area will break into the curb area which is costly and problematic. Relocate the RCB to the center of the street as far as possible.*

   The response is to maintain the original proposed location for the proposed regional facility 8'x8' RCB in *Sunset Run Drive*.

   In the final map, dedicate the amenity zone behind the northern curb of *Sunset Run Drive* and east of *Kettle Bend Road* as a Public Drainage Easement to be Privately Maintained by the *Summerlin Master HOA*.

In an effort to increase administrative efficiency, for all original and re-submittal packages including updates and the addenda, the City of Las Vegas Public Works Department requires both a hardcopy and a digital copy (PDF) on CD for the drainage study.

A letter sealed and signed by a Nevada registered civil engineer must be included in every submittal certifying documents on the electronic CD matches 100% of the hardcopy submittal. The new submittal requirement is effective on May 1, 2019. If there are any questions regarding these new requirements, please contact Albert Sung in the City Flood Control Section at (702) 229-6541.



Sample Letter to certify CD.pdf

NOTE: Please be advised that all land surface area disturbances over 1 acre or any area adjacent to a water way must submit to the *Nevada Division of Environmental Protection* a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site; for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until all stripped or disturbed surface areas have been covered by paving, building construction or planting. For more information, including forms and applications see http://ndep.nv.gov/bwpc/storm01.htm or call (775) 687-9429.

END OF REMARKS

ays

T/R/S: T20S/R59E/23

AREA K-23

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T1 SUMMERLIN PARKWAY EXTENSION
T2 MAINLINE 2 - 8'X8' RCB (ULTIMATE CONDITION)
T3 SUMMERLIN PKWY WB - CARRIAGE HILL TO I-215 WESTERN BELTWAY
SO   1000.00 3250.320  1      .015                 3256.974
R    1333.41 3260.988  1      .015                                  0.00    0.00  0
R    1411.95 3263.502  1      .015                                 90.00    0.00  0
R    1471.12 3265.395  1      .015                                  0.00    0.00  0
R    1601.28 3269.560  1      .015                                -82.86    0.00  0
R    1778.31 3284.077  1      .015                                 11.30    0.00  0
R    2047.72 3306.168  1      .015                                 17.12    0.00  0
R    2300.65 3308.698  1      .015                                -20.34    0.00  0
R    2300.65 3308.698  1      .015                                  0.00   15.00  0
R    2304.65 3308.738  1      .015                                  0.00   15.00  0
R    2308.65 3308.778  1      .015                                  0.00   15.00  0
SH   2363.00 3309.321  1      .015
CD   1  3   0   0.00     8.00     8.00  0.00  0.00
Q           745.000   .0
```

Program Package Serial Number: 1513

WATER SURFACE PROFILE LISTING Date:11-21-2019 Time: 9: 2:12

SUMMERLIN PARKWAY EXTENSION
MAINLINE 2 - 8'X8' RCB (ULTIMATE CONDITION)
SUMMERLIN PKWY WB - CARRIAGE HILL TO I-215 WESTERN BELTWAY

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1000.000	3250.320	3.397	3253.717	745.00	27.41	11.67	3265.39	.00	6.46	8.00	8.000	8.000	.00	0 .0
199.683	.0320					.0358	7.16	3.40	2.62	3.48	.015	.00	.00	BOX
1199.683	3256.709	3.274	3259.984	745.00	28.44	12.56	3272.54	.00	6.46	8.00	8.000	8.000	.00	0 .0
133.727	.0320					.0402	5.38	3.27	2.77	3.48	.015	.00	.00	BOX
1333.410	3260.988	3.122	3264.110	745.00	29.83	13.82	3277.93	4.42	6.46	8.00	8.000	8.000	.00	0 .0
78.540	.0320					.0454	3.57	7.54	2.97	3.47	.015	.00	.00	BOX
1411.950	3263.502	2.996	3266.498	745.00	31.08	15.00	3281.50	.00	6.46	8.00	8.000	8.000	.00	0 .0
59.170	.0320					.0508	3.01	3.00	3.16	3.48	.015	.00	.00	BOX
1471.120	3265.395	2.880	3268.275	745.00	32.33	16.23	3284.51	2.89	6.46	8.00	8.000	8.000	.00	0 .0
30.485	.0320					.0554	1.69	5.77	3.36	3.48	.015	.00	.00	BOX
1501.605	3266.370	2.813	3269.184	745.00	33.10	17.01	3286.20	3.02	6.46	8.00	8.000	8.000	.00	0 .0
53.693	.0320					.0612	3.29	5.84	3.48	3.48	.015	.00	.00	BOX
1555.299	3268.089	2.682	3270.771	745.00	34.72	18.71	3289.49	3.33	6.46	8.00	8.000	8.000	.00	0 .0
45.981	.0320					.0700	3.22	6.01	3.74	3.48	.015	.00	.00	BOX
1601.280	3269.560	2.558	3272.118	745.00	36.41	20.59	3292.70	.37	6.46	8.00	8.000	8.000	.00	0 .0
62.991	.0820					.0732	4.61	2.92	4.01	2.47	.015	.00	.00	BOX
1664.271	3274.725	2.595	3277.321	745.00	35.88	19.99	3297.31	.36	6.46	8.00	8.000	8.000	.00	0 .0
114.039	.0820					.0672	7.66	2.95	3.93	2.47	.015	.00	.00	BOX

Program Package Serial Number: 1513

WATER SURFACE PROFILE LISTING Date:11-21-2019 Time: 9: 2:12

SUMMERLIN PARKWAY EXTENSION
MAINLINE 2 - 8'X8' RCB (ULTIMATE CONDITION)
SUMMERLIN PKWY WB - CARRIAGE HILL TO I-215 WESTERN BELTWAY

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1778.310	3284.077	2.722	3286.799	745.00	34.21	18.18	3304.97	.32	6.46	8.00	8.000	8.000	.00	0 .0
43.245	.0820					.0603	2.61	3.04	3.65	2.47	.015	.00	.00	BOX
1821.555	3287.623	2.802	3290.424	745.00	33.24	17.16	3307.58	.30	6.46	8.00	8.000	8.000	.00	0 .0
51.318	.0820					.0543	2.79	3.11	3.50	2.47	.015	.00	.00	BOX
1872.874	3291.831	2.938	3294.769	745.00	31.69	15.60	3310.37	.28	6.46	8.00	8.000	8.000	.00	0 .0
37.009	.0820					.0476	1.76	3.22	3.26	2.47	.015	.00	.00	BOX
1909.883	3294.865	3.082	3297.947	745.00	30.22	14.18	3312.13	.25	6.46	8.00	8.000	8.000	.00	0 .0
28.263	.0820					.0417	1.18	3.33	3.03	2.47	.015	.00	.00	BOX
1938.146	3297.183	3.232	3300.415	745.00	28.81	12.89	3313.31	.23	6.46	8.00	8.000	8.000	.00	0 .0
22.342	.0820					.0366	.82	3.46	2.82	2.47	.015	.00	.00	BOX
1960.488	3299.015	3.390	3302.405	745.00	27.47	11.72	3314.12	.21	6.46	8.00	8.000	8.000	.00	0 .0
18.054	.0820					.0322	.58	3.60	2.63	2.47	.015	.00	.00	BOX
1978.542	3300.495	3.555	3304.051	745.00	26.19	10.65	3314.70	.19	6.46	8.00	8.000	8.000	.00	0 .0
14.794	.0820					.0283	.42	3.74	2.45	2.47	.015	.00	.00	BOX
1993.336	3301.708	3.729	3305.437	745.00	24.97	9.68	3315.12	.17	6.46	8.00	8.000	8.000	.00	0 .0

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   12.224    .0820                                    .0249      .30     3.90    2.28    2.47    .015       .00   .00  BOX
        |         |         |         |         |         |         |         |       |       |       |       |       |
  2005.560  3302.711    3.911  3306.622    745.00   23.81    8.80  3315.43     .16    6.46    8.00    8.000    8.000   .00   0   .0
       -|-       -|-      -|-       -|-       -|-       -|-     -|-       -|-     -|-      -|-      -|-      -|-     -|-     -|-
   10.140    .0820                                    .0219      .22     4.07    2.12    2.47    .015       .00   .00  BOX
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Program Package Serial Number: 1513

WATER SURFACE PROFILE LISTING Date:11-21-2019 Time: 9: 2:12

SUMMERLIN PARKWAY EXTENSION
MAINLINE 2 - 8'X8' RCB (ULTIMATE CONDITION)
SUMMERLIN PKWY WB - CARRIAGE HILL TO I-215 WESTERN BELTWAY

```
         | Invert  |  Depth |  Water  |    Q    |  Vel     Vel  |  Energy | Super |Critical|Flow Top|Height/|Base Wt|      |No Wth
 Station |  Elev   |  (FT)  |  Elev   |  (CFS)  | (FPS)    Head |  Grd.El.|  Elev | Depth  | Width  |Dia.-FT|or I.D.|  ZL  |Prs/Pip
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-    -|
 L/Elem  |Ch Slope |        |         |         |         SF Ave|    HF   |SE Dpth|Froude N|Norm Dp |  "N"  | X-Fall|  ZR  |Type Ch
*********|*********|********|*********|*********|*******|*******|*********|*******|********|********|*******|*******|******|*******
         |         |        |         |         |         |       |         |       |        |        |       |       |      |
 2015.700  3303.542    4.102  3307.644    745.00   22.70    8.00  3315.65     .14    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    8.410    .0820                                    .0193      .16     4.24    1.98    2.47    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2024.109  3304.232    4.302  3308.534    745.00   21.65    7.28  3315.81     .13    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    6.947    .0820                                    .0170      .12     4.43    1.84    2.47    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2031.056  3304.802    4.512  3309.313    745.00   20.64    6.61  3315.93     .12    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    5.689    .0820                                    .0150      .09     4.63    1.71    2.47    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2036.745  3305.268    4.732  3310.000    745.00   19.68    6.01  3316.01     .11    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    4.592    .0820                                    .0132      .06     4.84    1.59    2.47    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2041.336  3305.645    4.963  3310.608    745.00   18.76    5.47  3316.07     .10    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    3.624    .0820                                    .0117      .04     5.06    1.48    2.47    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2044.960  3305.942    5.205  3311.147    745.00   17.89    4.97  3316.12     .09    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    2.760    .0820                                    .0104      .03     5.29    1.38    2.47    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2047.720  3306.168    5.459  3311.627    745.00   17.06    4.52  3316.15     .10    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
  133.282    .0100                                    .0094     1.26     5.56    1.29    5.40    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2181.002  3307.501    5.583  3313.084    745.00   16.68    4.32  3317.40     .10    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
   89.130    .0100                                    .0087      .77     5.68    1.24    5.40    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2270.132  3308.393    5.855  3314.248    745.00   15.91    3.93  3318.18     .09    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
   30.518    .0100                                    .0077      .23     5.94    1.16    5.40    .015       .00   .00  BOX
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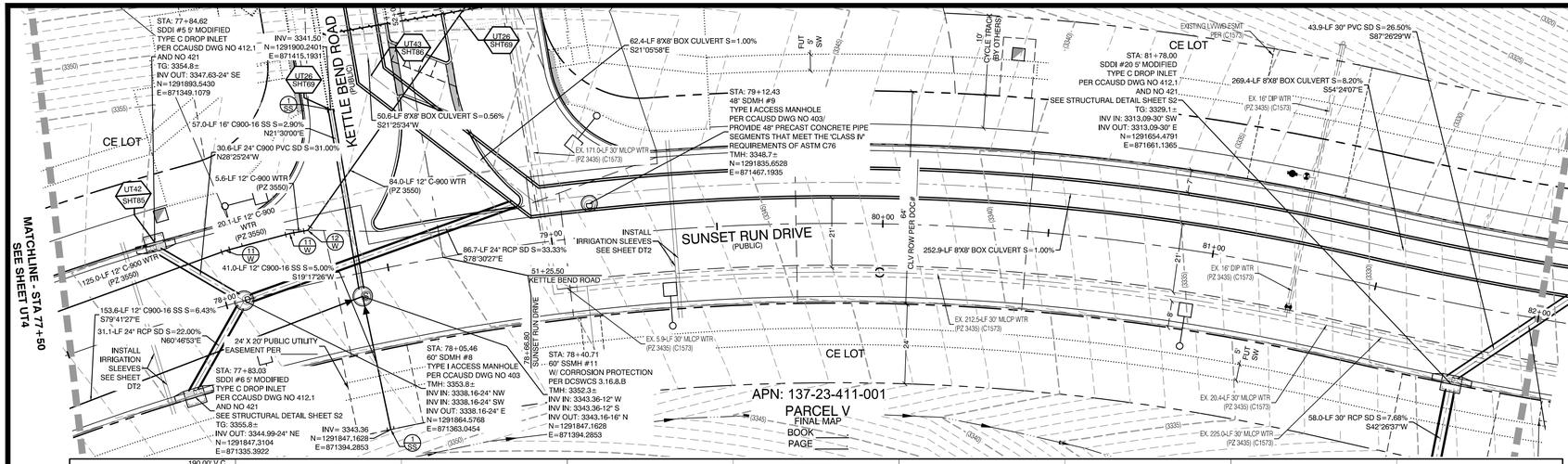
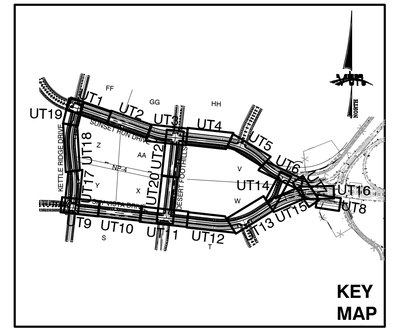
Program Package Serial Number: 1513

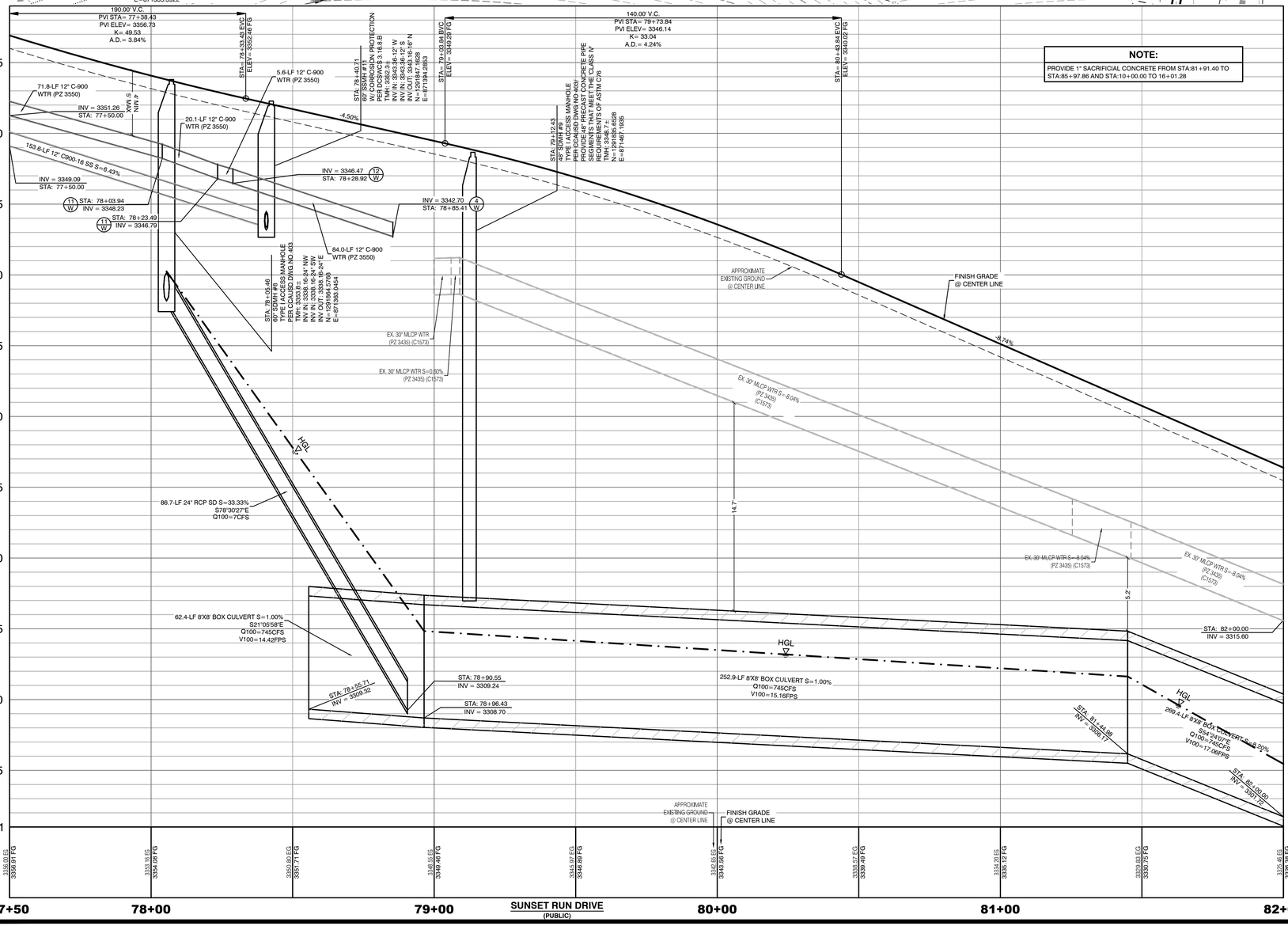
WATER SURFACE PROFILE LISTING Date:11-21-2019 Time: 9: 2:12

SUMMERLIN PARKWAY EXTENSION
MAINLINE 2 - 8'X8' RCB (ULTIMATE CONDITION)
SUMMERLIN PKWY WB - CARRIAGE HILL TO I-215 WESTERN BELTWAY

```
         | Invert  |  Depth |  Water  |    Q    |  Vel     Vel  |  Energy | Super |Critical|Flow Top|Height/|Base Wt|      |No Wth
 Station |  Elev   |  (FT)  |  Elev   |  (CFS)  | (FPS)    Head |  Grd.El.|  Elev | Depth  | Width  |Dia.-FT|or I.D.|  ZL  |Prs/Pip
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-    -|
 L/Elem  |Ch Slope |        |         |         |         SF Ave|    HF   |SE Dpth|Froude N|Norm Dp |  "N"  | X-Fall|  ZR  |Type Ch
*********|*********|********|*********|*********|*******|*******|*********|*******|********|********|*******|*******|******|*******
         |         |        |         |         |         |       |         |       |        |        |       |       |      |
 2300.650  3308.698    6.141  3314.839    745.00   15.16    3.57  3318.41     .00    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    4.000    .0100                                    .0071      .03     6.14    1.08    5.40    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2304.650  3308.738    6.224  3314.961    745.00   14.96    3.48  3318.44     .00    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
    4.000    .0100                                    .0067      .03     6.22    1.06    5.40    .015       .00   .00  BOX
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2308.650  3308.778    6.459  3315.237    745.00   14.42    3.23  3318.46     .00    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
         |         |         |         |         |         |         |         |       |       |       |       |       |
 2363.000  3309.321    6.459  3315.780    745.00   14.42    3.23  3319.01     .00    6.46    8.00    8.000    8.000   .00   0   .0
        -|-       -|-      -|-       -|-       -|-     -|-     -|-       -|-     -|-      -|-      -|-     -|-     -|-     -|-
```







NOTE:
PROVIDE 1" SACRIFICIAL CONCRETE FROM STA:81+91.40 TO STA:85+97.86 AND STA:10+00.00 TO 16+01.28

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'

GRAPHIC SCALE
-20 0 10 20 40
1" = 20'

RESTRAINTS NOTE:
ALL 6" AND 16" DIP FITTINGS AND JOINT TO BE RESTRAINED.

WATER LINE MARKER BALLS NOTE
INSTALL PIPELINE MARKER BALLS PER UDACS PLATE No. 15 AND 19.

FIRE HYDRANT MARKER NOTES
BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:
1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION
WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD ACCESS NOTE
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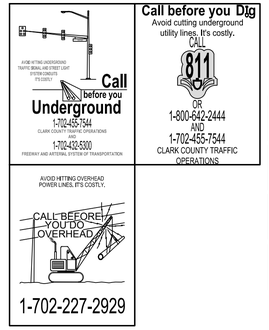

CONSTRUCTION NOTES

WATER

1 W	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6", 16"X6", 24"X6", OR 30"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W	12" GATE VALVE (PER UDACS PLATE 39)
3 W	16" GATE VALVE (PER UDACS PLATE 39)
4 W	12" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W	16" CAP & BLOW OFF (PER UDACS PLATE 36)
6 W	12"X12" TEE (PER UDACS PLATE 31)
7 W	16"X12" TEE (PER UDACS PLATE 31)
8 W	24"X12" TAPPING SLEEVE WITH 12" TAPPING VALVE (PER UDACS PLATE 30, 34, AND 39)
9 W	24"X16" TAPPING SLEEVE WITH 16" TAPPING VALVE (PER UDACS PLATE 30, 34, AND 39)
10 W	VERTICAL BEND (PER UDACS PLATE 31). SEE PROFILE FOR TYPE
11 W	12" 5° BEND (PER UDACS PLATE 31)
12 W	12" 45° BEND (PER UDACS PLATE 31)
13 W	16" 5° BEND (PER UDACS PLATE 31)
14 W	12"X16" REDUCER (PER UDACS PLATE 31)
15 W	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8
	6" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	12" C-900 AND DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	16" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
POC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S	STANDARD MANHOLE W/ WATER TIGHT JOINTS & 24" MANHOLE COVER PER SD-1, SD-2, SD-4 & SD-5
	8" AND 12" C-900-16 SANITARY SEWER MAIN
	16" C-900-16 SANITARY SEWER MAIN
1 S	SEWER CAP (PER STD 4.6 & 4.11)
POC	SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:
WATER SERVICES LOCATED IN THE 3435, 3550, AND 3665 PRESSURE ZONES.

WATER MAIN COVER NOTE:
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

NOTE:
5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

LAS VEGAS FIRE & RESCUE APPROVAL
BY: _____ DATE: _____
APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES
PROJECT:137479 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 5
77+50 TO 82+00

SUMMERLIN WEST VILLAGE 21
SUMMERLIN PARKWAY EXTENSION

DRAWN BY: KTC/TJR 07/15/2020
DESIGNED BY: CP 07/15/2020
CHECKED BY: WJM 07/15/2020
SCALE: HORIZ: 1"=20' VERT: 1"=4'
PROJECT NO: 7851

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. METZ
EXP: 12/31/21
No. 15745
CIVIL
2020-07-16

SHEET
UT5
48 OF 131 SHEETS
DRAWING NO.

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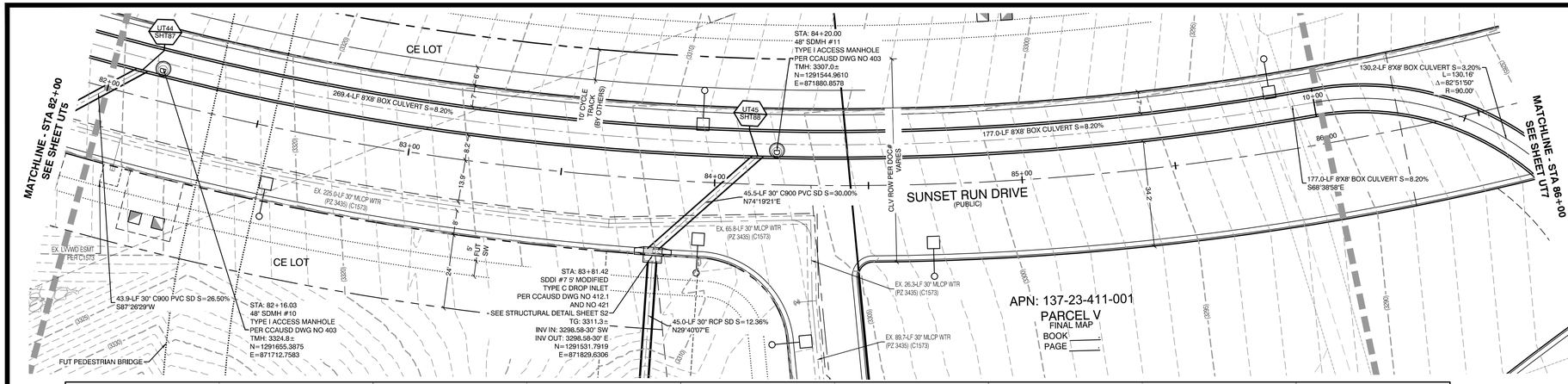

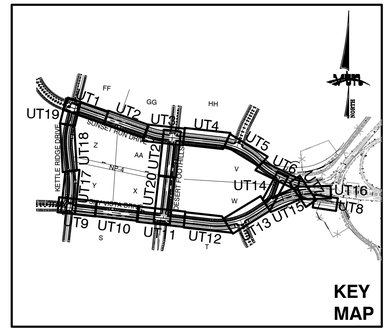

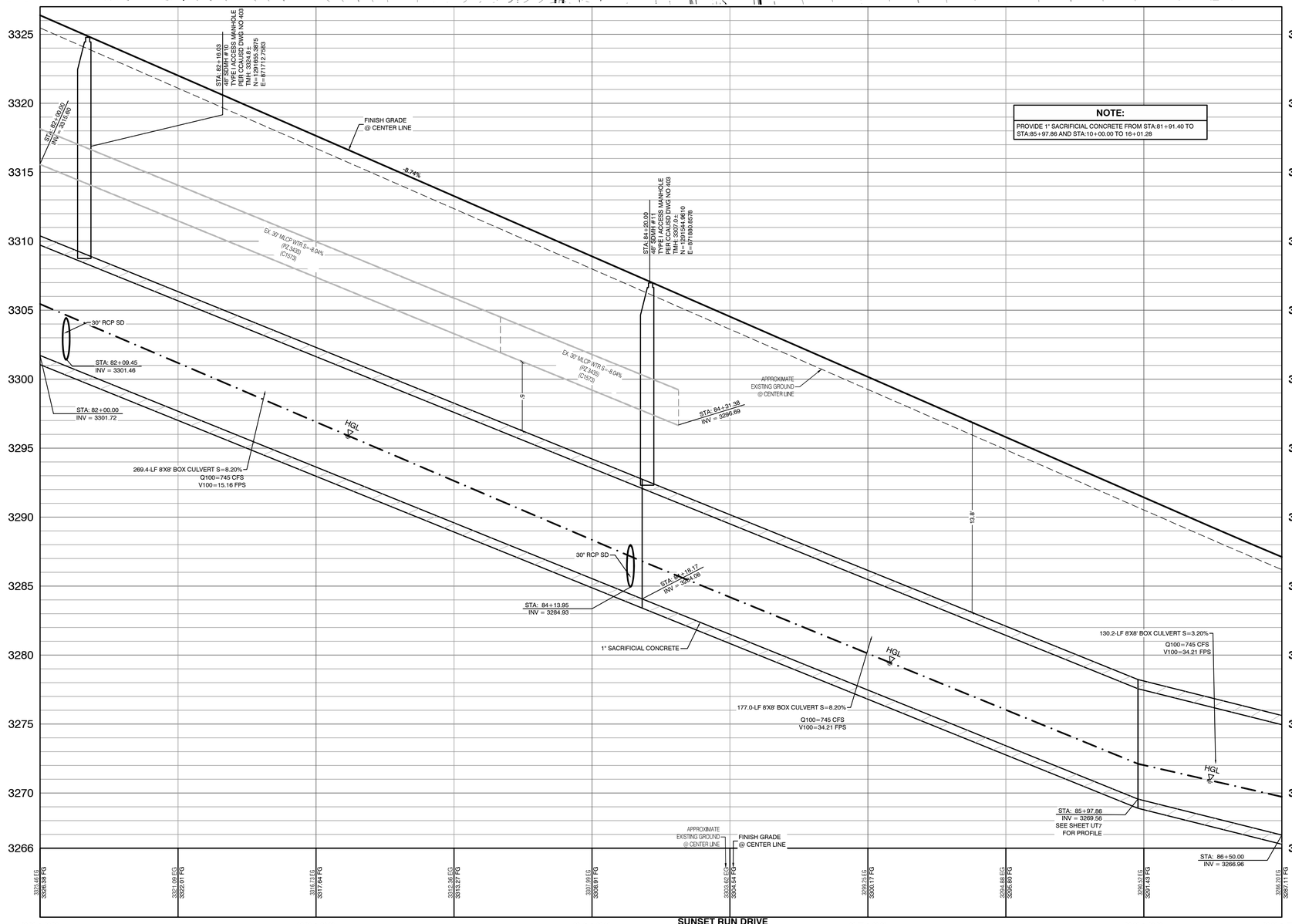

NOTE:

PROVIDE 1" SACRIFICIAL CONCRETE FROM STA:81+91.40 TO STA:85+97.86 AND STA:10+00.00 TO 16+01.28

SUNSET RUN DRIVE
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'

NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

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Call before you Dig

Avoid cutting underground utility lines. It's costly.

811

OR

1-800-642-2444

AND

1-702-455-7544

CLARK COUNTY TRAFFIC OPERATIONS

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WPC	WATER POINT OF CONNECTION

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SPC	SEWER POINT OF CONNECTION

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137479 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 6
82+00 TO 86+00

SUMMERLIN WEST VILLAGE 21
SUMMERLIN PARKWAY EXTENSION

DRAWN BY:	KTC/TJR 07/15/2020
DESIGNED BY:	CP 07/15/2020
CHECKED BY:	WJM 07/15/2020
PROJECT NO:	7851
SCALE:	HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MAY
No. 15745
EXP. 12/31/21
CIVIL
2020-07-16

SHEET
UT6
49 OF **131** SHEETS

DRAWING NO.

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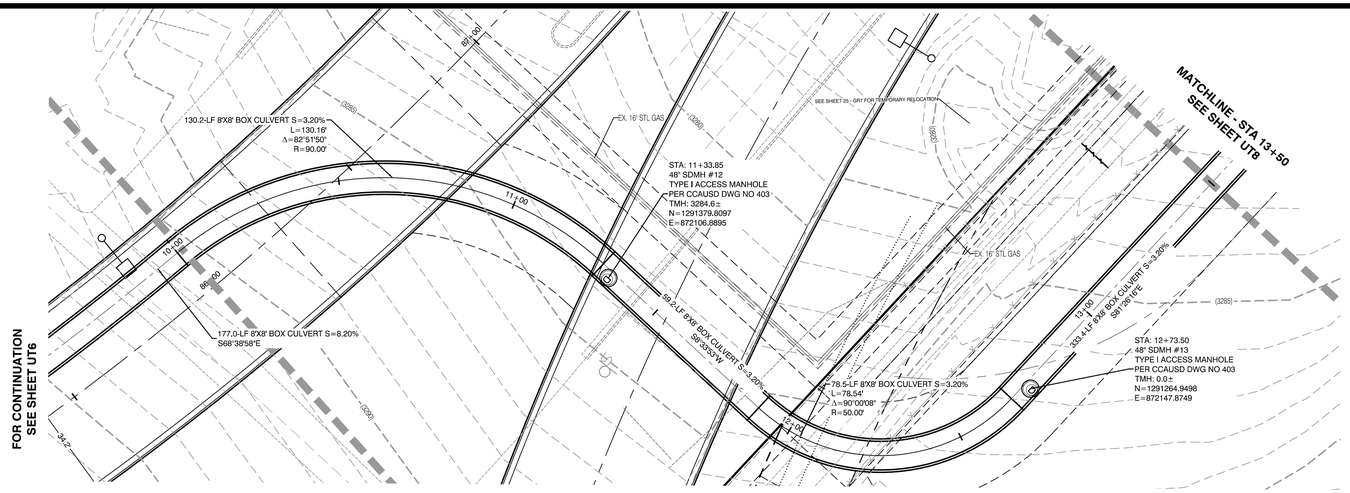

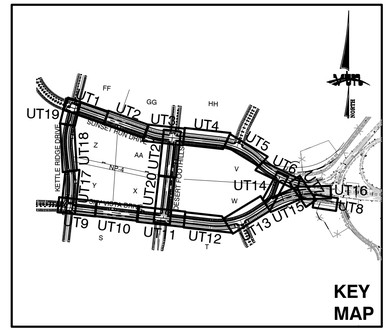

SUMMERLIN PARKWAY INTERCHANGE
(PUBLIC)

NOTE:
PROVIDE 1" SACRIFICIAL CONCRETE FROM STA:10+00 TO 16+01.28

PROFILE SCALES:
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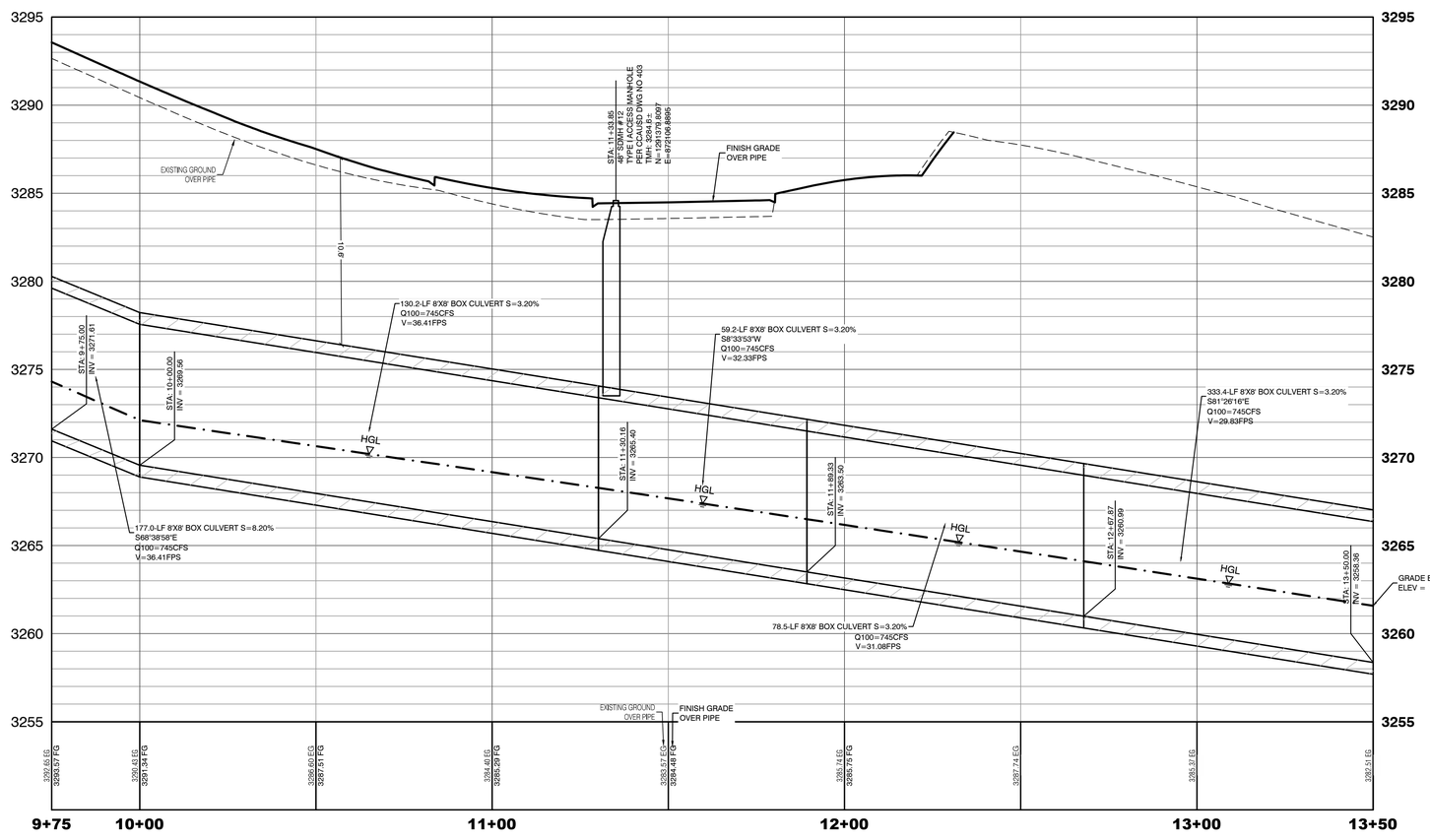

SUMMERLIN PARKWAY INTERCHANGE
(PUBLIC)



GRAPHIC SCALE
-20 0 10 20 40
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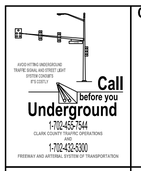

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CONSTRUCTION NOTES
WATER

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		WATER POINT OF CONNECTION

CONSTRUCTION NOTES
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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES
PROJECT:137479 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
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702-791-4000

CITY OF LAS VEGAS

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UTILITY PLAN & PROFILE 7
9+75 TO 13+50

SUMMERLIN WEST VILLAGE 21
SUMMERLIN PARKWAY EXTENSION

DRAWN BY: KTC/TJR	07/15/2020	SCALE:	HORIZ. 1"=20'
DESIGNED BY: CP	07/15/2020		VERT. 1"=4'
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PROJECT NO: 7851			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP. 12/31/21
CIVIL
No. 15745
2020-07-16

SHEET
UT7
50 OF 131 SHEETS
DRAWING NO.

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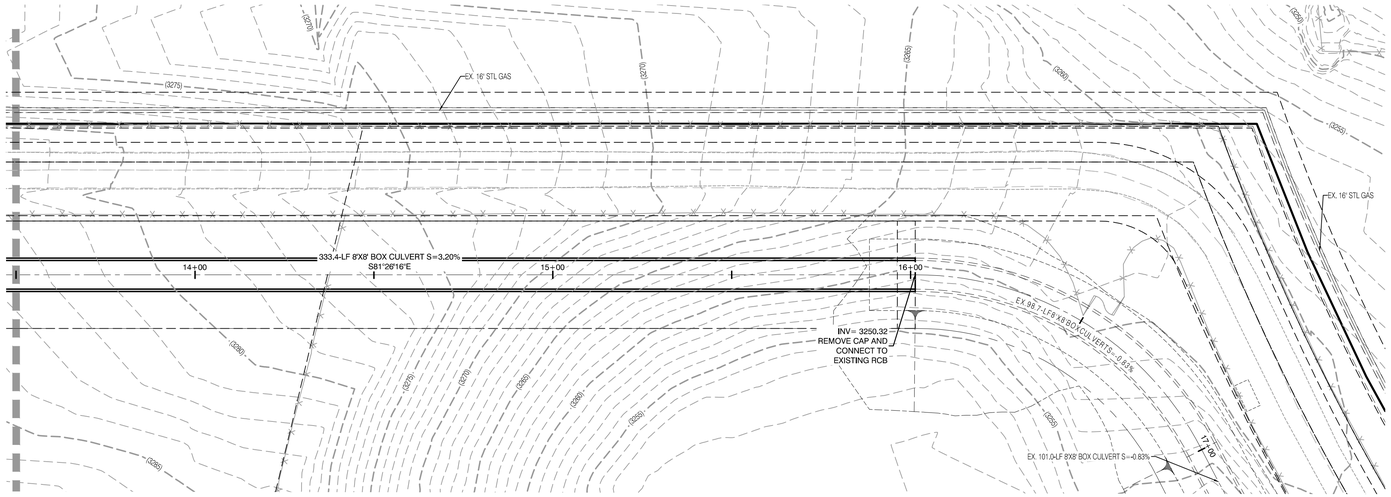
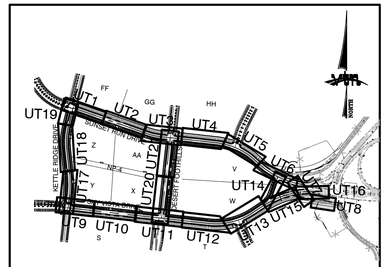
MATCHLINE - STA 13+50
SEE SHEET UT7





KEY MAP

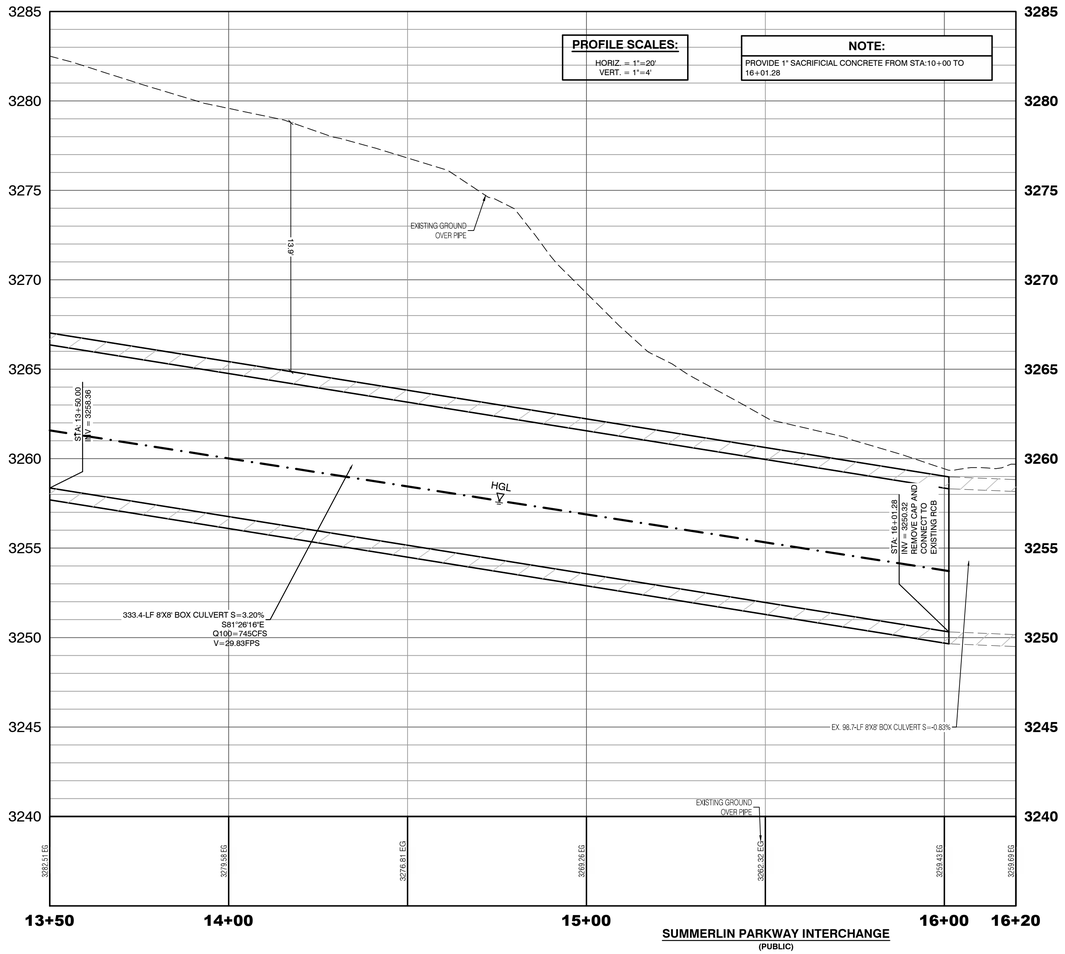
NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

SUMMERLIN PARKWAY INTERCHANGE
(PUBLIC)



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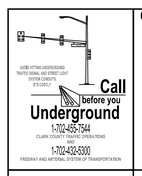
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:
UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.



Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS



CONSTRUCTION NOTES
WATER

1 W	⬢	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6", 16"X6", 24"X6", OR 30"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W	⊖	12" GATE VALVE (PER UDACS PLATE 39)
3 W	⊖	16" GATE VALVE (PER UDACS PLATE 39)
4 W	◖	12" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W	◖	16" CAP & BLOW OFF (PER UDACS PLATE 36)
6 W	⊐	12"X12" TEE (PER UDACS PLATE 31)
7 W	⊐	16"X12" TEE (PER UDACS PLATE 31)
8 W	⊐	24"X12" TAPPING SLEEVE WITH 12" TAPPING VALVE (PER UDACS PLATE 30, 34, AND 39)
9 W	⊐	24"X16" TAPPING SLEEVE WITH 16" TAPPING VALVE (PER UDACS PLATE 30, 34, AND 39)
10 W	|	VERTICAL BEND (PER UDACS PLATE 31). SEE PROFILE FOR TYPE
11 W	⌐	12" 5° BEND (PER UDACS PLATE 31)
12 W	⌐	12" 45° BEND (PER UDACS PLATE 31)
13 W	⌐	16" 5° BEND (PER UDACS PLATE 31)
14 W	▶	12"X16" REDUCER (PER UDACS PLATE 31)
15 W	▫▫	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8
		6" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 AND DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		16" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		WATER POINT OF CONNECTION

CONSTRUCTION NOTES
SEWER

	Ⓢ	STANDARD MANHOLE W/ WATER TIGHT JOINTS & 24" MANHOLE COVER PER SD-1, SD-2, SD-4 & SD-5
		8" AND 12" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
1 SS	◖	SEWER CAP (PER STD 4.6 & 4.11)
		SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:
WATER SERVICES LOCATED IN THE 3435, 3550, AND 3665 PRESSURE ZONES.

WATER MAIN COVER NOTE:
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

NOTE:
5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

LAS VEGAS FIRE & RESCUE APPROVAL
BY: _____ DATE: _____

APPROVAL OF THESE PLANS SHALL NOT BE CONSTRUED TO BE A PERMIT FOR, OR AN APPROVAL OF, ANY VIOLATION OF ANY OF THE PROVISIONS OF THE STATE OR COUNTY LAWS. FIRE FLOW 1,500 GPM AT 20 P.S.I. RESIDUAL.

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137479 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 8
13+50 TO 15+84

SUMMERLIN WEST VILLAGE 21
SUMMERLIN PARKWAY EXTENSION

DRAWN BY: KTC/TJR	07/15/2020	SCALE:	HORIZ. 1"=20'
DESIGNED BY: CP	07/15/2020		VERT. 1"=4'
CHECKED BY: KHM	07/15/2020	PROJECT NO: 7851	

PROFESSIONAL ENGINEER STATE OF NEVADA
No. 15745
WILLIAM L. LEVEY
EXP. 12/31/21
CIVIL
2020-07-16

SHEET
UT8
51 OF **131** SHEETS

DRAWING NO.

H:\7851\Summerlin Parkway Extension\Sheet Set\7851 UT1.dwg,7/15/2020 7:27 PM,chrisp

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

APN: 137-23-210-001

CITY OF LAS VEGAS

STATE OF NEVADA

DEVELOPED BY:

HOWARD HUGHES COMPANY, LLC

10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

FUTURE S.I.D. PROJECT

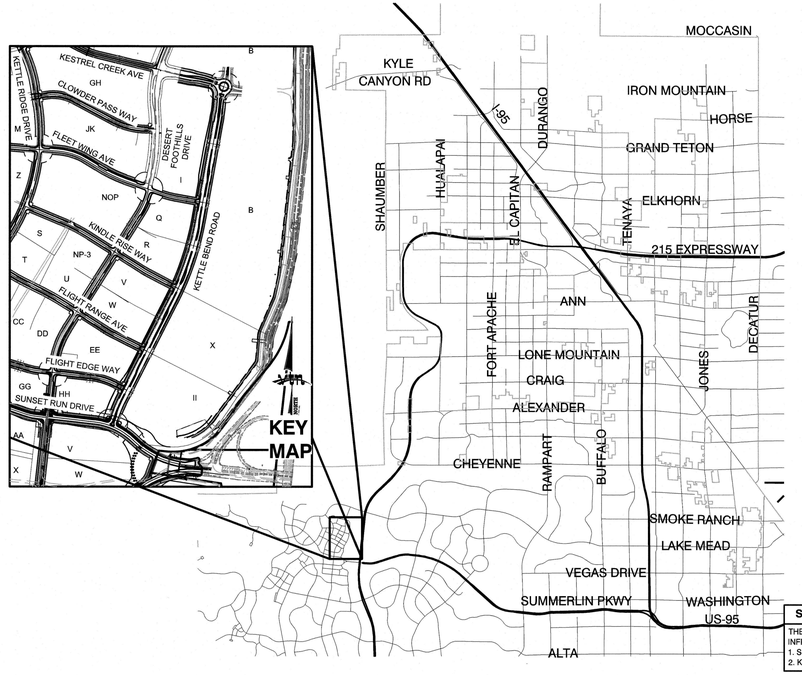
SHEET INDEX

SHEET #	SHEET	DESCRIPTION	STATION
1	CV	COVER SHEET	
2	NT	NOTE SHEET	
3	HC1	HORIZONTAL CONTROL PLAN 1	
4	HC2	HORIZONTAL CONTROL PLAN 2	
5	HC3	HORIZONTAL CONTROL PLAN 3	
6	HC4	HORIZONTAL CONTROL PLAN 4	
7	HC5	HORIZONTAL CONTROL PLAN 5	
8	HC6	HORIZONTAL CONTROL PLAN 6	
9	HC7	HORIZONTAL CONTROL PLAN 7	
10	HC8	HORIZONTAL CONTROL PLAN 8	
11	HC9	HORIZONTAL CONTROL PLAN 9	
12	HC10	HORIZONTAL CONTROL PLAN 10	
13	HC11	HORIZONTAL CONTROL PLAN 11	
14	MUTW	MASTER UTILITY WATER	
15	MUTSS	MASTER UTILITY SANITARY SEWER	
16	MUTSD	MASTER UTILITY STORM DRAIN	
17	MGR1	MASTER GRADING PLAN 1	
18	MGR2	MASTER GRADING PLAN 2	
19	MGR3	MASTER GRADING PLAN 3	
20	GR1	GRADING PLAN 1	
21	GR2	GRADING PLAN 2	
22	GR3	GRADING PLAN 3	
23	GR4	GRADING PLAN 4	
24	GR5	GRADING PLAN 5	
25	GR6	GRADING PLAN 6	
26	GR7	GRADING PLAN 7	
27	GR8	GRADING PLAN 8	
28	GR9	GRADING PLAN 9	
29	GR10	GRADING PLAN 10	
30	GR11	GRADING PLAN 11	
31	GR12	GRADING PLAN 12	
32	GR13	GRADING PLAN 13	
33	GR14	GRADING PLAN 14	
34	GR15	GRADING PLAN 15	
35	DT1	DETAIL SHEET 1	
36	DT2	DETAIL SHEET 2	
37	DT3	DETAIL SHEET 3	
38	DT4	DETAIL SHEET 4	
39	DT5	DETAIL SHEET 5	
40	DT6	DETAIL SHEET 6	
41	UT1	UTILITY PLAN & PROFILE 1	16+20 TO 13+50
42	UT2	UTILITY PLAN & PROFILE 2	13+50 TO 9+75
43	UT3	UTILITY PLAN & PROFILE 3	82+00 TO 86+00
44	UT4	UTILITY PLAN & PROFILE 4	52+00 TO 82+00
45	UT5	UTILITY PLAN & PROFILE 5	79+50 TO 54+00
46	UT6	UTILITY PLAN & PROFILE 6	54+00 TO 59+00
47	UT7	UTILITY PLAN & PROFILE 7	59+00 TO 64+25
48	UT8	UTILITY PLAN & PROFILE 8	64+25 TO 68+50
49	UT9	UTILITY PLAN & PROFILE 9	68+50 TO 72+80
50	UT10	UTILITY PLAN & PROFILE 10	72+80 TO 77+40
51	UT11	UTILITY PLAN & PROFILE 11	77+40 TO 81+00
52	UT12	UTILITY PLAN & PROFILE 12	81+00 TO 84+20
53	UT13	UTILITY PLAN & PROFILE 13	84+20 TO 87+75
54	UT14	UTILITY PLAN & PROFILE 14	10+00 TO 14+19
55	UT15	UTILITY PLAN & PROFILE 15	10+00 TO 12+20
56	UT16	UTILITY PLAN & PROFILE 16	7+50 TO 4+40.98
57	UT17	UTILITY PLAN & PROFILE 17	7+50 TO 10+00
58	UT18	UTILITY PLAN & PROFILE 18 SEWER LATERAL	
59	UT19	UTILITY PLAN & PROFILE 19 SEWER & WATER LATERAL	
60	UT20	UTILITY PLAN & PROFILE 20 SEWER & WATER LATERAL	
61	UT21	UTILITY PLAN & PROFILE 21 SEWER LATERAL	
62	UT22	UTILITY PLAN & PROFILE 22 WATER LATERAL	
63	UT23	UTILITY PLAN & PROFILE 23 SEWER LATERAL	
64	UT24	UTILITY PLAN & PROFILE 24 WATER LATERAL	
65	UT25	UTILITY PLAN & PROFILE 25 SEWER LATERAL	
66	UT26	UTILITY PLAN & PROFILE 26 SEWER LATERAL	
67	UT27	UTILITY PLAN & PROFILE 27 WATER LATERAL	
68	UT28	UTILITY PLAN & PROFILE 28 SEWER & WATER LATERAL	
69	UT29	UTILITY PLAN & PROFILE 29 SEWER & WATER LATERAL	
70	UT30	UTILITY PLAN & PROFILE 30 WATER LATERAL	
71	UT31	UTILITY PLAN & PROFILE 31 WATER LATERAL	
72	UT32	UTILITY PLAN & PROFILE 32 STORM DRAIN LATERAL	
73	UT33	UTILITY PLAN & PROFILE 33 STORM DRAIN LATERAL	
74	UT34	UTILITY PLAN & PROFILE 34 STORM DRAIN LATERAL	
75	UT35	UTILITY PLAN & PROFILE 35 STORM DRAIN LATERAL	
76	UT36	UTILITY PLAN & PROFILE 36 STORM DRAIN LATERAL	
77	UT37	UTILITY PLAN & PROFILE 37 STORM DRAIN LATERAL	
78	UT38	UTILITY PLAN & PROFILE 38 STORM DRAIN LATERAL	
79	UT39	UTILITY PLAN & PROFILE 39 STORM DRAIN LATERAL	
80	UT40	UTILITY PLAN & PROFILE 40 STORM DRAIN LATERAL	
81	UT41	UTILITY PLAN & PROFILE 41 STORM DRAIN LATERAL	
82	UT42	UTILITY PLAN & PROFILE 42 STORM DRAIN LATERAL	
83	UT43	UTILITY PLAN & PROFILE 43 STORM DRAIN LATERAL	
84	UT44	UTILITY PLAN & PROFILE 44 STORM DRAIN LATERAL	
85	UT45	UTILITY PLAN & PROFILE 45 STORM DRAIN LATERAL	
86	UT46	UTILITY PLAN & PROFILE 46 STORM DRAIN LATERAL	
87	UT47	UTILITY PLAN & PROFILE 47 STORM DRAIN LATERAL	
88	UT48	UTILITY PLAN & PROFILE 48 STORM DRAIN LATERAL	
89	UT49	UTILITY PLAN & PROFILE 49 STORM DRAIN LATERAL	
90	UT50	UTILITY PLAN & PROFILE 50 STORM DRAIN LATERAL	
91	UT51	UTILITY PLAN & PROFILE 51 STORM DRAIN LATERAL	
92	UT52	UTILITY PLAN & PROFILE 52 STORM DRAIN LATERAL	
93	UT53	UTILITY PLAN & PROFILE 53 STORM DRAIN LATERAL	
94	TR1	TRAFFIC AND STREET LIGHTING PLAN 1	
95	TR2	TRAFFIC AND STREET LIGHTING PLAN 2	
96	TR3	TRAFFIC AND STREET LIGHTING PLAN 3	
97	TR4	TRAFFIC AND STREET LIGHTING PLAN 4	
98	TR5	TRAFFIC AND STREET LIGHTING PLAN 5	
99	TR6	TRAFFIC AND STREET LIGHTING PLAN 6	
100	SL1	STREET LIGHTING PLAN 1	
101	SL2	STREET LIGHTING PLAN 2	
102	SL3	STREET LIGHTING PLAN 3	
103	SL4	STREET LIGHTING PLAN 4	
104	SL5	STREET LIGHTING PLAN 5	
105	SL6	STREET LIGHTING PLAN 6	
106	S1	STRUCTURAL SHEET 1	
107	S2	STRUCTURAL SHEET 2	

NORTH

LOCATION MAP

N.T.S.



THESE PLANS AND THE DESIGN CRITERIA CONTAINED WITHIN THESE PLANS ARE BASED UPON THE INFORMATION PRESENTLY KNOWN BY THE ENGINEER AND INTENDED SOLELY AS A GENERAL GUIDELINE FOR CONSTRUCTION. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL STATUTES, LAWS, CODES, REGULATIONS AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE FEDERAL FAIR HOUSING AMENDMENTS ACT, AMERICANS WITH DISABILITIES ACT, THE ARCHITECTURAL BARRIERS ACT AND ANY APPLICABLE UNIFORM STANDARDS, SPECIFICATIONS OR DRAWINGS. THE PERSON OR ENTITY PERFORMING THE CONSTRUCTION SHALL BE SOLELY RESPONSIBLE TO MAKE SURE CONSTRUCTION IS IN CONFORMANCE WITH ALL LOCAL, STATE AND FEDERAL STATUES, LAWS, CODES, REGULATIONS, STANDARDS, GUIDELINES AND ORDINANCES AND FURTHER, IS IN CONFORMANCE WITH ANY APPLICABLE DESIGN CRITERIA, INCLUDING BUT NOT LIMITED TO SOILS REPORTS, TRAFFIC STUDIES, GEOTECHNICAL REPORTS, ARCHITECTURAL PLANS AND SPECIFICATIONS, DRAINAGE PLANS OR STUDIES AND ANY OTHER CRITERIA, STANDARDS OR REQUIREMENTS LISTED IN THE PLANS OR THE GENERAL NOTES RELATED TO THESE PLANS OR PROVIDED BY ANYONE IN REFERENCE TO THIS PROJECT.

APPROVALS

LAS VEGAS FIRE & RESCUE — DATE

CENTRAL TELEPHONE COMPANY d/b/a CENTURYLINK — DATE

"THE AFFIXED CENTURY LINK 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 RULES AND REGULATIONS."

NV ENERGY — DATE

NV ENERGY ACKNOWLEDGES THAT WE HAVE RECEIVED YOUR PLANS AND WILL PROVIDE SERVICE TO ALL ELECTRICAL NEEDS ASSOCIATED WITH THIS PROJECT. NVENERGY 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.

COX COMMUNICATIONS LAS VEGAS, INC. — DATE

AMANDA HENDERSON — 2020AGH34856 — 08/05/2020
SOUTHWEST GAS CORPORATION — SWG UID — DATE

OWNER:DEVELOPER

KEVIN T. ORROCK, VICE PRESIDENT — DATE

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:

LVVWD APPROVED FIRE FLOW: TOTAL 1,500 GPM / ONSITE N/A GPM
SHEETS: 1, 2, 14, 32, 37, 39, 41, 43-86

NOTE:
THIS PROJECT PLAN APPROVAL CONTINGENT ON CON-1573 PLAN APPROVAL / BEING OPERATIONAL.

SUMMERLIN VILLAGE 22 CONSTRUCTION NOTE:
THE FOLLOWING SUMMERLIN VILLAGE 21/VILLAGE 22 ROADWAY INFRASTRUCTURE PLANS ARE TO BE CONSTRUCTED CONCURRENTLY:
1. SUMMERLIN PARKWAY EXTENSION (LVVWD #137706)
2. KETTLE BEND ROAD (LVVWD #137333)

OWNER
HOWARD HUGHES COMPANY, LLC
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

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

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

Call before you Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

DEVELOPER
HOWARD HUGHES COMPANY, LLC
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

ENGINEERING FIRM
VTN
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550
FAX (702) 362-2597

PROFESSIONAL ENGINEER-STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
8/31/20

2020-08-31

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

VTN
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

COVER SHEET

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:
BCC	BCC	WJM	7861
05/28/2019	05/28/2019	08/28/2020	SCALE: HORZ. 1" = N/A VERT.

SHEET
CV
1 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

H:\7861\Kettle Bend Road\Sheet Set\7861-CV.dwg 8/31/2020 8:45 AM brandonc

CITY OF LAS VEGAS GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE "UNIFORM STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFF-SITE IMPROVEMENTS, CLARK COUNTY AREA NEVADA", LATEST ISSUE; THE "UNIFORM STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION, CLARK COUNTY AREA NEVADA", LATEST REVISED EDITION; THE "SUMMERLIN IMPROVEMENT STANDARDS" 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 "DEVIATIONS FROM STANDARDS".
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 INTERFERENCES 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 CONTRACTOR'S 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 300' IN EXTRUDED-TYPE CURB.
8. AC PAVEMENT TO BE ONE-HALF INCH (½") 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: NOVA GEOTECHNICAL. PROJECT NO. G-18-176, DATED DECEMBER 30, 2019.
    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 ENGINEER 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.

WALL NOTES:

16. 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 TES"ING 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 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.
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.
24. REVISED 06/04/2018

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. 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.
4. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL DURING CONSTRUCTION IN ACCORDANCE WITH SSCTION 623 G.03.01 OF THE USS.
5. 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.
6. ANY STRUCTURE SUCH AS BLOCK WALLS, CHAIN LINK FENCES, RETAINING WALLS, 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
7. 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.
8. 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.
9. 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.
10. THE CONTRACTOR SHALL FURNISH COMPLETE CONDUIT, WIRE, ETC. FROM SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON THE PLANS.

REVISED JUNE 4, 2018 (LD VERSION)

LAS VEGAS VALLEY CONSTRUCTION SITE BEST MANAGEMENT PRACTICES 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 THE CITY OF LAS VEGAS 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 THE CITY OF LAS VEGAS 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.

SUMMERLIN VILLAGE 22 CONSTRUCTION NOTE:

THE FOLLOWING SUMMERLIN VILLAGE 21/VILLAGE 22 ROADWAY INFRASTRUCTURE PLANS ARE TO BE CONSTRUCTED CONCURRENTLY:
1. SUMMERLIN PARKWAY EXTENSION
2. KETTLE BEND ROAD (LVVWD #137333)

NOTE:

THIS PROJECT PLAN APPROVAL CONTINGENT ON CON-1573 PLAN APPROVAL / BEING OPERATIONAL.

CITY OF LAS VEGAS FIRE DEPARTMENT NOTES

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LAS VEGAS FIRE AND RESCUE ADOPTED FIRE CODE ORDINANCE #6631 FOR HYDRANT SPECIFICATIONS AND HYDRANT INSTALLATION SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE LAS VEGAS VALEY WATER DISTRICT'S - APPROVED PRODUCTS LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM LAS VEGAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE WATER LINES AND FIRE HYDRANTS. THE PERMIT AND CONTRACTORS MATERIAL TEST CERTIFICATE FOR UNDERGROUND PIPING FORM SHALL BE OBTAINED FROM THE FIRE PROTECTION ENGINEER BEFORE COMMENCEMENT OF WORK. [IFC § 105.6.15]
4. 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. [IFC § 3310, § 3312]
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTERLINE OF THE STREET ADJACENT TO THE FIRE HYDRANTS. [IFC § 507.5.7.3]
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOADING IS ACCEPTABLE FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [IFC § 106.3]
7. 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. [IFC § 507.2.1, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PADS, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE, AND ALL OTHER WORK NECESSARY PER PLANS SHALL BE COMPLETED BEFORE APPROVAL BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION. [IFC § 507]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [IFC § 507.5.7.1]
10. PRIOR TO THE FINAL OCCUPANCY, A FIRE FLOW TEST SHALL BE WITNESSED BY LAS VEGAS FIRE AND RESCUE, FIRE PREVENTION DIVISION TO VERIFY AVAILABILITY OF THE REQUIRED FIRE FLOW. [IFC § 507]
11. FIRE HYDRANT SPACING SHALL BE AS FOLLOWS: [IFC § C102]

    RESIDENTIAL - 500 FT UNSPRINKLERED; 600 FT SPRINKLERED.
    COMMERCIAL - 300 FT UNSPRINKLERED; 400 FT SPRINKLERED.
12. WHERE THE WATER MAINS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE FIRE HYDRANTS ARE NOT NEEDED FOR PROTECTION OF THE STRUCTURES, FIRE HYDRANTS SHALL BE INSTALLED AT A MAXIMUM OF 1000 FT SPACING, TO PROVIDE FOR TRANSPORTATION HAZARDS. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS OR HAVE FOUR (4) 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 FT ON AN ALTERNATING BASIS. [IFC § C102.8]
13. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN THE RADIUS OF A CUL-DE-SAC OR WITHIN 20 FT OF THE PERIMETER OF THE RADIUS OF THE CUL-DE-SAC.
14. NO FIRE HYDRANTS SHALL BE LOCATED WITHIN 6 FT OF ANY CURB RETURN, DRIVEWAY, POWER POLE, STREETLIGHT OR ANY OTHER OBSTRUCTION. [IFC § C102.10]
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TWO FAMILY DWELLING SHALL NOT EXCEED 300 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.4]
16. THE MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A FIRE DEPARTMENT CONNECTION (FDC) SHALL NOT EXCEED 100 FT, AS MEASURED BY AN APPROVED ROUTE. [IFC § C102.7]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [IFC § C102.6]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHENEVER THERE IS 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE SYSTEM. FOR SYSTEMS REQUIRED TO HAVE TWO (2) SOURCES OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. FOR SYSTEMS PERMITTED TO HAVE ONE SOURCE OF WATER SUPPLY, SECTIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 3 FIRE HYDRANTS AND/OR FIRE SPRINKLER LEAD-INS CAN BE OUT OF SERVICE DUE TO A SERVICE INTERRUPTION. [IFC § C104]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES, AND SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF THE FIRE APPARATUS. [IFC § 503.2.3]
20. THE GRADIENT FOR THE FIRE APPARATUS ACCESS ROADS SHALL NOT EXCEED 12%. ANGLES OF APPROACH AND ANGLES OF DEPARTURE SHALL NOT EXCEED 6% FOR 25 FT PRIOR TO OR AFTER THE GRADE CHANGE. ADJACENT TO THE STRUCTURES GRADIENT SHALL NOT EXCEED 6%. [IFC § 503.2.7, § 503.2.8]
21. THE TURNING RADIUS OF THE FIRE APPARATUS ACCESS ROADS SHALL BE NO LESS THAN 52 FT OUTSIDE AND 28 FT INSIDE TURNING RADIUS. [IFC § 503.2.4]
22. VERTICAL CLEARANCE OF ALL FIRE APPARATUS ACCESS ROADS SHALL NOT BE LESS THAN 13FT 6 INS. [IFC § 503.2.1]
23. FIRE DEPARTMENT ACCESS ROADS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF NOT LESS THAN 33 FT WITH PARKING ON BOTH SIDES MEASURED TO FACE OF CURB. NOT LESS THAN 28 FT WIDE WITH PARKING RESTRICTED TO ONE SIDE MEASURED TO FACE OF CURB. NOT LESS THAN 24 FT WIDE WITH NO PARKING ON EITHER SIDE MEASURED TO FACE OF CURB. FIRE LANES THROUGH PARKING LOTS SHALL BE NOT LESS THAN 24 FT. [IFC § 503.2.1.1]
24. A FIRE APPARATUS ACCESS ROAD SHALL BE REQUIRED WHEN ANY PORTION OF AN EXTERIOR WALL OF THE FIRST STORY IS LOCATED MORE THAN 150 FT FROM A FIRE DEPARTMENT VEHICLE ACCESS. [IFC § 503.1.1]
25. APPROVED SECONDARY FIRE APPARATUS ACCESS SHALL BE PROVIDED FOR 200 OR MORE DWELLING UNITS, ROAD(S) WITH DEAD-ENDS OR A SINGLE POINT OF ACCESS IN EXCESS OF 600 FT. CLV REGULATION AND MOU
26. ALL DEAD-END FIRE APPARATUS ROADS AND/OR FIRE LANES, PUBLIC OR PRIVATE, IN EXCESS OF 150 FT IN LENGTH SHALL BE PROVIDED WITH AN APPROVED TURN AROUND HAVING A MINIMUM DIAMETER OF 81 FT. CLV REGULATION
27. 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 FT ALONG THE DESIGNATED FIRE LANES. SIGNS TO BE PLACED ON BOTH SIDES OF AN ACCESS ROADWAY IF NEEDED TO PREVENT PARKING ON EITHER SIDE. SIGNS TO BE INSTALLED NO HIGHER THAN 10 FT OR LESS THAN 6 FT FROM THE ROADWAY LEVEL. THE CURB ALONG OR ON THE PAVEMENT OR CEMENT (IF NO CURB IS PROVIDED) SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [IFC § 503.3]
28. ELECTRICALLY CONTROLLED ACCESS GATES SHALL BE PROVIDED WITH AN APPROVED EMERGENCY VEHICLE DETECTOR/RECEIVER SYSTEM. IFC § 503.6
29. WHERE STREETS ARE PROVIDED WITH MEDIAN DIVIDERS, OR HAVING FOUR OR MORE TRAVEL LANES AND A TRAFFIC COUNT OF MORE THAN 30,000 VEHICLES PER DAY, ALL HYDRANTS BEING UTILIZED TO DELIVER FIRE FLOW TO THE PROPOSED LOCATION SHALL BE LOCATED ON THE SAME SIDE OF THE STREET AS THE PROPOSED DEVELOPMENT. CLV REGULATION

    EFFECTIVE DATE: FEBRUARY 4th, 2019

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 CCAUGS 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

APPROVED FOR CONSTRUCTION

_____
LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

DEVIATION FROM CITY OF LAS VEGAS STANDARDS

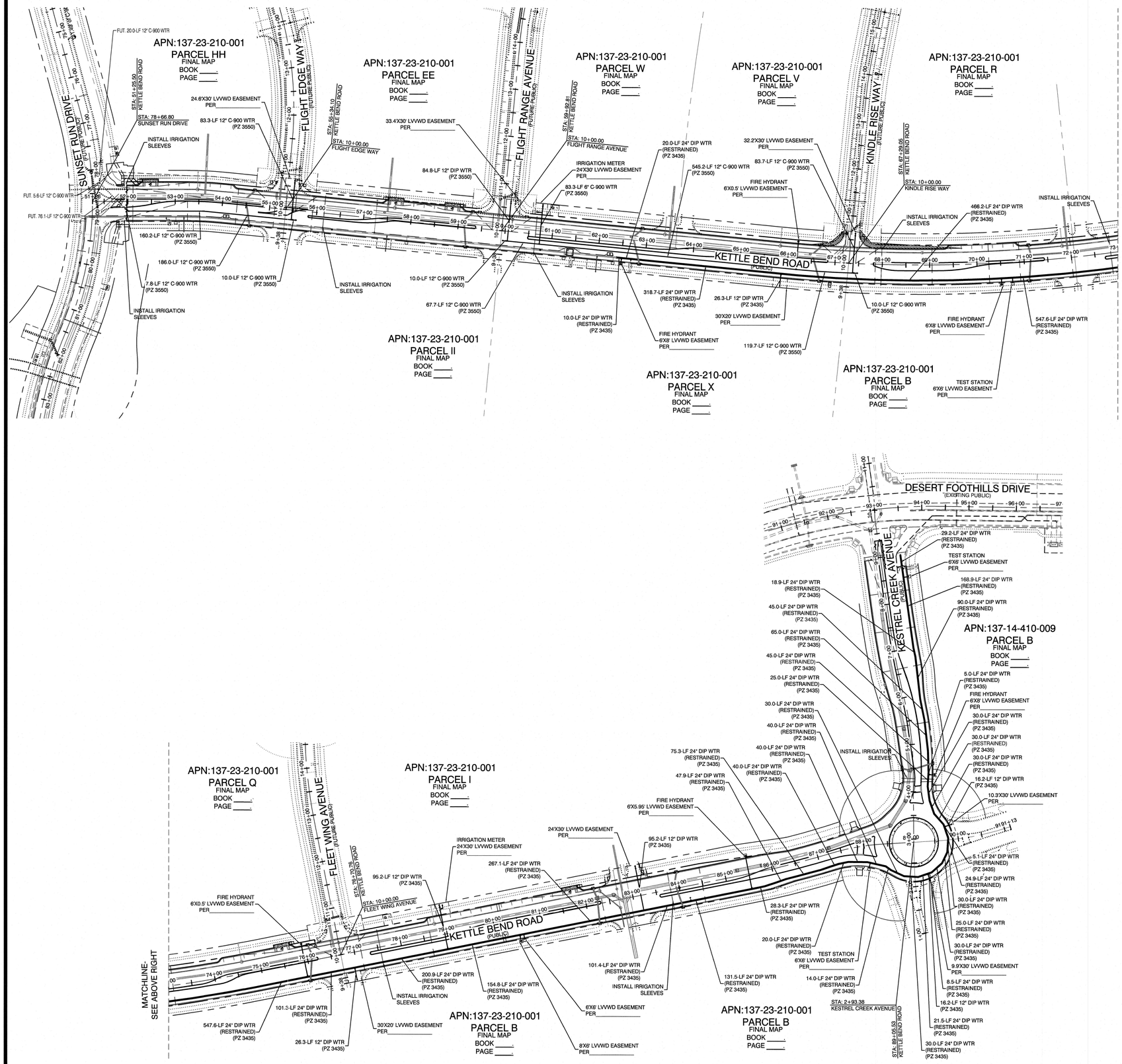
- NONE

LAS VEGAS VALLEY WATER DISTRICT STANDARD NOTES

LVVWD PROJECT #137333

(REVISED 01/09/2017)

1. NO WORK SHALL BEGIN UNTIL THE WATER PLANS HAVE BEEN APPROVED FOR CONSTRUCTION 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 P.M. 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 SPECIFICATIONS, AND TO THE **2010** EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS). **THE LATEST EDITION OF UDACS SHALL SUPERSEDE ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.**
3. ALL WORK, EXCEPT AS MODIFIED BY 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



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR ZONE:

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 TRIAL SHUTDOWN.

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

LVVWD EXISTING FACILITIES NOTE:

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

DEPTH OF COVER DURING CONSTRUCTION:

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

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

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 / WALLS (TO INCLUDE NO FOOTINGS), AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

Call before you Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

CALL BEFORE YOU DIG OVERHEAD
1-702-227-2929

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

MASTER UTILITY WATER

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

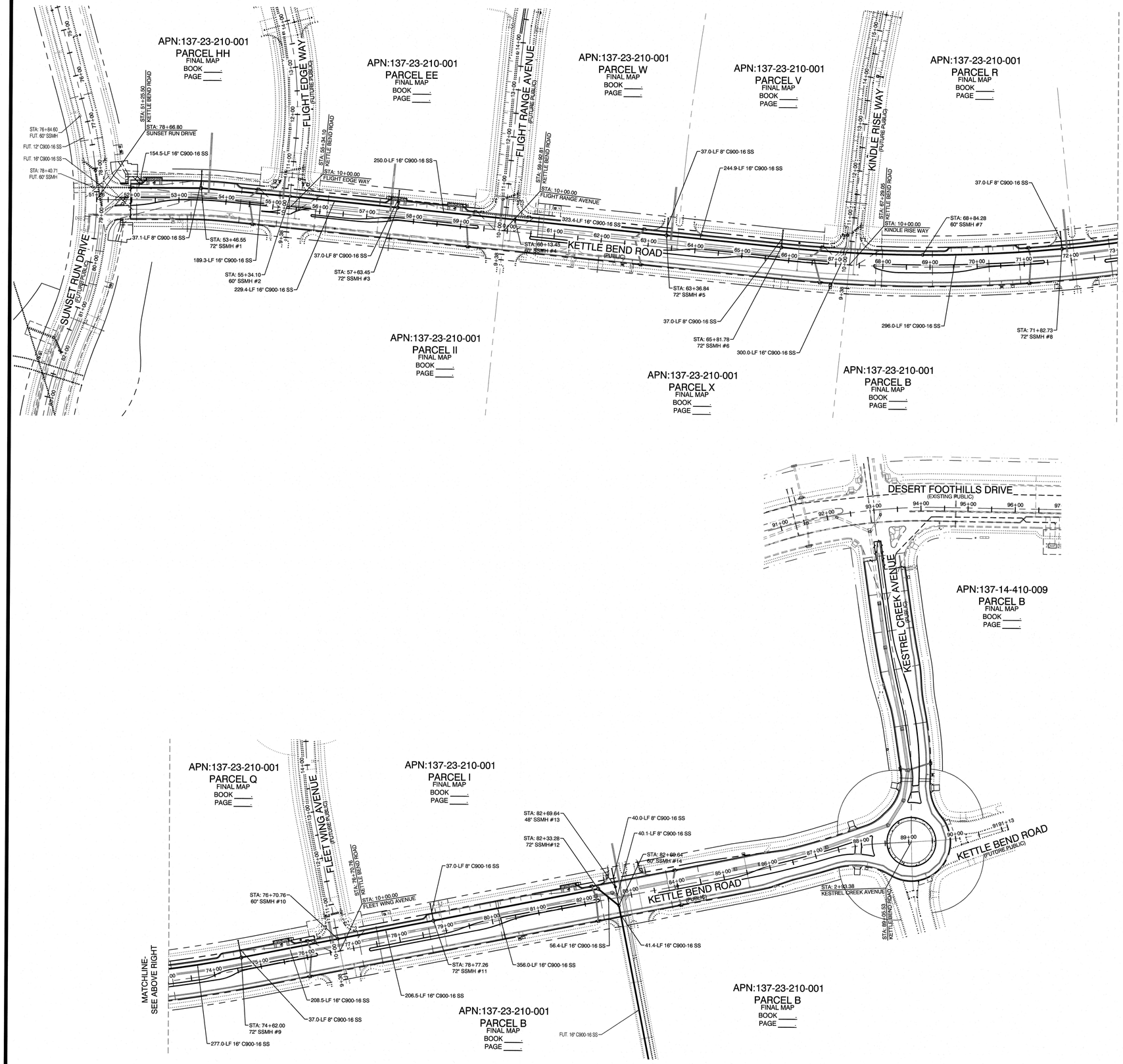
DRAWN BY: BCC 05/30/2019
DESIGNED BY: BCC 05/30/2019
CHECKED BY: WJM 06/28/2020
PROJECT NO: 7981
SCALE: 1"=100' HORIZ. N/A VERT.

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
MUTW
14 OF **107** SHEETS

DRAWING NO
L20-01282
107V8449

H:\7981\Kettle Bend Road\Sheet Set\7981-MUTW.dwg 8/18/2020 2:28 PM trevor



WATER MAIN COVER NOTE:

ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS IN TRENCH ABOVE EACH HORIZONTAL ELBOW FITTING, PER UDACS PLATE No. 15

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

PVC PIPE SHALL BE DEFLECTED AT THE JOINT ONLY. THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE ONE (1) DEGREE PER JOINT WITH A MINIMUM RADIUS OF CURVATURE OF 1,150 FEET, PER UDACS 2.07.01 AND 2.07.02.

FOR CHANGES IN DIRECTION EXCEEDING THE MAXIMUM ALLOWABLE JOINT DEFLECTION, FITTINGS SHALL BE USED.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

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WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 PRESSURE ZONE.

Call before you Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7350 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

MASTER UTILITY SANITARY SEWER

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	05/30/2019	SCALE:	1"= 100' HORIZ.
DESIGNED BY: BCC	05/30/2019		N/A VERT.
CHECKED BY: WJM	08/28/2020	PROJECT NO:	7861

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15745
2020-08-31

SHEET
MUTSS
15 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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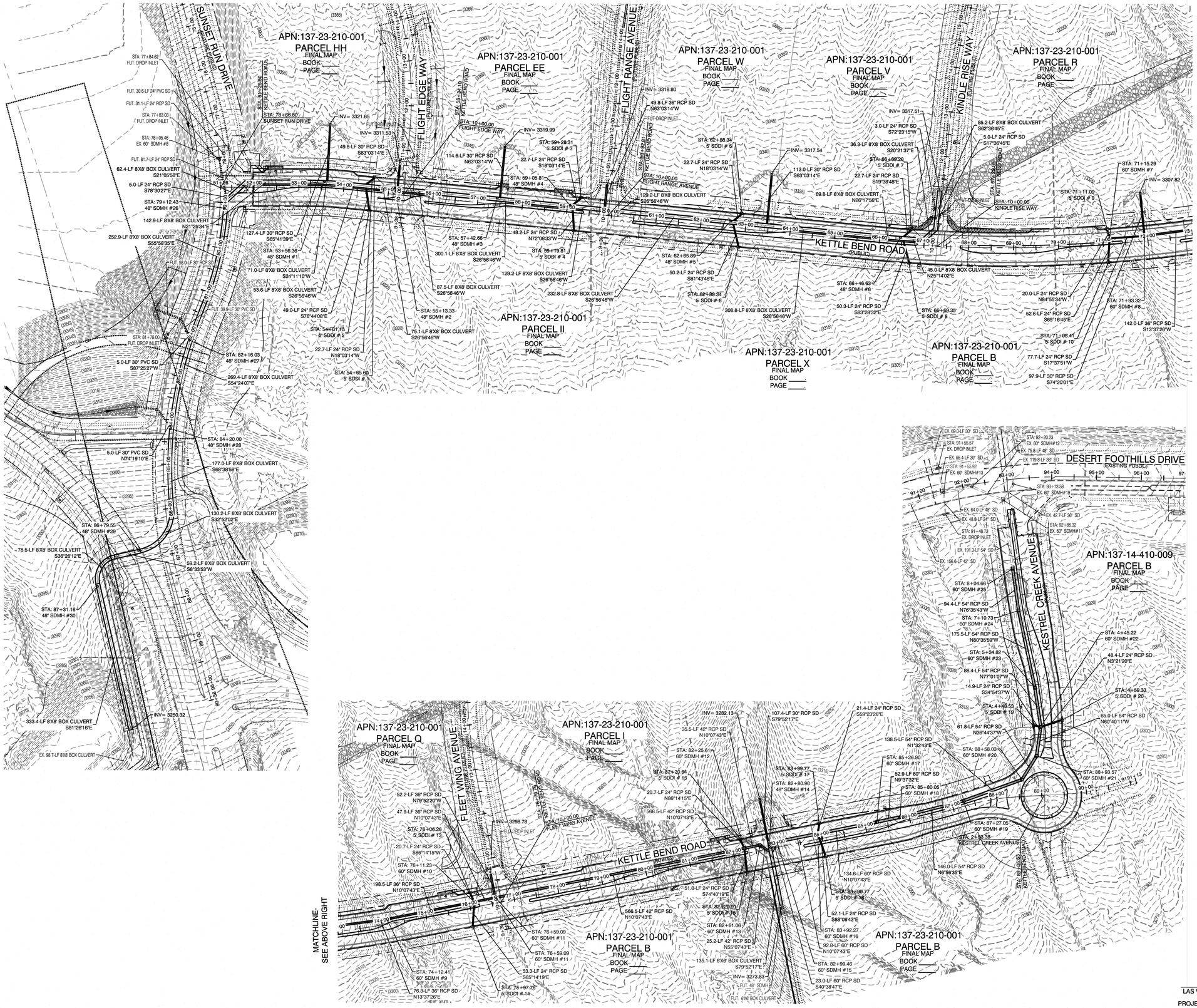

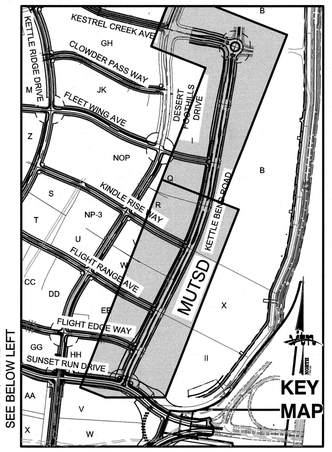

NORTH

GRAPHIC SCALE

-100 0 50 100 200

1" = 100'

GRADING PERMIT NOTE

THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHERS STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL
PROJECT #G-18-176, DATED DECEMBER 30, 2019
HTE #L20-01282

SIGHT VISIBILITY ZONES:

NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

Call before you Underground
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AND
1-702-432-5330
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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1-702-227-2929

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OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

MASTER UTILITY STORM DRAIN

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	05/30/2019	SCALE:	1"=80' HORIZ N/A VERT:
DESIGNED BY: BCC	05/30/2019		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7981			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
MUTSD
16 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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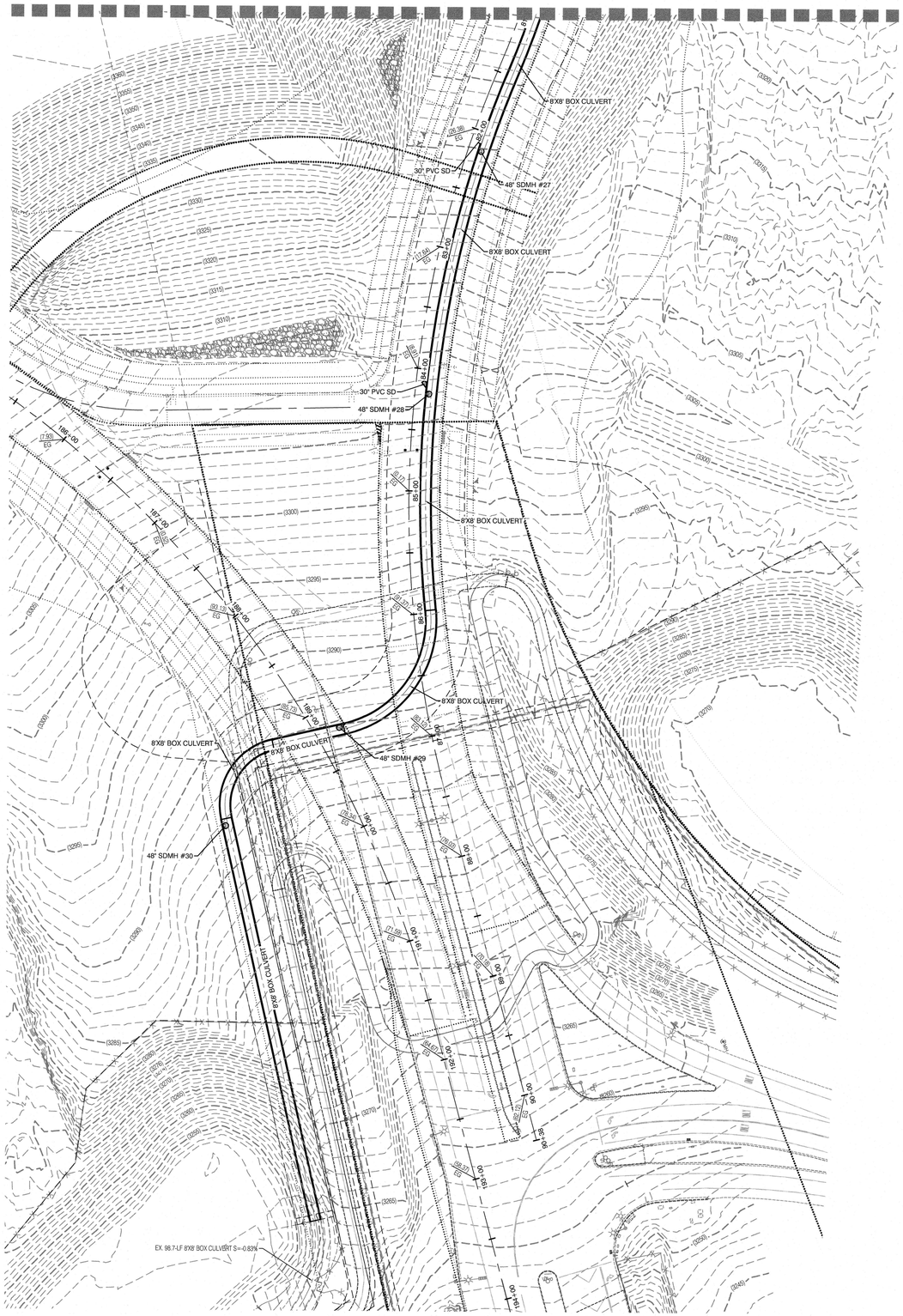
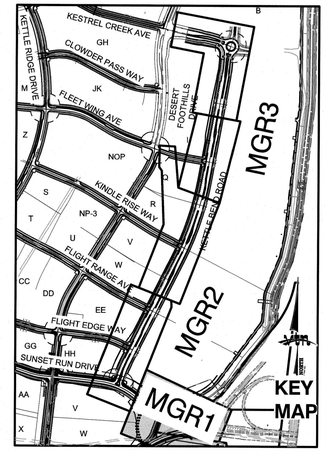
MATCHLINE-
SEE SHEET MGR2







GRAPHIC SCALE

-50 0 25 50 100

1" = 50'

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

ALL OFFSITE INTERIM FLOOD CONTROL FACILITIES SUCH AS BUT NOT LIMITED TO BERMS/DITCHES AND TEMPORARY SUMPS ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOWARD HUGHES COMPANY.

GRADING PERMIT NOTE

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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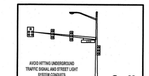
WILLIAM J MEYER , P.E. No. 15745 DATE



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1-702-432-5300
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AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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1-702-227-2929

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10846 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

MASTER GRADING PLAN 1

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/27/2020	SCALE: 1"=50'	HORIZ.
DESIGNED BY: BCC	08/27/2020		VERT. N/A
CHECKED BY: WJM	08/28/2020	PROJECT NO: 7861	

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15745
2020-08-31

SHEET
MGR1
17 OF 107 SHEETS

DRAWING NO.
L20-01282
107W8449

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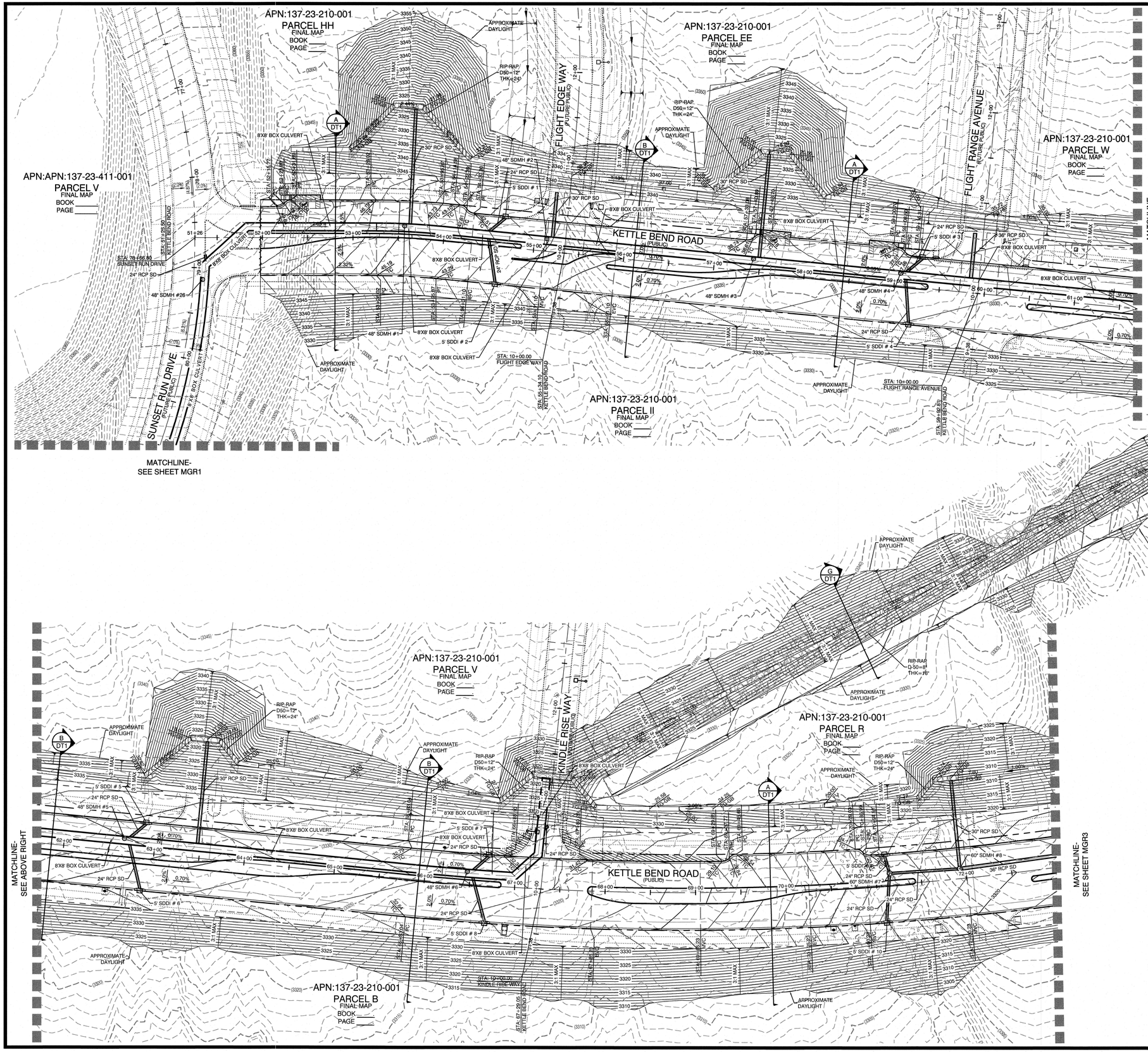

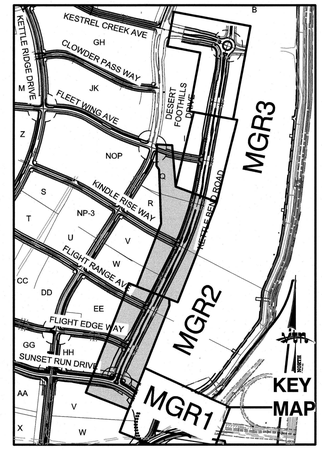

GRAPHIC SCALE

-50 0 25 50 100

1" = 50'

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

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I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS
ITS-03812

Call before you Underground
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CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-402-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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CALL BEFORE YOU DO OVERHEAD

1-702-227-2929

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

MASTER GRADING PLAN 2

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 08/27/2020
DESIGNED BY: BCC 08/27/2020
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7861
SCALE: HORIZ. 1"=50' VERT. N/A

PROFESSIONAL ENGINEER-STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
MGR2
18 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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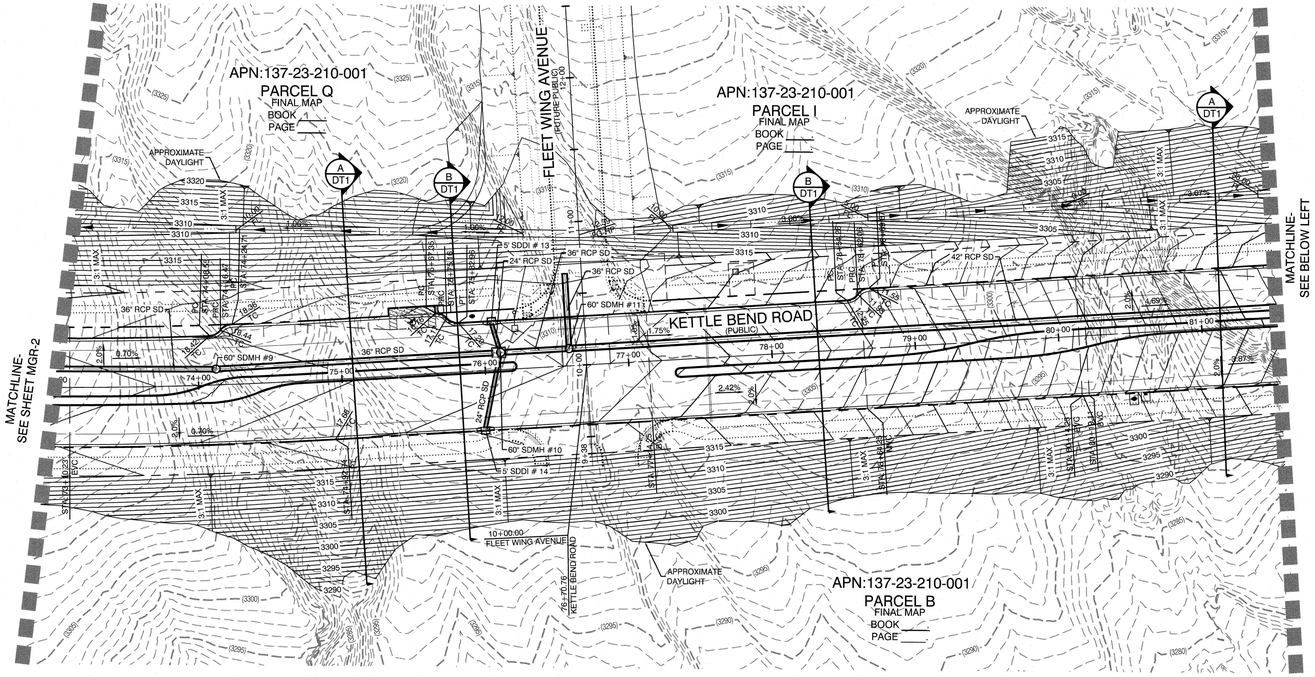

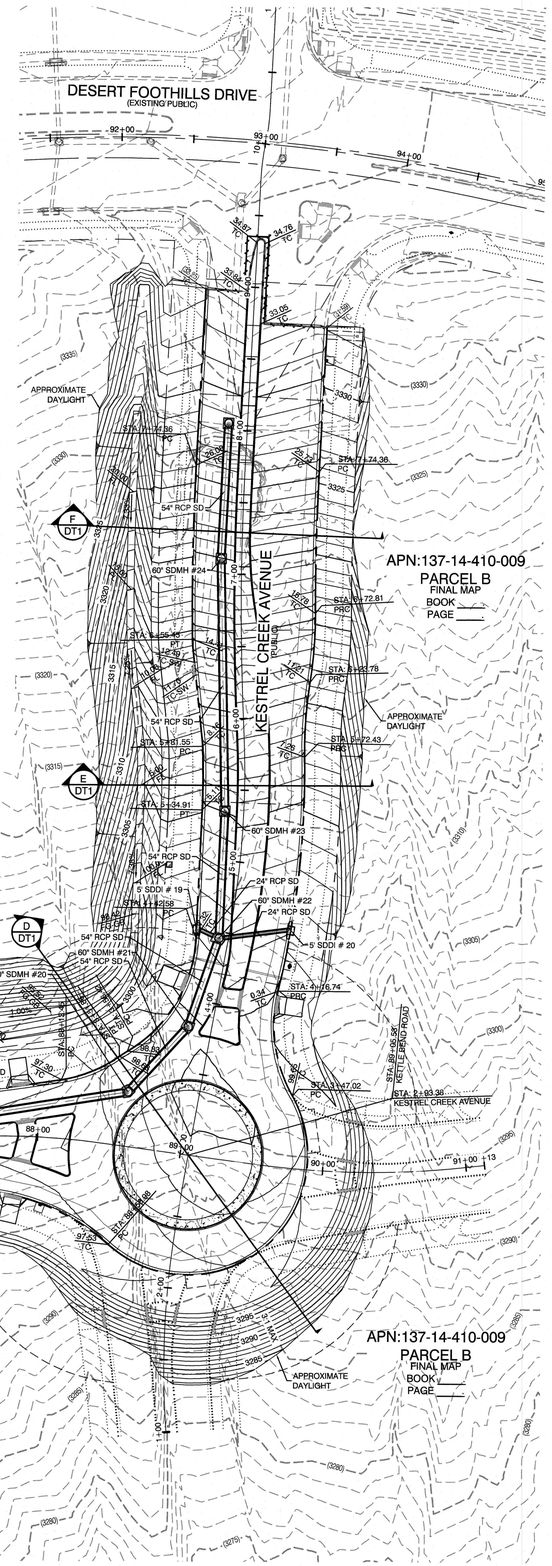

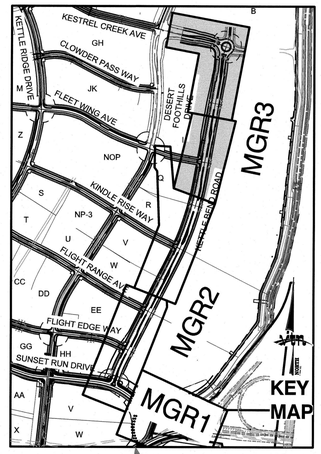

GRAPHIC SCALE

-50 0 25 50 100

1" = 50'

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

ALL OFFSITE INTERIM FLOOD CONTROL FACILITIES SUCH AS BUT NOT LIMITED TO BERMS/DITCHES AND TEMPORARY SUMPS ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOWARD HUGHES COMPANY.

GRADING PERMIT NOTE

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WILLIAM J MEYER , P.E. No. 15745 DATE

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY

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1-702-227-2929

REV	DATE	BY	REVISION

CITY OF LAS VEGAS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
(NEVADA CERTIFICATE #E0027-2002)
LAS VEGAS, NEVADA 89135
702-791-4000

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

MASTER GRADING PLAN 3

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	07/25/2019		
DESIGNED BY: BCC	07/25/2019		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7981	SCALE: 1"=50'	HORIZ.	
		VERT: N/A	

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
MGR3
19 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

VILLAGE 22
APN:137-23-210-001

CITY OF LAS VEGAS
CLARK COUNTY

EXISTING BIKE TRAIL

EX. 16" STL GAS

120' VC

SEE SHEET GR2 STA 85+50 FOR CONTINUATION

SUNSET RUN DRIVE
(FUTUREPUBLIC)

86+00

87+00

FUT 50.67' ROW

152-LF 6'X8' BOX CULVERT S=3.20%

APN: 137-23-499-001

STA: 189+20.65
48" SDMH #29
TYPE I ACCESS MANHOLE
PER CCAUSD DWG NO 403
TMH: 3284.6±
N=1291379.8097
E=872106.8895
(ADJUST TO FUTURE GRADE)

EX. 16" STL GAS

SKY VISTA DRIVE
(FUTURE PUBLIC)

191+00

190+00

189+00

87' DRAINAGE EASEMENT

99.2-LF 8'X8' BOX CULVERT S=3.20%

FUT 36" CMP TRUCK

FUT 18" RCP

FUT 24" RCP

FUT 15" RCP

FUT 18" RCP

FUT 15" RCP

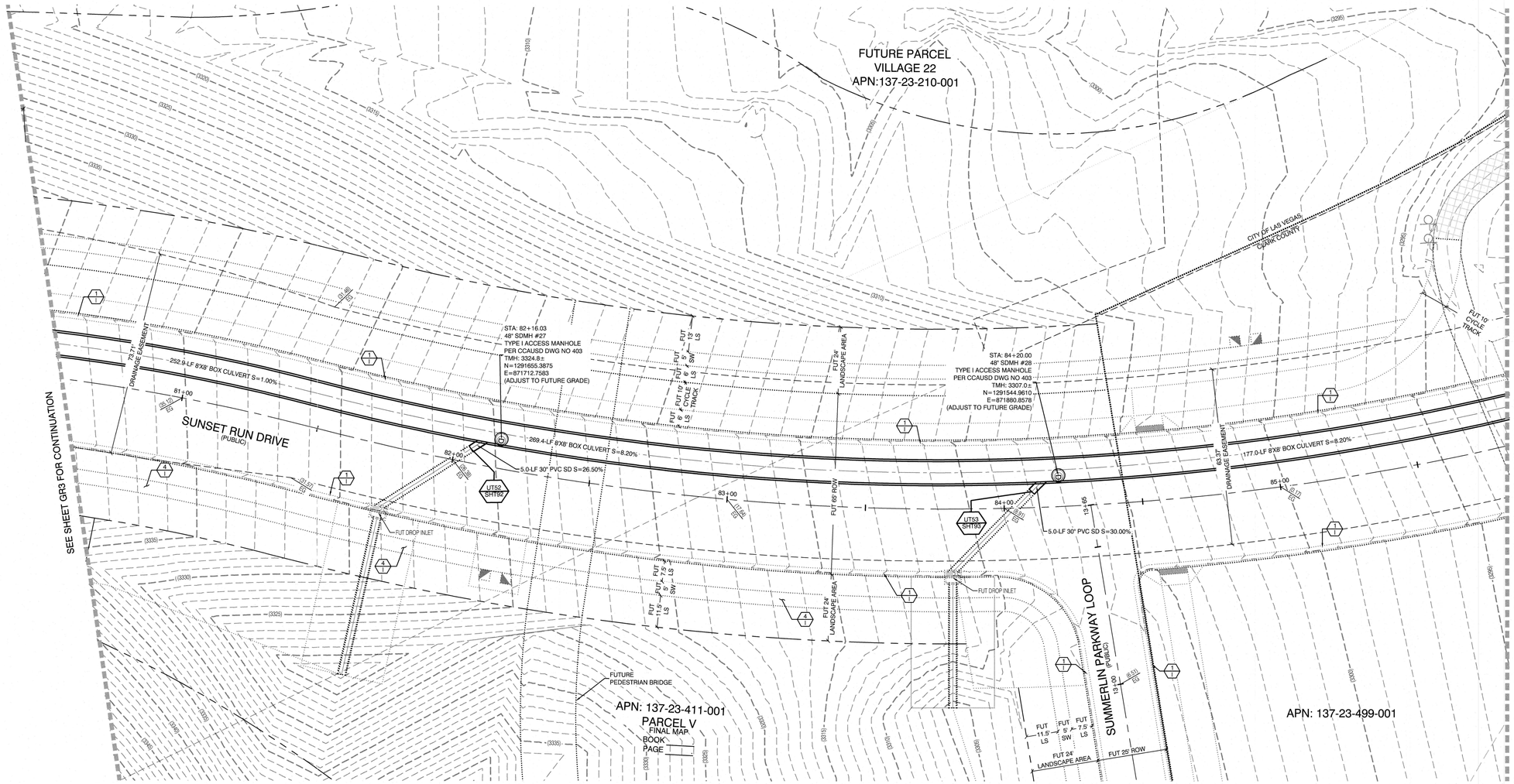
FUT 15" RCP

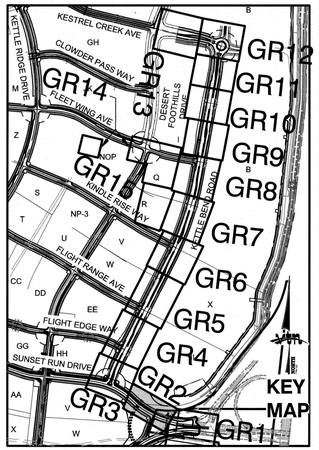
FUT 18" RCP

FUT 15" RCP

FUT 15" RCP

FUT 15





NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

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GRADING PERMIT NOTE

THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHERS STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

ENGINEER DISCLAIMER NOTE:

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AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY

Call before you Underground

1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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1-702-227-2929

Call before you Dig

Avoid cutting underground utility lines. It's costly.

CALL 811 OR 1-800-642-2444 AND 1-702-455-7544 CLARK COUNTY TRAFFIC OPERATIONS

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 2

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	07/15/2020	SCALE:	1"=20' HORIZ. N/A VERT.
DESIGNED BY: BCC	07/15/2020		
CHECKED BY: WJM	07/15/2020		
PROJECT NO: 7981			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
GR2
21 OF 107 SHEETS

DRAWING NO
L20-01282
107V8449

H:\7981\Kettle Bend Road\Sheet Set\7981-GR3-3.dwg 8/31/2020 5:24 AM brandonc

APPROXIMATE DAYLIGHT

APN:137-23-210-001
PARCEL HH
FINAL MAP
BOOK ____.
PAGE ____.

RIP-RAP
D50=12"
T=K=24"

UT32
SHT72

INV= 3321.65

2.24%

APPROXIMATE DAYLIGHT

42.48 FL | 3.67% | 40.09 FG-GB

127.4-LF 30" RCP SD S=8.58%
S65°41'39"E

STA: 53+66.36
48" SDMH #1
TYPE I ACCESS MANHOLE
PER CCAUSD DWG NO 403/
PROVIDE 48" PRECAST CONCRETE PIPE
SEGMENTS THAT MEET THE 'CLASS IV'
REQUIREMENTS OF ASTM-D76
TMH: 3344.8±
N=1290230.9877
E=872902.9882

42" HT PORTABLE JERSEY RAIL

3.22%

50.00 TOB

48.00 TOB

CE LOT

FUT DROP INLET

FUT DROP INLET

STA: 51+97.76 OPT. 34.25 LT
BEGIN ROAD
CONSTRUCTION/ BEGIN
PAVEMENT TRANSITION

STA: 52+15.77
STA: 52+16.68
STA: 52+23.86
BEGIN TRANSITION
STA: 52+31.68
STA: 53+31.68
PI

STA: 53+26.02
END TRANSITION
STA: 53+28.02
PC

STA: 53+95.87
PT

3.29%

142.9-LF 8'X8' BOX CULVERT S=0.50%
N21°25'34"E

37.17 BC TO BC

PUE & NON-EXCLUSIVE UNDERGROUND EASEMENT

71.0-LF 6'X8' BOX CULVERT S=0.50%
S24°11'10"W

STA: 51+97.76
PC

STA: 52+50.37
PRC

STA: 53+13.14
PT

STA: 53+28.02
PC

STA: 53+95.87
PT

2.51%

41.9' BC TO BC

KETTLE BEND ROAD
(PUBLIC)

APN:APN:137-23-411-001
PARCEL V
FINAL MAP
BOOK
PAGE

STA: 51+25.50
KETTLE BEND ROAD

STA:78+66.80
SUNSET RUN DRIVE

5.0-LF 24" RCP SD S=33.33%
S78°30'27"E

62.4-LF 8'X8' BOX CULVERT S=1.00%
S01°05'8"E

STA: 51+97.76
PC

STA: 51+97.76
BEGIN ROAD
CONSTRUCTION/ BEGIN
PAVEMENT TRANSITION

STA: 53+28.02
END PAVEMENT
TRANSITION
PC

STA: 53+95.87
PT

STA: 79+12.43
48" SDMH #26
TYPE I ACCESS MANHOLE
PER CCAUSD DWG NO 403/
PROVIDE 48" PRECAST CONCRETE PIPE
SEGMENTS THAT MEET THE 'CLASS IV'
REQUIREMENTS OF ASTM C76
TMH: 3348.7±
N=1291835.6529
E=871467.1935

SUNSET RUN DRIVE
(FUTURE PUBLIC)

252.9-LF 8'X8' BOX CULVERT S=1.00%
S55°58'35"E

78.5' DRAINAGE EASEMENT

APPROXIMATE DAYLIGHT

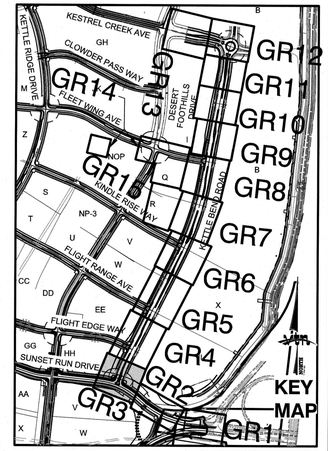
APN:137-23-210-001
PARCEL II
FINAL MAP
BOOK ____.
PAGE ____.

SEE SHEET GR4 FOR CONTINUATION

SEE SHEET GR2 FOR CONTINUATION

NORTH

GRAPHIC SCALE
-20 0 10 20 40
1" = 20'



CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

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GRADING PERMIT NOTE

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL
PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS
7/1/2013

Call before you
Underground
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CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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811
OR
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AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2897 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 3

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	ECC
DESIGNED BY:	BCC
CHECKED BY:	WJM
PROJECT NO:	7861
08/25/2020	
08/25/2020	
08/28/2020	
SCALE:	1"=20' HORIZ. N/A VERT.

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
GR3
22 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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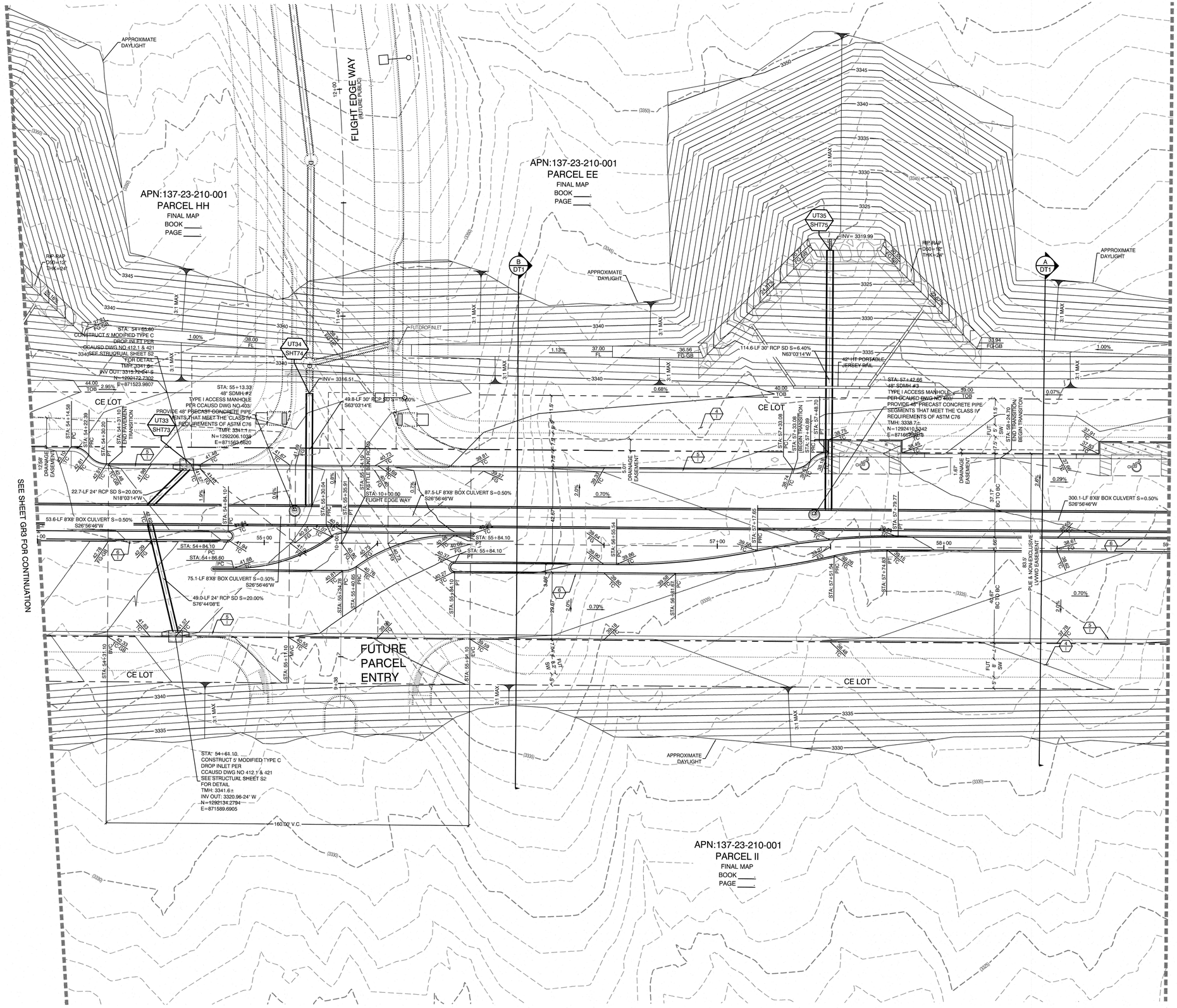

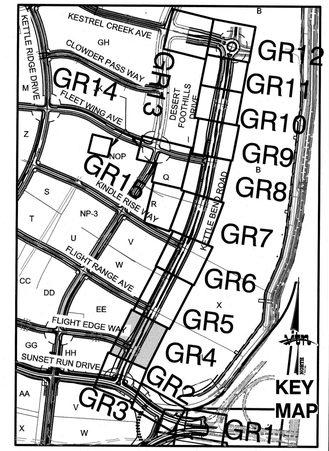

NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

CONSTRUCTION NOTES

1. FUTURE 24' TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24' TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

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OFFSITE FLOOD CONTROL NOTE:

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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WILLIAM J MEYER , P.E. No. 15745 DATE

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CLARK COUNTY TRAFFIC OPERATIONS
AND
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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Call before you Dig
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OR
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AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
(702) 791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 4

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020
DESIGNED BY: BCC	08/25/2020
CHECKED BY: WJM	08/28/2020
PROJECT NO: 7981	SCALE: 1"=20' HORIZ. N/A VERT.

PROFESSIONAL ENGINEER-STATE OF NEVADA
WILLIAM J MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
GR4
23 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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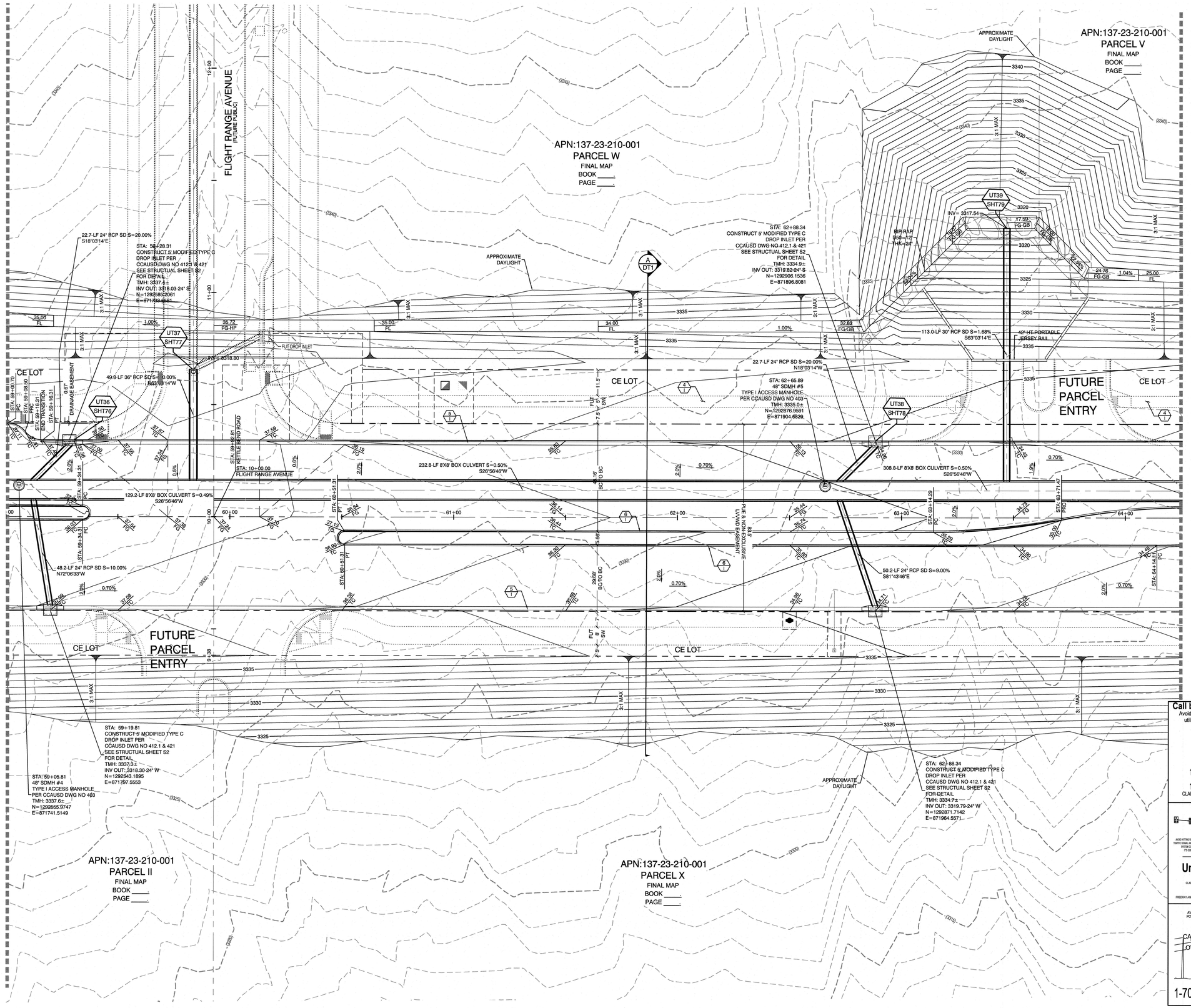

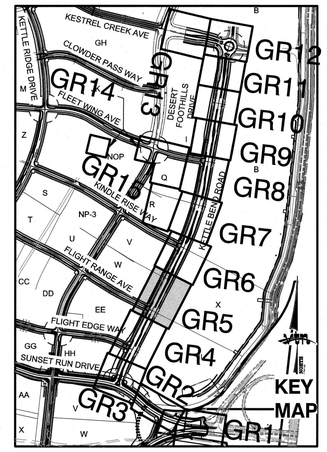

NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

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OFFSITE FLOOD CONTROL NOTE:

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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WILLIAM J MEYER , P.E. No. 15745 DATE

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OR
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AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS





REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 5

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020	SCALE: 1"=20'	HORIZ.
DESIGNED BY: BCC	08/25/2020		VERT. N/A
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP. 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
GR5
24 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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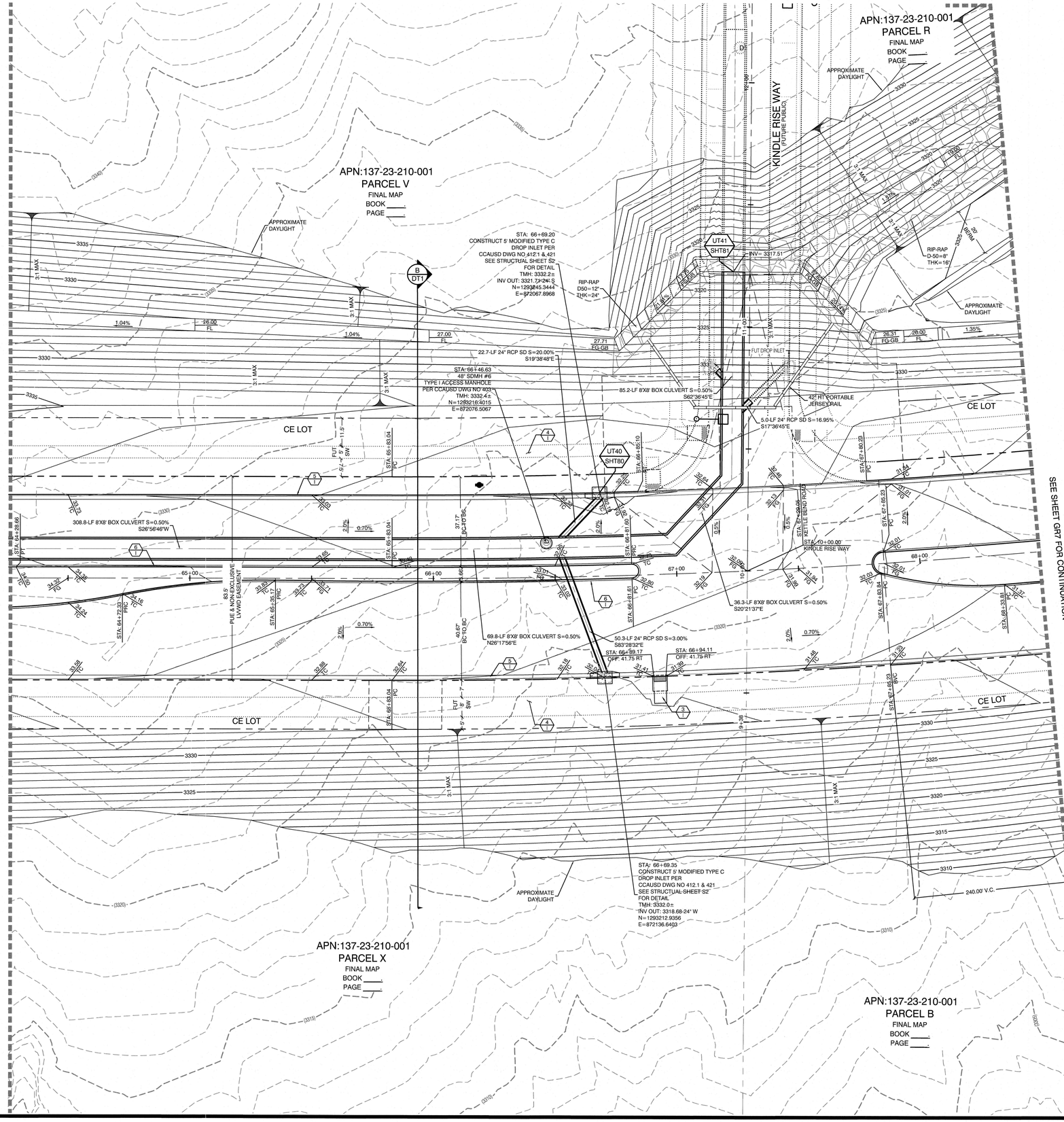

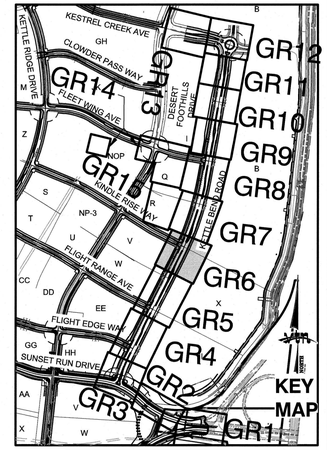

NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

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OFFSITE FLOOD CONTROL NOTE:

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL
PROJECT #G-18-176, DATED DECEMBER 30, 2019

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AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS
FIX DIRECT

Call before you Underground
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CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5500
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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OR
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AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

CITY OF LAS VEGAS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

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LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 6

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020		
DESIGNED BY: BCC	08/25/2020		
CHECKED BY: WJM	08/28/2020	SCALE:	1"=20' HORIZ. N/A VERT.
PROJECT NO: 7861			

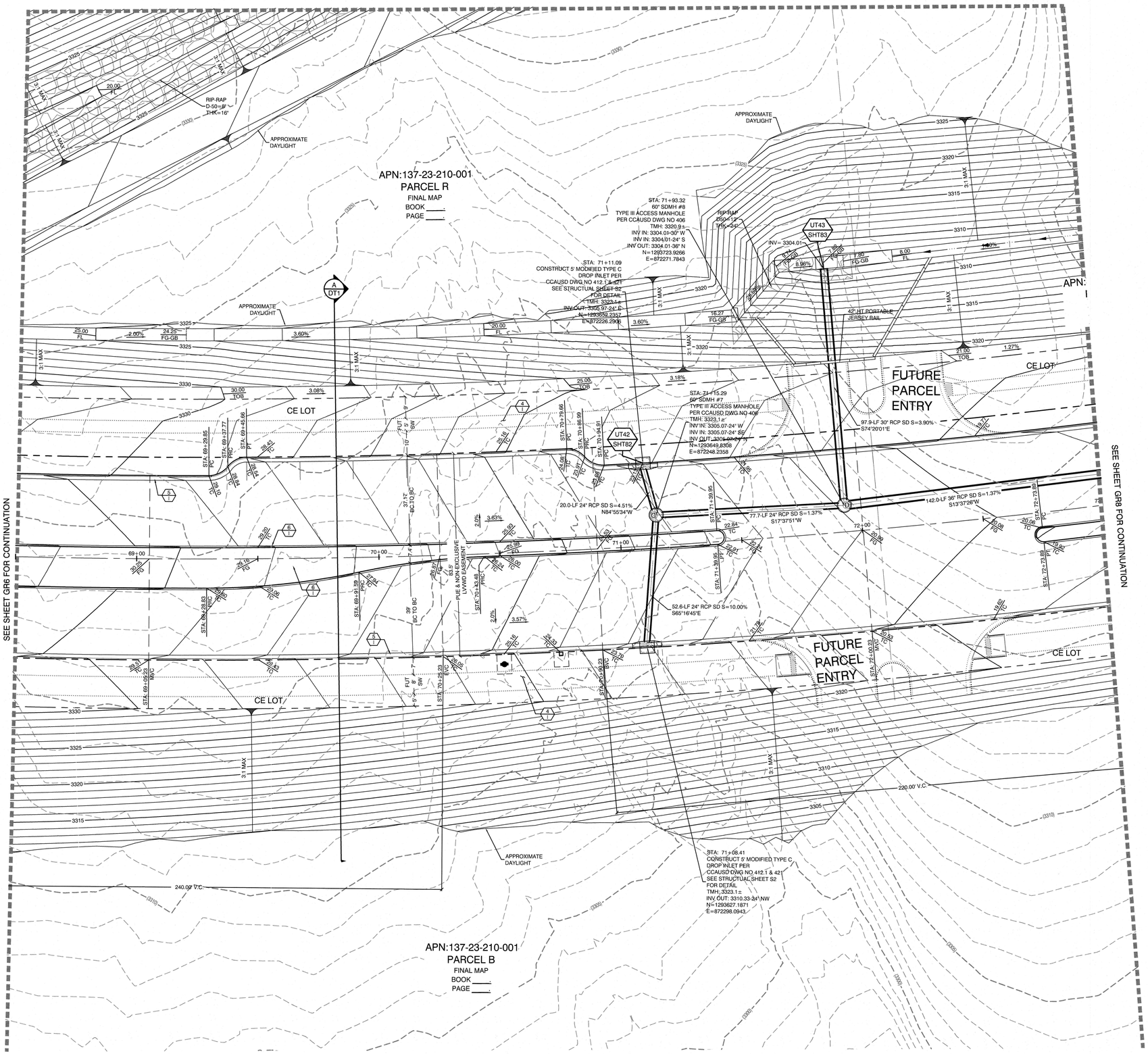
PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

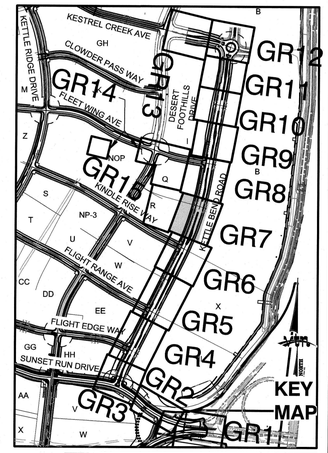
SHEET
GR6
25 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

H:\7861\Kettle Bend Road\Sheet Set\7861-GRD-1.dwg,8/31/2020 5:59 AM,bordonc

SEE SHEET GR15 FOR CONTINUATION







GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

ALL OFFSITE INTERIM FLOOD CONTROL FACILITIES SUCH AS BUT NOT LIMITED TO BERMS/DITCHES AND TEMPORARY SUMPS ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOWARD HUGHES COMPANY.

GRADING PERMIT NOTE

THIS GRADING PERMIT DOES NOT INCLUDE THE CONSTRUCTION OF RETAINING WALLS AND OTHERS STRUCTURES. SEPARATE PERMITS AND APPLICATIONS ARE REQUIRED FOR THESE.

GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL
PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

NO STRUCTURE, WALLS, VEGETATION, OR OBJECT OF ANY KIND IS PERMITTED OVER TWENTY-FOUR (24) INCHES IN HEIGHT (MEASURED FROM THE TOP OF ADJACENT CURB IF CURB EXISTS) WITHIN THE SIGHT VISIBILITY ZONES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS
773-2357.2

Call before you
Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
1-702-432-5000
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DIG OVERHEAD

1-702-227-2929

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2697 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 7

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:
BCC	BCC	WJM	7861

08/25/2020 | 08/25/2020 | 08/28/2020

SCALE: 1"=20' HORIZ. N/A VERT.

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
GR7
26 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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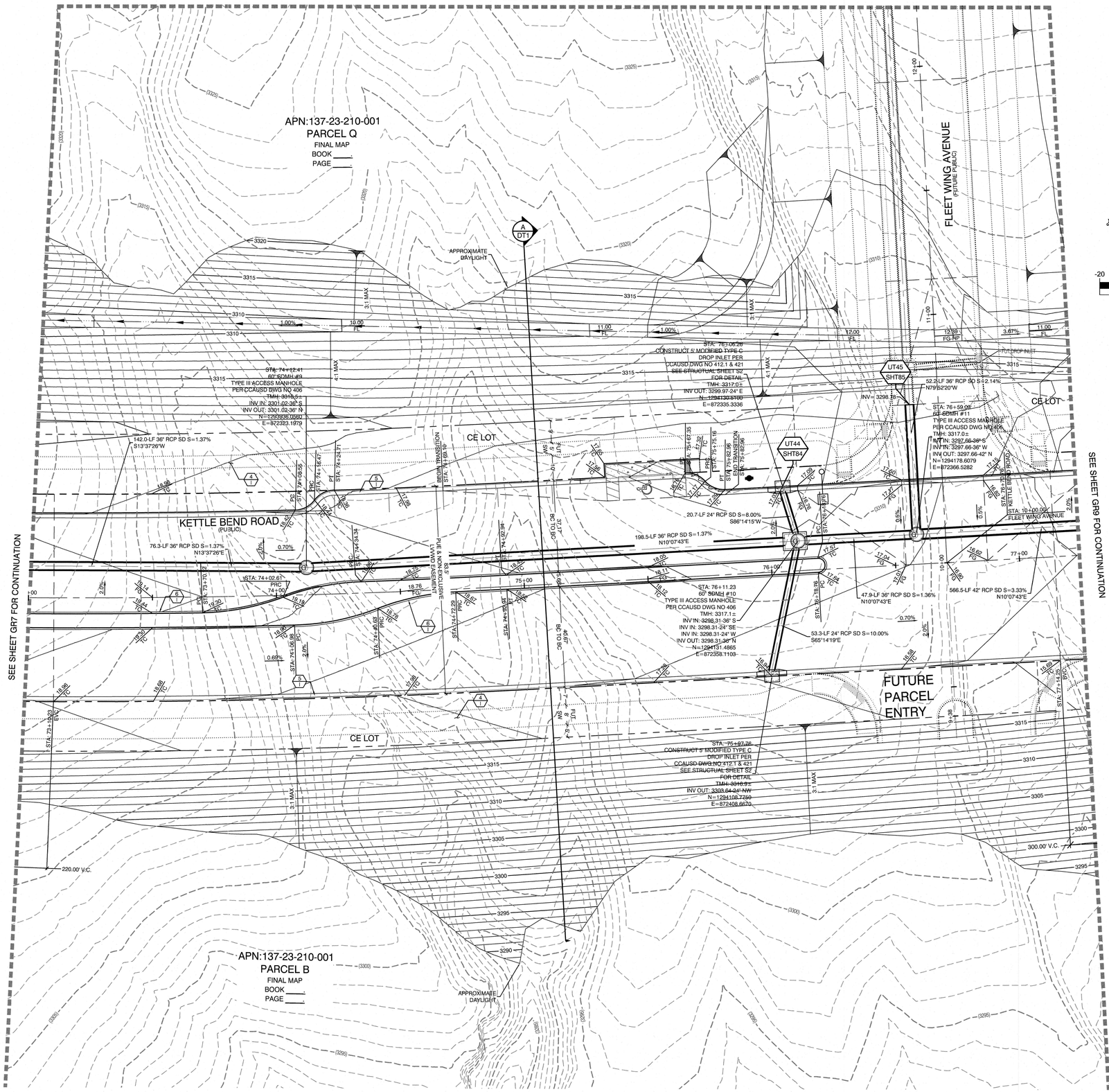
SEE SHEET GR14 FOR CONTINUATION

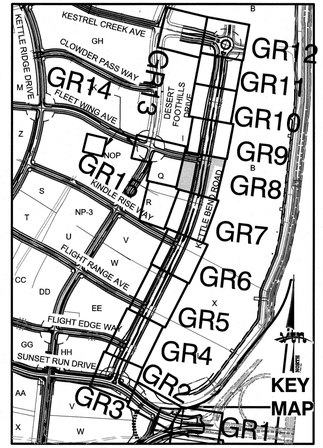




GRAPHIC SCALE

-20 0 10 20 40

1" = 20'



CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
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6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

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OFFSITE FLOOD CONTROL NOTE:

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL
PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 8

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020	SCALE:	1"=20' HORZ. N/A VERT.
DESIGNED BY: BCC	08/25/2020		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7891			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
GR8
27 OF 107 SHEETS

DRAWING NO.
L20-01282
107V9449

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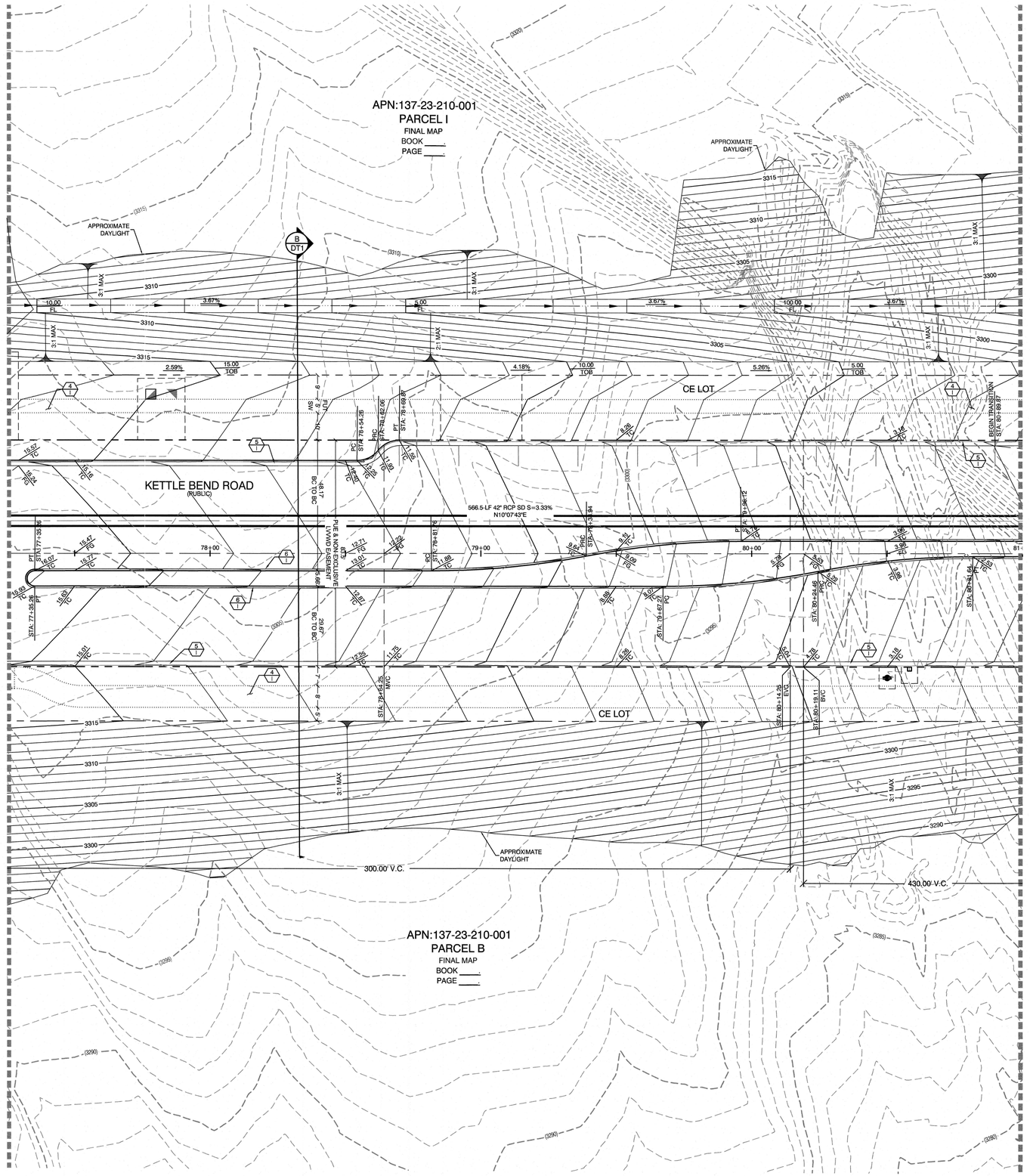

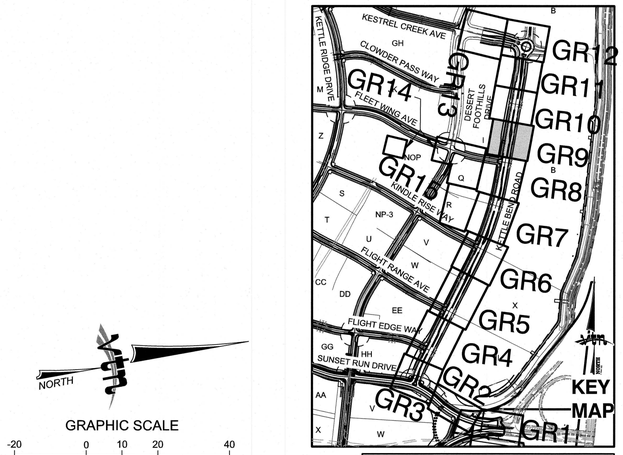

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

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GRADING PERMIT NOTE

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10345 GRIFFITH PEAK DRIVE - SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.LVTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 9

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020	
DESIGNED BY: BCC	08/25/2020	
CHECKED BY: WJM	08/28/2020	
PROJECT NO: 7861	SCALE:	1"=20' / N/A HORIZ. / VERT.

PROFESSIONAL ENGINEER ONLY
STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
GR9
28 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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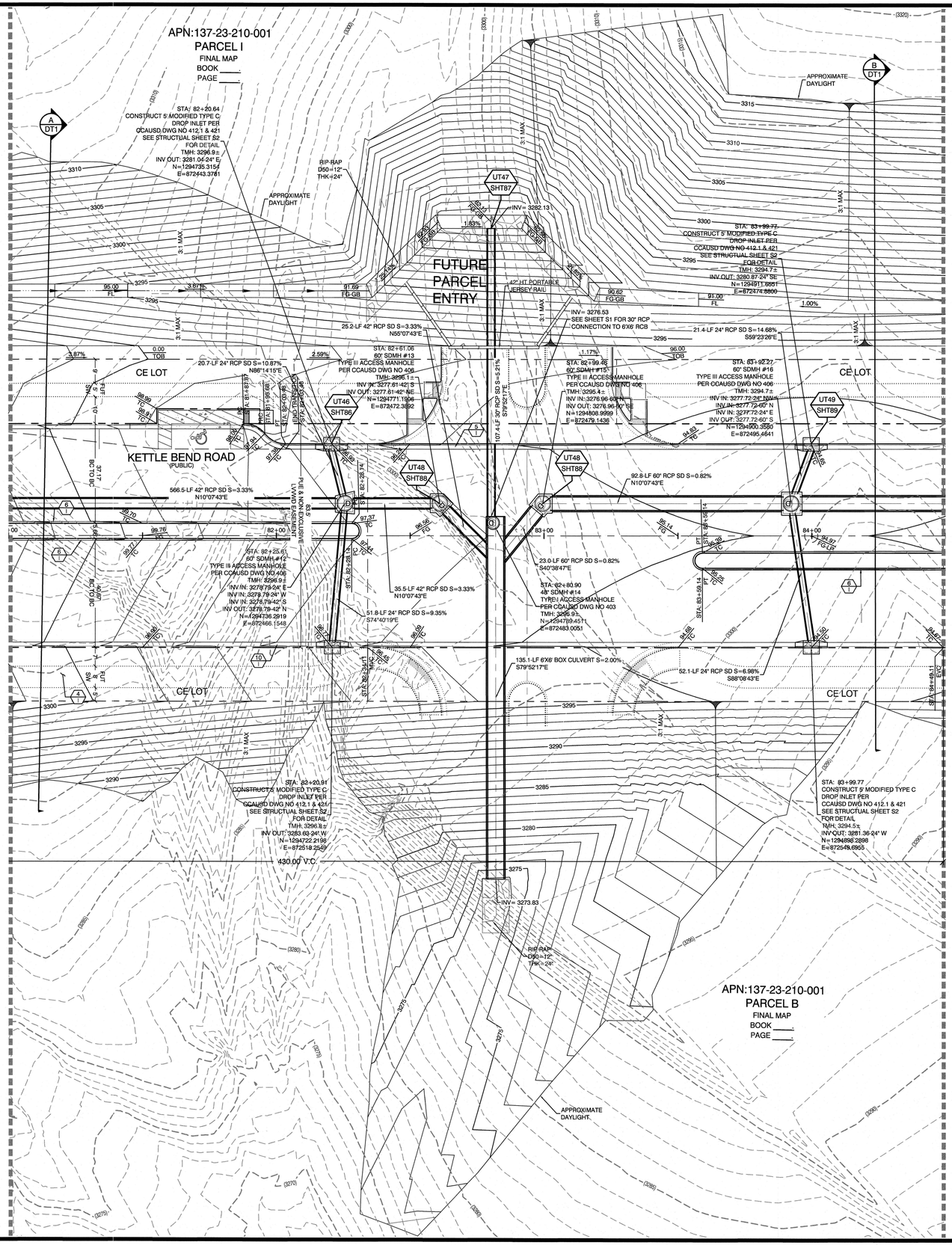

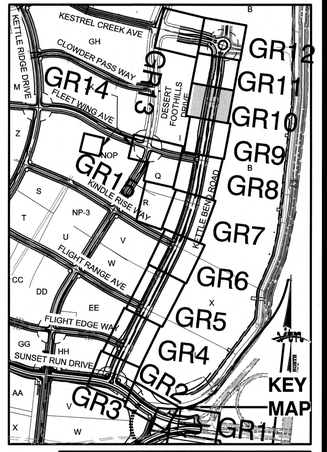

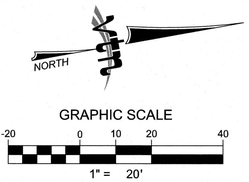

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

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GRADING PERMIT NOTE

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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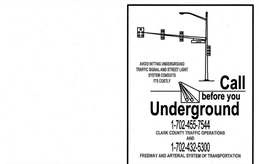



I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2997 WEB WWW.JTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 10

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020	SCALE:	1"=20' HORZ. N/A VERT.
DESIGNED BY: BCC	08/25/2020		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7981			

PROFESSIONAL ENGINEER - STATE OF NEVADA - No. 15745 - WILLIAM J. MEYER - EXP: 12/31/21 - CIVIL

2020-08-31

SHEET
GR10
29 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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SEE SHEET GR13 FOR CONTINUATION

SEE SHEET GR10 FOR CONTINUATION

SEE SHEET GR12 FOR CONTINUATION

APN:137-23-210-001
PARCEL I
FINAL MAP
BOOK ____
PAGE ____

APPROXIMATE DAYLIGHT

STA: 87+27.85
60" SDMH #19
TYPE III ACCESS MANHOLE
PER CCAUSD DWG NO 406
TMH: 3296.8 ±
INV IN: 3280.82-54" N
INV OUT: 3280.82-54" S
N=1295230.0654
E=872545.6472

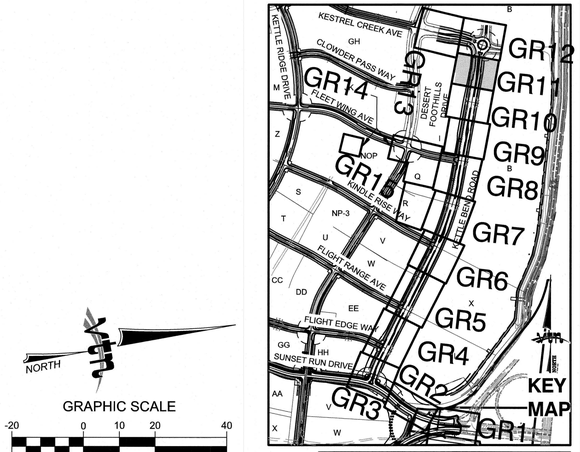
STA: 85+80.05
60" SDMH #18
TYPE III ACCESS MANHOLE
PER CCAUSD DWG NO 406
TMH: 3296.8 ±
INV IN: 3279.35-54" N
INV OUT: 3279.35-60" S
N=1295085.0882
E=872527.9928

STA: 85+26.90
60" SDMH #17
TYPE III ACCESS MANHOLE
PER CCAUSD DWG NO 406
TMH: 3295.4 ±
INV IN: 3278.83-60" N
INV OUT: 3278.83-60" S
N=1295032.8952
E=872519.1410

CE LOT

KETTLE BEND ROAD
(PUBLIC)

APN:137-23-210-001
PARCEL B
FINAL MAP
BOOK ____
PAGE ____



NORTH

GRAPHIC SCALE
-20 0 10 20 40
1" = 20'

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
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FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.
CALL BEFORE YOU DO OVERHEAD
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Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

I CERTIFY THAT THIS GRADING PLAN CONFORMS TO THE APPROVED DRAINAGE STUDY FOR THIS SITE ON FILE WITH CITY OF LAS VEGAS, #DS05204

WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 382-2397 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 11

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7861
08/25/2020
08/25/2020
08/28/2020
SCALE: 1"=20' HORIZ. N/A VERT.

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
GR11
30 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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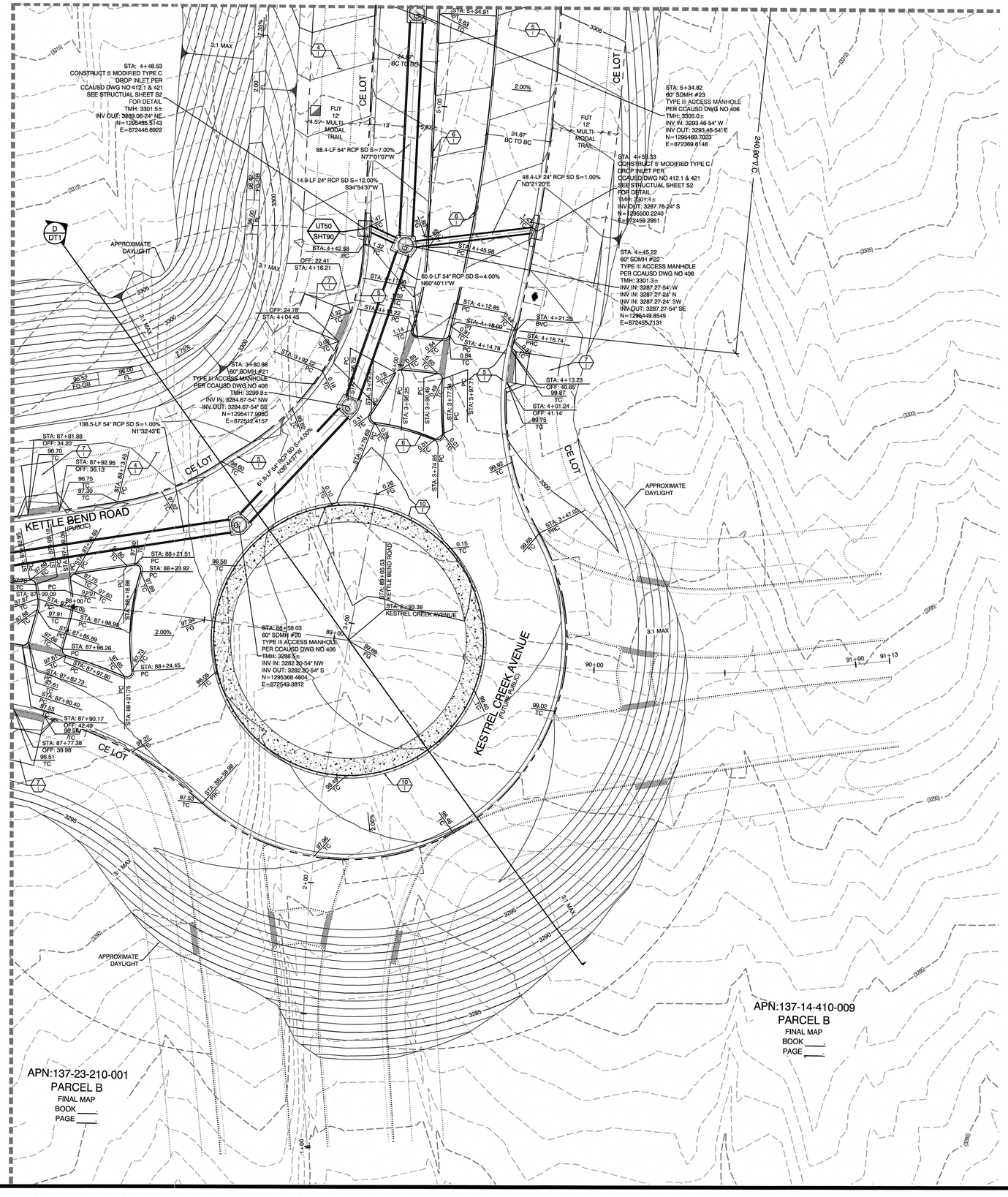
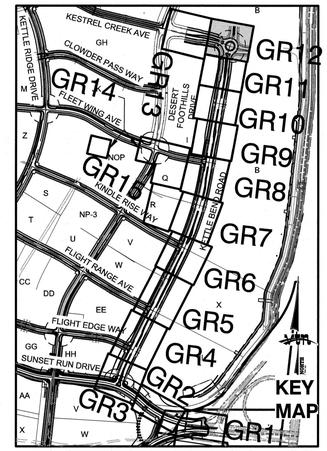
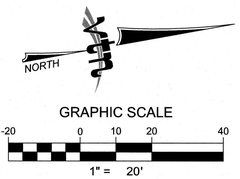
SEE SHEET GR13 FOR CONTINUATION



SEE SHEET GR11 FOR CONTINUATION





CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

ALL OFFSITE INTERIM FLOOD CONTROL FACILITIES SUCH AS BUT NOT LIMITED TO BERMS/DITCHES AND TEMPORARY SUMPS ARE PRIVATELY OWNED AND TO BE PRIVATELY MAINTAINED BY THE HOWARD HUGHES COMPANY.

GRADING PERMIT NOTE

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GEOTECHNICAL NOTE:

REFER TO SOILS REPORT: NOVA GEOTECHNICAL PROJECT #G-18-176, DATED DECEMBER 30, 2019

SIGHT VISIBILITY ZONES:

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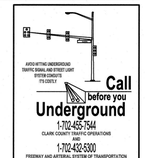





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WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
(DBA'S GRIFFITH PEAK DRIVE, SUITE 150)
LAS VEGAS, NEVADA 89135
702-791-4000

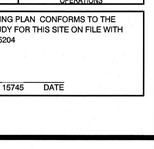
CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.LVTNINV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 12

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 08/25/2020
DESIGNED BY: BCC 08/25/2020
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7981
SCALE: HORIZ. 1"=20' VERT. N/A



2020-08-31

SHEET
GR12
31 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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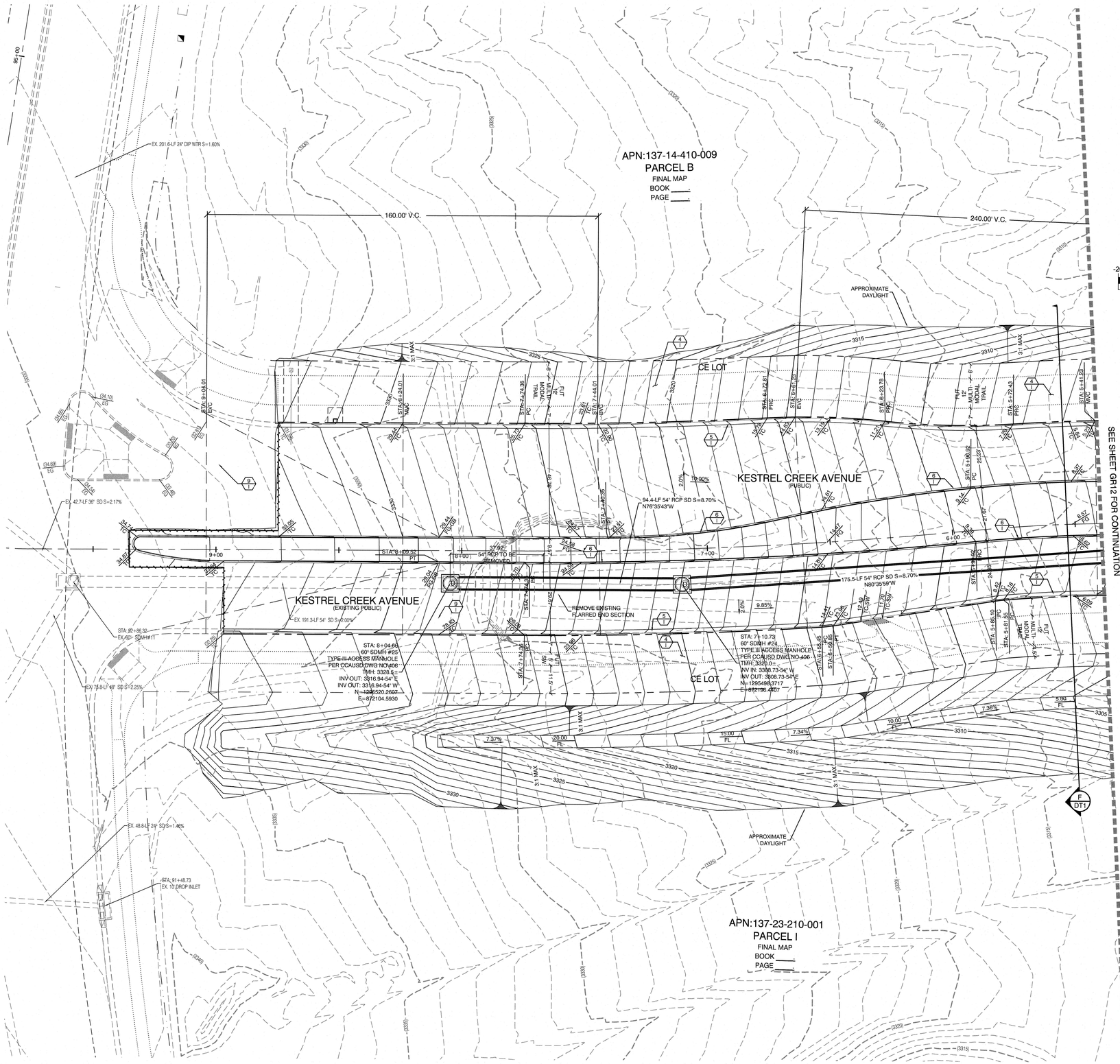

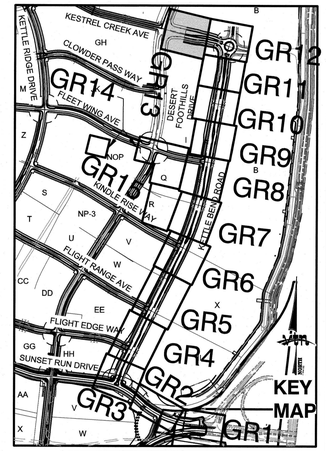

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
5. CONSTRUCT 24" TYPE "L" CURB & GUTTER PER STD. DWG. 216.
6. CONSTRUCT TYPE "A" CURB PER STD. DWG. 219.
7. CONSTRUCT HANDICAP RAMP SEE DETAIL ON SHEET DT 2, 3, 4 & 5
8. SAWCUT AND REMOVE ASPHALT PAVING AND MATCH WITH NEW CONSTRUCTION PER CCAUSD #500.5 & #503.
9. FIELD VERIFY AND MATCH EXISTING
10. CONSTRUCT APRON CURB SEE SHEET DT1

STORM DRAIN DROP INLET NOTE:

ALL STORM DRAIN INLETS SHALL INCLUDE A STORM WATER INLET CONCRETE STAMP IN ACCORDANCE WITH CCAUSD DWG NO. 421

OFFSITE FLOOD CONTROL NOTE:

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GRADING PERMIT NOTE

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GEOTECHNICAL NOTE:

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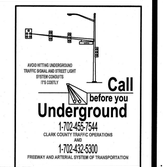





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WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
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10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

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PH. (702) 873-7560 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

CITY OF LAS VEGAS

GRADING PLAN 13

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020
DESIGNED BY: BCC	08/25/2020
CHECKED BY: JAM	08/28/2020
PROJECT NO: 7861	SCALE: 1"=20' HORIZ. N/A VERT.

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
GR13
32 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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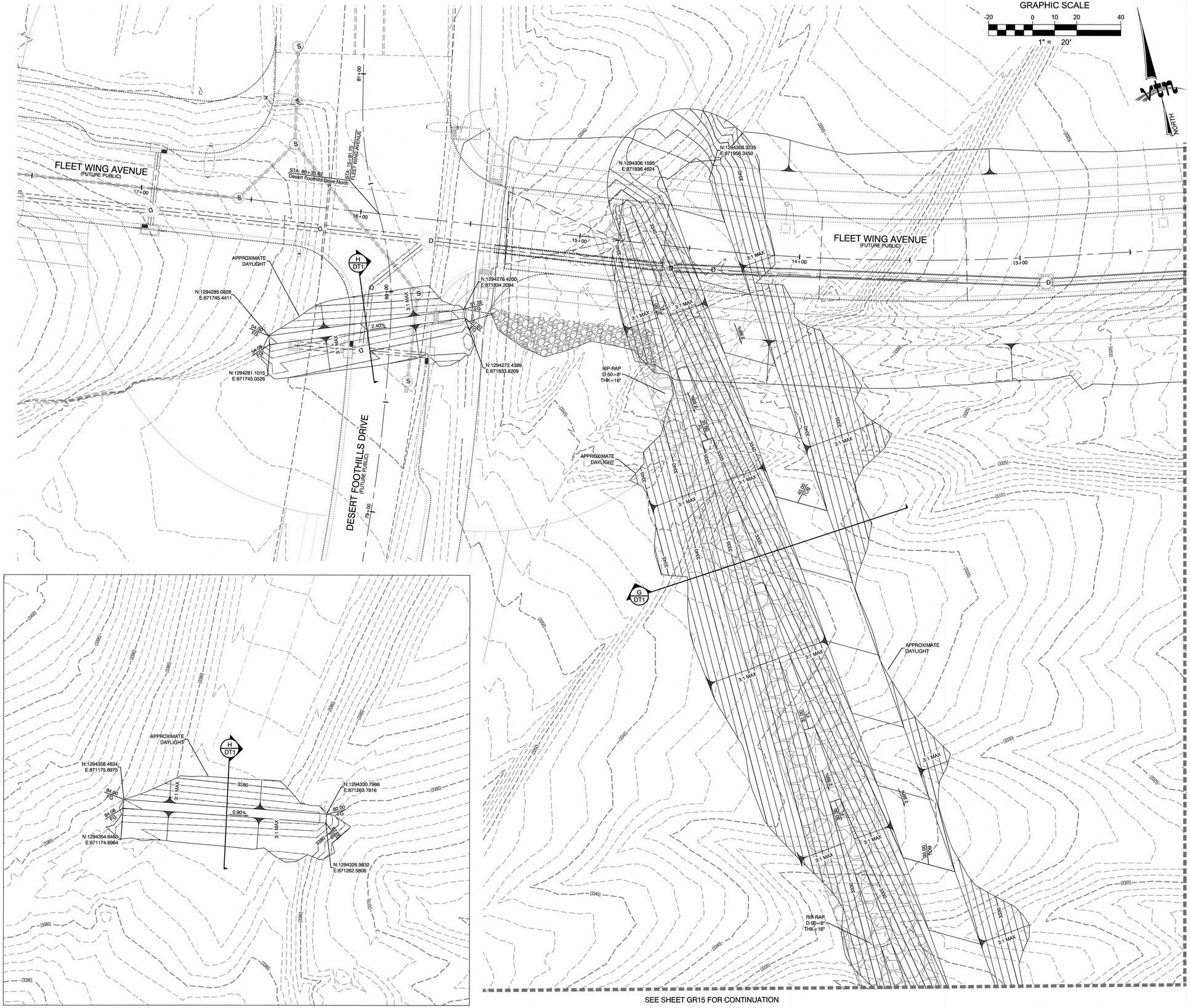

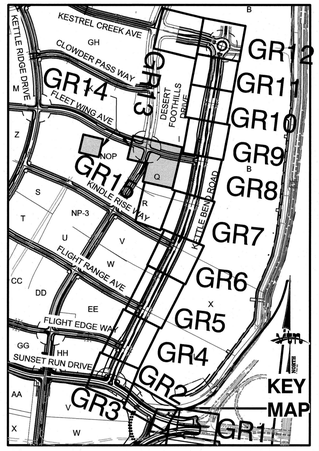

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STORM DRAIN DROP INLET NOTE:

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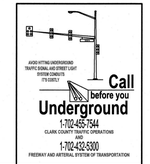



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AND
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CLARK COUNTY TRAFFIC OPERATIONS

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WILLIAM J MEYER , P.E. No. 15745 DATE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

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PH. (702) 873-7590 FAX (702) 382-2997 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 14

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 08/25/2020
DESIGNED BY: BCC 08/25/2020
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7861
SCALE: 1"=20' HORZ. N/A VERT.

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
GR14
33 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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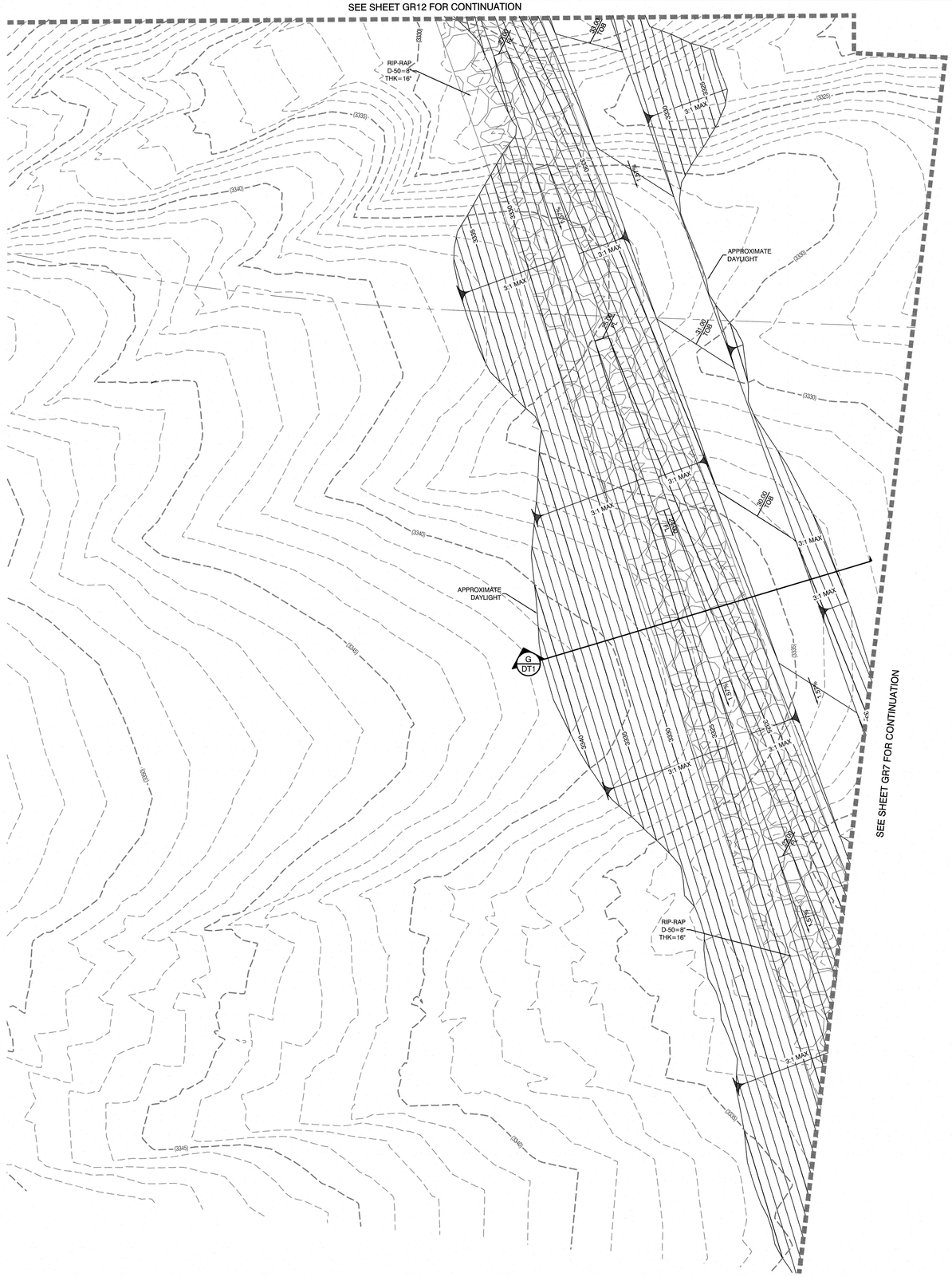
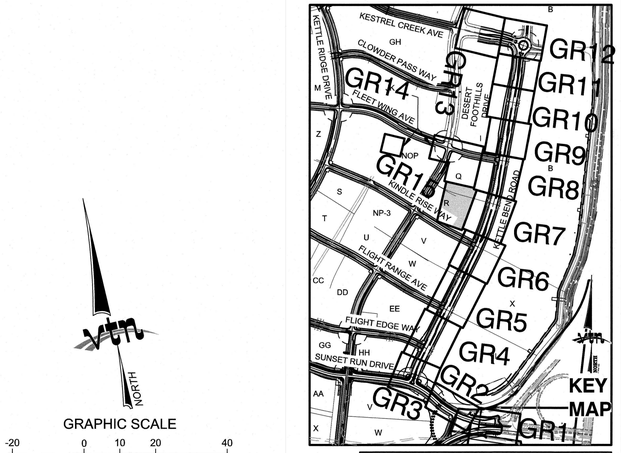
SEE SHEET GR12 FOR CONTINUATION





GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

CONSTRUCTION NOTES

1. FUTURE 24" TYPE "L" CURB & GUTTER
2. FUTURE TYPE "A" CURB
3. FUTURE HANDICAP RAMP
4. FUTURE SIDEWALK
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AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY

Call before you Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-422-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

AVOID HITTING OVERHEAD POWER LINES IT'S COSTLY

CALL BEFORE YOU DO OVERHEAD

1-702-227-2929

Call before you Dig
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CLARK COUNTY TRAFFIC OPERATIONS

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CITY OF LAS VEGAS

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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

GRADING PLAN 15

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	08/25/2020		
DESIGNED BY: BCC	08/25/2020		
CHECKED BY: WJM	08/28/2020	SCALE:	1"=20' HORIZ. N/A VERT.
PROJECT NO: 7981			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
GR15
34 OF **107** SHEETS

DRAWING NO.
L20-01282
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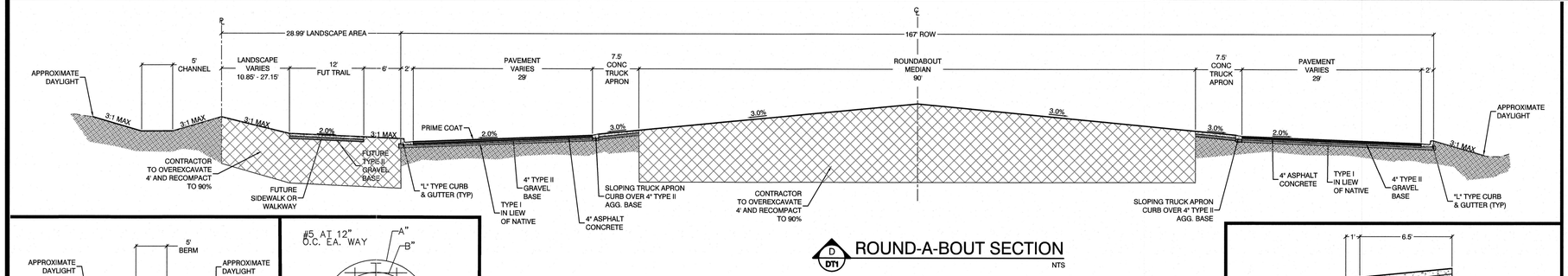
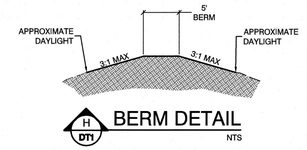


D DT1 ROUND-A-BOUT SECTION
NTS



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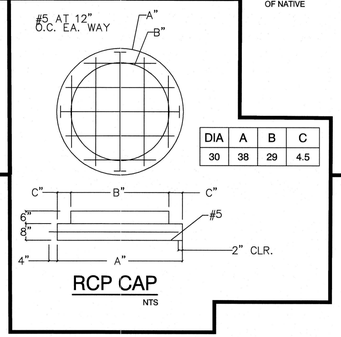
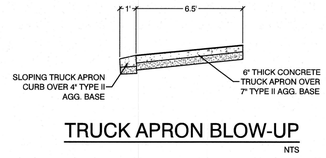
NTS

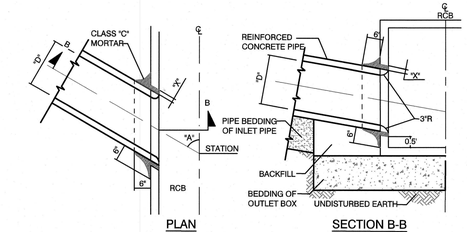


DIA	A	B	C
30	38	29	4.5

RCP CAP
NTS



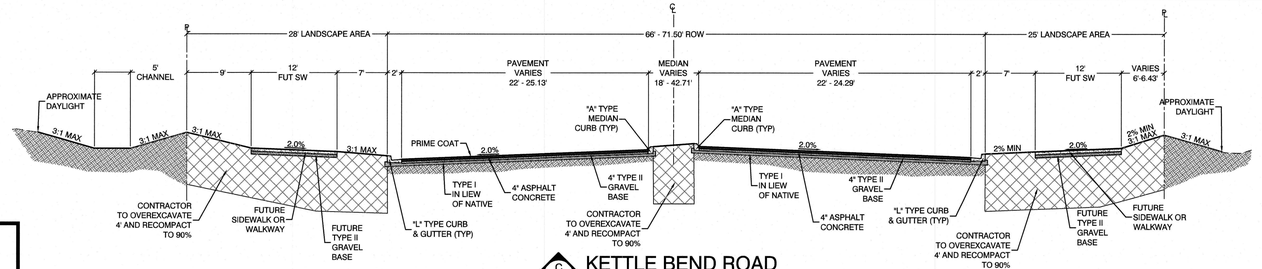
TRUCK APRON BLOW-UP
NTS



NOTES:

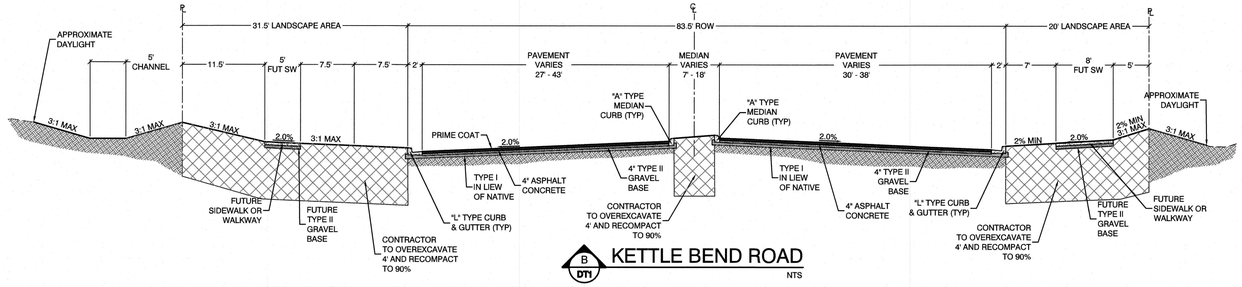
1. SEE PLAN FOR ANGLE "A"
2. DIMENSION "X" SHALL BE 2" MINIMUM AND 4" MAXIMUM
3. BURN OR CHIP END OF INLET PIPE FLUSH WITH INNER SURFACE OF MAINLINE. ROUND EDGES OF MAINLINE AND INLET PIPE.

RCB PENETRATION DETAIL
NTS

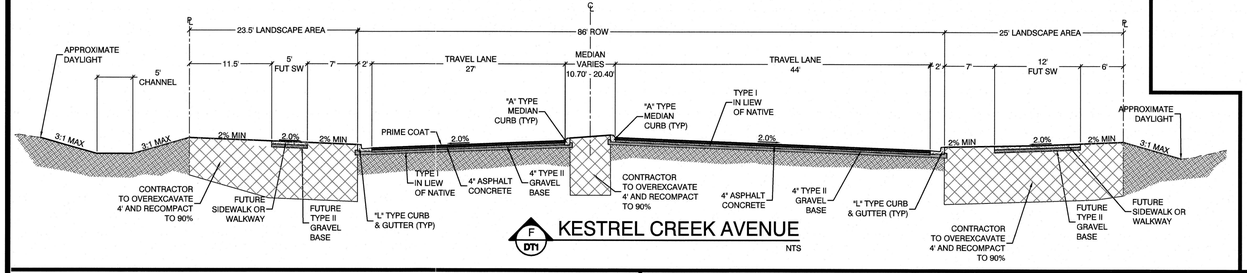


C DT1 KETTLE BEND ROAD
NTS

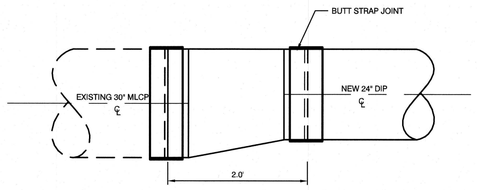
E DT1 KESTREL CREEK AVENUE
NTS



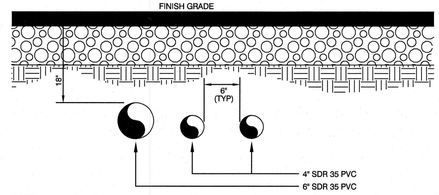
B DT1 KETTLE BEND ROAD
NTS



F DT1 KESTREL CREEK AVENUE
NTS

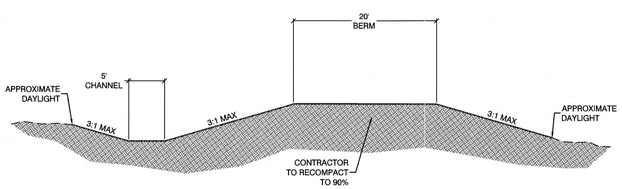


CONNECTION WITH ECCENTRIC REDUCER
NTS



NOTE:
CONTRACTOR TO EXTEND SLEEVES 1' (12") BEHIND BACK OF CURB, TYP.

IRRIGATION SLEEVE BANK
SCALE: N.T.S.



G DT1 TYPICAL GRADING SECTION
NTS

A DT1 KETTLE BEND ROAD
NTS

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

CITY OF LAS VEGAS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

DETAIL SHEET 1

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	06/04/2019	SCALE: —	HORIZ.
DESIGNED BY: BCC	06/04/2019		VERT. N/A
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7981			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15745
2020-08-31

SHEET
DT1
35 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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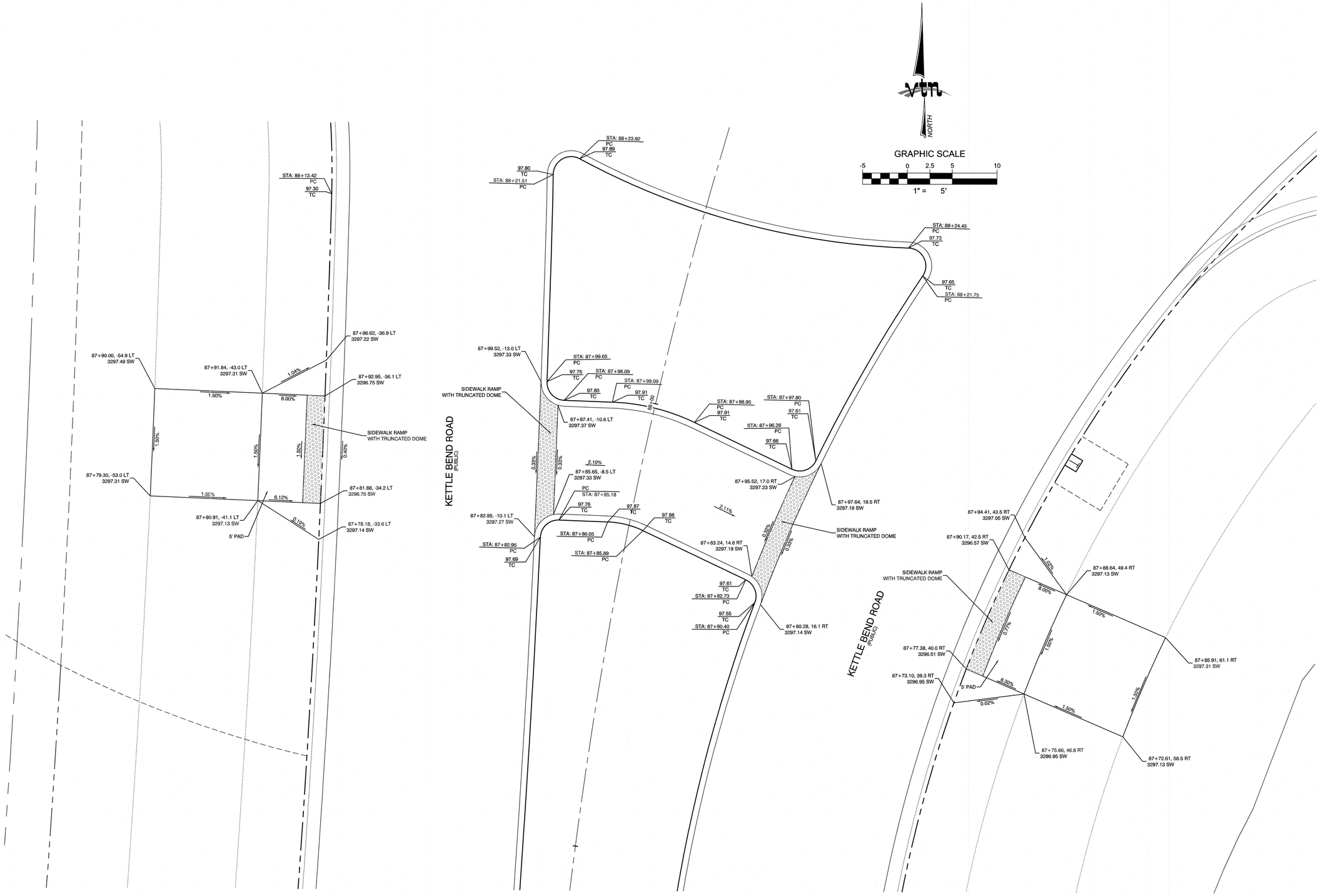

KETTLE BEND ROAD MEDIAN HANDICAP RAMPS

NTS

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

DETAIL SHEET 2

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	06/04/2019
DESIGNED BY: BCC	06/04/2019
CHECKED BY: WJM	08/28/2020
PROJECT NO: 7861	SCALE: 1"=5' N/A HORIZ. VERT.

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
DT2
36 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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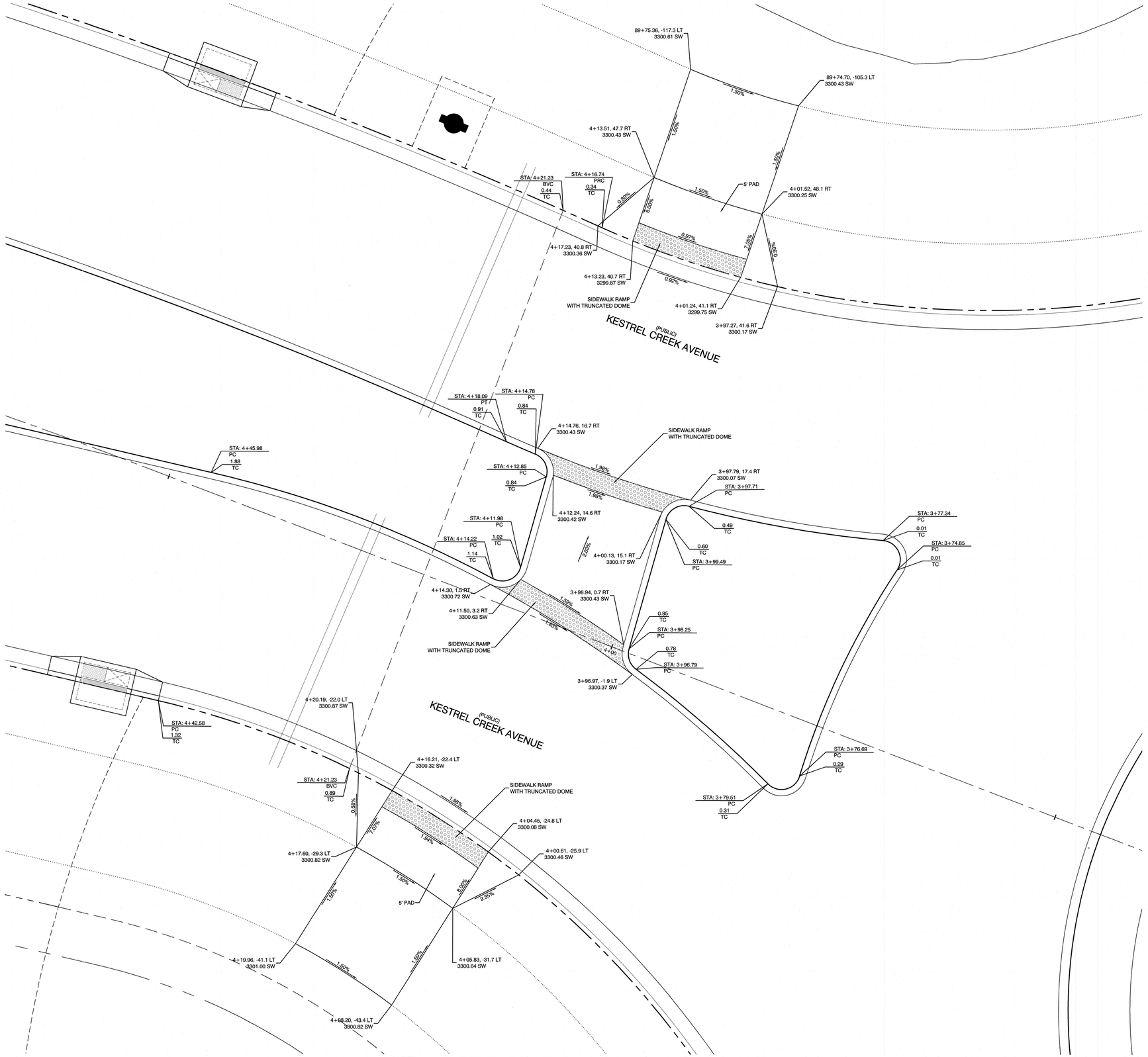

KETTLE BEND ROAD MEDIAN HANDICAP RAMPS

NTS

NORTH

GRAPHIC SCALE

-5 0 2.5 5 10

1" = 5'

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

DETAIL SHEET 3

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	06/04/2019	SCALE:	HORIZ. 1"=5'
DESIGNED BY: BCC	06/04/2019		VERT. N/A
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7981			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
DT3
37 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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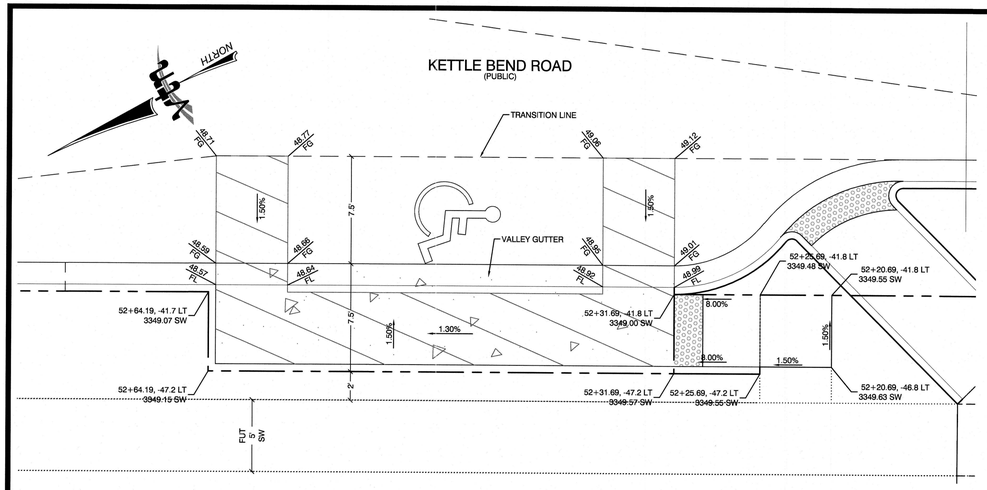


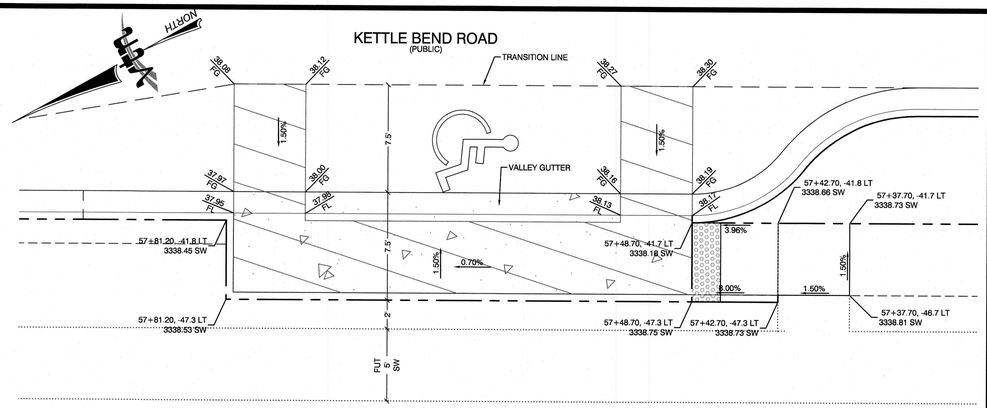
KETTLE BEND ROAD HANDICAP PARKING RAMP

NTS

GRAPHIC SCALE

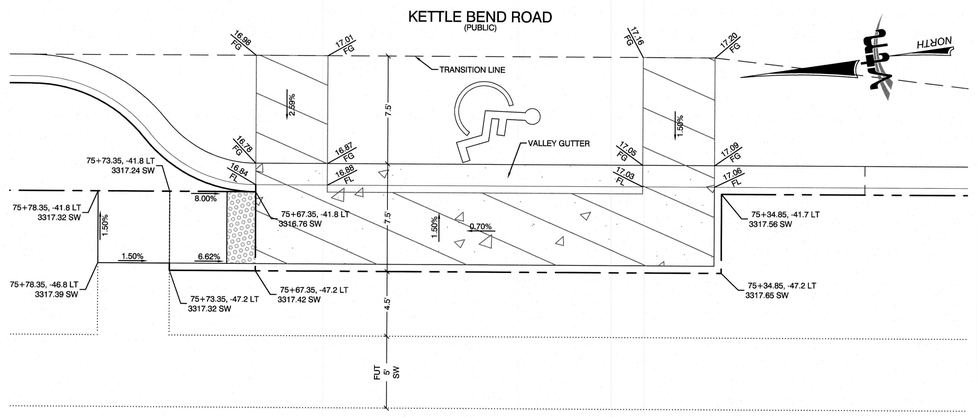
-5 0 2.5 5 10

1" = 5'



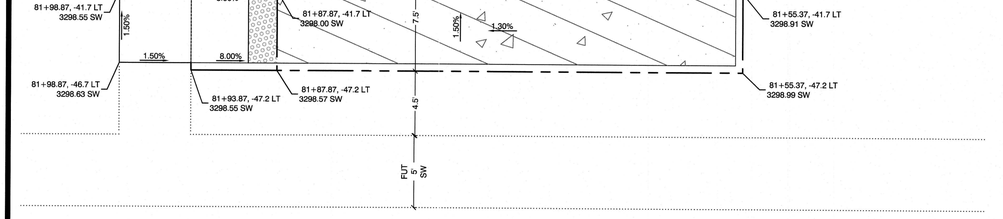
KETTLE BEND ROAD HANDICAP PARKING RAMP

NTS



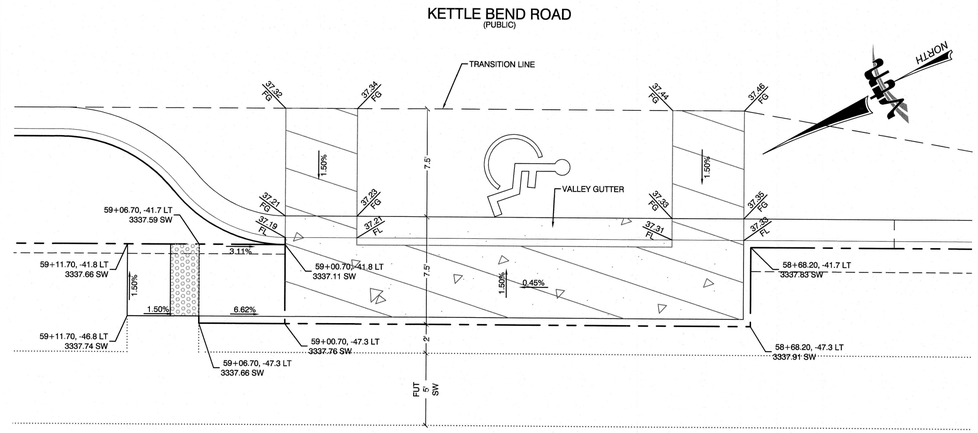
KETTLE BEND ROAD HANDICAP PARKING RAMP

NTS



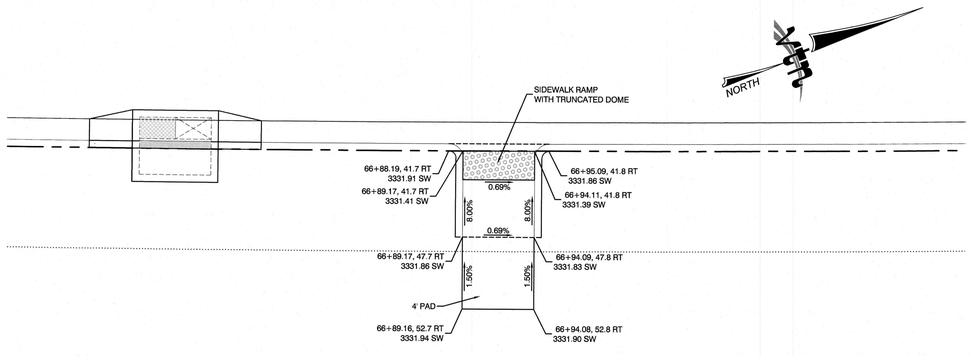
KETTLE BEND ROAD HANDICAP PARKING RAMP

NTS



KETTLE BEND ROAD HANDICAP PARKING RAMP

NTS



KETTLE BEND ROAD MEDIAN HANDICAP RAMP

NTS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10846 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

REV	DATE	BY	REVISION

DETAIL SHEET 4

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE:	
BCC 09/11/2019	BCC 09/11/2019	WJM 08/28/2020	2861	1"=5'	HORIZ.
				N/A	VERT.

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15745

2020-08-31

SHEET
DT4
38 OF 107 SHEETS

DRAWING NO.
L20-01282
107/9448

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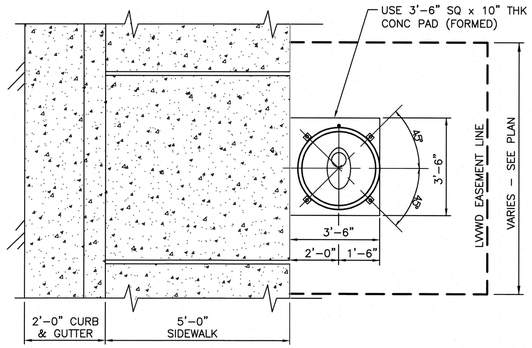
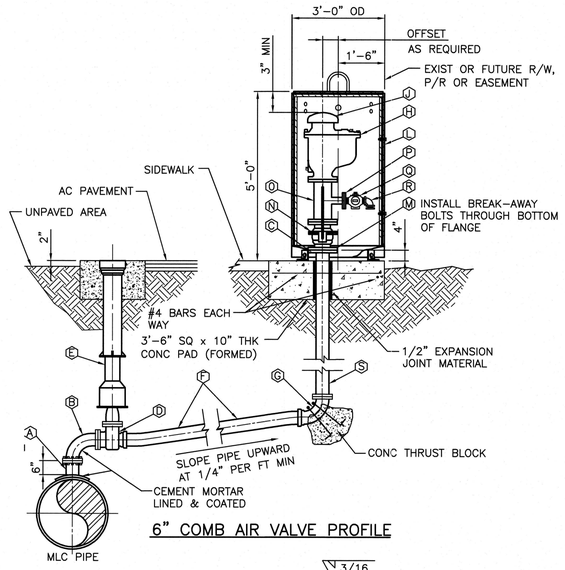


PLAN VIEW

NOTES

IN IMPROVED AREAS CONTRACTOR TO REPLACE FULL SIDEWALK PANEL.

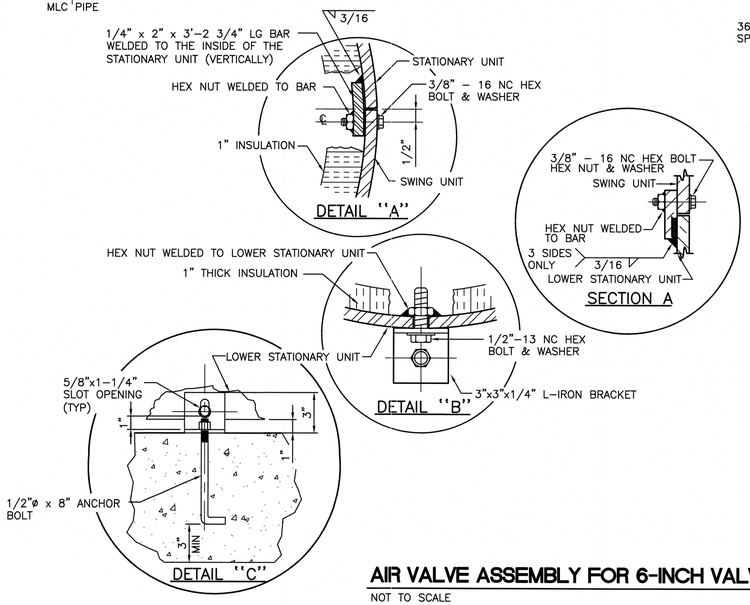
IN UNIMPROVED AREAS CONTRACTOR TO CONSTRUCT FORMED 3'–6" SQ x 10" THICK CONCRETE SLAB.

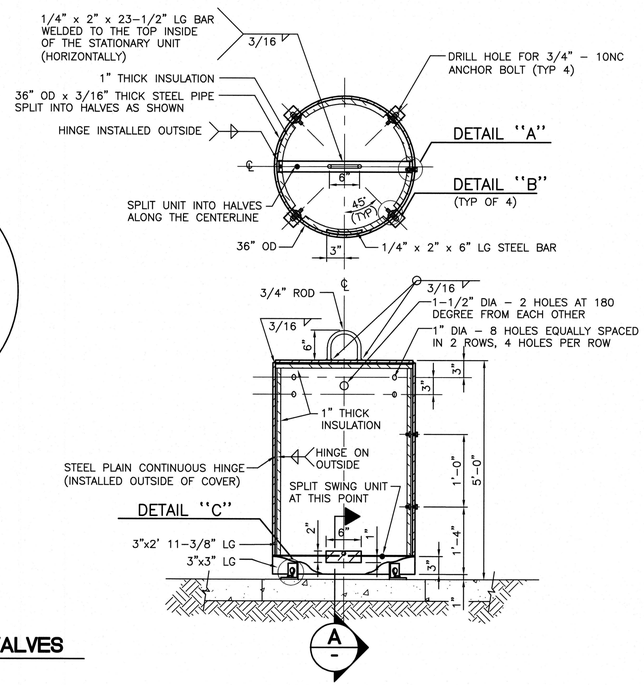


6" COMB AIR VALVE PROFILE

LEGEND

- Ⓐ 6" FLG STL OUTLET FOR MLC STL PIPE, FLG TEE FOR DIP
- Ⓑ 6"– 90° FLG DUCTILE IRON BEND
- Ⓒ 6" DUCTILE IRON FLANGE ADAPTOR
- Ⓓ 6" FLG x PO OR FLG x MJ GATE VALVE W/2" OPERATING NUT
- Ⓔ VALVE BOX & COVER
- Ⓕ 6" DUCTILE IRON PC350 OR 6" PVC CL150 DR18 PIPE
- Ⓖ 6" – 90° FLG x PO OR FLG x MJ CI BEND
- Ⓗ 6" AIR VALVE, FLANGED INLET
- Ⓙ 6" MUSHROOM VENT CAP WITH #22/24 STAINLESS STEEL MESH SCREEN
- Ⓛ 3'–0" OD x 4'–6" HIGH STEEL COVER
- Ⓜ 5/8"–11NC BREAK–AWAY ZINC PLATED HEX HD BOLT, HEX NUT AND LOCKWASHER
- Ⓝ 6" BALL VALVE – QUARTER TURN
- Ⓞ 6" X 2" FLG TEE
- Ⓟ 2" THREADED FLANGE
- Ⓠ 2" CORP STOP, THREADED BOTH ENDS W/ THREADED NIPPLES
- Ⓡ 2" 90° ELBOW, THREADED W/ THREADED CAP
- Ⓢ 6" DUCTILE IRON PC350





AIR VALVE ASSEMBLY FOR 6-INCH VALVES

NOT TO SCALE

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2697 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

DETAIL SHEET 5

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	SCALE:	HORIZ:
BCC 08/28/2020	BCC 08/28/2020	WJM 08/28/2020	N/A	N/A
		PROJECT NO: 7981		VERT: N/A

PROFESSIONAL ENGINEER – STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
DT5
39 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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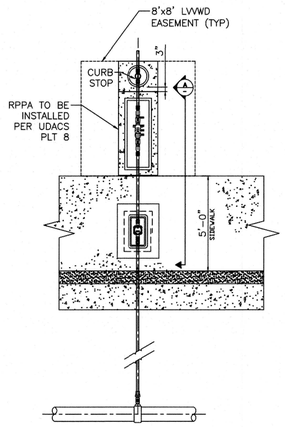
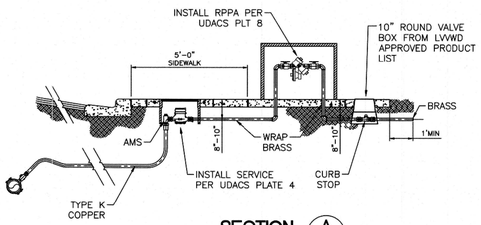
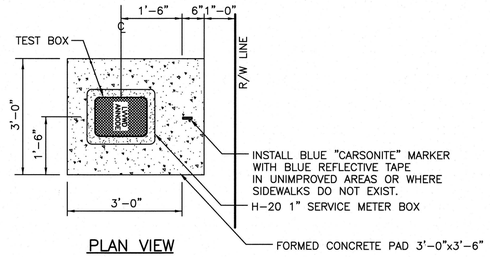




SECTION A

METER AND RPPA PER UDACS PLATE NO. 4 AND 8 WITH CURB STOP



PLAN VIEW

GENERAL NOTES

1. ALL TEST LEADS INSIDE THE TEST BOX SHALL BE BUNDLED TOGETHER AT 8 INCH INTERVALS WITH NYLON CABLE TIES. ALL TEST STATION LEADS SHALL BE PROVIDED WITH SUFFICIENT SLACK SO THAT THE TEST BOARD MAY BE EXTENDED A MINIMUM OF 4 FEET ABOVE THE TEST BOX.
2. ALL TEST LEADS AND ANODE LEADS (WIRE INSULATION) ARE COLOR CODED

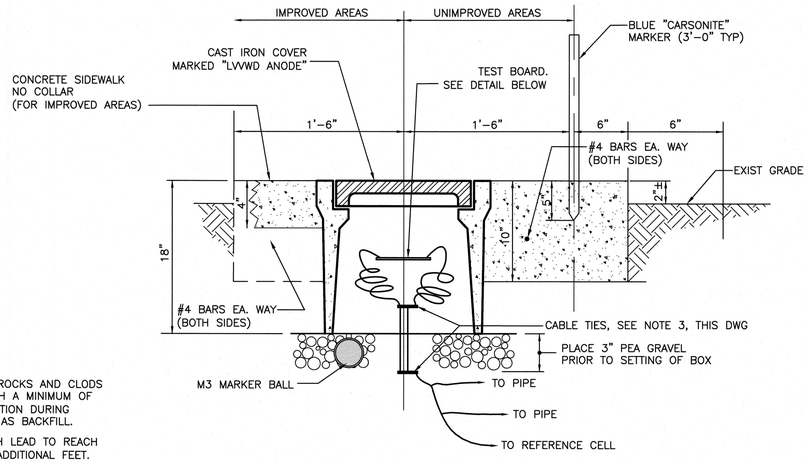
TEST STATION LEADS FROM PIPE	– WHITE
REFERENCE CELL TEST LEADS	– RED
CASING	– BLACK

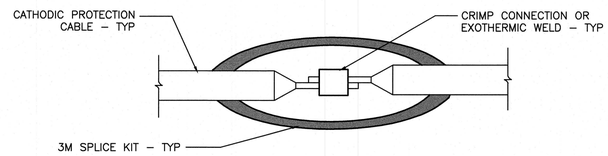
ALL TEST LEADS SHALL BE COLOR CODED WITH COLORED WIRE INSULATION (TYP).

** WHEN APPROVED BY DISTRICT ENGINEER COLOR CODED "TAPING" IS PERMITTED ** IN LIEU OF COLOR CODED WIRES AND SHALL BE INSTALLED AS FOLLOWS:

A. ALL WIRE INSULATION SHALL BE ONE UNIFORM COLOR.
B. ALL COLOR CODED TAPE SHALL FOLLOW THE ABOVE COLOR TABLE.
C. TAPE SHALL BE INSTALLED AT EACH END AND 4 FOOT INTERVALS.

3. ALL TEST LEADS SHALL BE CONNECTED TO THE BRASS BOLTS ON THE TEST BOARD WITH SOLDER–LESS SCREW TIGHT COPPER LOG CONNECTORS OR PRESSURE TERMINAL CONNECTORS.
4. ALL TEST LEADS SHALL HAVE A MINIMUM OF 4 FEET OF SLACK NEAR THE PIPE JOINT TO PREVENT DAMAGE DURING THE BACKFILL OPERATION.
5. FOR WIRE SPLICE SEE INLINE SPLICE DETAIL BELOW.





INLINE SPLICE DETAIL

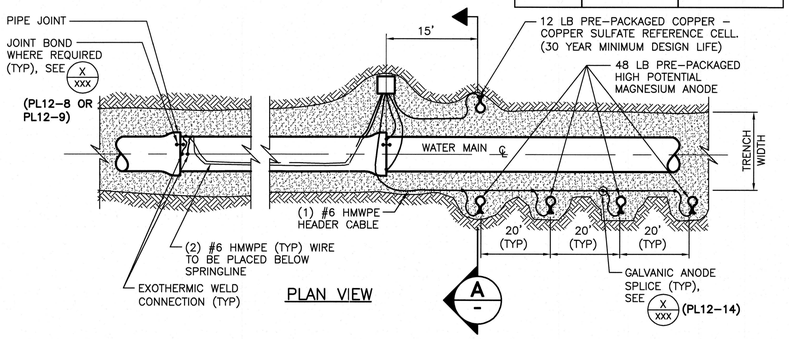
NOT TO SCALE

SECTION A

NOTES:

1. USE ONLY NATIVE SOIL FREE OF ROCKS AND CLODS FOR BACKFILL AROUND CELLS WITH A MINIMUM OF (10) TEN GALS OF WATER SATURATION DURING INSTALLATION. DO NOT USE SAND AS BACKFILL.
2. SUPPLY ENOUGH WIRE FROM EACH LEAD TO REACH FULL R/W WIDTH PLUS FIVE (5) ADDITIONAL FEET. COIL WIRE IN BOTTOM OF BOX.
3. TEST STATION PLACEMENT TO BE PERPENDICULAR TO PIPE, AT INTERSECTIONS, TEST STATION WIRES TO BE PLACED PARALLEL TO PIPE FOR PLACEMENT PERPENDICULAR TO PIPE AFTER ROAD EASEMENT RADIUS.

APPROXIMATE PIPELINE STATIONING OF TEST STATIONS		
DWG NO	STATION	ADDITIONAL WIRE
UT5	70+73.27	9.3'
UT7	80+58.27	9.3'
UT10	88+08.71	10.1'
UT13	8+51.65	9.1'



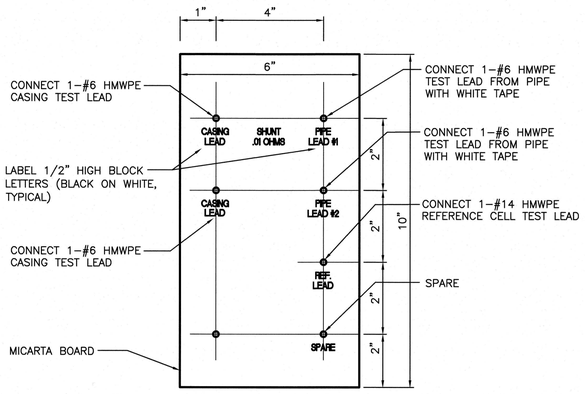
PLAN VIEW

TEST STATION INSTALLATION WITH PRE-PACKAGED ANODES

NOT TO SCALE

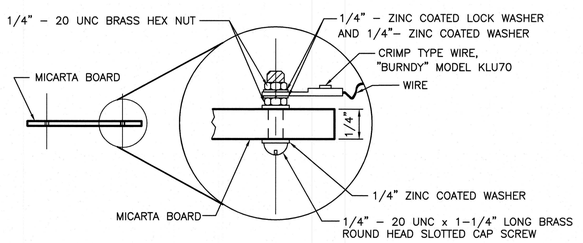
CATHODIC PROTECTION TEST STATION BOX + MARKER

NOT TO SCALE



STANDARD TEST BOARD INSTALLATION

NOT TO SCALE



TEST BOARD DETAIL - TYPICAL

NOT TO SCALE

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
(SUCCESSOR BY CONVERSION TO HOWARD HUGHES CORPORATION)
LAS VEGAS, NEVADA 89135 – SUITE 150
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5146
PH. (702) 873-7590 FAX (702) 362-2697 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

REV	DATE	BY	REVISION

DETAIL SHEET 6

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 08/28/2020
DESIGNED BY: BCC 08/28/2020
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7861
SCALE: N/A HORIZ. N/A VERT.

WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15743
PROFESSIONAL ENGINEER – STATE OF NEVADA
2020-08-31

SHEET
DT6
40 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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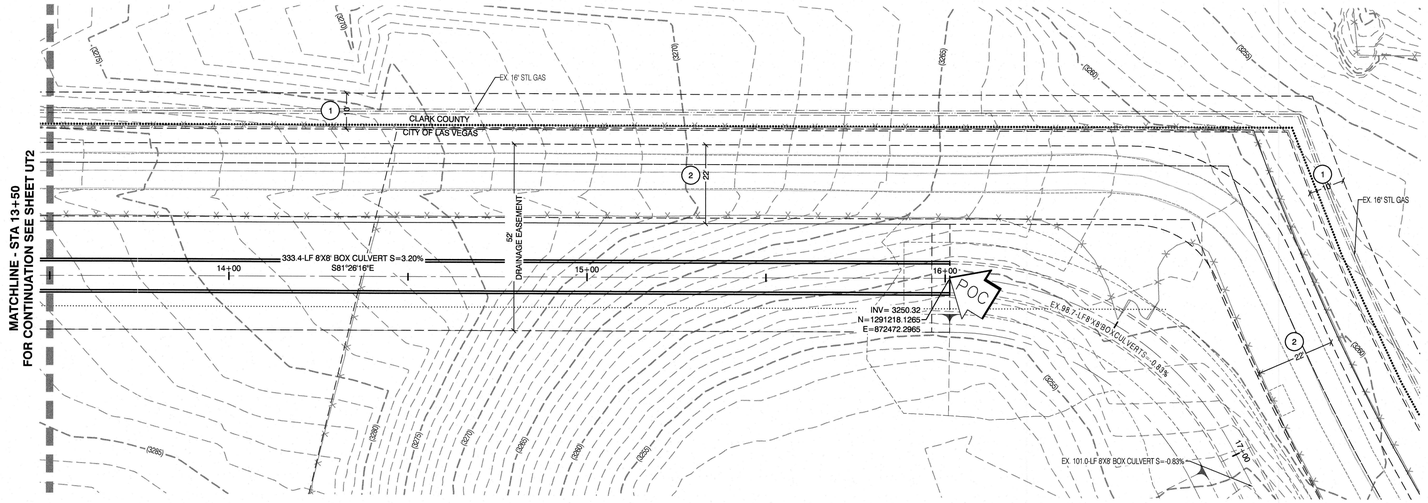
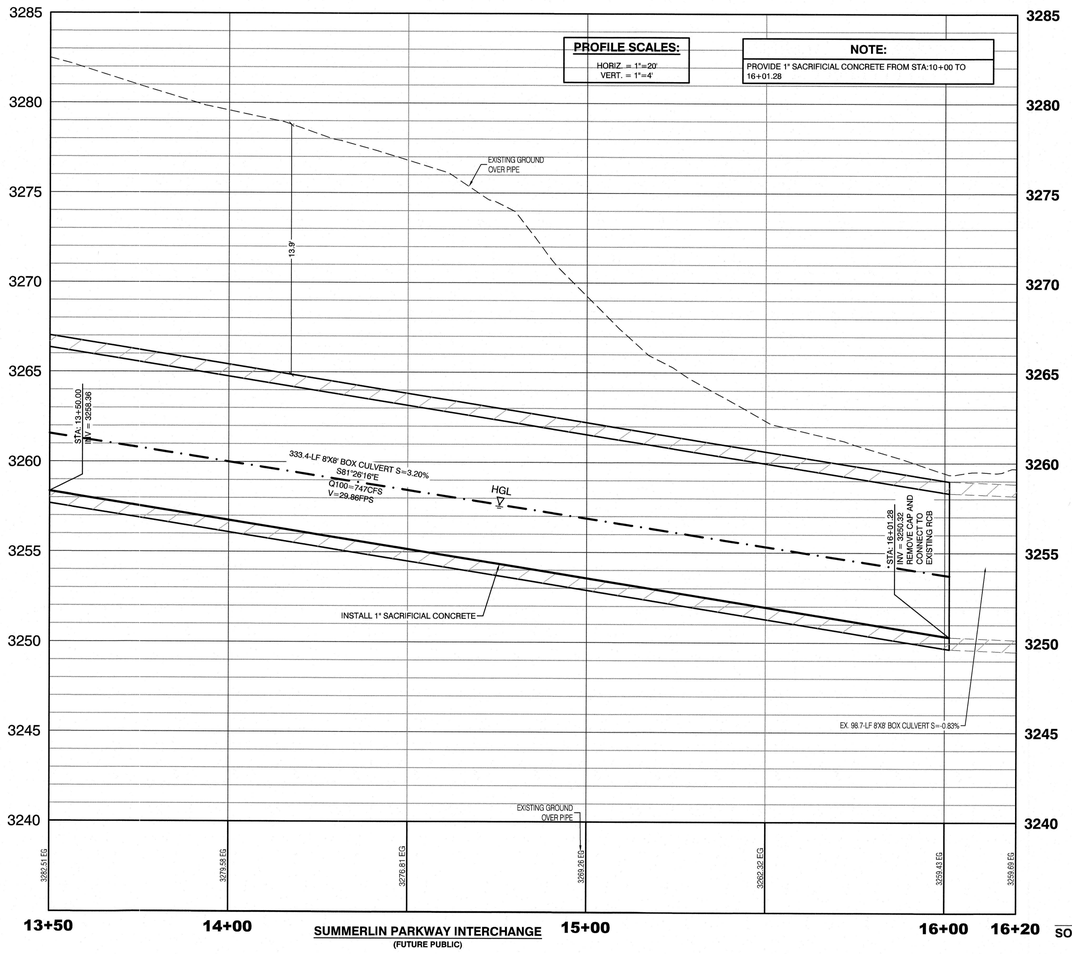
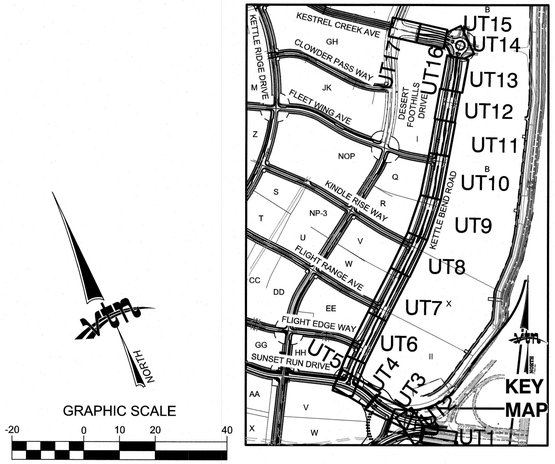


SUMMERLIN PARKWAY INTERCHANGE
(FUTURE PUBLIC)



SUMMERLIN PARKWAY INTERCHANGE
(FUTURE PUBLIC)



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR NOTE:

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 TRIAL SHUTDOWN.

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS PER UDACS PLATE No. 15 AND 19.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

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CAUTION HIGH PRESSURE GASLINE

CALL SOUTHWEST GAS AT 702-400-1789 FOR STANDBY WHEN EXCAVATING OVER OR NEAR HIGH PRESSURE GAS LINES.

EASEMENT REFERENCE LEGEND

(1)	10' GAS EASEMENT GRANTED TO SOUTHWEST GAS COMPANY PER OR: 19991103:0000824.
(4)	PEDESTRIAN TRAIL EASEMENT GRANTED TO CLARK COUNTY PER OR: 20060527:0005041.



Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS



CONSTRUCTION NOTES

		WATER	PUBLIC
(1W)		FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)	7 EA.
(2W)		12" GATE VALVE (PER UDACS PLATE 30 & 39)	14 EA.
(3W)		12" CAP & BLOW OFF (PER UDACS PLATE 36)	12 EA.
(4W)		24" CAP & BLOW OFF (PER UDACS PLATE 36)	1 EA.
(5W)		12"X12" TEE (PER UDACS PLATE 31)	3 EA.
(6W)		24"X12" TEE (PER UDACS PLATE 31)	6 EA.
(7W)		24" 5° BEND (PER UDACS PLATE 31)	10 EA.
(8W)		24" 11° BEND (PER UDACS PLATE 31)	5 EA.
(9W)		24" 22° BEND (PER UDACS PLATE 31)	9 EA.
(10W)		12" 45° BEND (PER UDACS PLATE 31)	1 EA.
(11W)		12" 5° BEND (PER UDACS PLATE 31)	1 EA.
(12W)		1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7	2 EA.
(13W)		24"X6" TEE (PER UDACS PLATE 31)	3 EA.
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17	84 LF.
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17	1,361 LF.
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17	276 LF.
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17	3,407 LF.
POC		WATER POINT OF CONNECTION	

CONSTRUCTION NOTES

		SEWER	PUBLIC
(S)		STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8	12 EA.
		8" C-900-16 SANITARY SEWER MAIN	296 LF.
		16" C-900-16 SANITARY SEWER MAIN	3,174 LF.
(SS)		SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.	8 EA.
POC		SEWER POINT OF CONNECTION	

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

WATER MAIN COVER NOTE:

ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

APPROVED FOR CONSTRUCTION

SOUTHWEST GAS CORPORATION SWG UID DATE

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:

REV	DATE	BY	REVISION

CITY OF LAS VEGAS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.LTNRW.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 1
16+20 TO 13+50

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

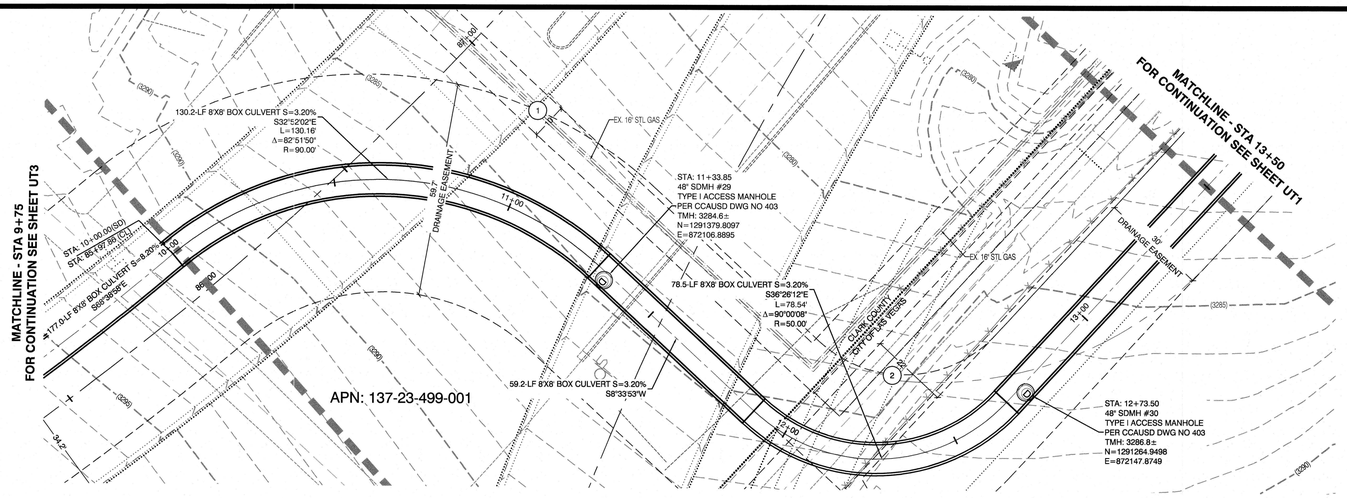
DRAWN BY: BCC 07/15/2020
DESIGNED BY: BCC 07/15/2020
CHECKED BY: WJM 07/15/2020
PROJECT NO: 7861
SCALE: HORIZ 1"=20' VERT 1"=4'

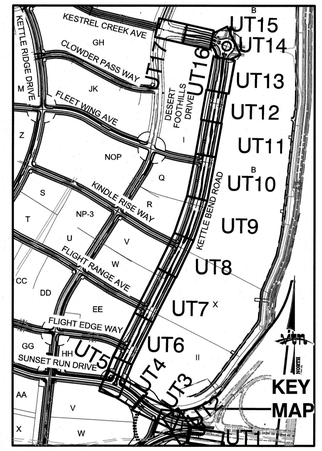
PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15745
2020-08-31

SHEET
UT1
41 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

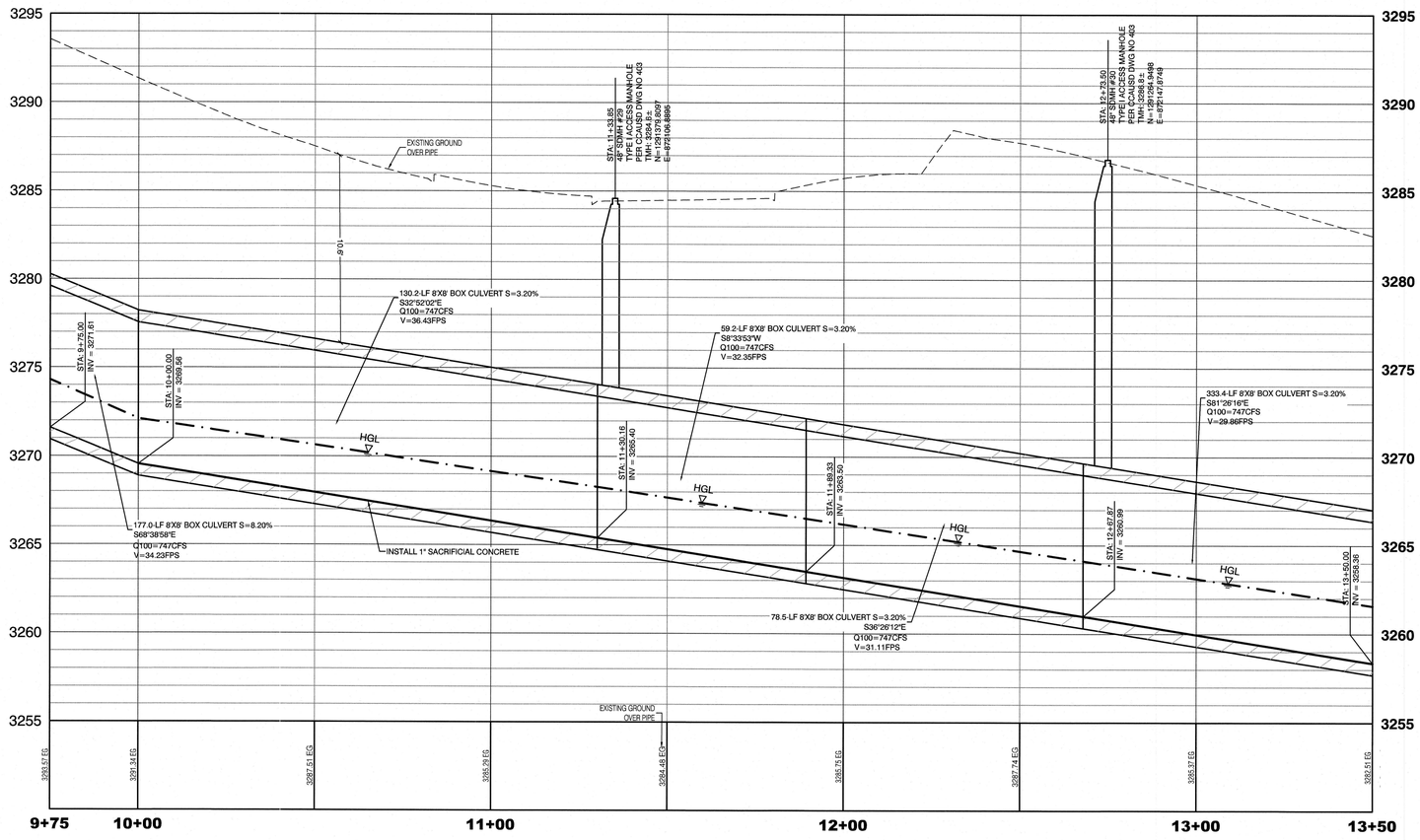
H:\7861\Kettle Bend Road\Sheet Set\7861-UT-3.dwg,8/31/2020 9:49 AM,bandonic





SUMMERLIN PARKWAY INTERCHANGE
(FUTURE PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



SUMMERLIN PARKWAY INTERCHANGE
(FUTURE PUBLIC)

NOTE:
PROVIDE 1" SACRIFICIAL CONCRETE FROM STA:10+00 TO 16+01.28

STORM DRAIN MANHOLE NOTE:
ALL STORM DRAIN MANHOLE RIMS SHOWN ON THESE PLANS ARE SET TO ROUGH GRADE ELEVATIONS. THE RIMS SHALL BE RAISED TO THE AC GRADE WHEN THE ROADWAYS ARE CONSTRUCTED.

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)
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CONTRACTOR TO INSTALL TEMPORARY SERVICE TO ENSURE PROPER SHUTDOWN IN THE EVENT NO OTHER APPURTENANCES ARE AVAILABLE.

NOTE:
5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE
INSTALL PIPELINE MARKER BALLS PER UDACS PLATE No. 15 AND 19.

FIRE HYDRANT MARKER NOTES
BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:
1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION
WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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UTILITY CROSSING NOTE:
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CONSTRUCTION NOTES

WATER

1W	⬢	FIRE HYDRANT ASSEMBLY; INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2W	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
3W	⊲	12" CAP & BLOW OFF (PER UDACS PLATE 36)
4W	⊲	24" CAP & BLOW OFF (PER UDACS PLATE 36)
5W	⊐	12"X12" TEE (PER UDACS PLATE 31)
6W	⊐	24"X12" TEE (PER UDACS PLATE 31)
7W	⌐	24" 5° BEND (PER UDACS PLATE 31)
8W	⌐	24" 11° BEND (PER UDACS PLATE 31)
9W	⌐	24" 22° BEND (PER UDACS PLATE 31)
10W	⌐	12" 45° BEND (PER UDACS PLATE 31)
11W	⌐	12" 5° BEND (PER UDACS PLATE 31)
12W	⊸	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13W	⊐	24"X6" TEE (PER UDACS PLATE 31)
	———	6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
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	POC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

	Ⓢ	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	———	8" C-900-16 SANITARY SEWER MAIN
	———	16" C-900-16 SANITARY SEWER MAIN
14S	⊏	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
	POC	SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:
WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

WATER MAIN COVER NOTE:
ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

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SOUTHWEST GAS CORPORATION SWG UID DATE

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:

APPROVED FOR CONSTRUCTION

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2897 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 2
13+50 TO 9+75

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	07/15/2020	SCALE:	1"=20' HORIZ. 1"=4' VERT.
DESIGNED BY: BCC	07/15/2020		
CHECKED BY: WJM	07/15/2020		
PROJECT NO: 7981			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15145

2020-08-31

SHEET
UT2
42 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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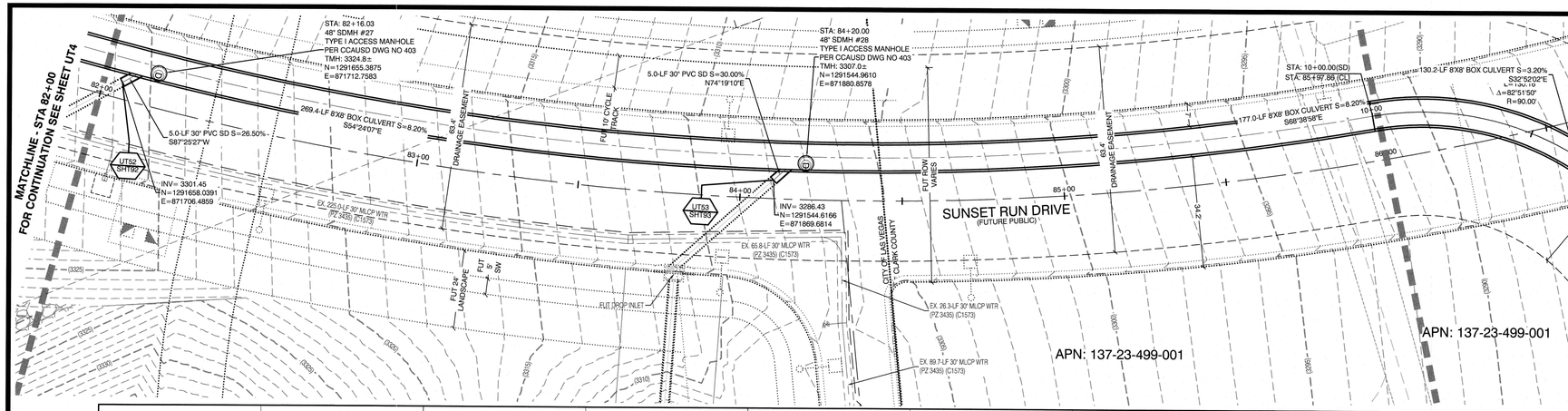

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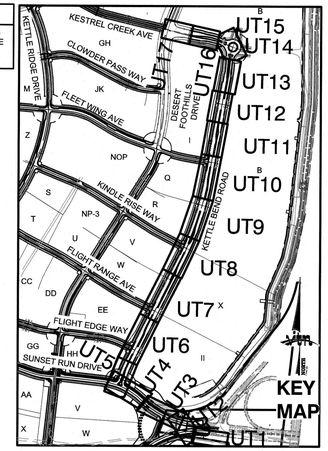

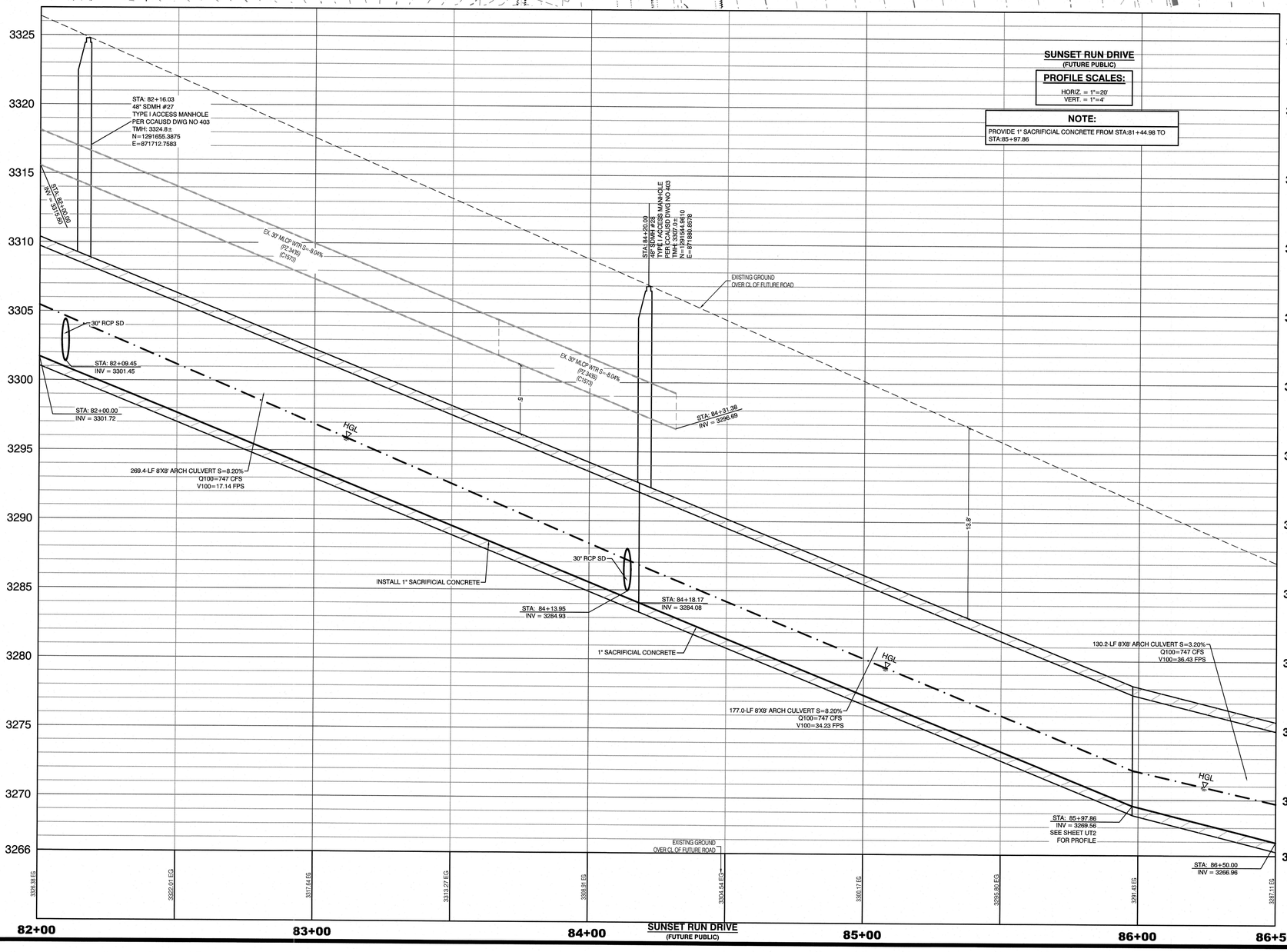

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

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WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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- (W) 12" CAP & BLOW OFF (PER UDACS PLATE 36)
- (W) 24" CAP & BLOW OFF (PER UDACS PLATE 36)
- (W) 12"X12" TEE (PER UDACS PLATE 31)
- (W) 24"X12" TEE (PER UDACS PLATE 31)
- (W) 24" 5° BEND (PER UDACS PLATE 31)
- (W) 24" 11° BEND (PER UDACS PLATE 31)
- (W) 24" 22° BEND (PER UDACS PLATE 31)
- (W) 12" 45° BEND (PER UDACS PLATE 31)
- (W) 12" 5° BEND (PER UDACS PLATE 31)
- (W) 1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
- (W) 24"X6" TEE (PER UDACS PLATE 31)
- 6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
- WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

- (S) STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
- 8" C-900-16 SANITARY SEWER MAIN
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- (SS) SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.







APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:

REV	DATE	BY	REVISION

CITY OF LAS VEGAS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
(702) 791-4000

2727 SOUTH RAINBOW BOULEVARD
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PH. (702) 873-7550 FAX (702) 382-2897 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 3
82+00 TO 86+00

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	SCALE:	HORIZ. / VERT.
BCC 07/15/2020	BCC 07/15/2020	W.M 07/15/2020	1"=20' 1"=4'	

PROJECT NO: 7861

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J MEYER
EXP: 12/31/21
CIVIL
NO. 15745
2020-08-31

SHEET
UT3
43 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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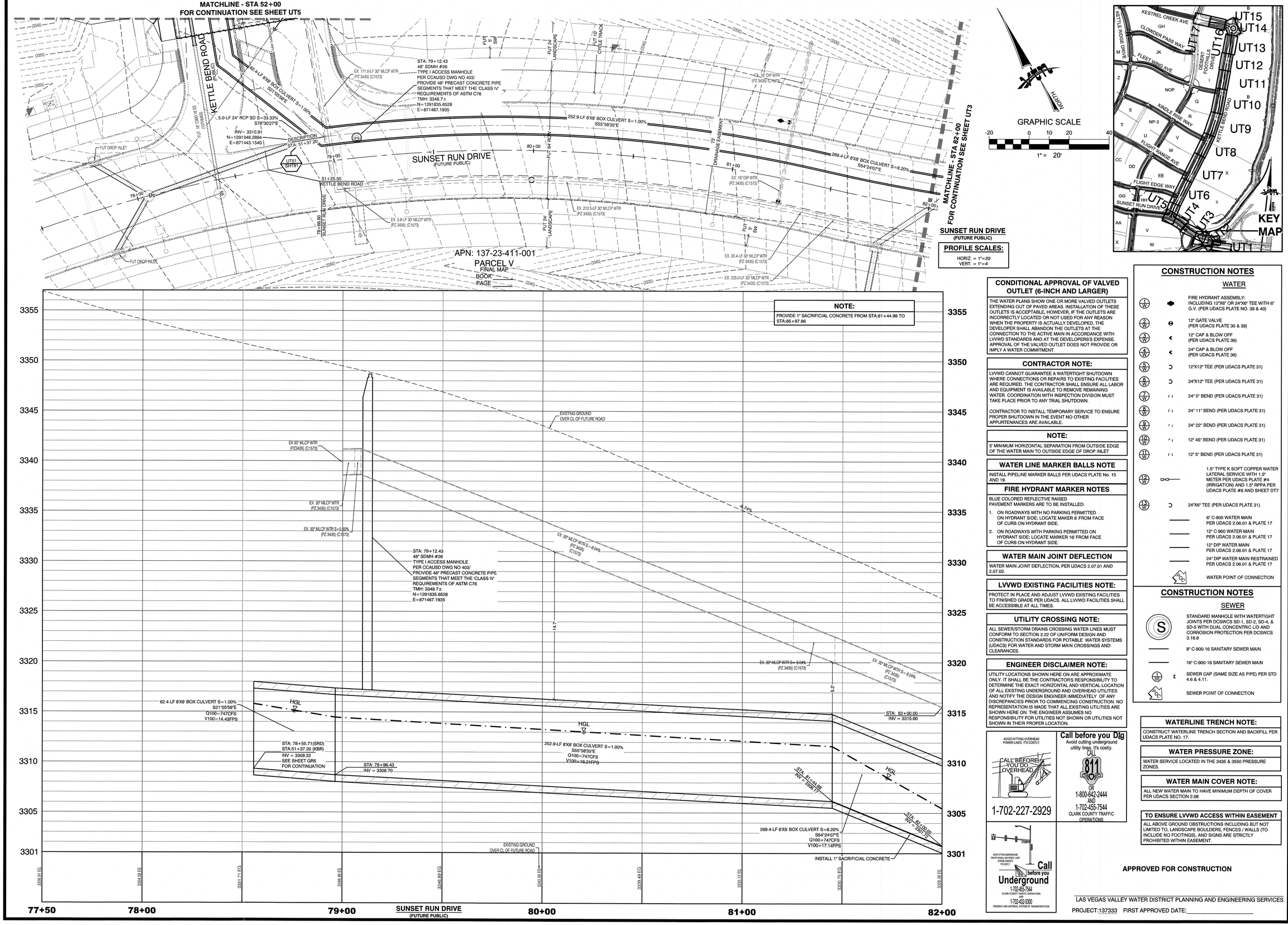

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR NOTE:

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 TRIAL SHUTDOWN.

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS PER UDACS PLATE No. 15 AND 19.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-642-2444 AND 1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

CONSTRUCTION NOTES

WATER

1W	⬢	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2W	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
3W	◂	12" CAP & BLOW OFF (PER UDACS PLATE 36)
4W	◂	24" CAP & BLOW OFF (PER UDACS PLATE 36)
5W	⊃	12"X12" TEE (PER UDACS PLATE 31)
6W	⊃	24"X12" TEE (PER UDACS PLATE 31)
7W	⌐	24" 5° BEND (PER UDACS PLATE 31)
8W	⌐	24" 11° BEND (PER UDACS PLATE 31)
9W	⌐	24" 22° BEND (PER UDACS PLATE 31)
10W	⌐	12" 45° BEND (PER UDACS PLATE 31)
11W	⌐	12" 5° BEND (PER UDACS PLATE 31)
12W	▭—	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13W	⊃	24"X6" TEE (PER UDACS PLATE 31)
	——	6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
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	——	12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	——	24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
PC	PC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S	Ⓢ	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	——	8" C-900-16 SANITARY SEWER MAIN
	——	16" C-900-16 SANITARY SEWER MAIN
8S	⊏	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
PC	PC	SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

WATER MAIN COVER NOTE:

ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 4
52+00 TO 82+00

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE: HORZ.	SCALE: VERT.
BCC	BCC	WJM	7861	1"=20'	1"=4'
07/15/2020	07/15/2020	07/15/2020			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT4
44 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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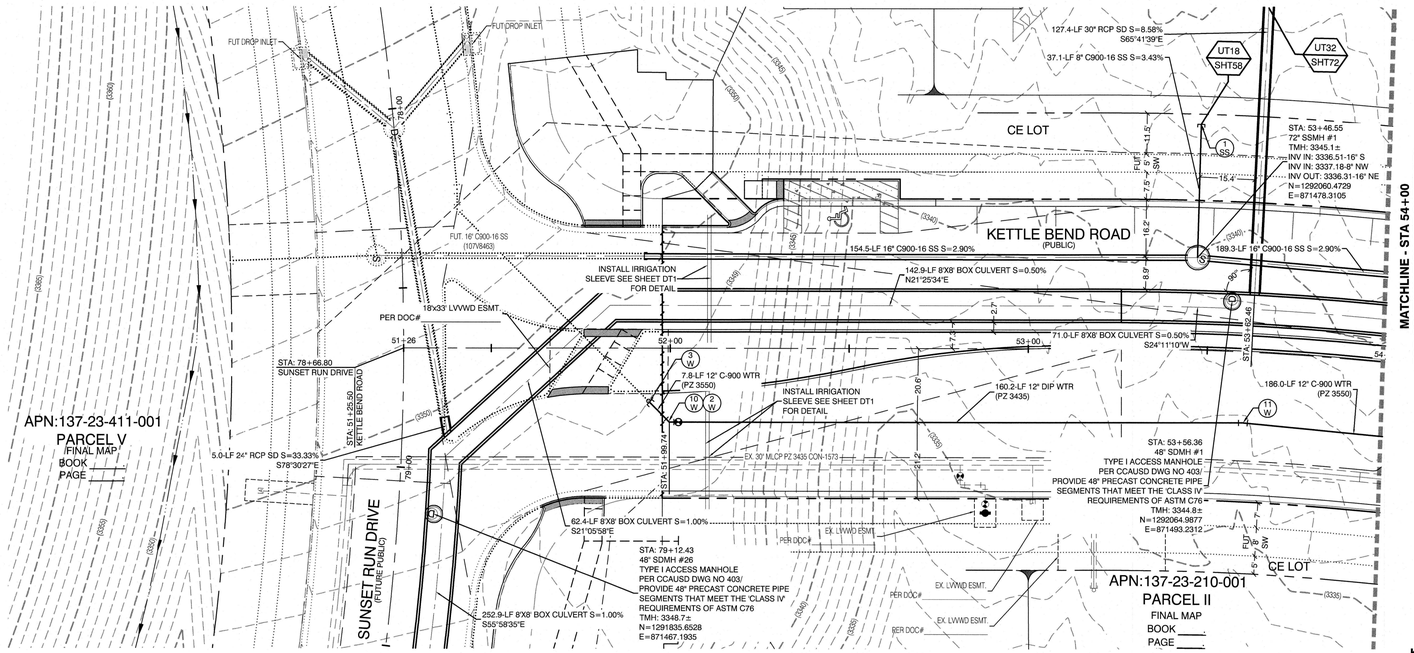

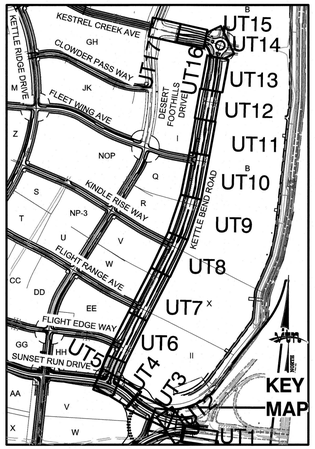

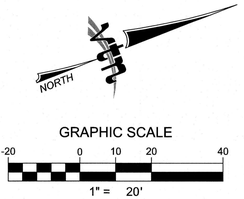

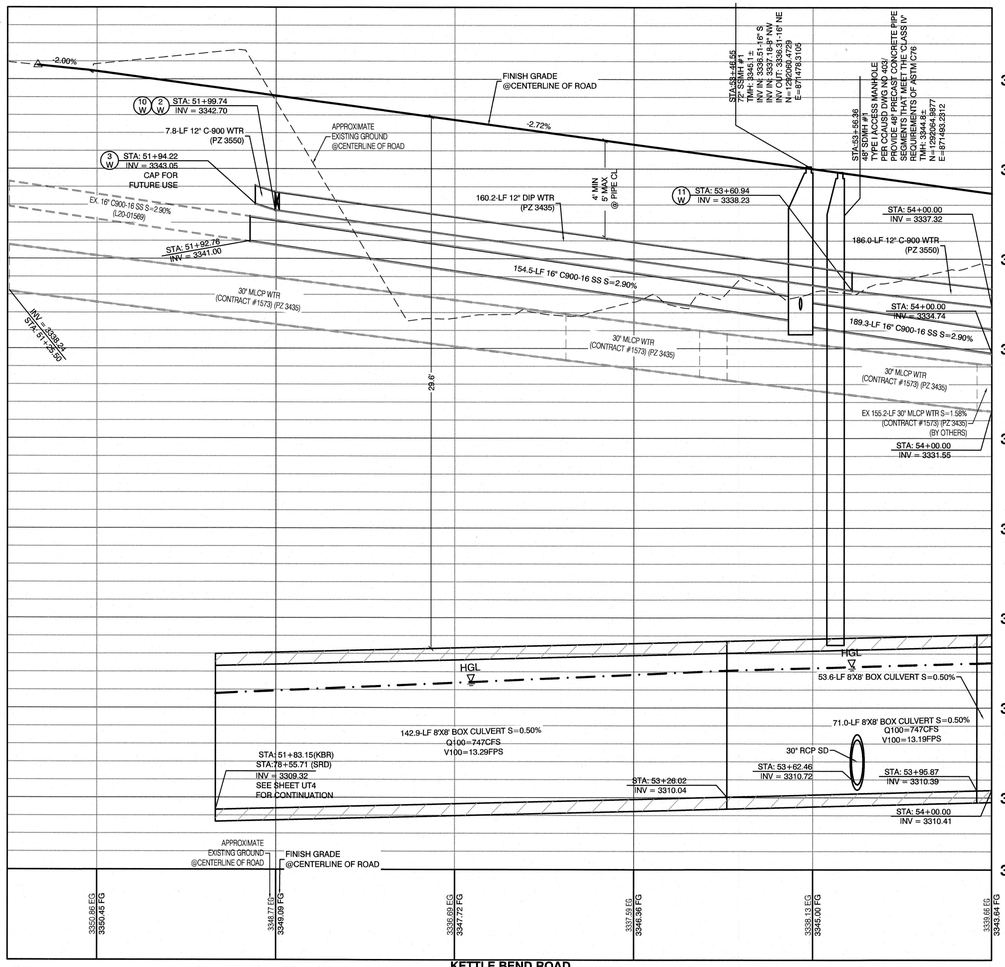

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5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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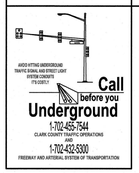

CONSTRUCTION NOTES

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9W	⌐	24" 22" BEND (PER UDACS PLATE 31)
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PC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

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PC		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2997 WEB WWW.JTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 5
79+50 TO 54+00

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE:
BCC	BCC	WJM	7981	HORIZ. 1"=20' VERT. 1"=4'
05/28/2019	05/28/2019	08/28/2020		

PROFESSIONAL ENGINEER - STATE OF NEVADA - No. 15745
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
2020-08-31

SHEET
UT5
45 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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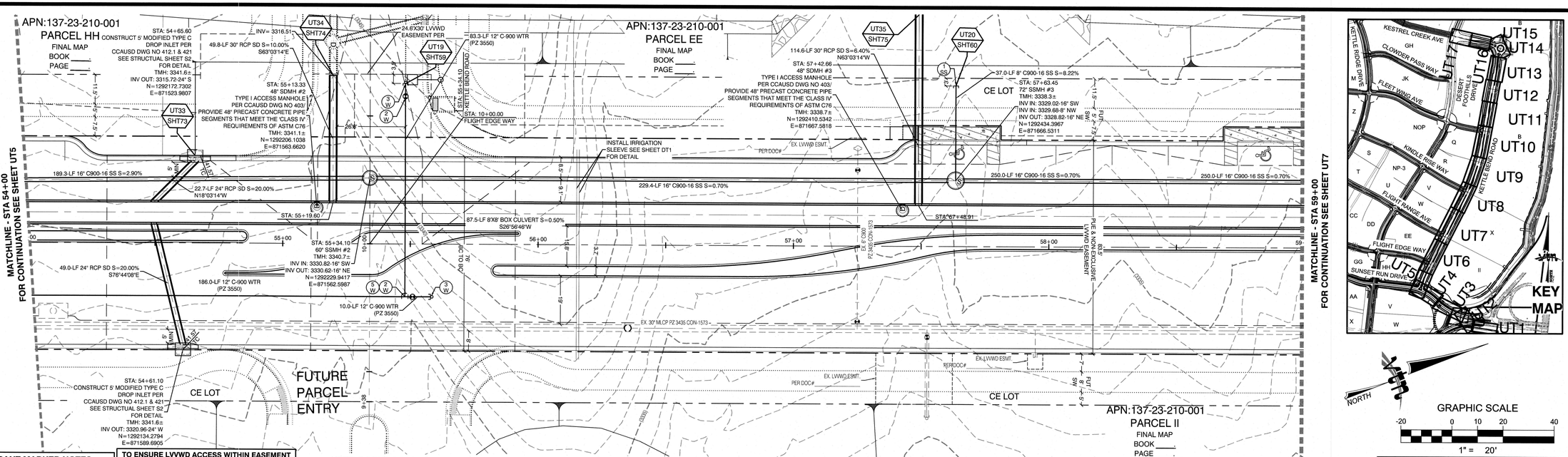

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NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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WATERLINE TRENCH NOTE:

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WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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UTILITY CROSSING NOTE:

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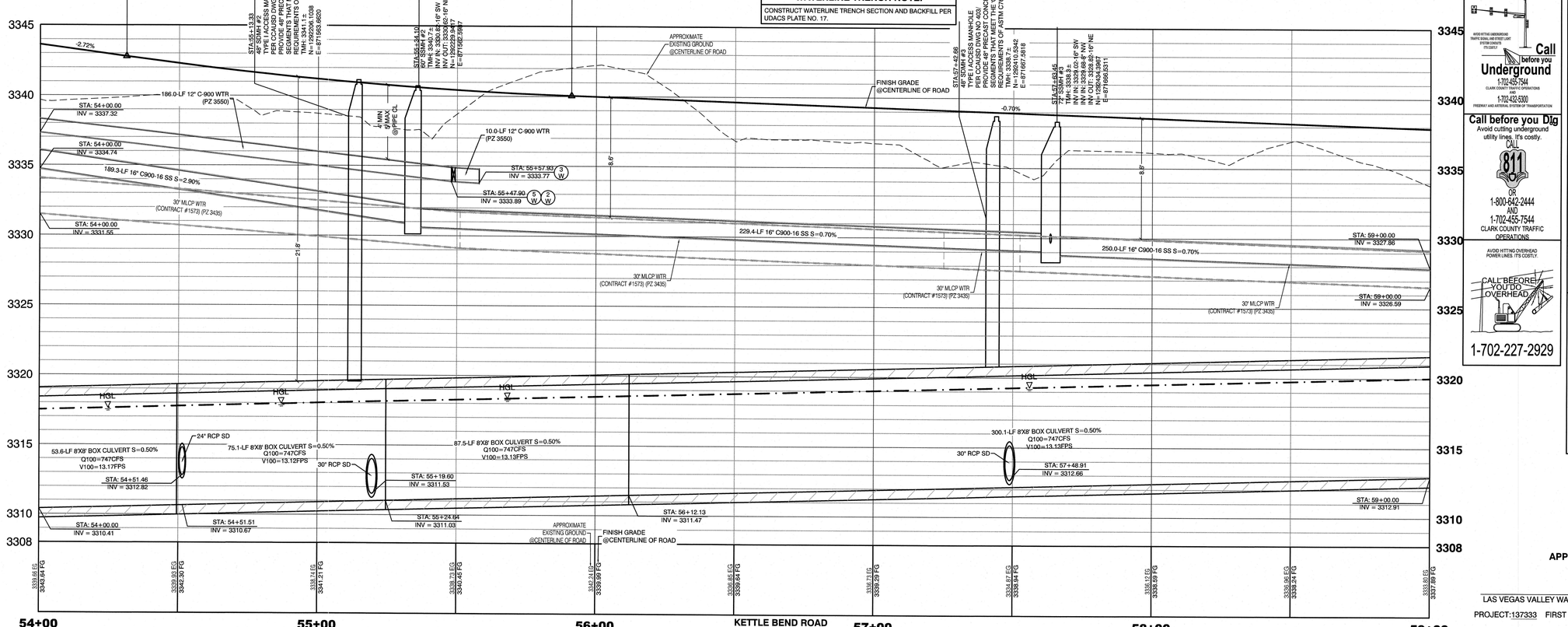

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:____

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HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4500

CITY OF LAS VEGAS

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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 6
54+00 TO 59+00

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC — 05/28/2019
DESIGNED BY: BCC — 05/28/2019
CHECKED BY: WJM — 08/28/2020
PROJECT NO: 7861
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15749
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SHEET
UT6
46 OF **107** SHEETS

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107V8449

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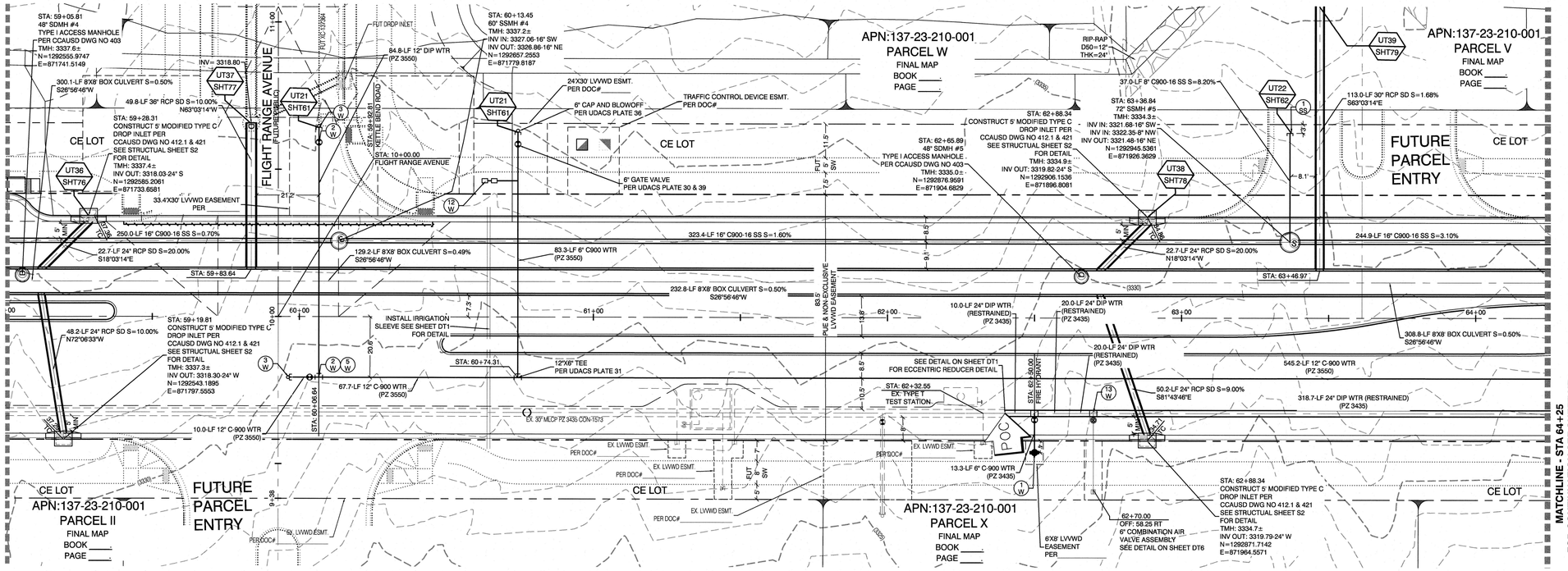

AVOID HITTING OVERHEAD POWER LINES. IT'S COSTLY.

CALL BEFORE YOU DO OVERHEAD

1-702-227-2929

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-642-2444
AND 1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND ITS SUPPORT SYSTEM CONDUITS
Call before you Dig Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
1-702-486-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEAFANCES.

LVVWD EXISTING FACILITIES NOTE:

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

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

ENGINEER DISLAIMER NOTE:

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KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:

CONTRACTOR NOTE:

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 TRIAL SHUTDOWN.

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

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

NOTE:

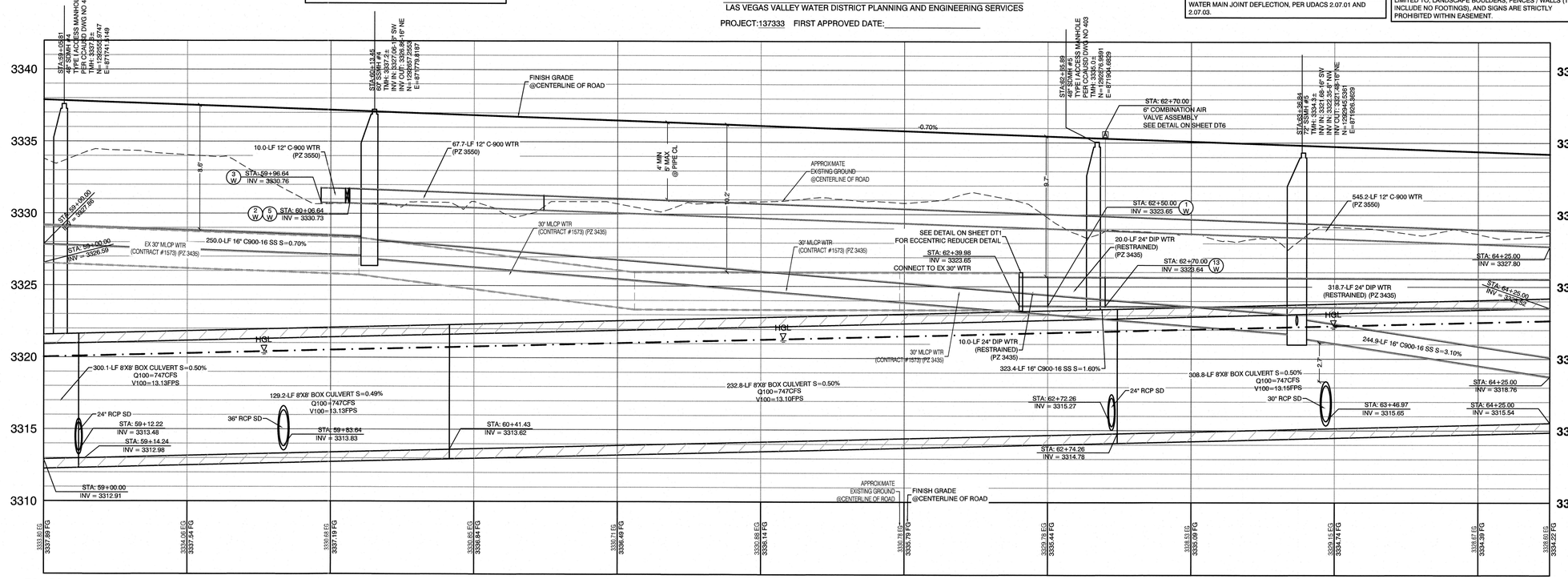
5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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



CONSTRUCTION NOTES

WATER

- (1 W) FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
- (2 W) 12" GATE VALVE (PER UDACS PLATE 30 & 39)
- (3 W) 12° CAP & BLOW OFF (PER UDACS PLATE 36)
- (4 W) 24° CAP & BLOW OFF (PER UDACS PLATE 36)
- (5 W) 12"X12" TEE (PER UDACS PLATE 31)
- (6 W) 24"X12" TEE (PER UDACS PLATE 31)
- (7 W) 24° 5° BEND (PER UDACS PLATE 31)
- (8 W) 24° 11° BEND (PER UDACS PLATE 31)
- (9 W) 24° 22° BEND (PER UDACS PLATE 31)
- (10 W) 12° 45° BEND (PER UDACS PLATE 31)
- (11 W) 12° 5° BEND (PER UDACS PLATE 31)
- (12 W) 1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
- (13 W) 24"X6" TEE (PER UDACS PLATE 31)
- 6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
- POC WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

- (S) STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
- 8" C-900-16 SANITARY SEWER MAIN
- 16" C-900-16 SANITARY SEWER MAIN
- (1 SS) SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
- POC SEWER POINT OF CONNECTION

DEPTH OF COVER DURING CONSTRUCTION:

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

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 873-7590 FAX (702) 362-2997 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 7
59+00 TO 64+25

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7861
SCALE: HORIZ. 1"=20' VERT. 1"=4'
06/28/2019
06/28/2019
06/28/2020

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT7
47 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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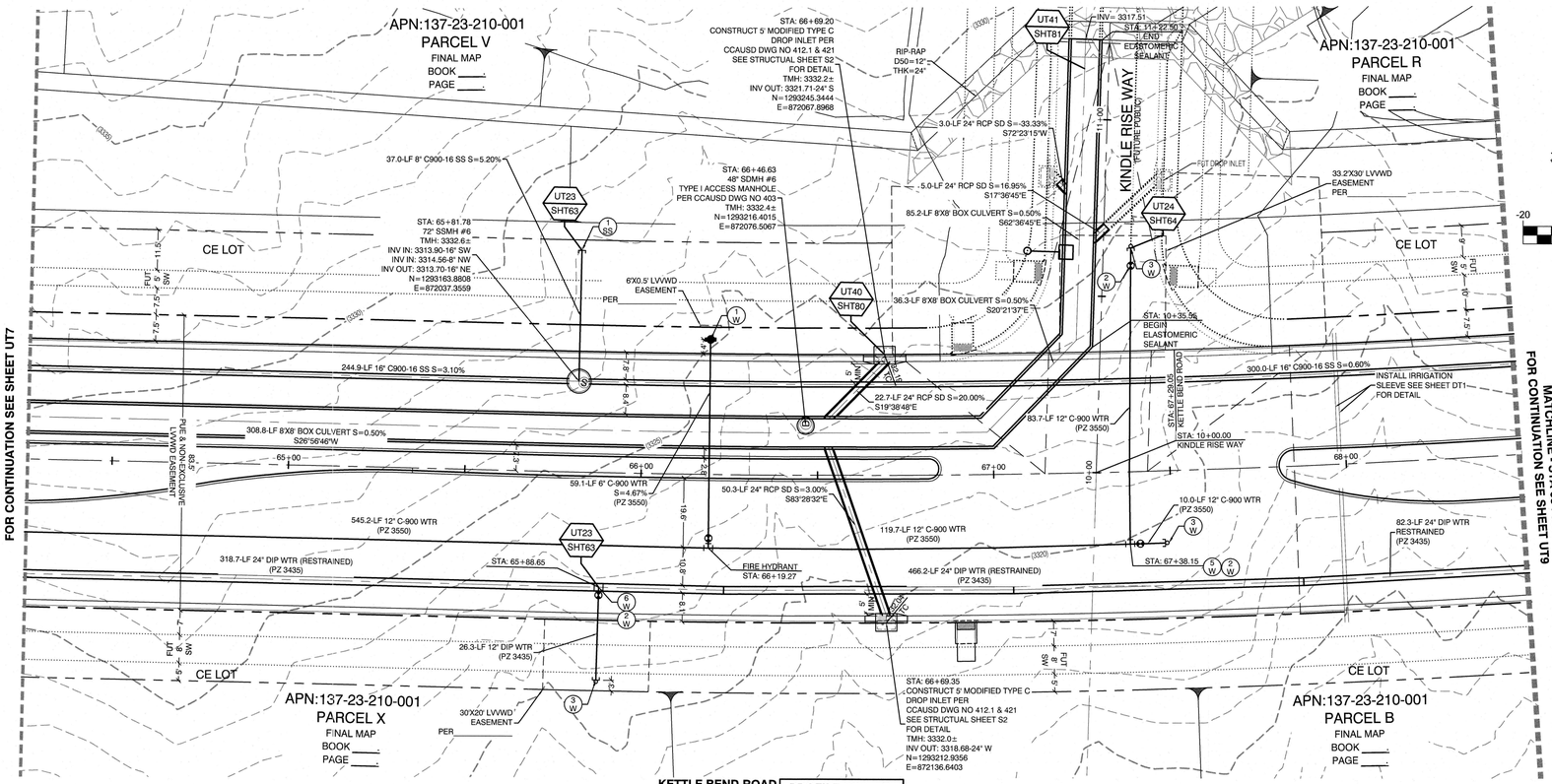

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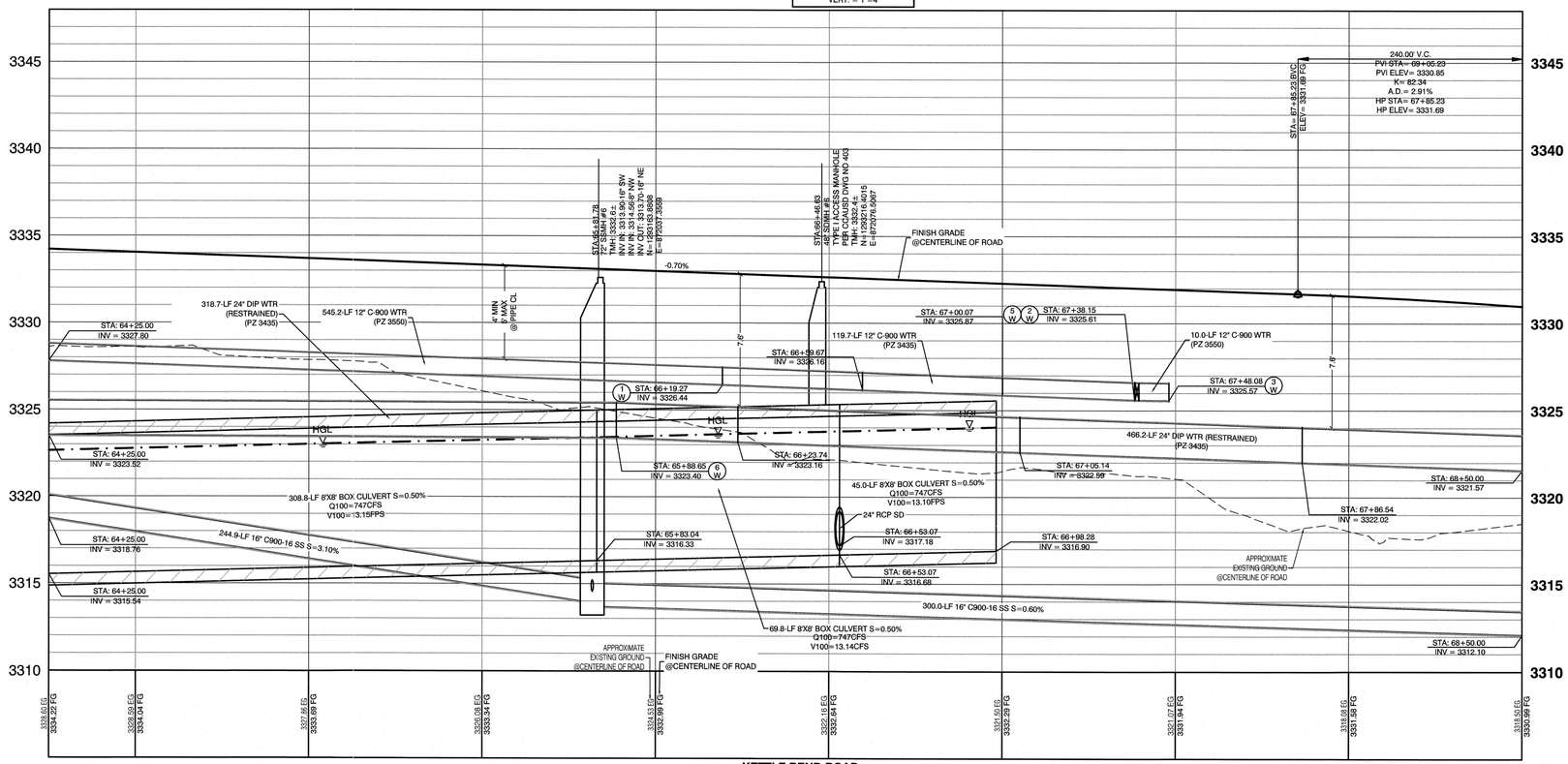

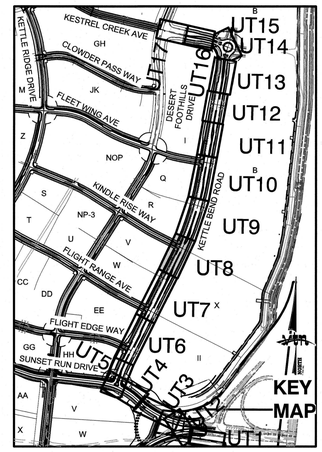

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3 W	‹	12" CAP & BLOW OFF (PER UDACS PLATE 36)
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7 W	⌐	24" 5° BEND (PER UDACS PLATE 31)
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	POC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

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WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DROP INLET SEPARATION NOTE

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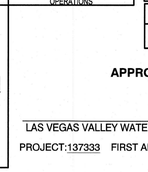
WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.





APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2997 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 8
64+25 TO 68+50

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	05/28/2019
DESIGNED BY: BCC	05/28/2019
CHECKED BY: WJM	08/28/2020
PROJECT NO: 7891	SCALE: HORZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
CIVIL
EXP: 12/31/21
No. 15745
2020-08-31

SHEET
UT8
48 OF **107** SHEETS

DRAWING NO.
L20-01282
107V9449

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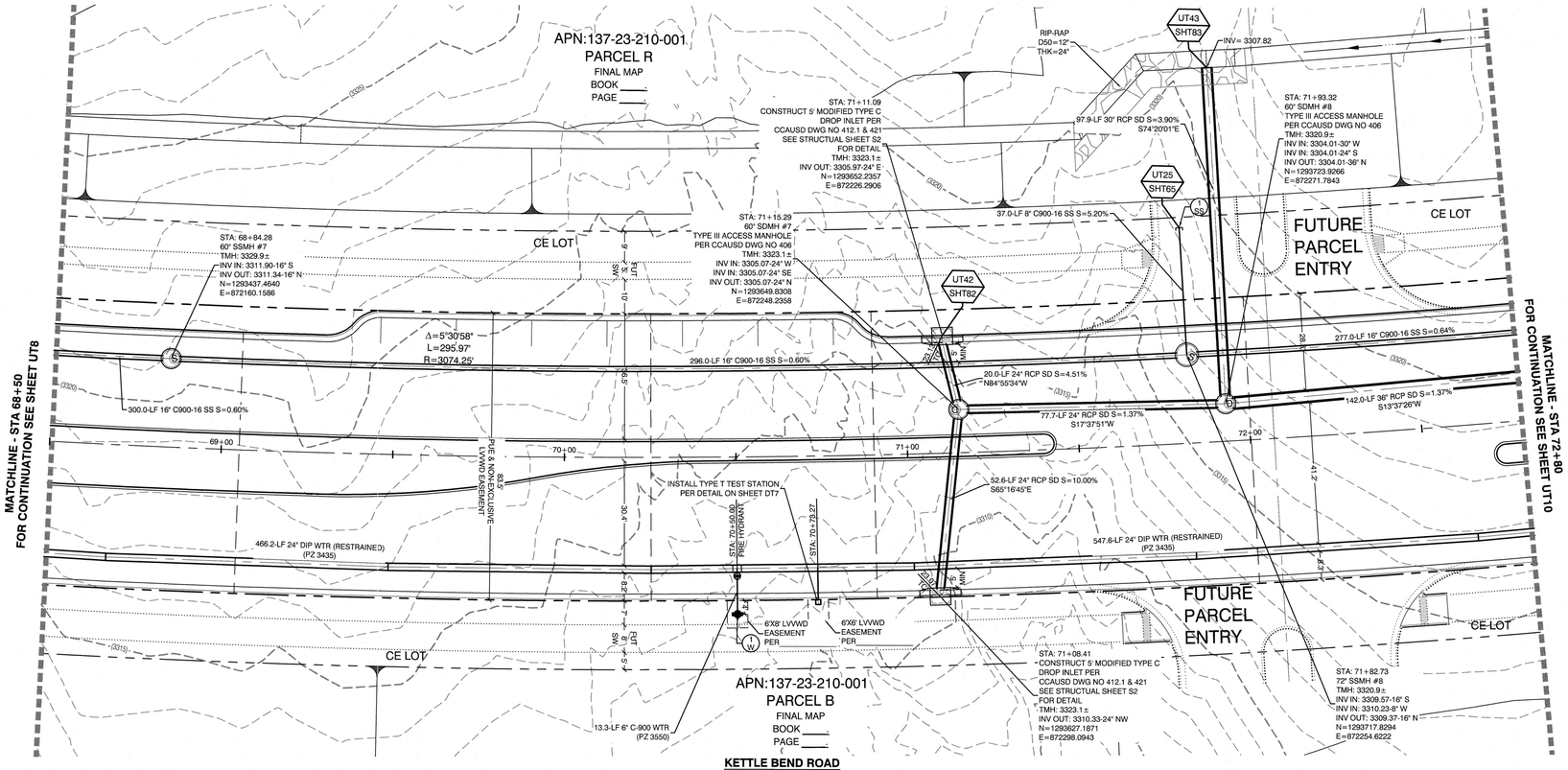

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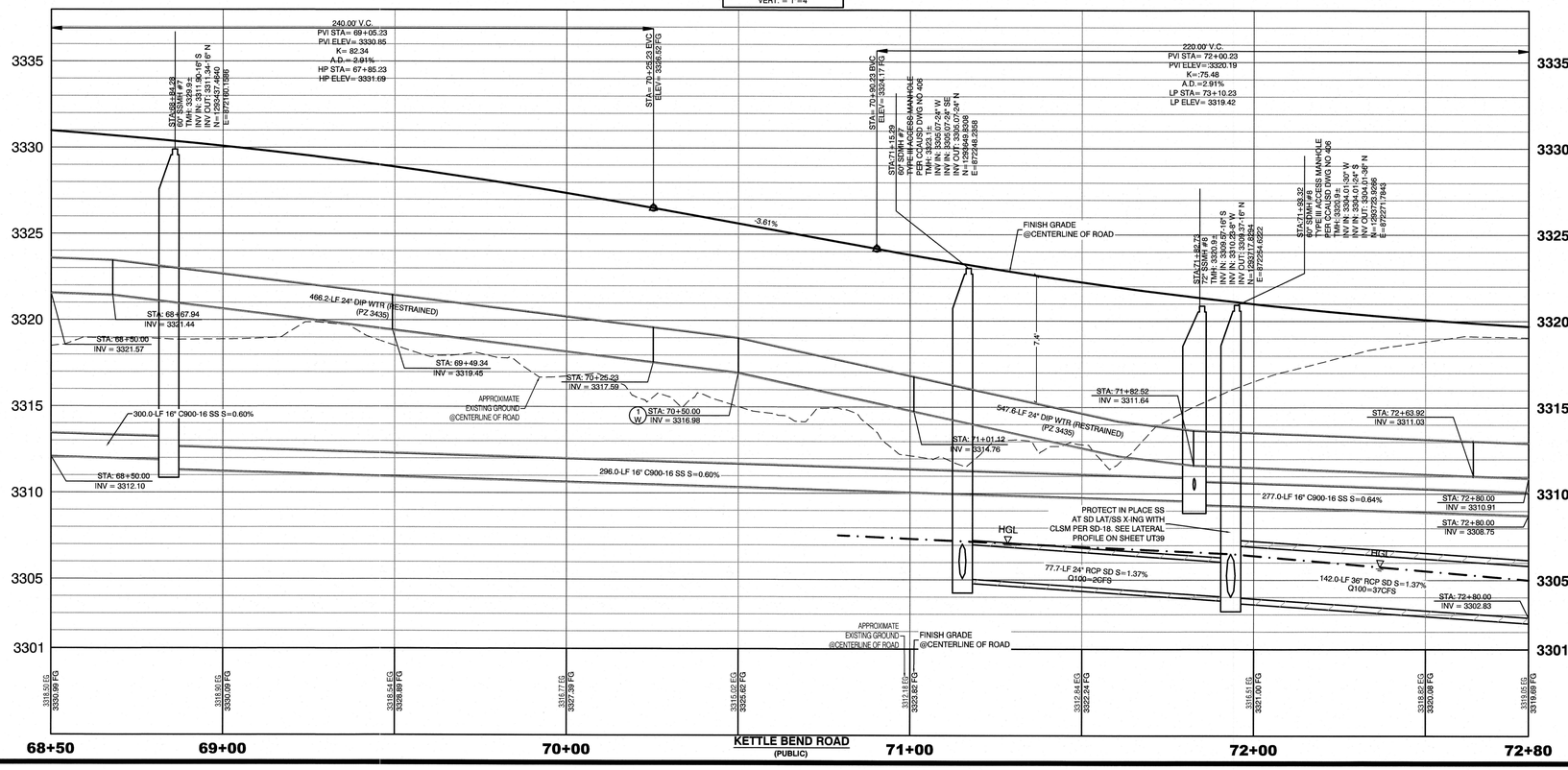



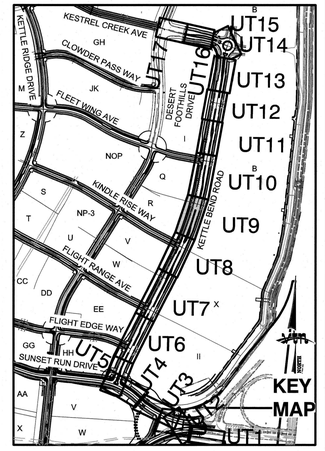

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INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

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BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

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WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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1-702-227-2929

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL
811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS



CONSTRUCTION NOTES

WATER

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WPOC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

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SPOC		SEWER POINT OF CONNECTION

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 9
68+50 TO 72+80

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 06/28/2019
DESIGNED BY: BCC 06/28/2019
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7801
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT9
49 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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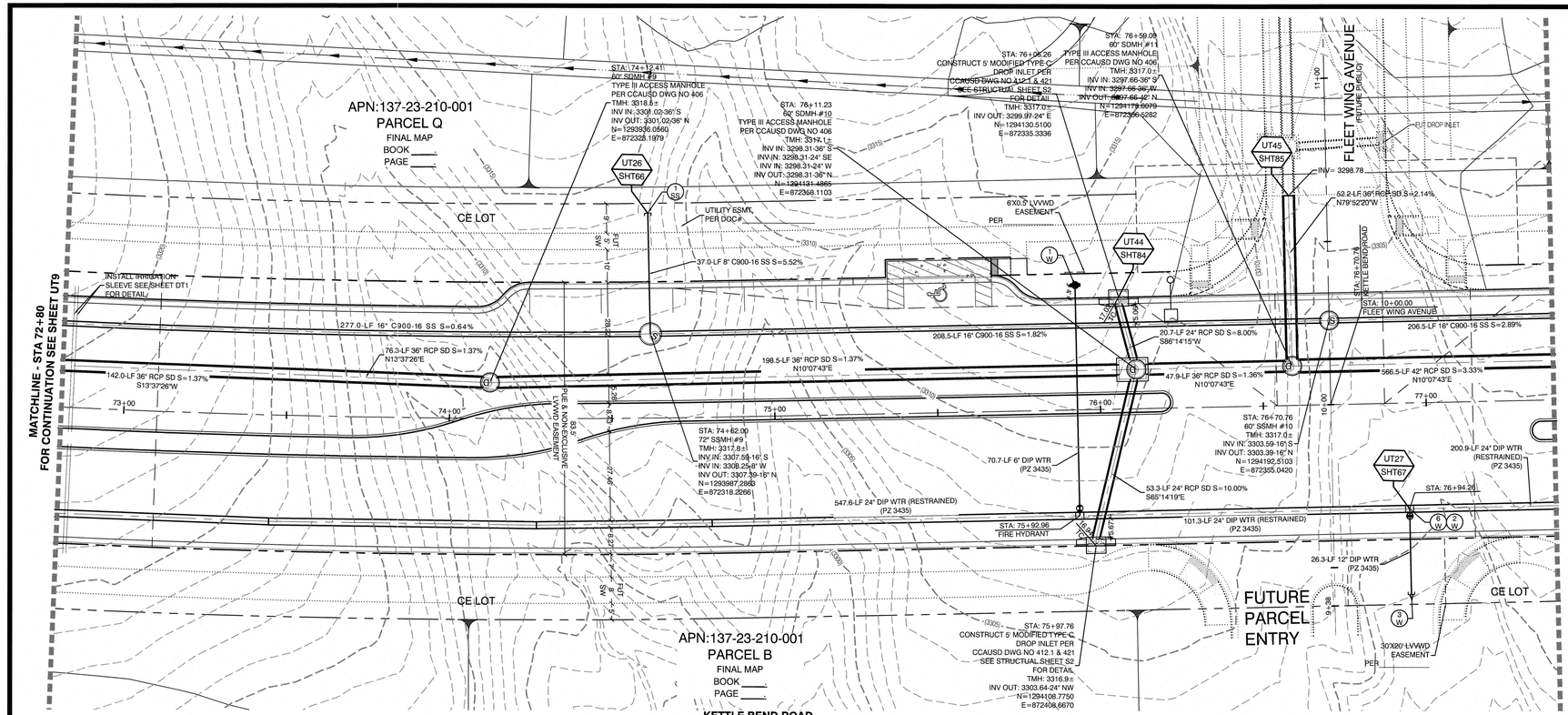
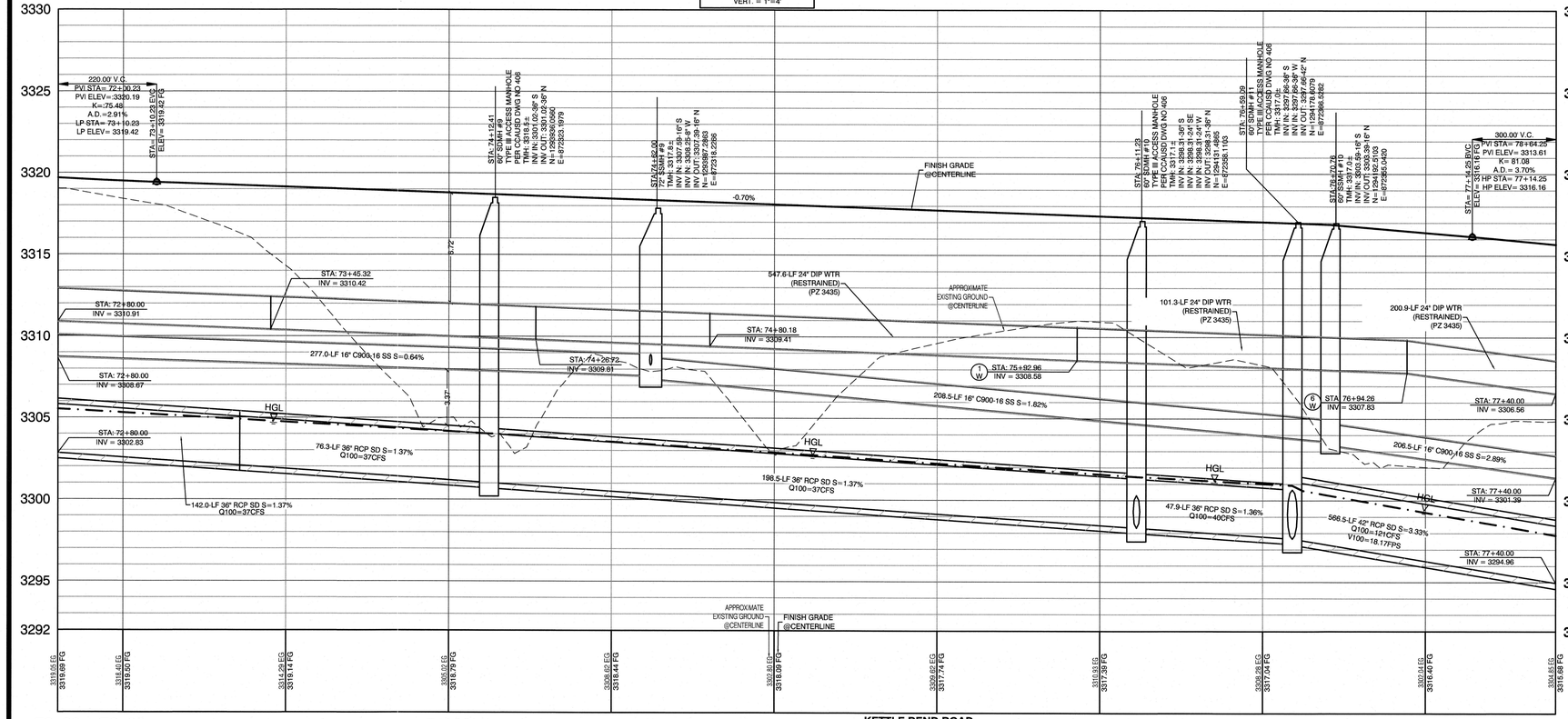






PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'

DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR NOTE:

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 TRIAL SHUTDOWN.

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

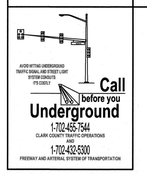
ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.







CONSTRUCTION NOTES

WATER

1 W	⬬	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 W	◂	12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 W	◂	24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W	⊃	12"X12" TEE (PER UDACS PLATE 31)
6 W	⊃	24"X12" TEE (PER UDACS PLATE 31)
7 W	⊃	24" 5° BEND (PER UDACS PLATE 31)
8 W	⊃	24" 11° BEND (PER UDACS PLATE 31)
9 W	⊃	24" 22° BEND (PER UDACS PLATE 31)
10 W	⊃	12" 45° BEND (PER UDACS PLATE 31)
11 W	⊃	12" 5° BEND (PER UDACS PLATE 31)
12 W	⊶	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W	⊃	24"X6" TEE (PER UDACS PLATE 31)
	———	6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
———	8" C-900-16 SANITARY SEWER MAIN
———	16" C-900-16 SANITARY SEWER MAIN
4 SS	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
	SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

LVVWD EXISTING FACILITIES NOTE:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

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UTILITY PLAN & PROFILE 10
72+80 TO 77+40

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	06/28/2019		
DESIGNED BY: BCC	06/28/2019		
CHECKED BY: WJM	08/28/2020	SCALE:	1"=20' HORZ 1"=4' VERT.
PROJECT NO: 7891			

WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
PROFESSIONAL ENGINEER STATE OF NEVADA
2020-08-31

SHEET
UT10
50 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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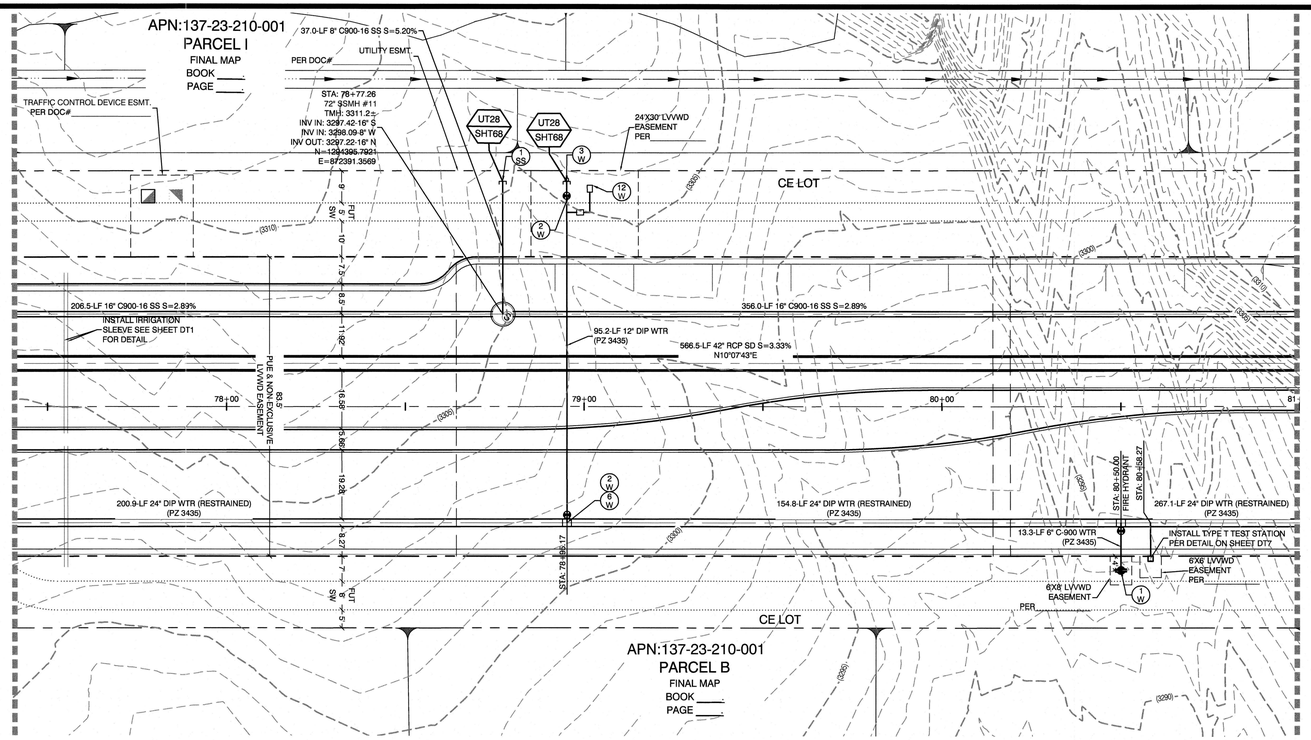

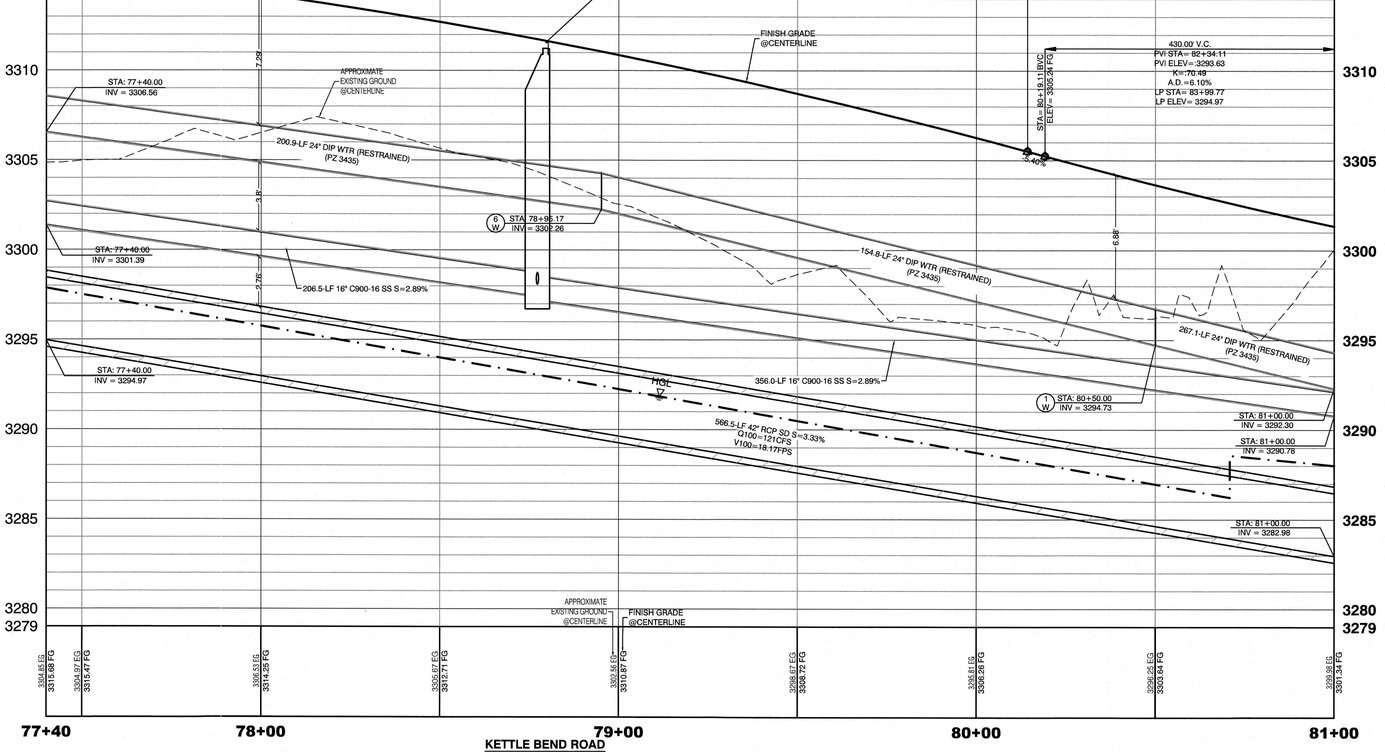

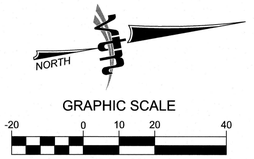

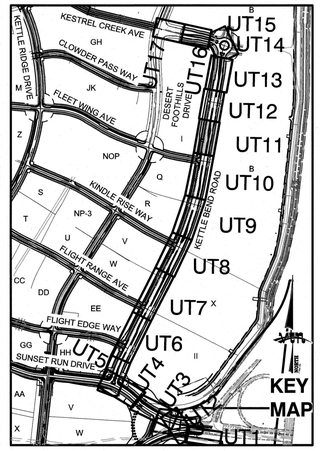

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NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

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1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'

CONSTRUCTION NOTES

WATER

- (1 W) FIRE HYDRANT ASSEMBLY; INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
- (2 W) 12" GATE VALVE (PER UDACS PLATE 30 & 39)
- (3 W) 12" CAP & BLOW OFF (PER UDACS PLATE 36)
- (4 W) 24" CAP & BLOW OFF (PER UDACS PLATE 36)
- (5 W) 12"X12" TEE (PER UDACS PLATE 31)
- (6 W) 24"X12" TEE (PER UDACS PLATE 31)
- (7 W) 24" 5° BEND (PER UDACS PLATE 31)
- (8 W) 24" 11° BEND (PER UDACS PLATE 31)
- (9 W) 24" 22° BEND (PER UDACS PLATE 31)
- (10 W) 12" 45° BEND (PER UDACS PLATE 31)
- (11 W) 12" 5° BEND (PER UDACS PLATE 31)
- (12 W) 1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
- (13 W) 24"X6" TEE (PER UDACS PLATE 31)
- 6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
- 24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
- POC WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

- (S) STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
- 8" C-900-16 SANITARY SEWER MAIN
- 16" C-900-16 SANITARY SEWER MAIN
- (1 SS) SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
- POC SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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

WATERLINE TRENCH NOTE:

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LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

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REVISION

HOWARD HUGHES COMPANY, LLC
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CITY OF LAS VEGAS

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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 11
77+40 TO 81+00

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	05/28/2019	SCALE:	1"=20' HORIZ. 1"=4' VERT.
DESIGNED BY: BCC	05/28/2019		
CHECKED BY: WLMH	08/28/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15747
2020-08-31

SHEET
UT11
51 OF 107 SHEETS

DRAWING NO.
L20-01282
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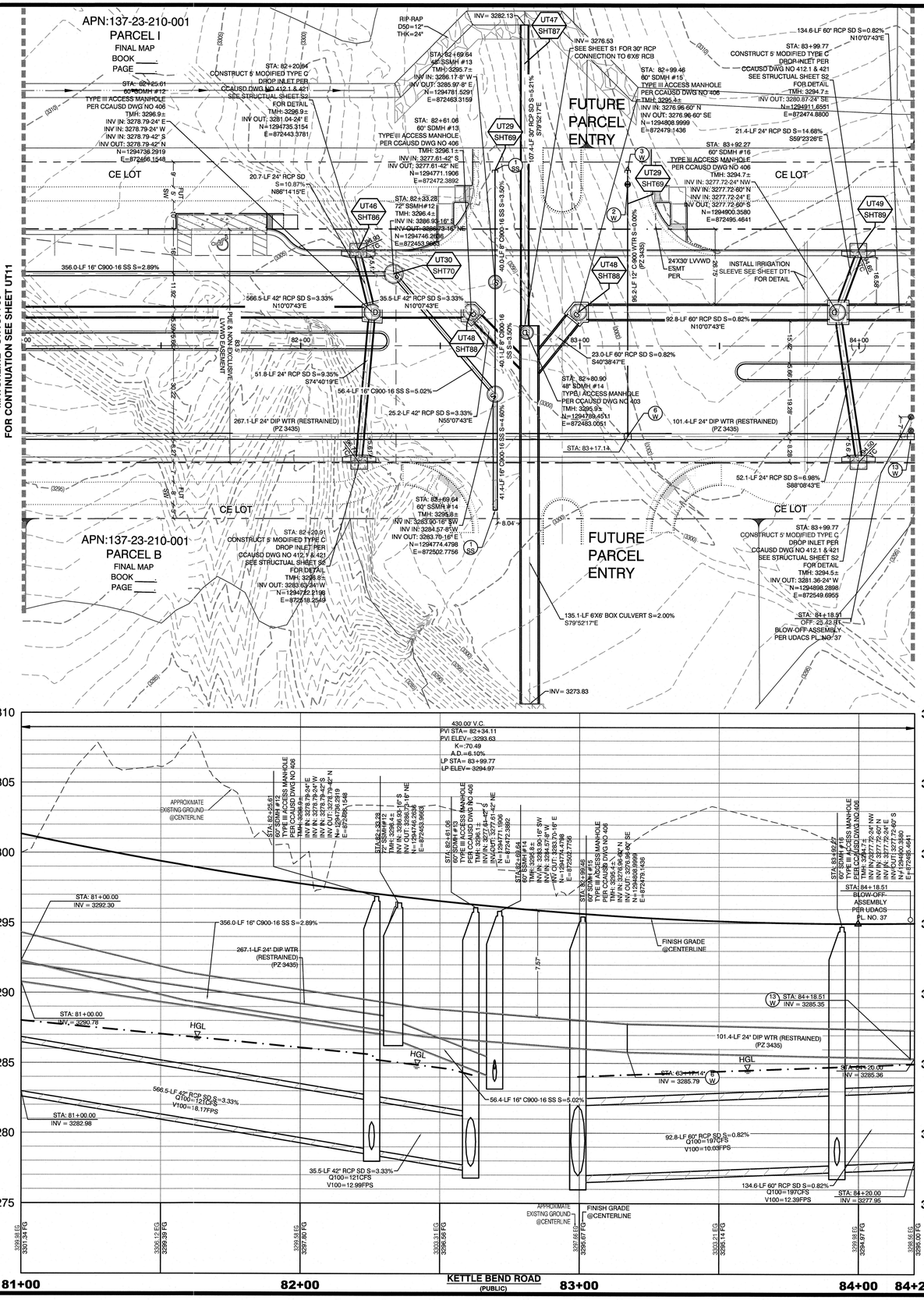

KETTLE BEND ROAD
(PUBLIC)

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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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WATER

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9 W		24" 22° BEND (PER UDACS PLATE 31)
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11 W		12" 5° BEND (PER UDACS PLATE 31)
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	PWP	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

	S	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
		8" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
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	PSP	SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

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APPROVED FOR CONSTRUCTION

_____
LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 873-7500 FAX (702) 362-2997 WEB WWW.JTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

CITY OF LAS VEGAS

UTILITY PLAN & PROFILE 12
81+00 TO 84+20

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	05/28/2019
DESIGNED BY: BCC	05/28/2019
CHECKED BY: WJM	06/26/2020
PROJECT NO: 7981	SCALE: 1"=20' HORIZ 1"=4' VERT

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT12
52 OF 107 SHEETS

DRAWING NO
L20-01282
107V8449

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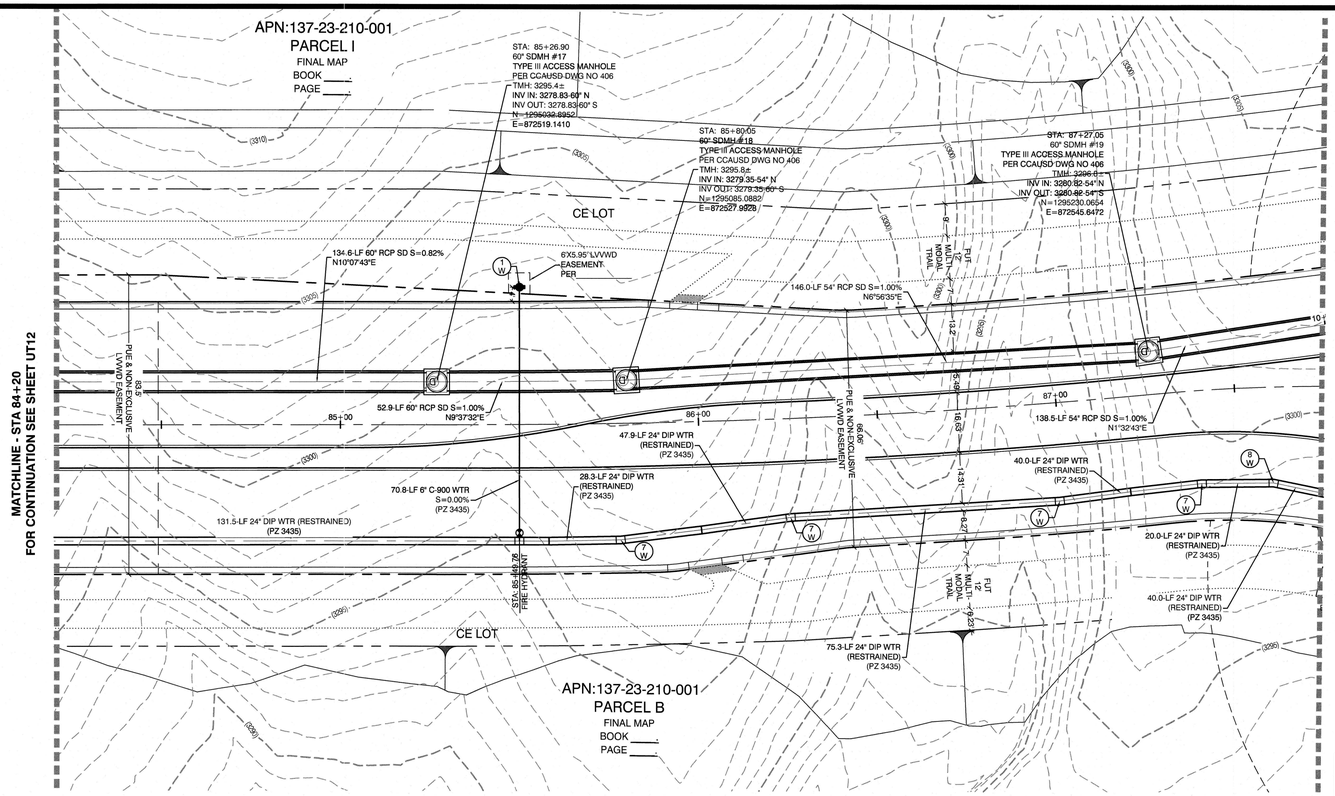
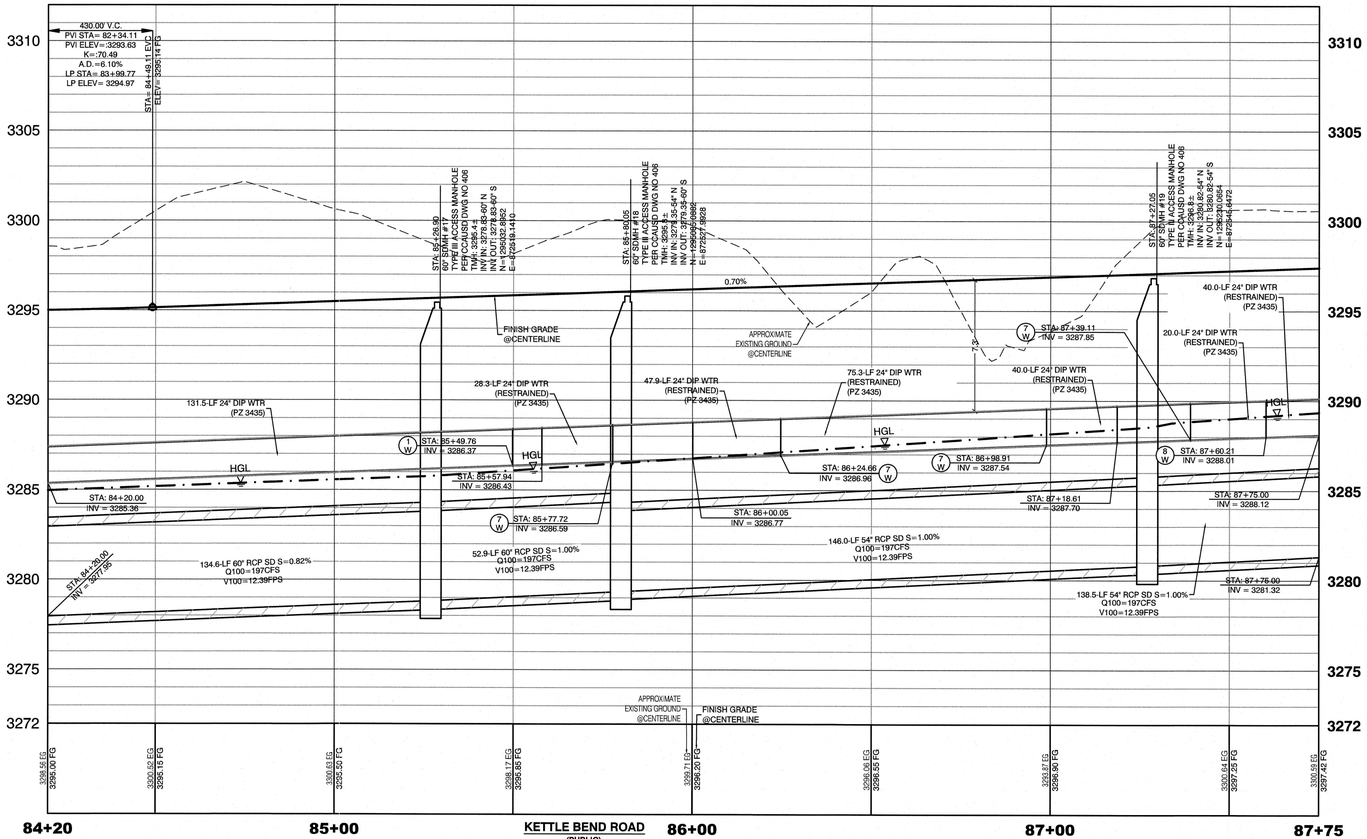
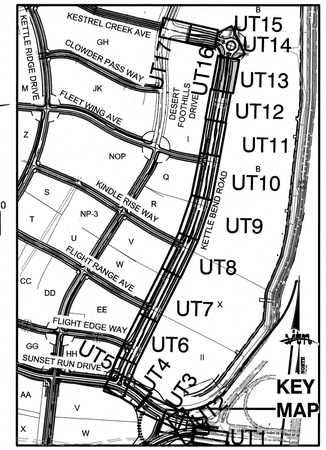


PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'







CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR NOTE:

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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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.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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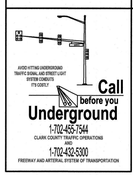

CONSTRUCTION NOTES

WATER

1 W		FIRE HYDRANT ASSEMBLY; INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W		12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 W		12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 W		24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W		12"X12" TEE (PER UDACS PLATE 31)
6 W		24"X12" TEE (PER UDACS PLATE 31)
7 W		24" 5° BEND (PER UDACS PLATE 31)
8 W		24" 11° BEND (PER UDACS PLATE 31)
9 W		24" 22° BEND (PER UDACS PLATE 31)
10 W		12" 45° BEND (PER UDACS PLATE 31)
11 W		12" 5° BEND (PER UDACS PLATE 31)
12 W		1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W		24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
	POC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

	S	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
		8" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
14 S		SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
	POC	SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

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LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 13
84+20 TO 87+75

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	05/28/2019	SCALE:	HORIZ. 1"=20' VERT. 1"=4'
DESIGNED BY: BCC	05/28/2019		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT13
53 OF 107 SHEETS

DRAWING NO.
L20-01282
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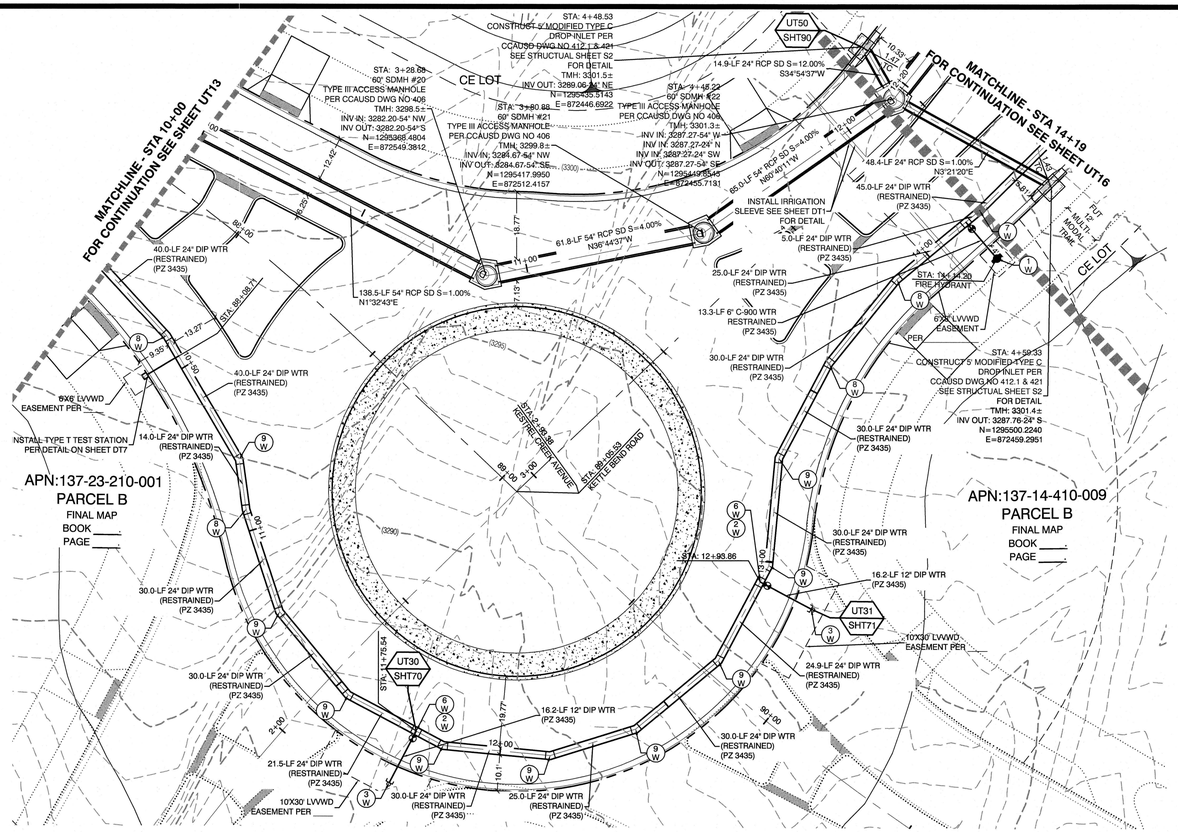

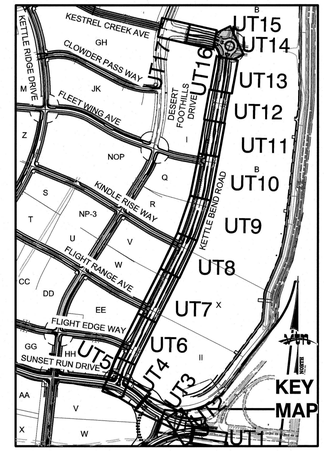

NORTH

GRAPHIC SCALE

-20 0 10 20 40

1" = 20'

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
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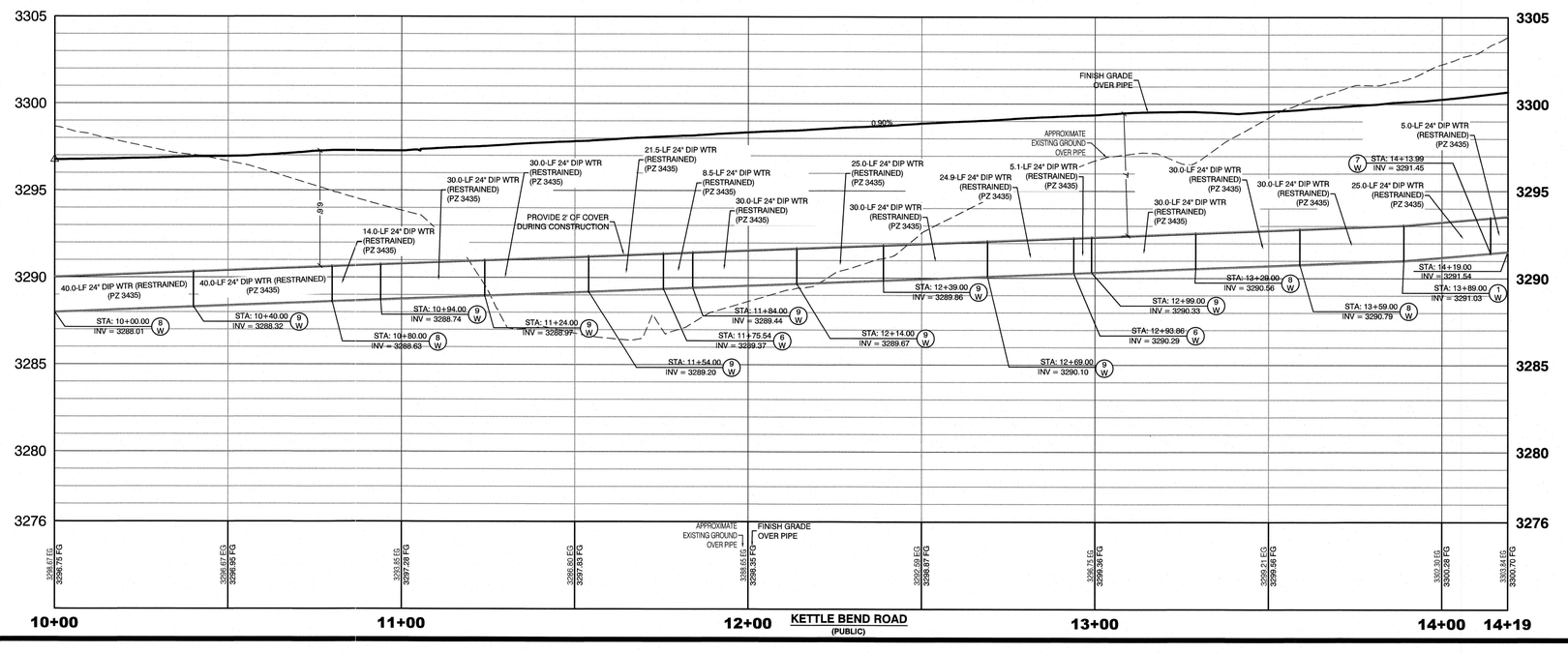

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY
Call before you Dig Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

DROP INLET SEPARATION NOTE

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PROJECT:137333 FIRST APPROVED DATE: _____

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702-791-4000

CITY OF LAS VEGAS

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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 14
10+00 TO 14+19

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

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DESIGNED BY: BCC	05/28/2019			VERT:	
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PROJECT NO: 7861			1"=4'		

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54 OF **107** SHEETS

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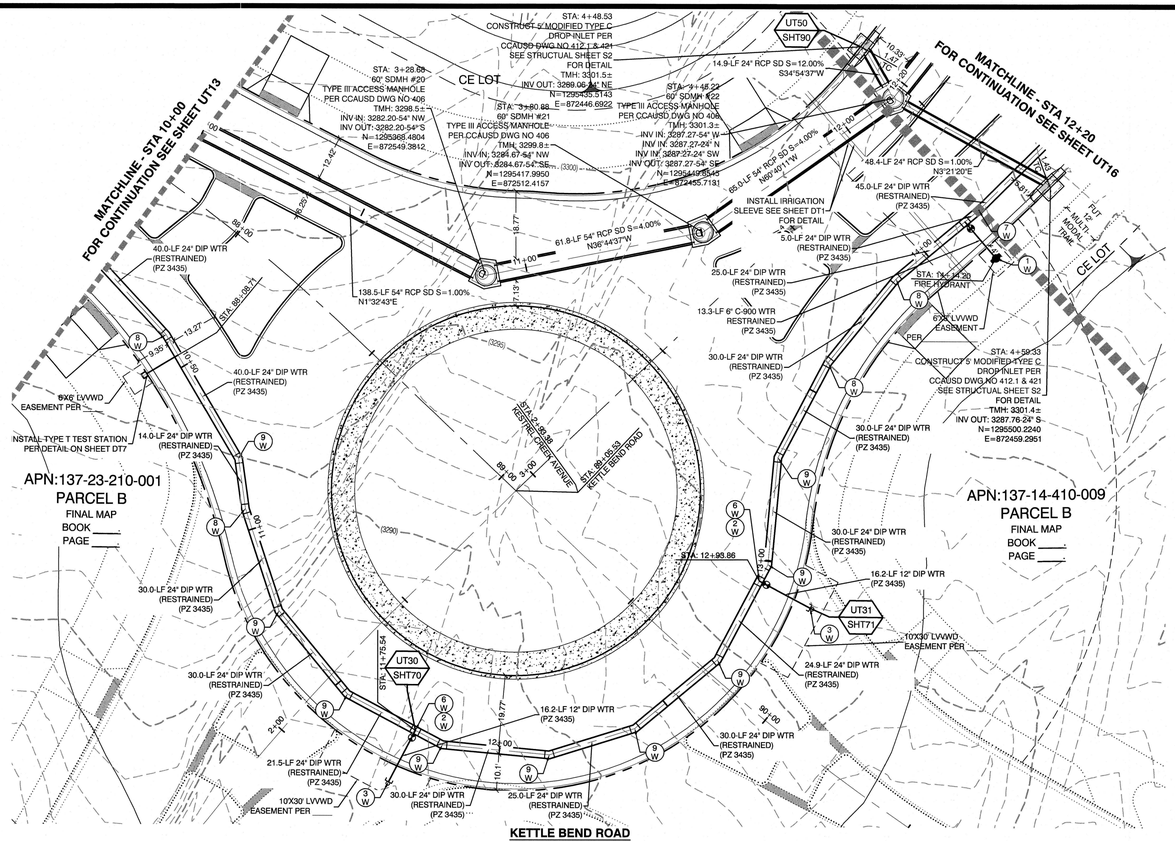



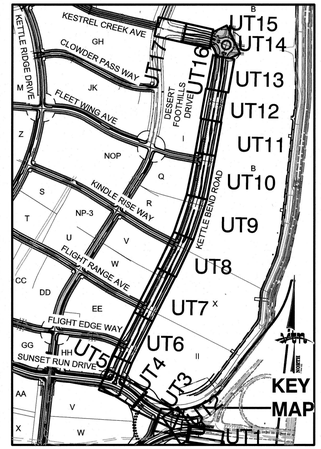

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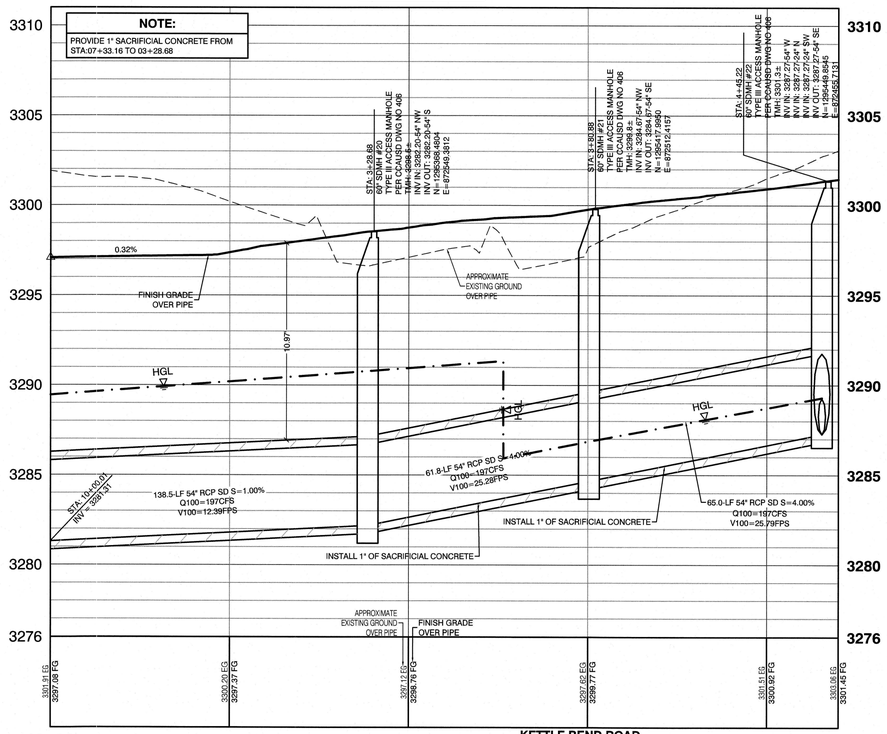

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	POC	WATER POINT OF CONNECTION

SEWER

	Ⓢ	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	———	8" C-900-16 SANITARY SEWER MAIN
	———	16" C-900-16 SANITARY SEWER MAIN
16" S	⊂	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
	POC	SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2697 WEB WWW.LTNRW.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 15
10+00 TO 12+20

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 07/23/2019
DESIGNED BY: BCC 07/23/2019
CHECKED BY: WJM 06/28/2020
PROJECT NO: 7861
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER-STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT15
55 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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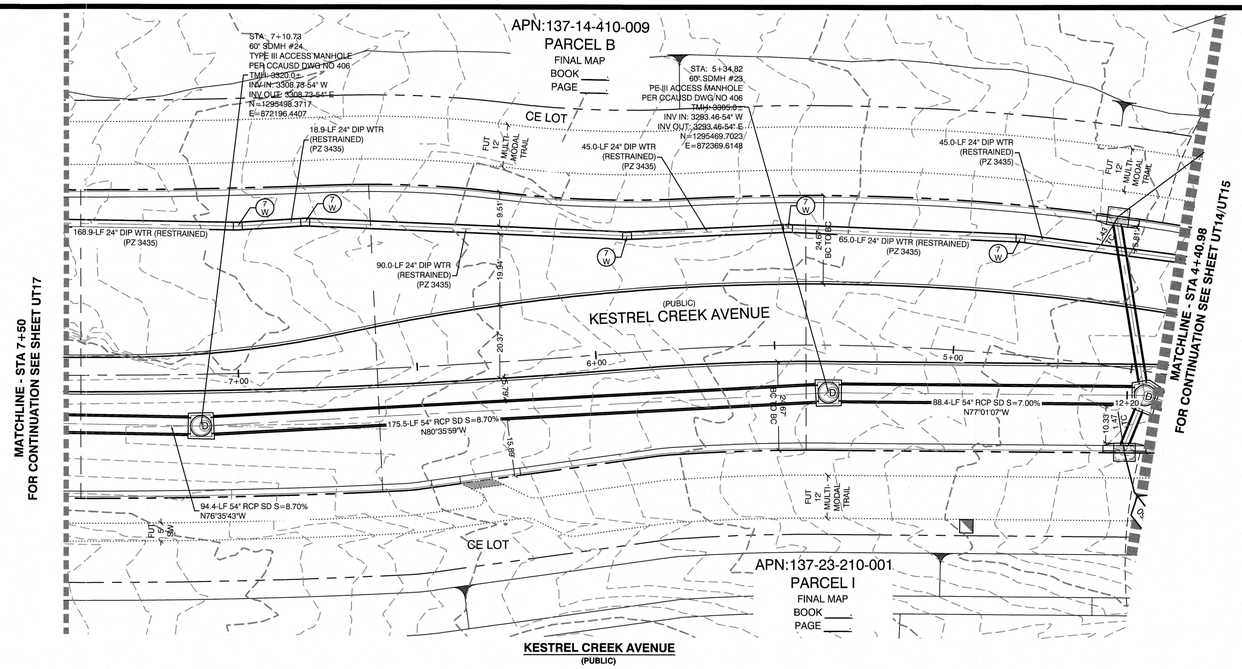
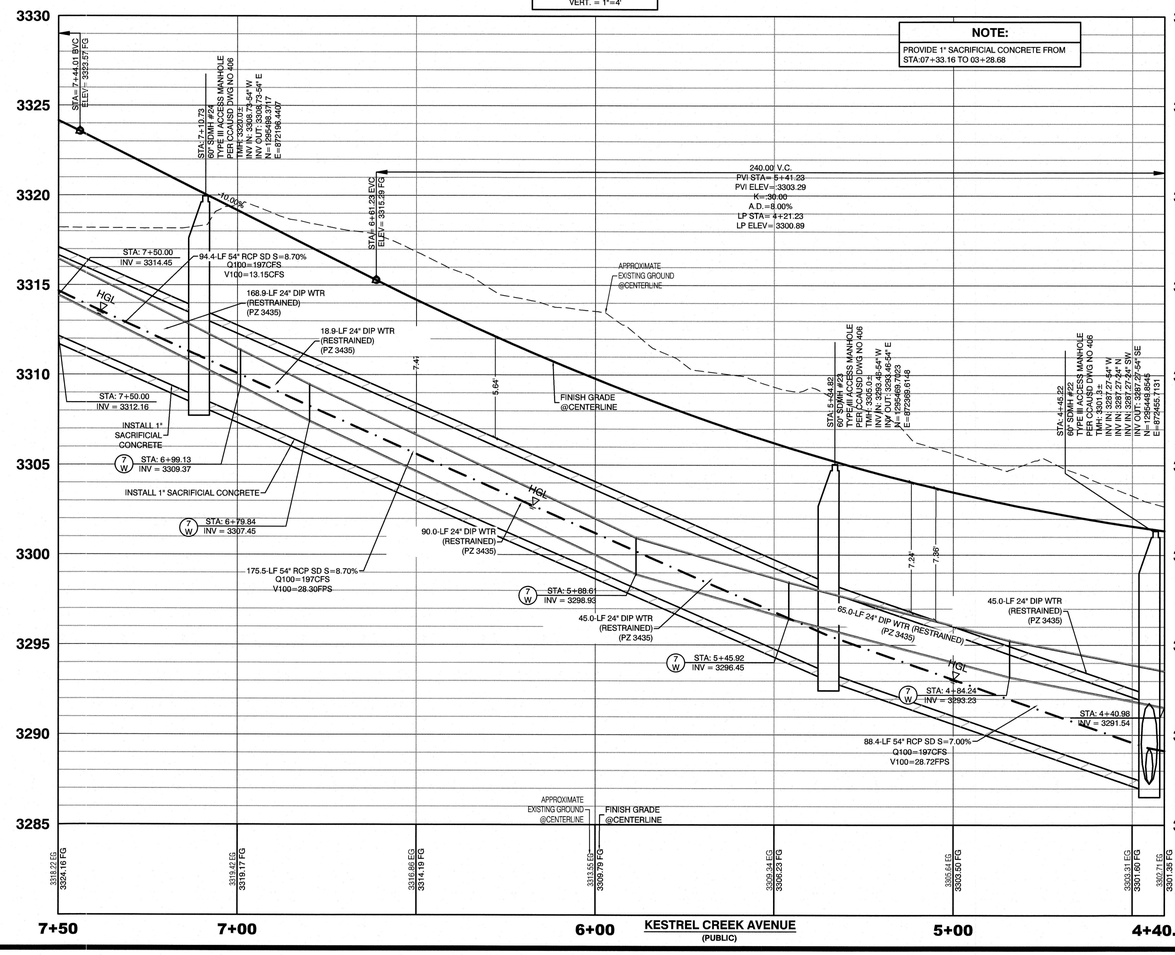
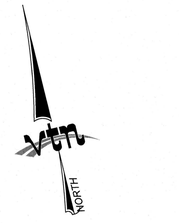


PROFILE SCALES:

HORIZ. = 1"=20'
VERT: = 1"=4'





GRAPHIC SCALE

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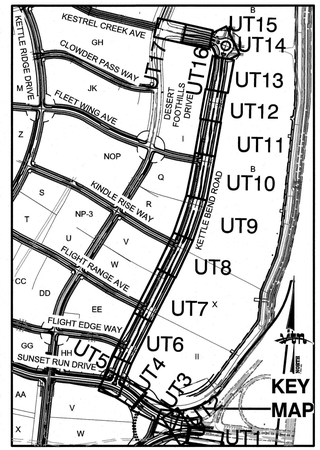
1" = 20'



DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR NOTE:

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 TRIAL SHUTDOWN.

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.25 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL. WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CONSTRUCTION NOTES

WATER

1 W		FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W		12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 W		12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 W		24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W		12"X12" TEE (PER UDACS PLATE 31)
6 W		24"X12" TEE (PER UDACS PLATE 31)
7 W		24" 5° BEND (PER UDACS PLATE 31)
8 W		24" 11° BEND (PER UDACS PLATE 31)
9 W		24" 22° BEND (PER UDACS PLATE 31)
10 W		12" 45° BEND (PER UDACS PLATE 31)
11 W		12" 5° BEND (PER UDACS PLATE 31)
12 W		1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W		24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
PWPC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	8" C-900-16 SANITARY SEWER MAIN
	16" C-900-16 SANITARY SEWER MAIN
SC	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
PSPC	SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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Call before you Dig
Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

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

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2997 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 16
7+50 TO 4+40.98

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC — 06/03/2019
DESIGNED BY: BCC — 06/03/2019
CHECKED BY: WJM — 08/28/2020
PROJECT NO: 7981
SCALE: HORIZ 1"=20' VERT 1"=4'

PROFESSIONAL ENGINEER — STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT16
56 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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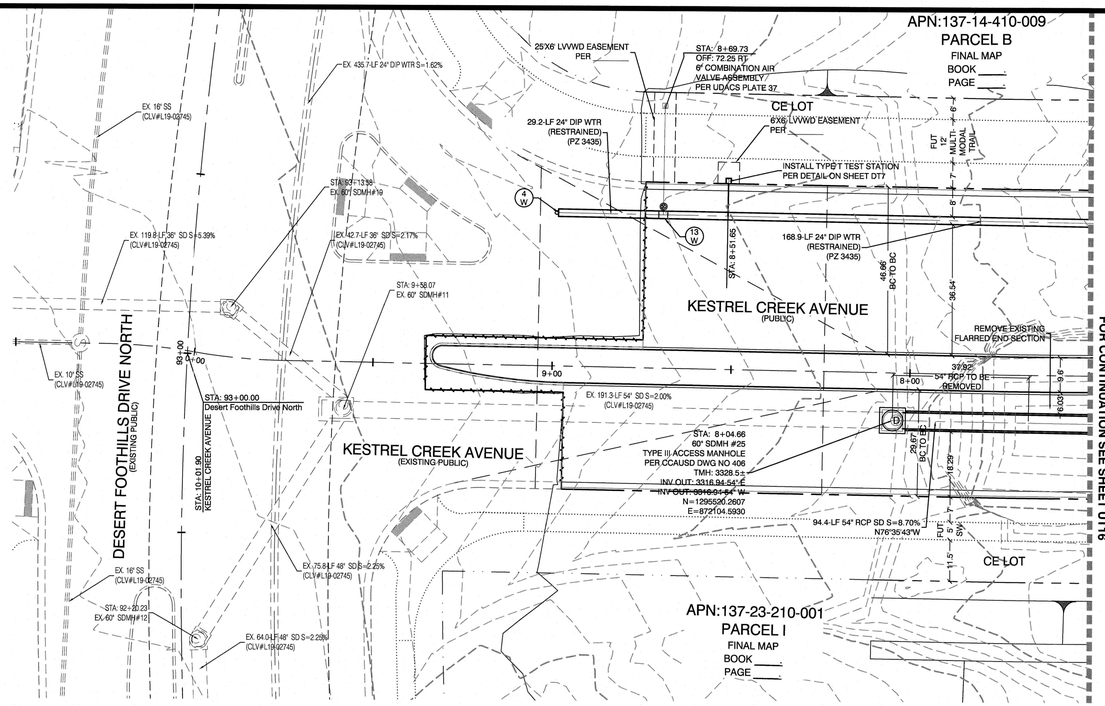
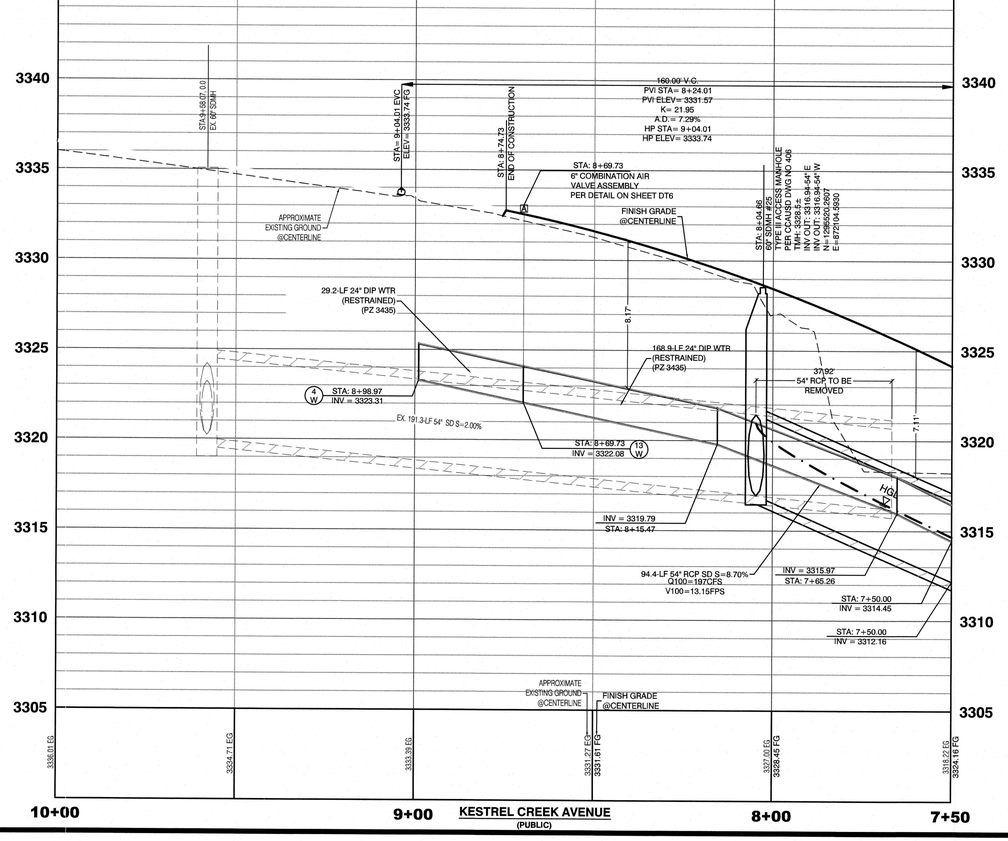
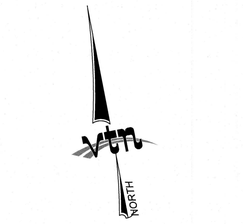
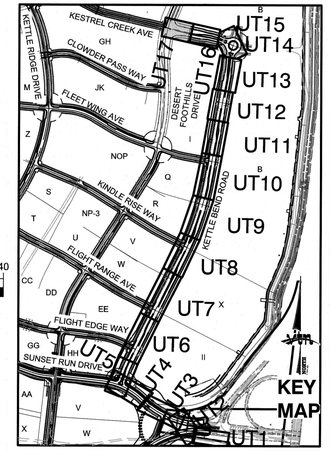


KESTREL CREEK AVENUE
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'







CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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CONSTRUCTION NOTES

WATER

1 W	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
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7 W	24" 5° BEND (PER UDACS PLATE 31)
8 W	24" 11° BEND (PER UDACS PLATE 31)
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13 W	24"X6" TEE (PER UDACS PLATE 31)
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	12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
POC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	8" C-900-16 SANITARY SEWER MAIN
	16" C-900-16 SANITARY SEWER MAIN
	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
POC	SEWER POINT OF CONNECTION

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

DEPTH OF COVER DURING CONSTRUCTION:

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WATERLINE TRENCH NOTE:

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

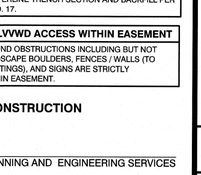
CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5146
PH: (702) 873-7550 FAX: (702) 382-2897 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 17 7+50 TO 10+00

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	BSC 06/03/2019
DESIGNED BY:	BCC 06/03/2019
CHECKED BY:	WJM 08/28/2020
PROJECT NO:	7861
SCALE:	HORIZ. 1"=20' VERT. 1"=4'



2020-08-31

SHEET
UT17
57 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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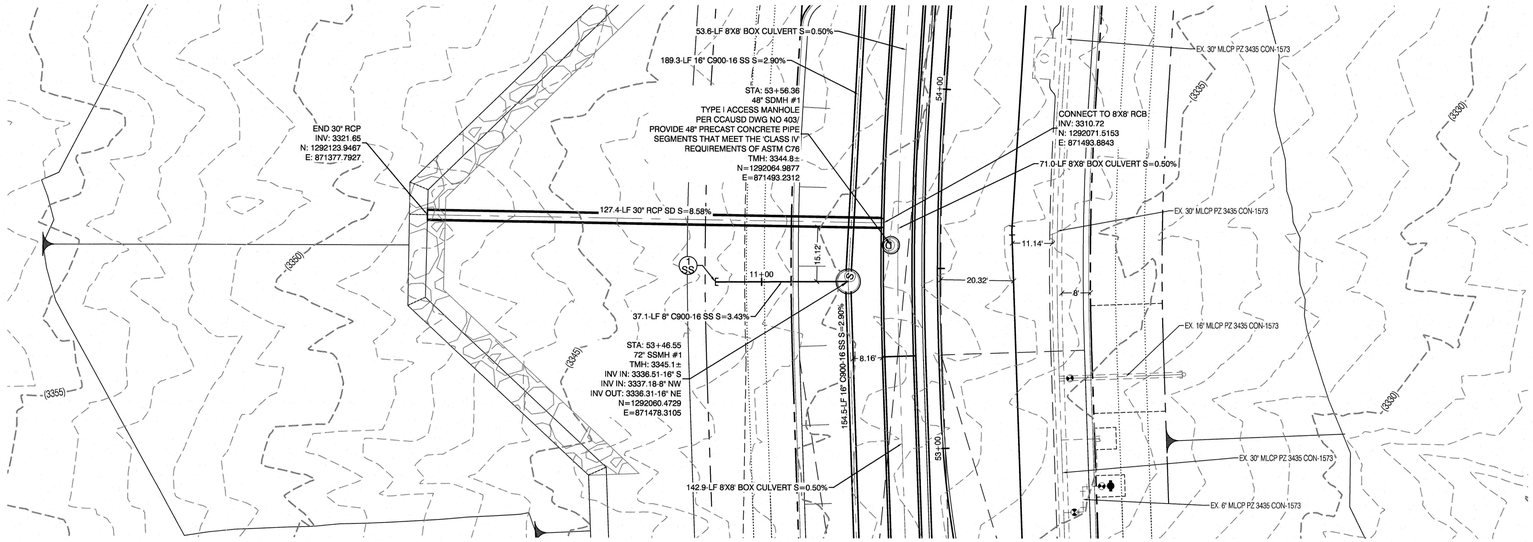
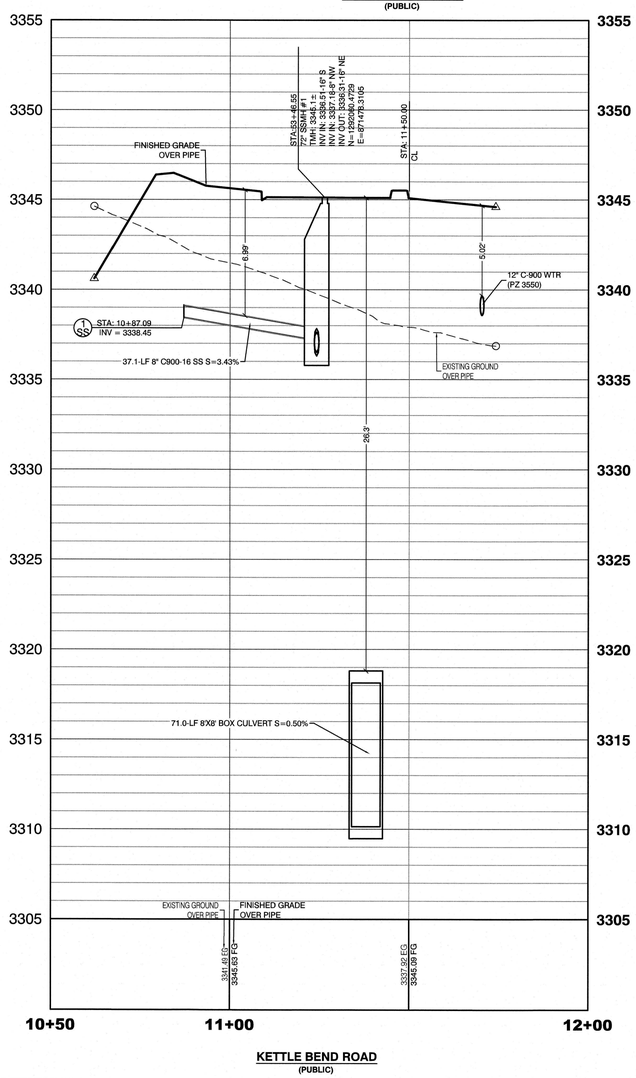


KETTLE BEND ROAD
(PUBLIC)



KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)
THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

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

WATER LINE MARKER BALLS NOTE
INSTALL PIPELINE MARKER BALLS. PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES
BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION
WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:
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UTILITY CROSSING NOTE:
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CONSTRUCTION NOTES
WATER

1 W	⬢	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
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4 W	◂	24" CAP & BLOW OFF (PER UDACS PLATE 36)
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7 W	⌐	24" 5° BEND (PER UDACS PLATE 31)
8 W	⌐	24" 11° BEND (PER UDACS PLATE 31)
9 W	⌐	24" 22° BEND (PER UDACS PLATE 31)
10 W	⌐	12" 45° BEND (PER UDACS PLATE 31)
11 W	⌐	12" 5° BEND (PER UDACS PLATE 31)
12 W	▫—▫	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W	⊃	24"X6" TEE (PER UDACS PLATE 31)
	———	6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
	FG	WATER POINT OF CONNECTION

CONSTRUCTION NOTES
SEWER

	S	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	———	8" C-900-16 SANITARY SEWER MAIN
	———	16" C-900-16 SANITARY SEWER MAIN
	⊂	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
	FG	SEWER POINT OF CONNECTION

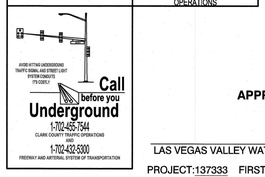
WATERLINE TRENCH NOTE:
CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:
WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:
MAINTAIN MINIMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

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





APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2597 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 18
SEWER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 08/09/2019
DESIGNED BY: BCC 08/09/2019
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7981
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 17145
2020-08-31

SHEET
UT18
58 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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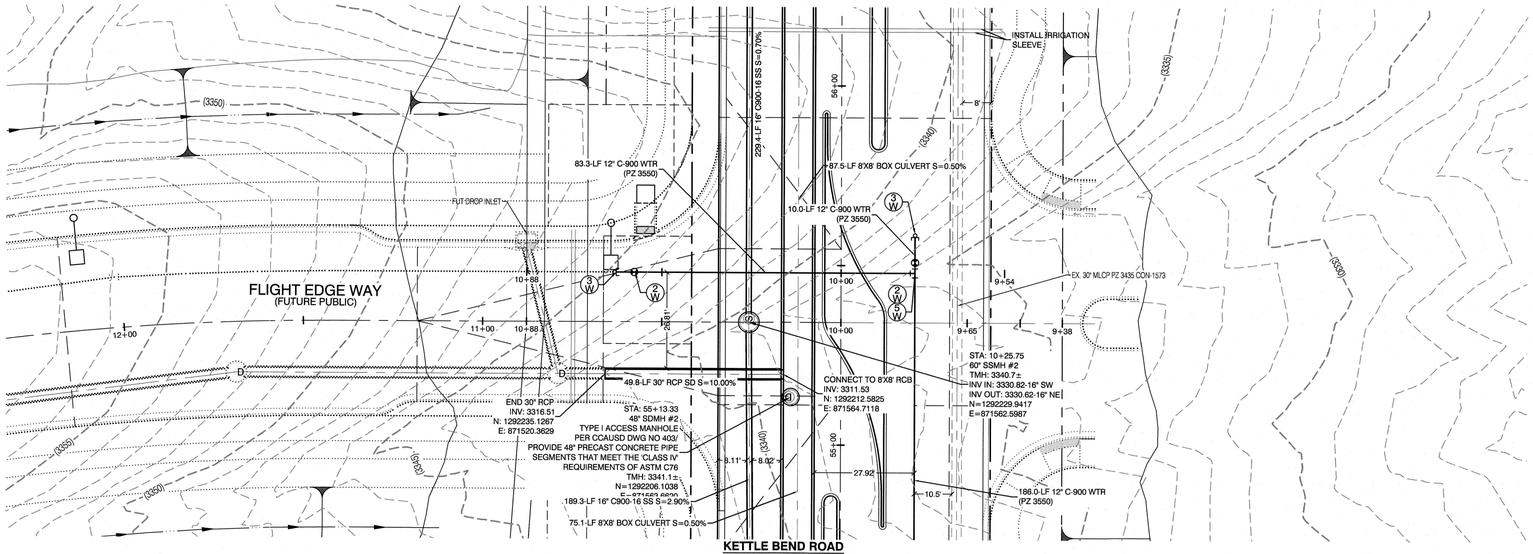

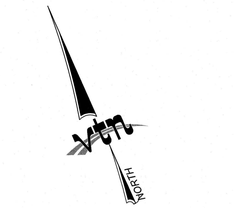

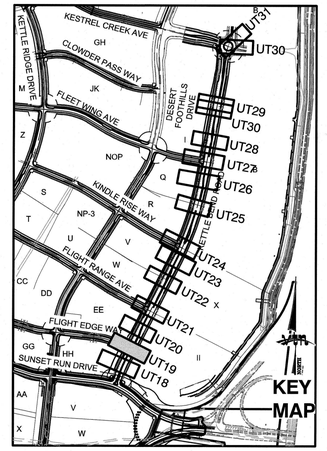

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR NOTE:

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 TRIAL SHUTDOWN.

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

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS. PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CONSTRUCTION NOTES

WATER

1 W		FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W		12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 W		12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 W		24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W		12"X12" TEE (PER UDACS PLATE 31)
6 W		24"X12" TEE (PER UDACS PLATE 31)
7 W		24" 5° BEND (PER UDACS PLATE 31)
8 W		24" 11° BEND (PER UDACS PLATE 31)
9 W		24" 22° BEND (PER UDACS PLATE 31)
10 W		12" 45° BEND (PER UDACS PLATE 31)
11 W		12" 5° BEND (PER UDACS PLATE 31)
12 W		1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W		24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
PWC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S		STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
		8" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
1 S		SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
PSC		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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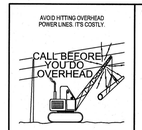
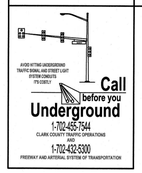




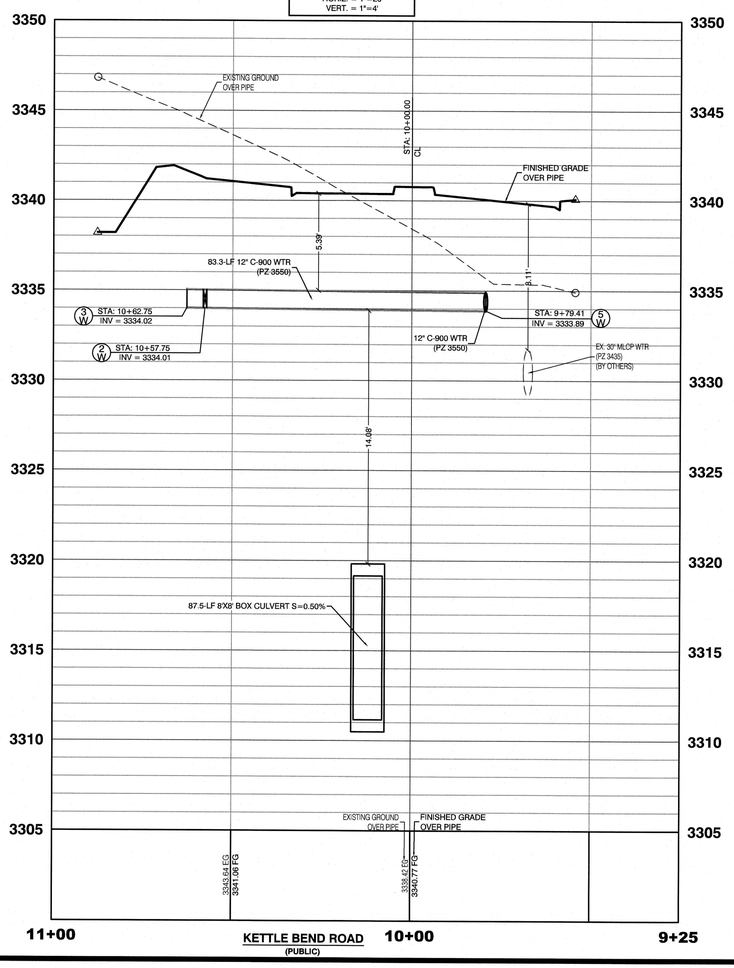


APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



HOWARD HUGHES COMPANY, LLC A DELAWARE LIMITED LIABILITY COMPANY 10845 GRIFFITH PEAK DRIVE, SUITE 160 LAS VEGAS, NEVADA 89135 702-791-4000	CITY OF LAS VEGAS
UTILITY PLAN & PROFILE 19 SEWER & WATER LATERAL	SUMMERLIN WEST VILLAGE 22 KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

REV	DATE	BY	REVISION

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7861
09/09/2019
09/09/2019
08/28/2020
SCALE: 1"=20' HORIZ. 1"=4' VERT.

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT19
59 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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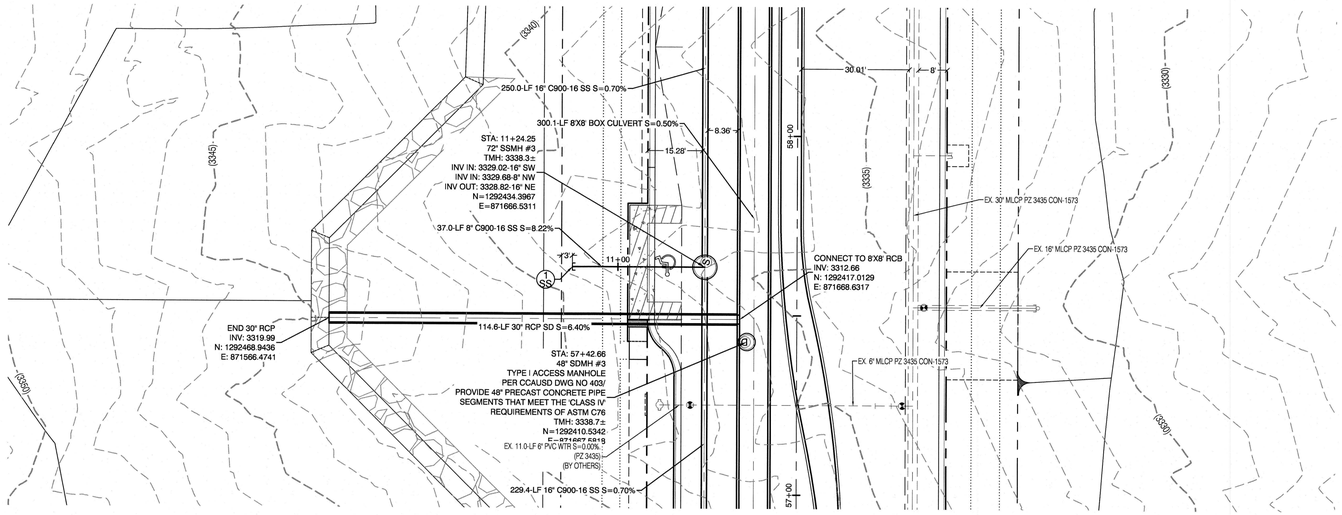
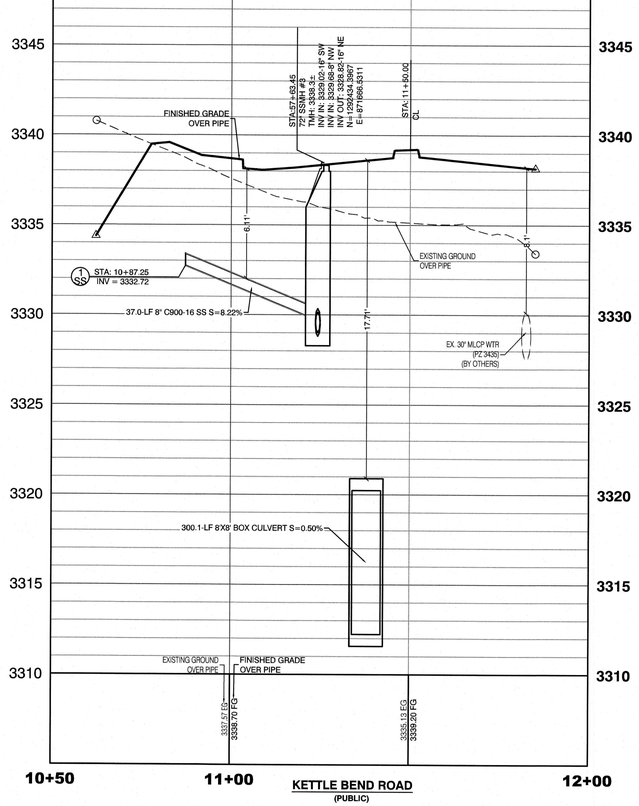


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = N/A



KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE
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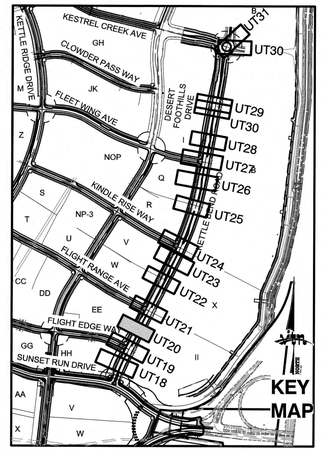
1" = 20'



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

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

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS. PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED
PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

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CONSTRUCTION NOTES

WATER

1 (W)	⬢	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 (W)	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 (W)	⊀	12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 (W)	⊀	24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 (W)	⊃	12"X12" TEE (PER UDACS PLATE 31)
6 (W)	⊃	24"X12" TEE (PER UDACS PLATE 31)
7 (W)	⌐	24" 5° BEND (PER UDACS PLATE 31)
8 (W)	⌐	24" 11° BEND (PER UDACS PLATE 31)
9 (W)	⌐	24" 22° BEND (PER UDACS PLATE 31)
10 (W)	⌐	12" 45° BEND (PER UDACS PLATE 31)
11 (W)	⌐	12" 5° BEND (PER UDACS PLATE 31)
12 (W)	⊸	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 (W)	⊃	24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
POC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S		STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
		8" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
1 SS	⊂	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
POC		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

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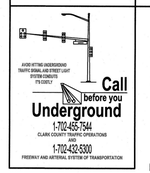

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7350 FAX (702) 362-2697 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 20
SEWER & WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7981
SCALE: HORIZ. 1"=20' VERT. N/A
08/08/2019
09/09/2019
08/28/2020

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15749

2020-08-31

SHEET
UT20
60 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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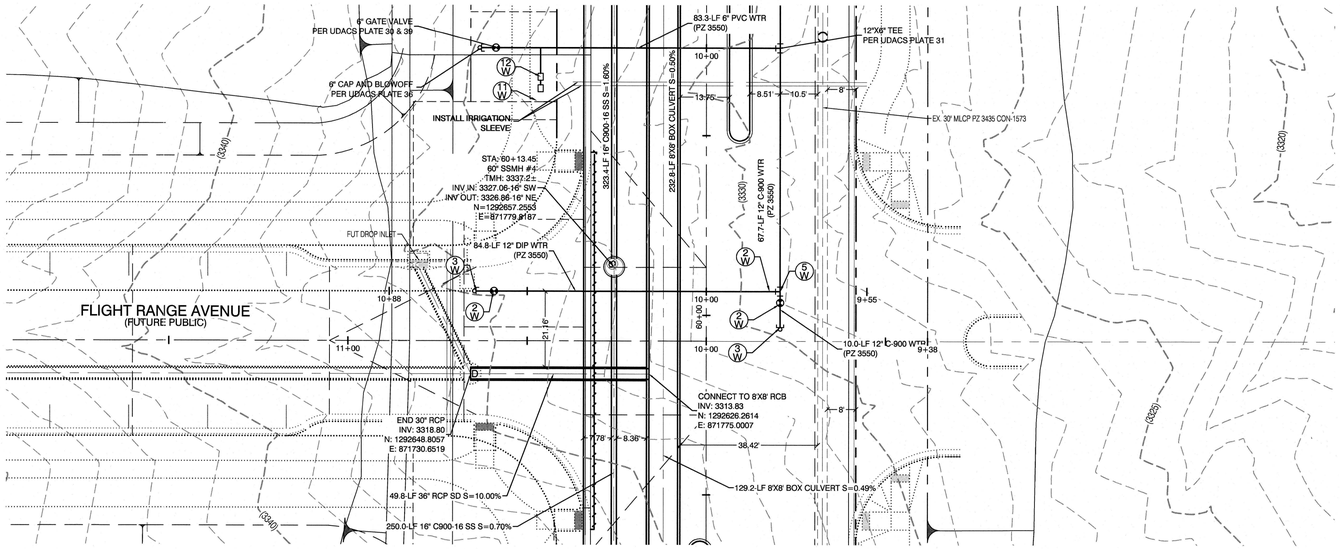
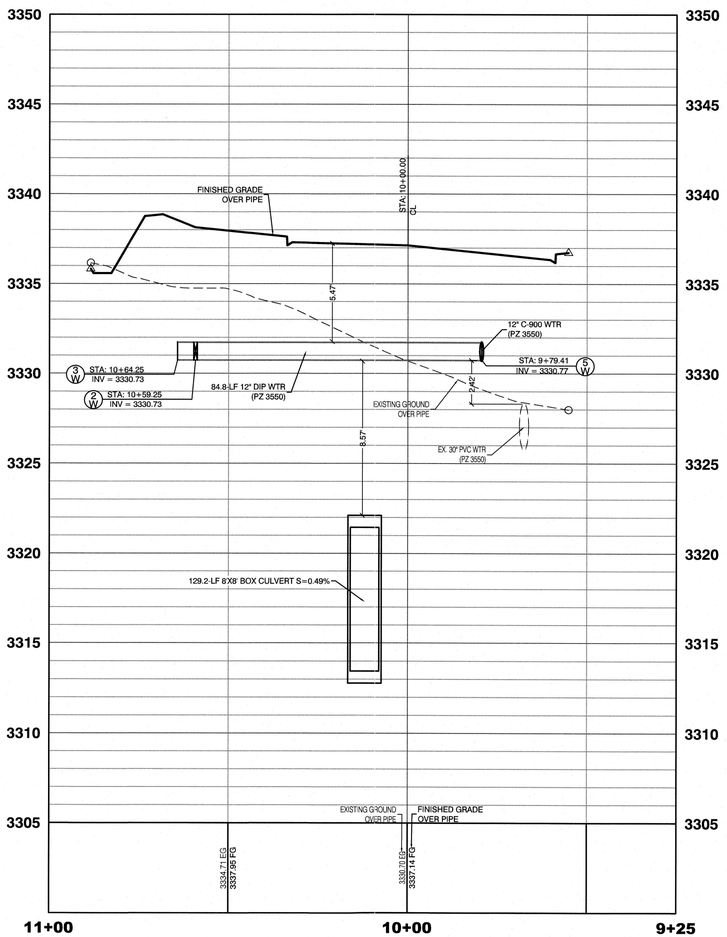
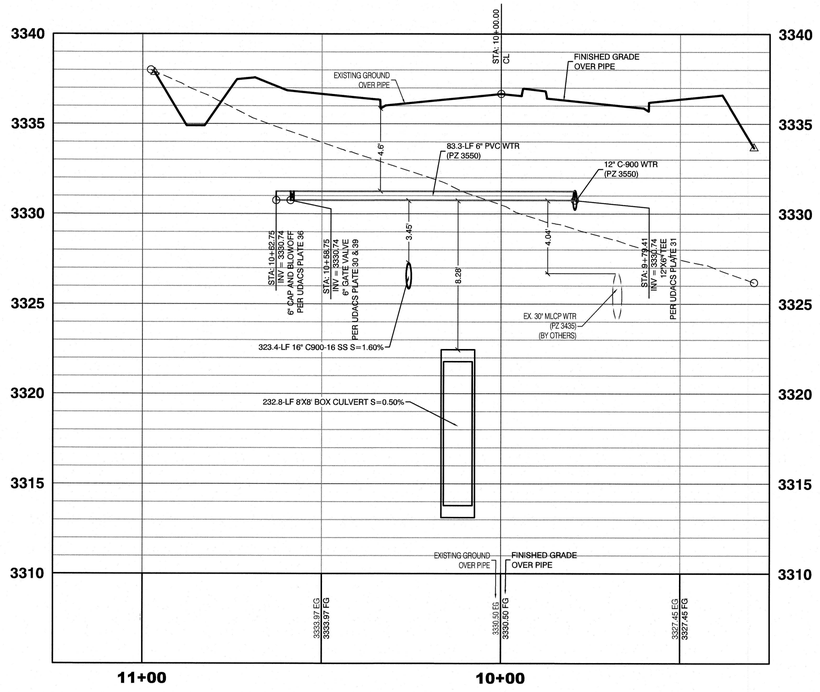


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'

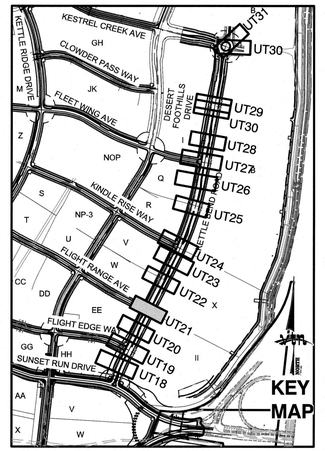


KETTLE BEND ROAD
(PUBLIC)



KETTLE BEND ROAD
(PUBLIC)





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

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS. PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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CONSTRUCTION NOTES

WATER

1 W		FIRE HYDRANT ASSEMBLY; INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W		12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 W		12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 W		24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W		12"X12" TEE (PER UDACS PLATE 31)
6 W		24"X12" TEE (PER UDACS PLATE 31)
7 W		24" 5° BEND (PER UDACS PLATE 31)
8 W		24" 11° BEND (PER UDACS PLATE 31)
9 W		24" 22° BEND (PER UDACS PLATE 31)
10 W		12" 45° BEND (PER UDACS PLATE 31)
11 W		12" 5° BEND (PER UDACS PLATE 31)
12 W		1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W		24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
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PC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S		STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
		8" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
4.6 SS		SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
PC		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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CALL BEFORE YOU DO OVERHEAD
1-702-227-2929

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-642-2444 AND 1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

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Call before you Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-432-5000
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

REV	DATE	BY	REVISION

UTILITY PLAN & PROFILE 21
SEWER LATERAL

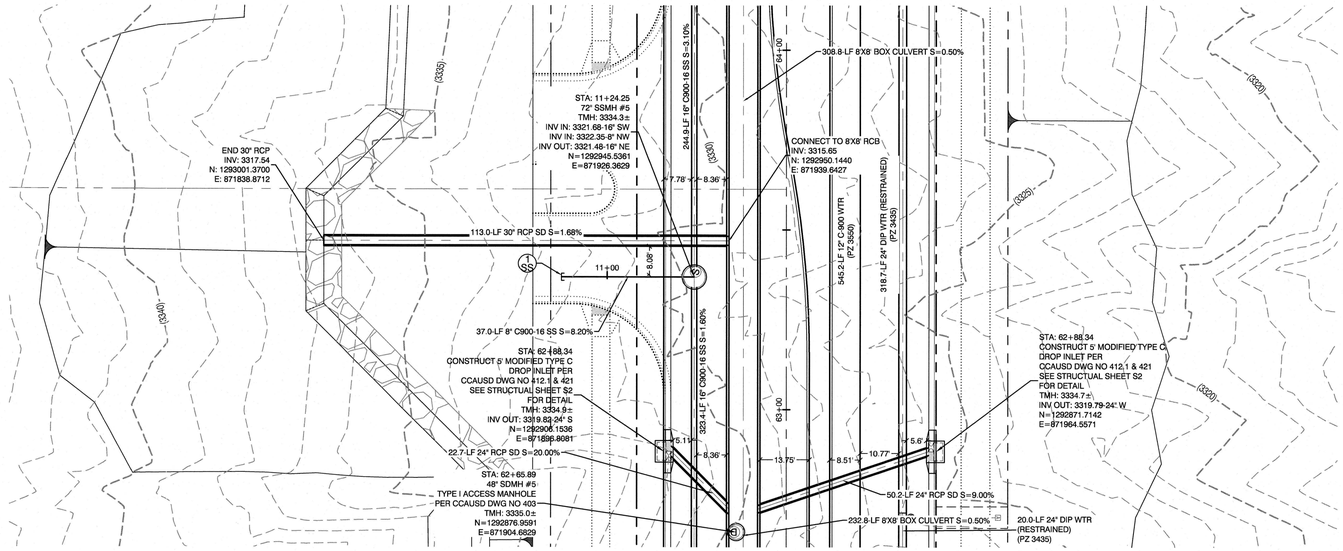
SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7861
09/09/2019
09/09/2019
08/28/2020
SCALE: 1"=20' HORIZ. 1"=4' VERT.

PROFESSIONAL ENGINEER-STATE OF NEBRASKA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. E-15745
2020-08-31

SHEET
UT21
61 OF **107** SHEETS
DRAWING NO.
L20-01282
107V8449

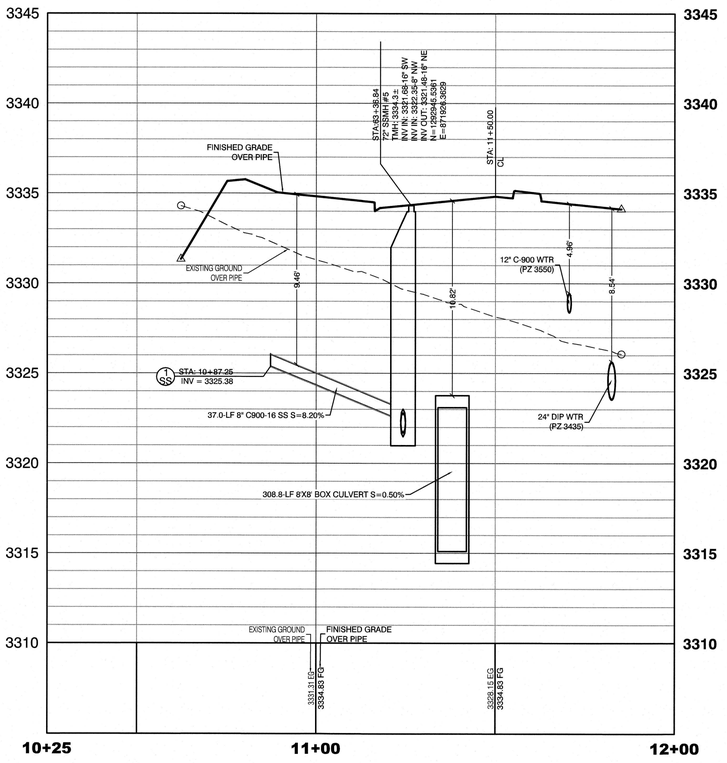
H:\7861\Kettle Bend Road\Sheet Set\7861-UTLAT-1.dwg,8/28/2020 8:16 AM,brandonc



KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'



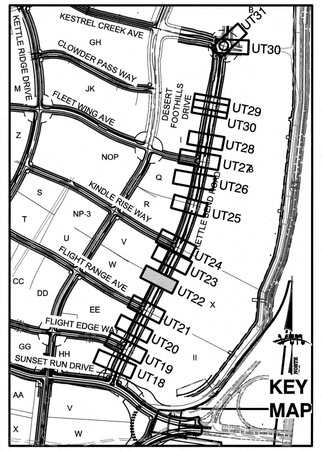
KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE

-20 0 10 20 40

1" = 20'



DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).

CONTRACTOR NOTE:

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

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

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WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS. PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED
PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

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	PCC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

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	PCC	SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

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Avoid cutting underground utility lines. It's costly.
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OR
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AND
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CLARK COUNTY TRAFFIC OPERATIONS

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS ITS (CCSTL)

Call before you **Underground**
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
OR
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10345 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-3597 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 22 WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7981

08/08/2019
09/09/2019
08/28/2020

SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT22
62 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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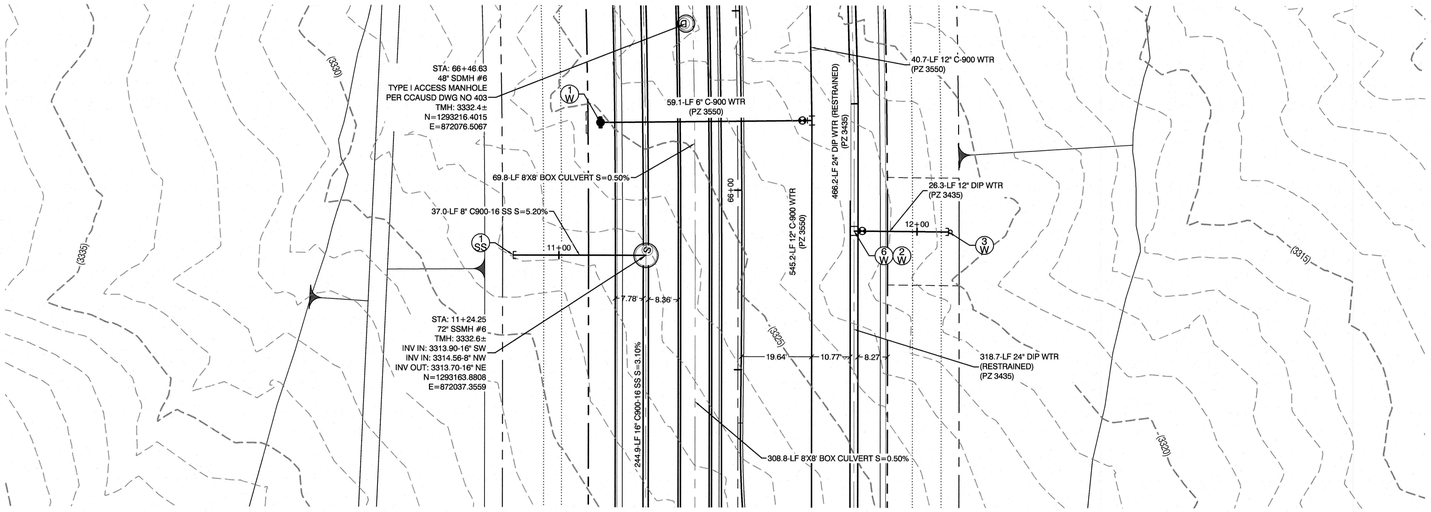

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
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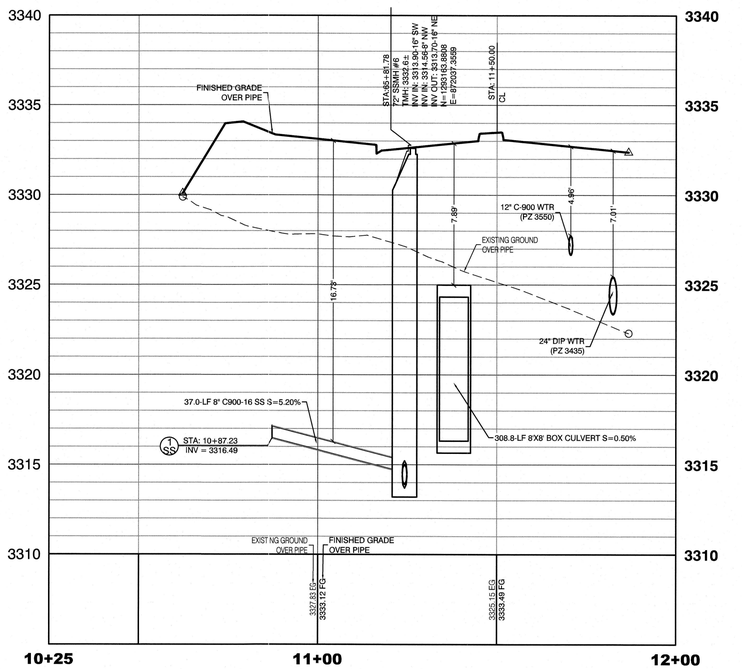
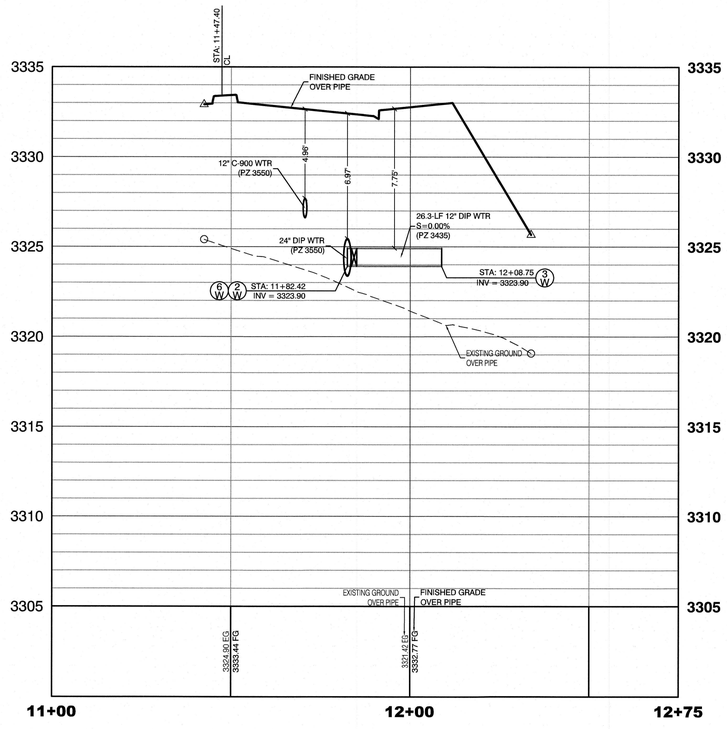
VERT. = 1"=4'



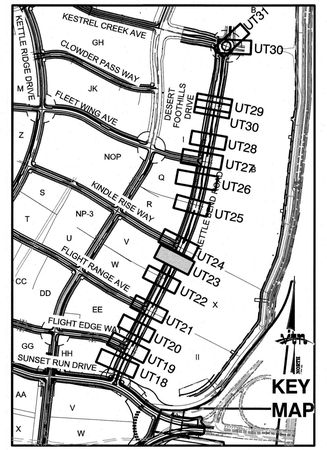
KETTLE BEND ROAD
(PUBLIC)



KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE
-20 0 10 20 40
1" = 20'



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POC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

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POC		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

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WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2597 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 23
SEWER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/09/2019	SCALE:	HORZ. 1"=20' VERT. 1"=4'
DESIGNED BY: BCC	09/09/2019		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15743
2020-08-31

SHEET
UT23
63 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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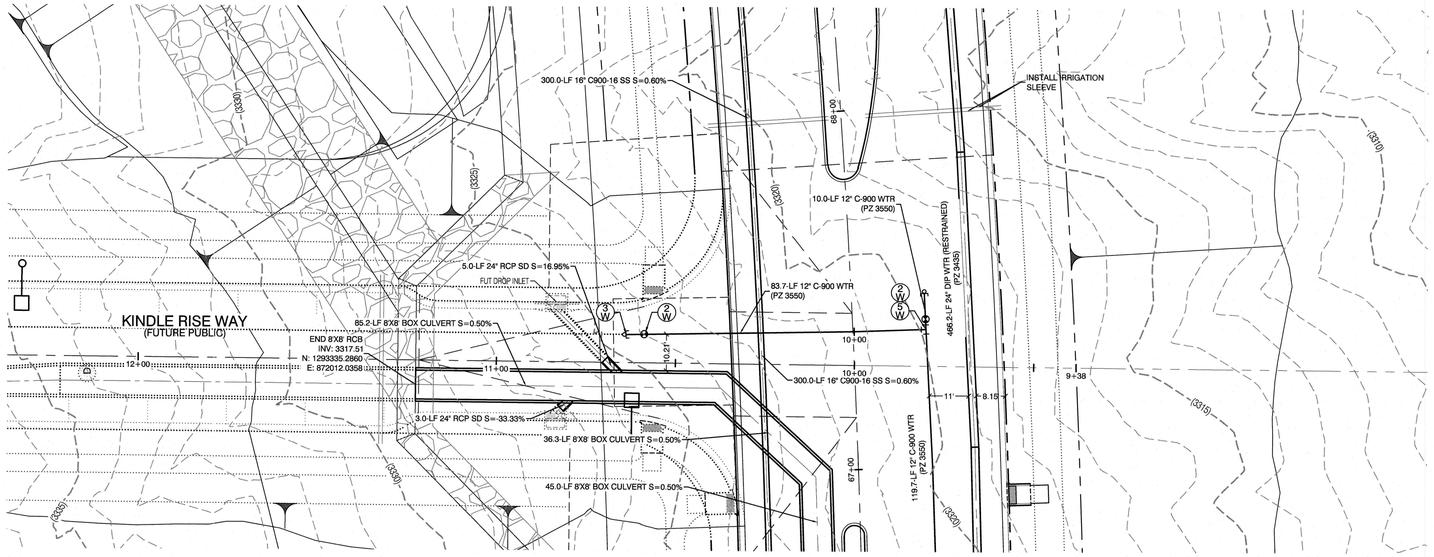
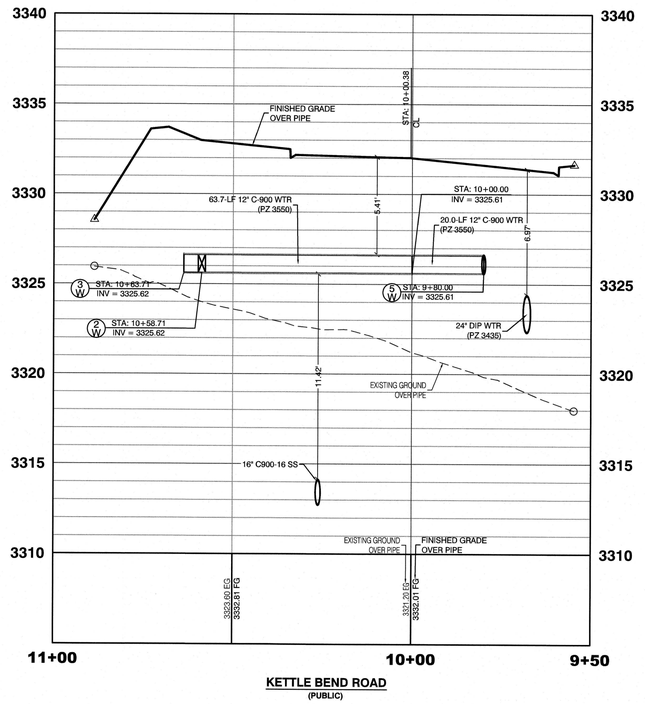


KETTLE BEND ROAD
(PUBLIC)

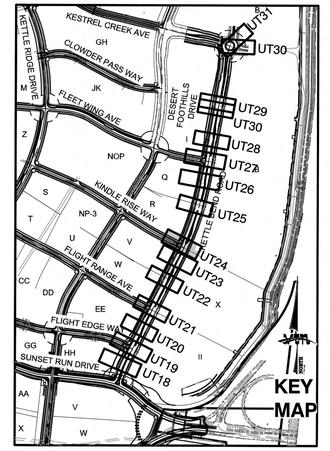
PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE
-20 0 10 20 40
1" = 20'



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR ZONE:

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 TRIAL SHUTDOWN.

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

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

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 / WALLS (TO INCLUDE NO FOOTINGS), AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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CONSTRUCTION NOTES

WATER

1 W		FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W		12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 W		12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 W		24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W		12"X12" TEE (PER UDACS PLATE 31)
6 W		24"X12" TEE (PER UDACS PLATE 31)
7 W		24" 5° BEND (PER UDACS PLATE 31)
8 W		24" 11° BEND (PER UDACS PLATE 31)
9 W		24" 22° BEND (PER UDACS PLATE 31)
10 W		12" 45° BEND (PER UDACS PLATE 31)
11 W		12" 5° BEND (PER UDACS PLATE 31)
12 W		1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W		24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
POC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S		STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
		8" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
1 SS		SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
POC		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

LVVWD EXISTING FACILITIES NOTE:

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







APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 24
WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC
DESIGNED BY: BCC
CHECKED BY: WJM
PROJECT NO: 7881
SCALE: HORIZ. 1"=20' VERT. 1"=4"
08/06/2019
08/06/2019
08/28/2020

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
2020-08-31

SHEET
UT24
64 OF **107** SHEETS
DRAWING NO.
L20-01282
107V8449

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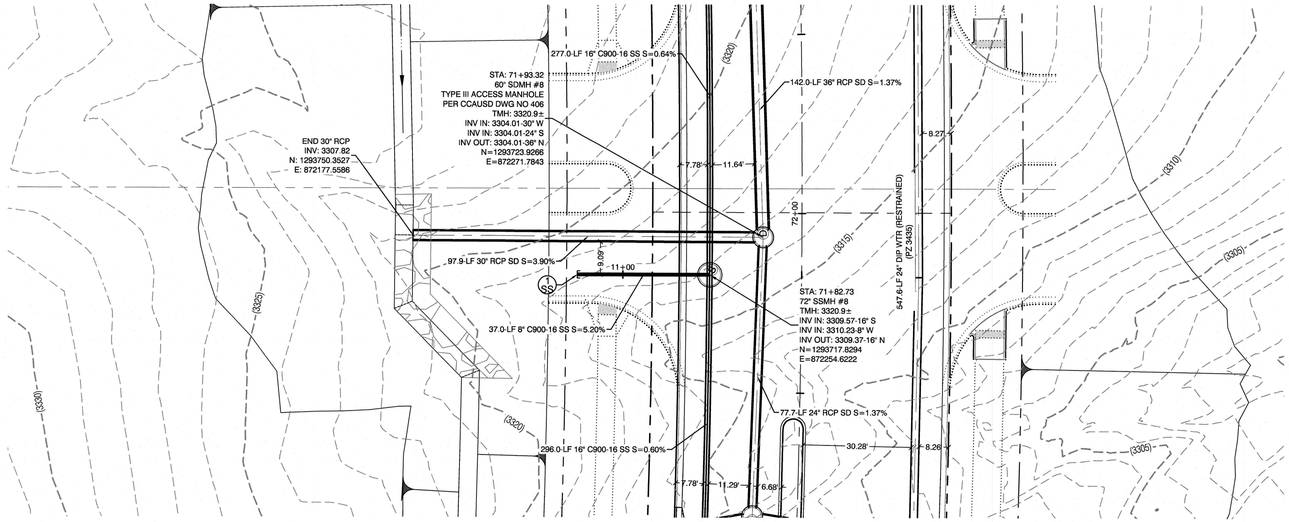

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
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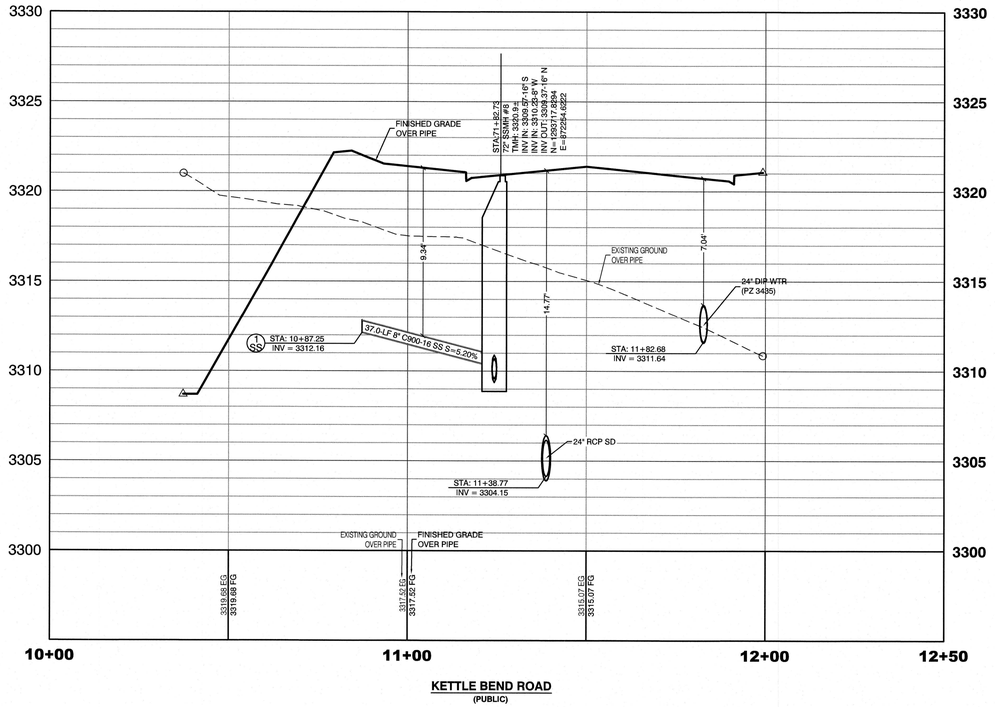

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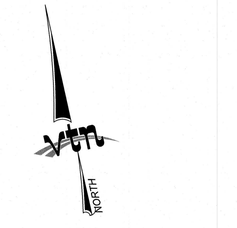

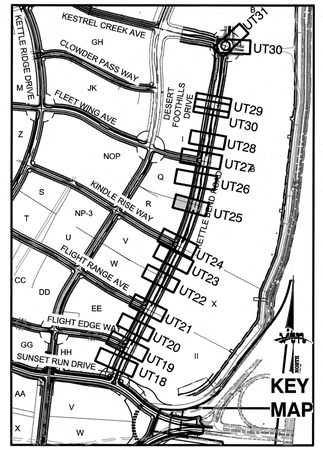

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WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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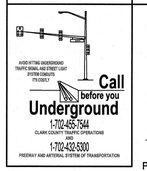

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REVISION	BY	DATE	REV

CITY OF LAS VEGAS

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-207-4500

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2697 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 25
SEWER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE:
BCS 09/09/2019	BCC 09/09/2019	WJM 08/28/2020	7861	HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
UT25
65 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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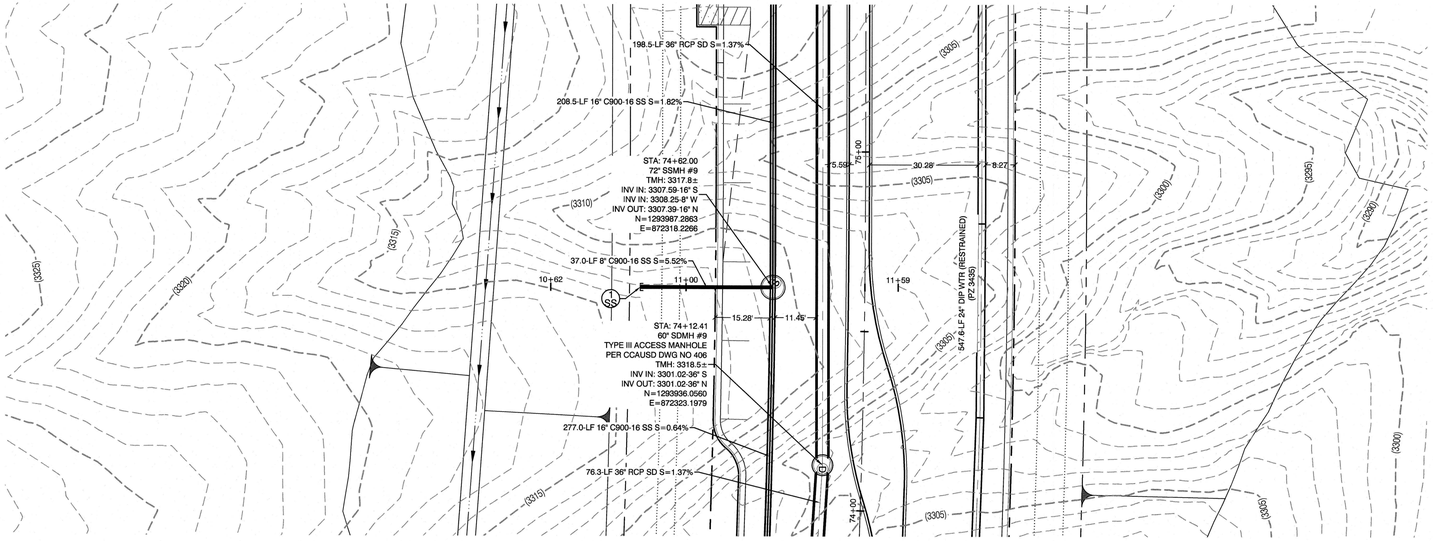

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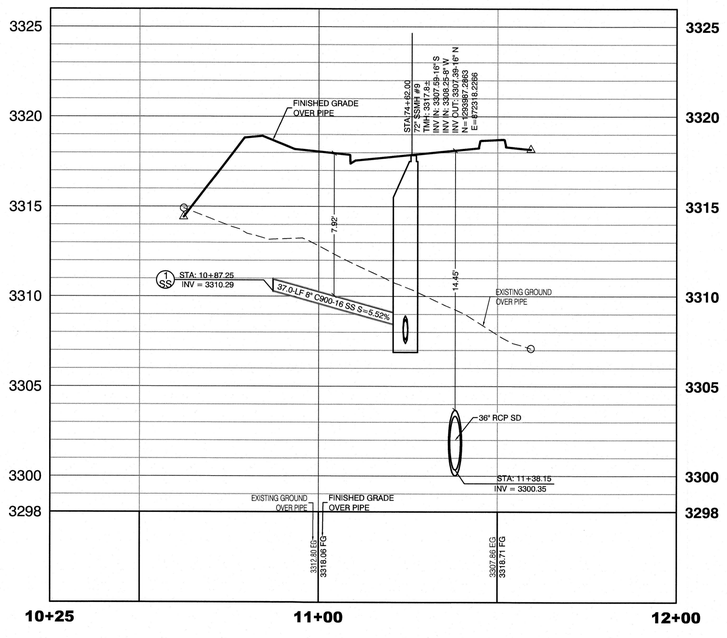

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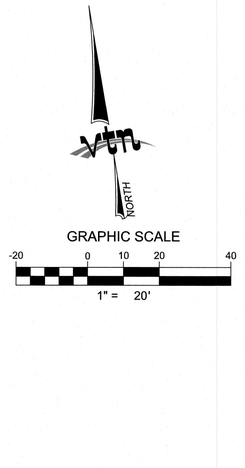

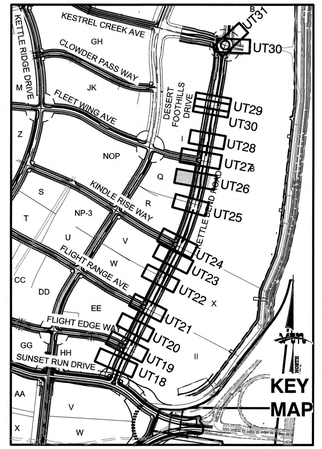

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CONSTRUCTION NOTES

SEWER

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

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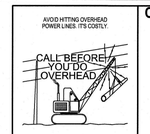



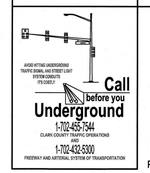

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

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UTILITY PLAN & PROFILE 26
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SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 08/09/2019
DESIGNED BY: BCC 08/09/2019
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7981
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
15745
2020-08-31

SHEET
UT26
66 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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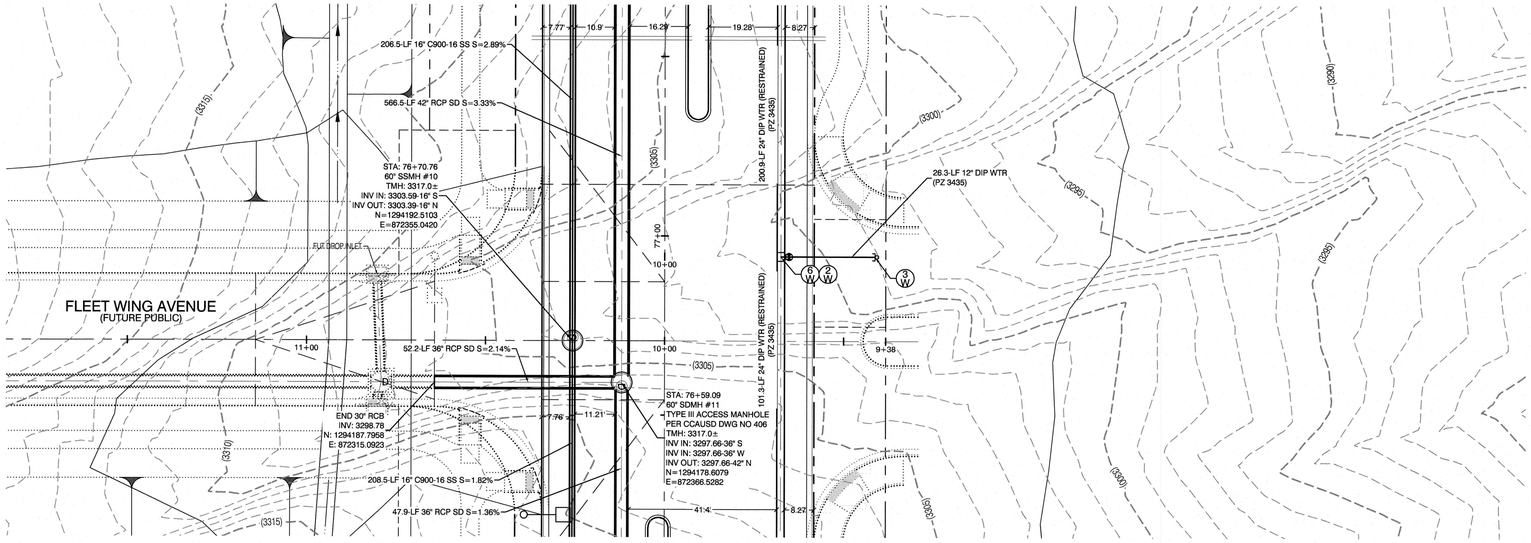
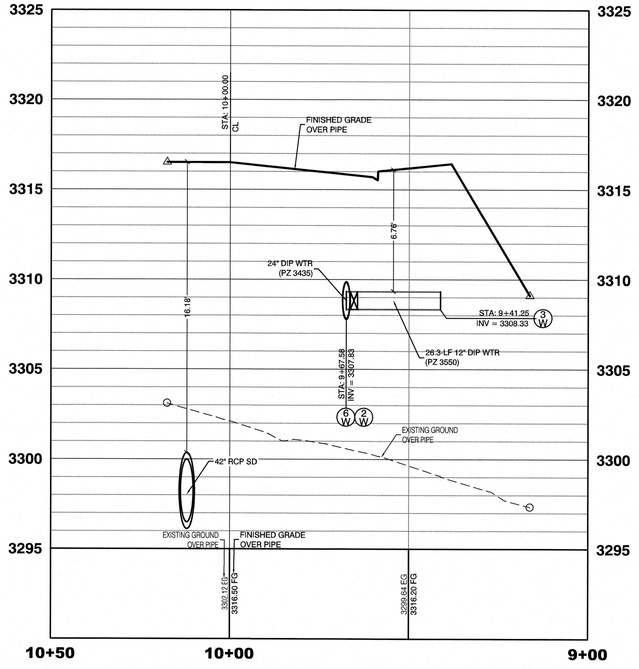


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



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(PUBLIC)



GRAPHIC SCALE
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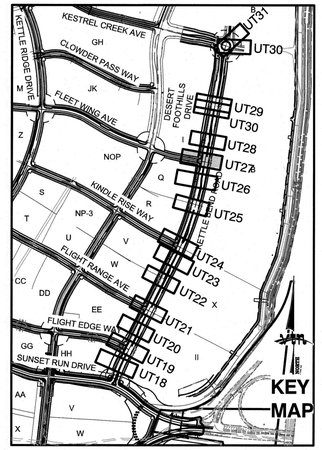
1" = 20'



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

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WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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CONSTRUCTION NOTES

WATER

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3W — 12" CAP & BLOW OFF (PER UDACS PLATE 36)
4W — 24" CAP & BLOW OFF (PER UDACS PLATE 36)
5W — 12"X12" TEE (PER UDACS PLATE 31)
6W — 24"X12" TEE (PER UDACS PLATE 31)
7W — 24" 5° BEND (PER UDACS PLATE 31)
8W — 24" 11° BEND (PER UDACS PLATE 31)
9W — 24" 22° BEND (PER UDACS PLATE 31)
10W — 12" 45° BEND (PER UDACS PLATE 31)
11W — 12" 5° BEND (PER UDACS PLATE 31)
12W — 1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13W — 24"X6" TEE (PER UDACS PLATE 31)
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12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
POC — WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S — STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
8" C-900-16 SANITARY SEWER MAIN
16" C-900-16 SANITARY SEWER MAIN
1 SS — SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
POC — SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS IT'S COSTLY
Call before you Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
AND
1-702-422-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 27
WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE: HORIZ. / VERT.
BCC 08/09/2019	BCC 08/09/2019	MMM 08/28/2020	7861	1"=20' / 1"=4'

PROFESSIONAL ENGINEER — STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT27
67 OF **107** SHEETS

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107V8449

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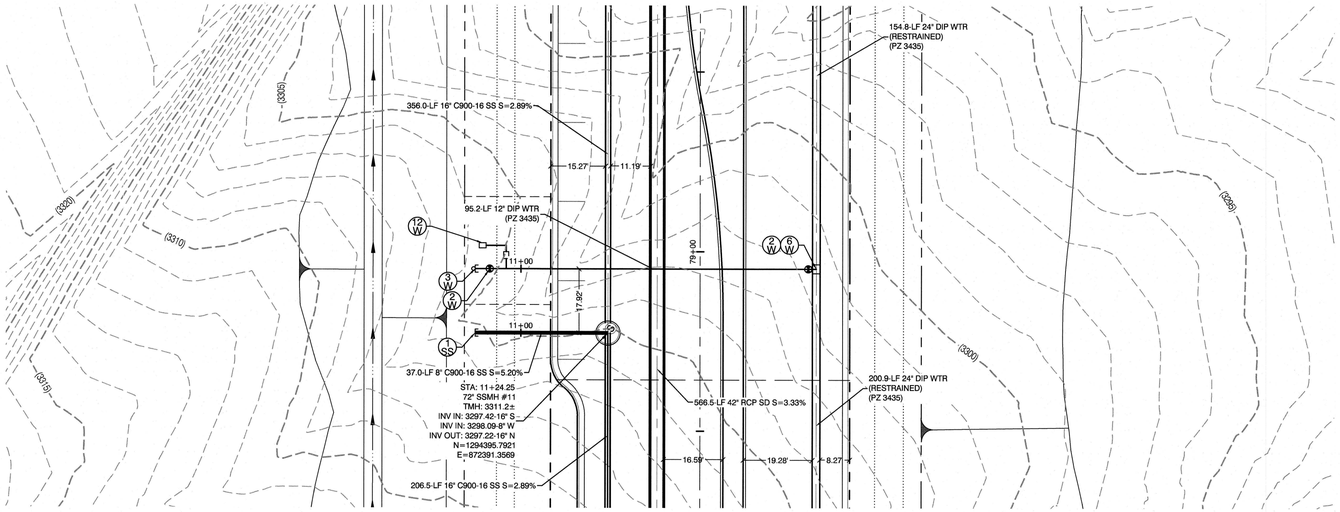

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(PUBLIC)

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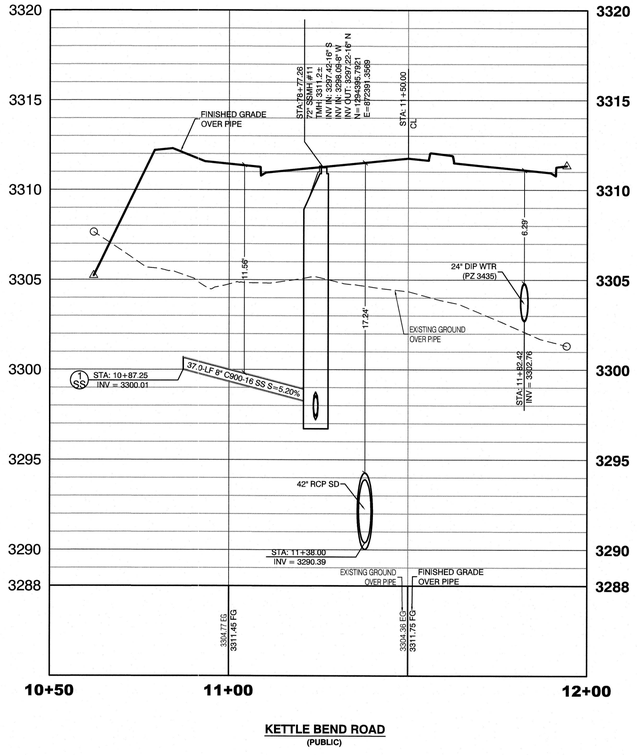

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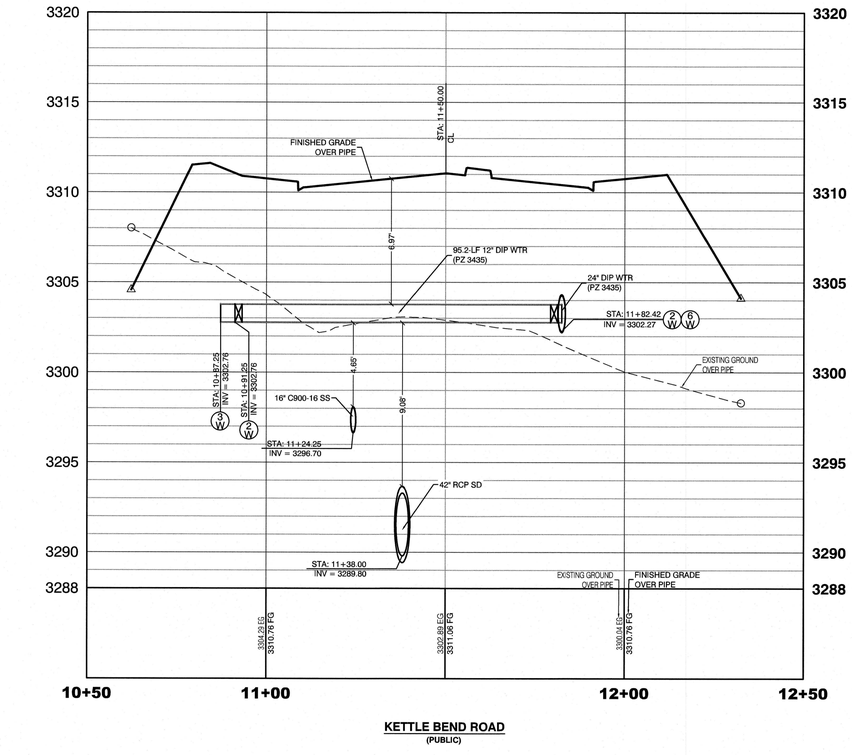

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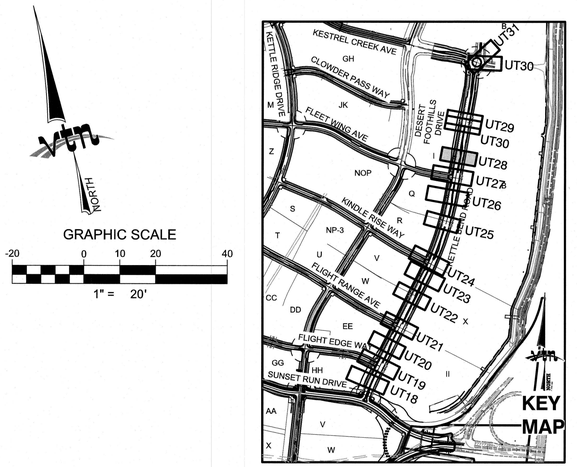

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WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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WATERLINE TRENCH NOTE:

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WATER PRESSURE ZONE:

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

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LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2897 WEB WWW.LTINW.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 28
SEWER & WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	09/09/2019
DESIGNED BY:	09/09/2019
CHECKED BY:	08/28/2020
PROJECT NO:	SCALE: HORIZ. 1"=20' VERT. 1"=4'
7861	

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT28
68 OF **107** SHEETS

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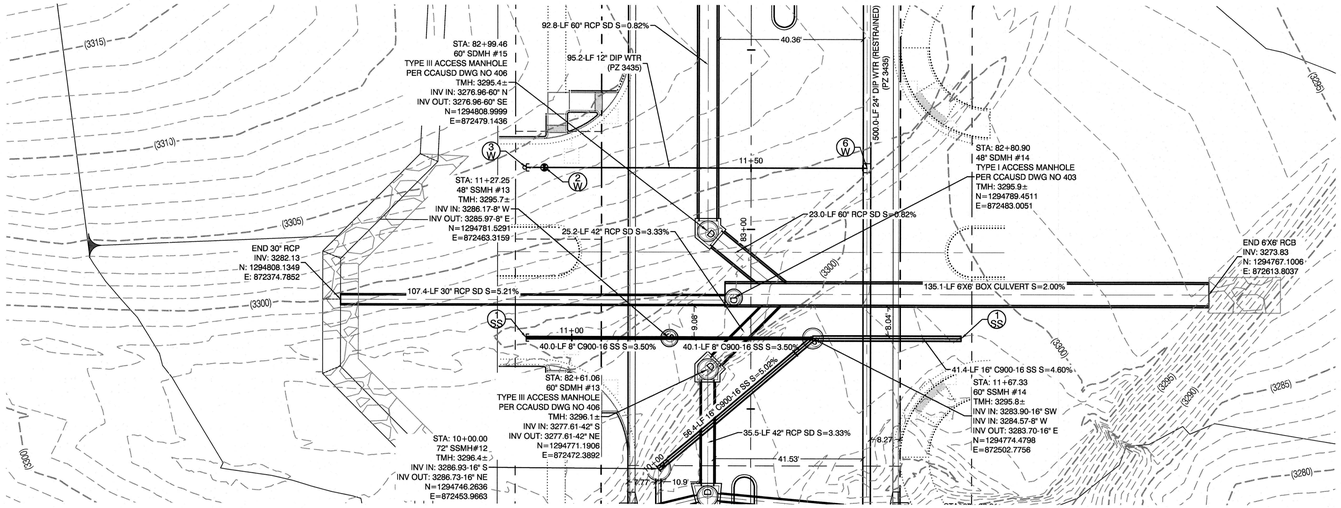

KETTLE BEND ROAD
(PUBLIC)

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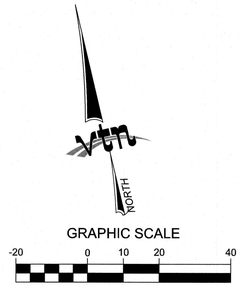

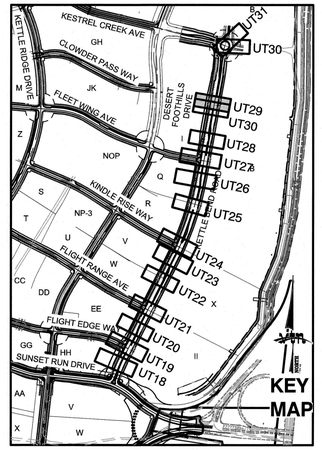

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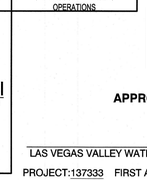
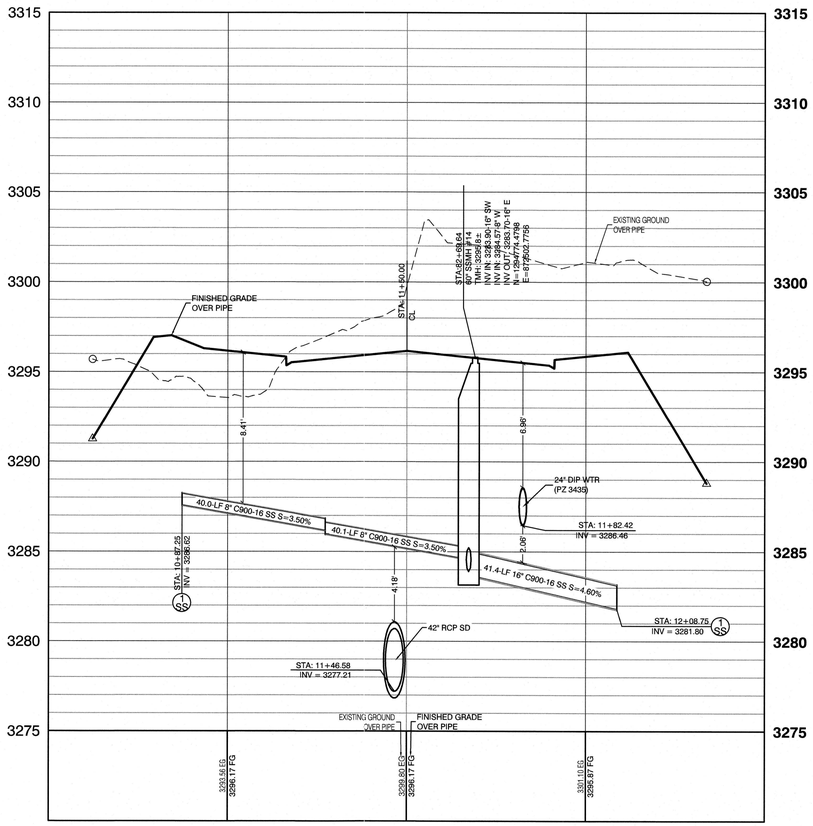
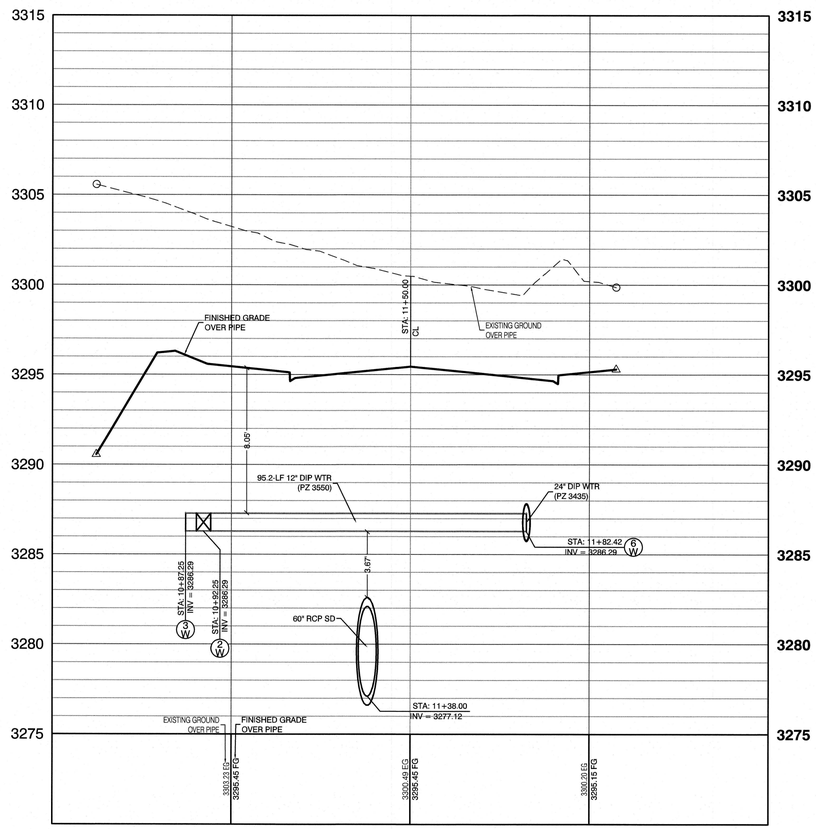


APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____





HOWARD HUGES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.LTINV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

REV	DATE	BY	REVISION

UTILITY PLAN & PROFILE 29
SEWER & WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 09/26/2019
DESIGNED BY: BCC 09/26/2019
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7861
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15141
2020-08-31

SHEET
UT29
69 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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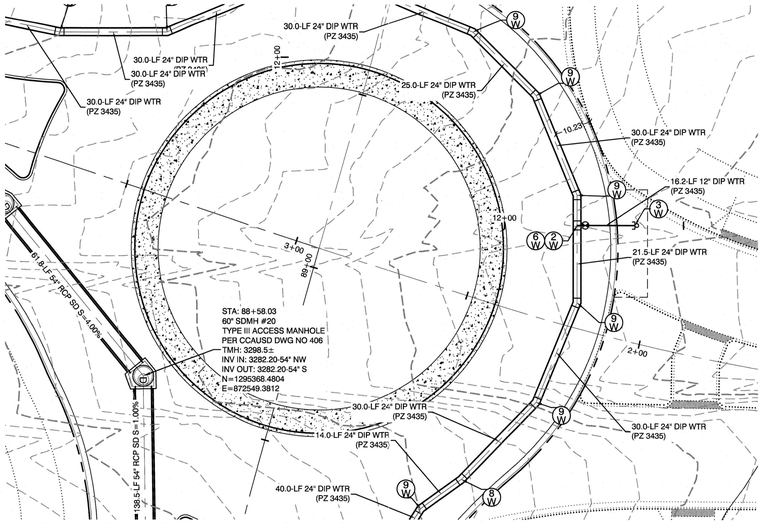
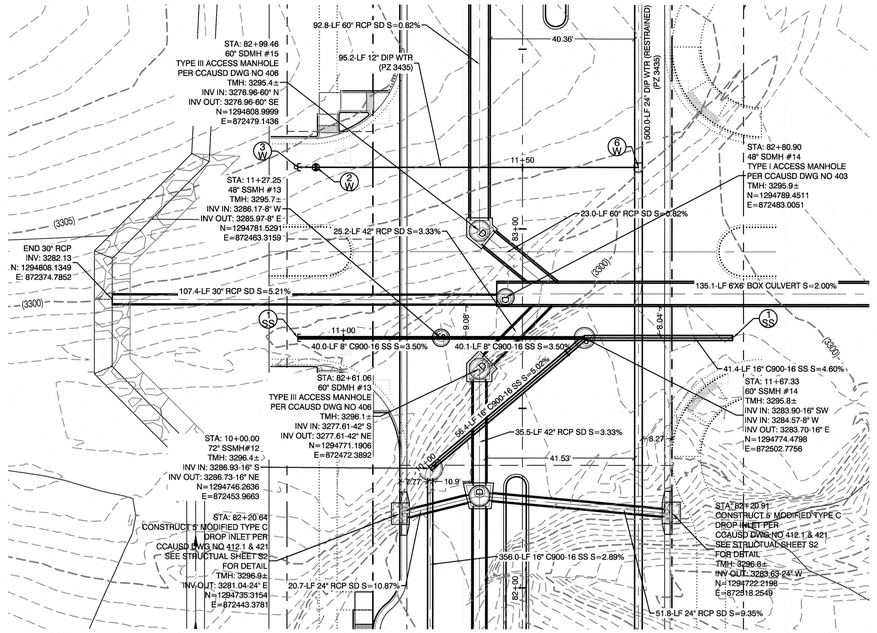
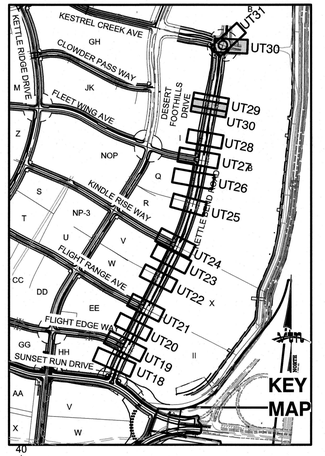






GRAPHIC SCALE

-20 0 10 20 40

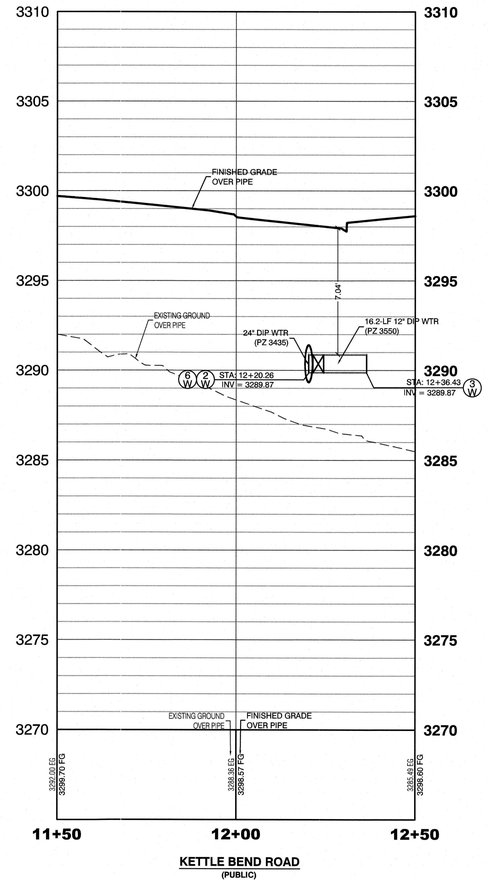
1" = 20'

NORTH

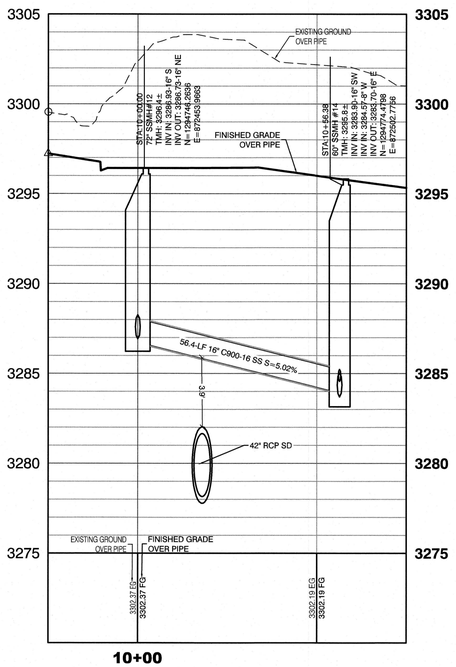
KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)



KETTLE BEND ROAD
(PUBLIC)

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR ZONE:

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 TRIAL SHUTDOWN.

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

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED
PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

CONSTRUCTION NOTES

WATER

1 W	⬬	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
3 W	⊂	12" CAP & BLOW OFF (PER UDACS PLATE 36)
4 W	⊂	24" CAP & BLOW OFF (PER UDACS PLATE 36)
5 W	⊃	12"X12" TEE (PER UDACS PLATE 31)
6 W	⊃	24"X12" TEE (PER UDACS PLATE 31)
7 W	⌐	24" 5° BEND (PER UDACS PLATE 31)
8 W	⌐	24" 11° BEND (PER UDACS PLATE 31)
9 W	⌐	24" 22° BEND (PER UDACS PLATE 31)
10 W	⌐	12" 45° BEND (PER UDACS PLATE 31)
11 W	⌐	12" 5° BEND (PER UDACS PLATE 31)
12 W	⊃	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13 W	⊃	24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
POC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	8" C-900-16 SANITARY SEWER MAIN
	16" C-900-16 SANITARY SEWER MAIN
SS	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
POC	SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

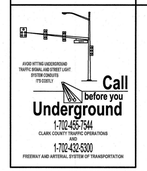
MAINTAIN MINIMUM TWENTY-FOUR (24) INCH COVER PER UDACS SECTION 2.08.04. GRADING MUST BE COMPLETED PRIOR TO WATERLINE INSTALLATION.

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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







APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 873-7550 FAX (702) 362-2397 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 30
WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/09/2019		
DESIGNED BY: BCC	09/09/2019		
CHECKED BY: WJM	08/28/2020	SCALE:	1"=20' HORIZ. 1"=4' VERT.
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT30
70 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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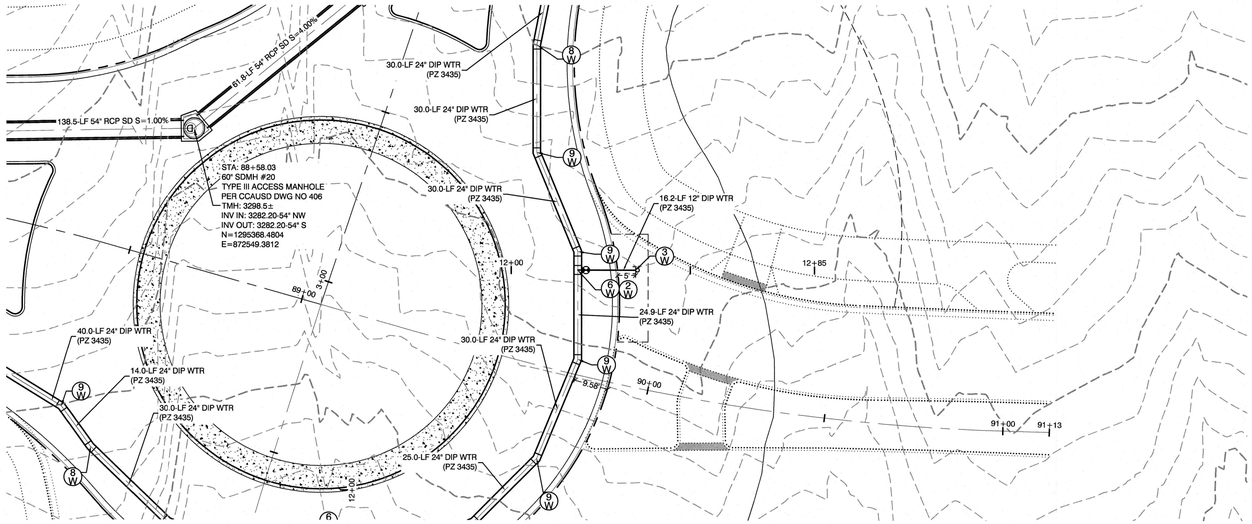
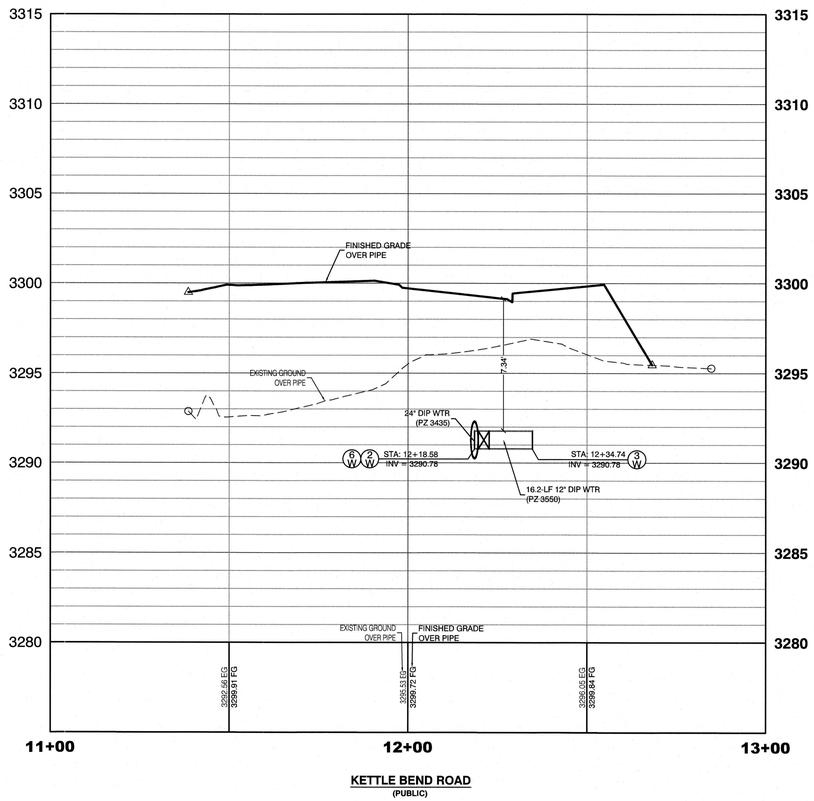


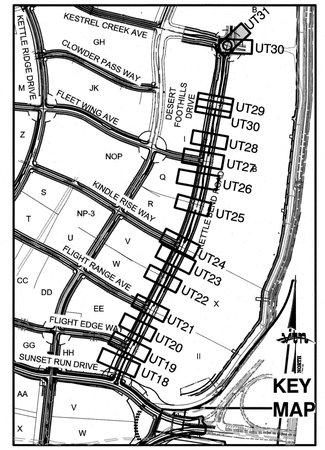
KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)

GRAPHIC SCALE
-20 0 10 20 40
1" = 20'



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

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 18' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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UTILITY CROSSING NOTE:

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CONSTRUCTION NOTES

WATER

1W		FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2W		12" GATE VALVE (PER UDACS PLATE 30 & 39)
3W		12" CAP & BLOW OFF (PER UDACS PLATE 36)
4W		24" CAP & BLOW OFF (PER UDACS PLATE 36)
6W		12"X12" TEE (PER UDACS PLATE 31)
6W		24"X12" TEE (PER UDACS PLATE 31)
7W		24" 5° BEND (PER UDACS PLATE 31)
8W		24" 11° BEND (PER UDACS PLATE 31)
9W		24" 22° BEND (PER UDACS PLATE 31)
10W		12" 45° BEND (PER UDACS PLATE 31)
11W		12" 5° BEND (PER UDACS PLATE 31)
12W		1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
13W		24"X6" TEE (PER UDACS PLATE 31)
		6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
		12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
		24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
POC		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

S		STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
		8" C-900-16 SANITARY SEWER MAIN
		16" C-900-16 SANITARY SEWER MAIN
4S		SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
POC		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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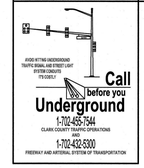

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

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PH. (702) 873-7590 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 31
WATER LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/06/2019	CHECKED BY: KMM	08/28/2020	SCALE: HORIZ. 1"=20' VERT. 1"=4'
DESIGNED BY: BCC	09/06/2019	PROJECT NO: 7861		

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
UT31
71 OF **107** SHEETS

DRAWING NO.
L20-01282
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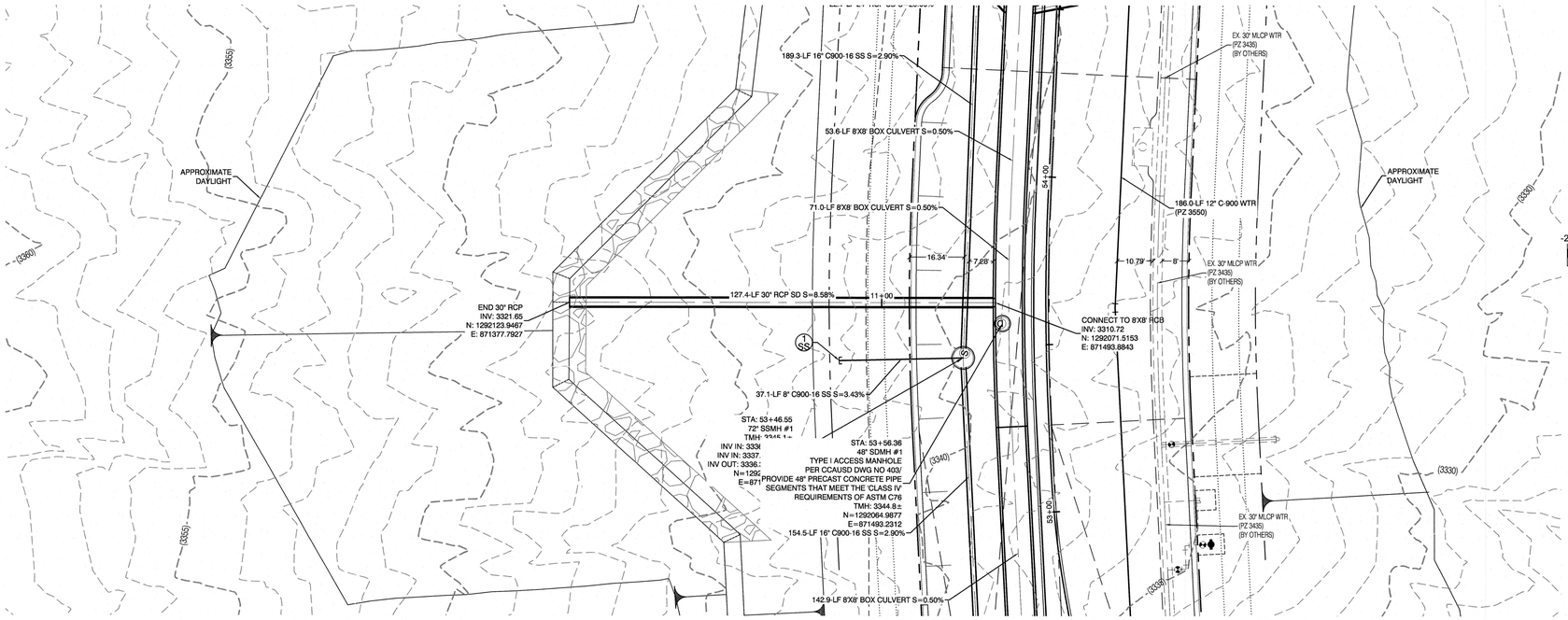
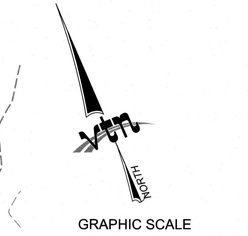
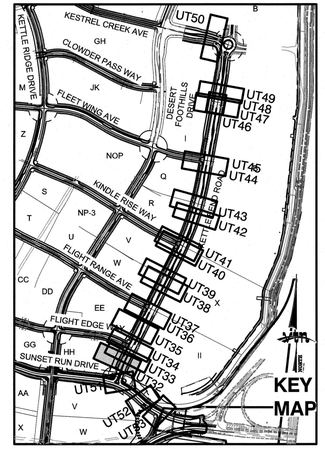
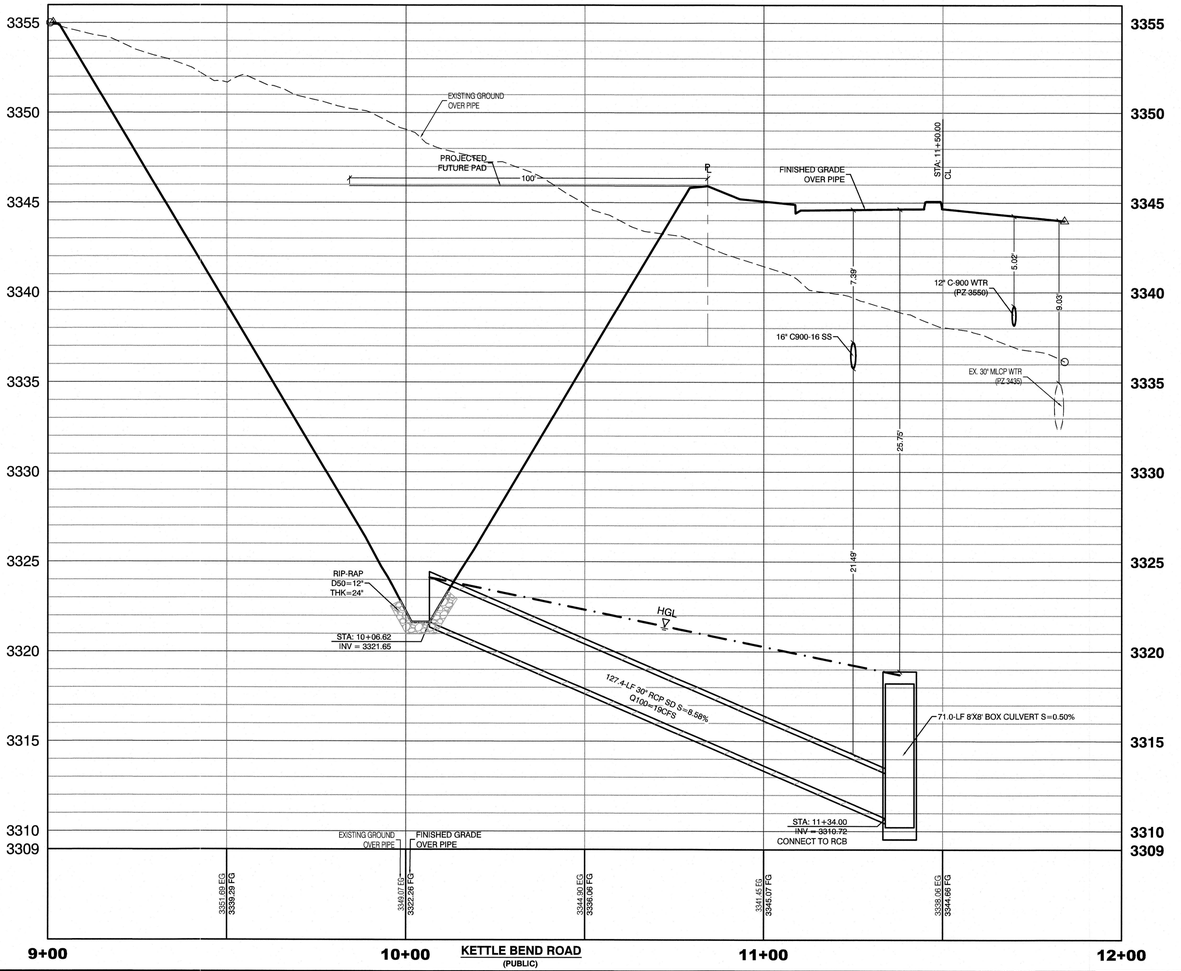
H:\7861\Kettle Bend Road\Sheet Set\7861-UTLAT-2.dwg,8/28/2020 8:18 AM,brandonc









KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

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LVVWD EXISTING FACILITIES NOTE:

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WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED
PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

UTILITY CROSSING NOTE:

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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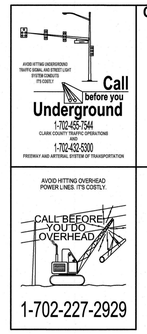

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AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 32
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

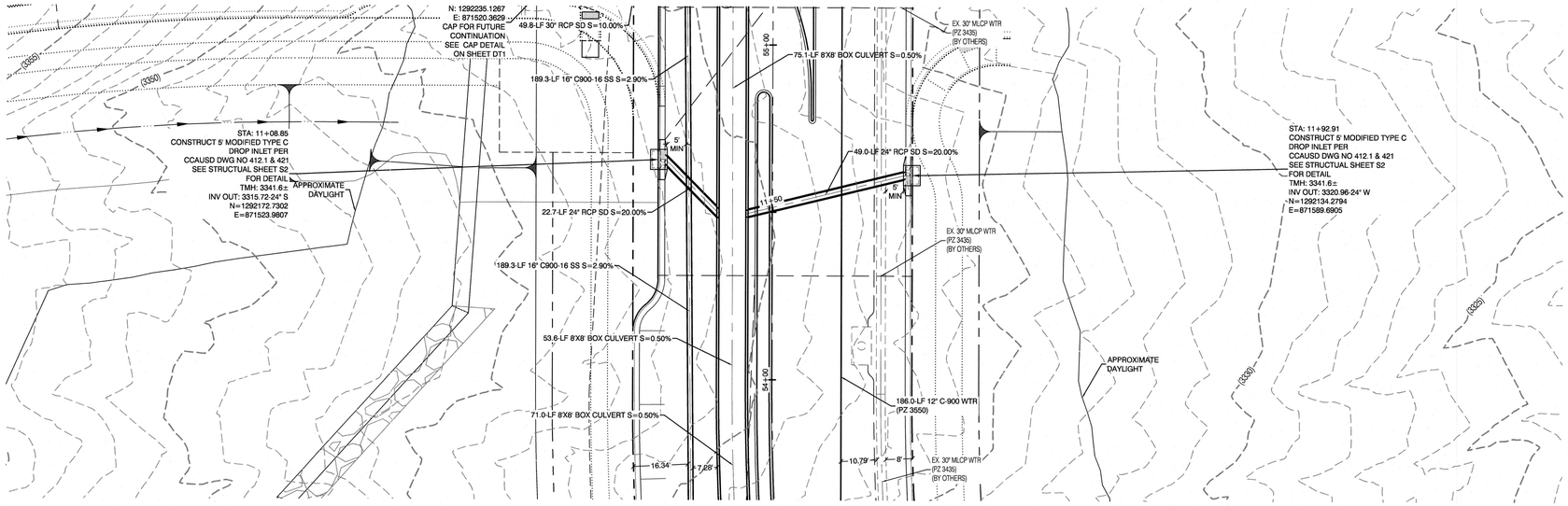
DRAWN BY: BCC 09/10/2019
DESIGNED BY: BCC 09/10/2019
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7891
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT32
72 OF 107 SHEETS

DRAWING NO.
L20-01282
107V9449

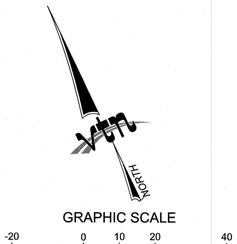
H:\7891\Kettle Bend Road\Sheet Set\7891-UT-SD LAT-1.dwg,8/28/2020 8:19 AM,brandonc

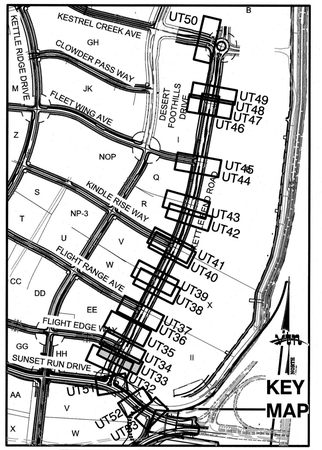


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'

KETTLE BEND ROAD
(PUBLIC)





CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

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NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

UTILITY CROSSING NOTE:

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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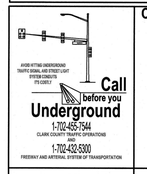
DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).



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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 33
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019	SCALE:	HORIZ. 1"=20' VERT. 1"=4'
DESIGNED BY: BCC	09/10/2019		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT33
73 OF **107** SHEETS

DRAWING NO.
L20-01282
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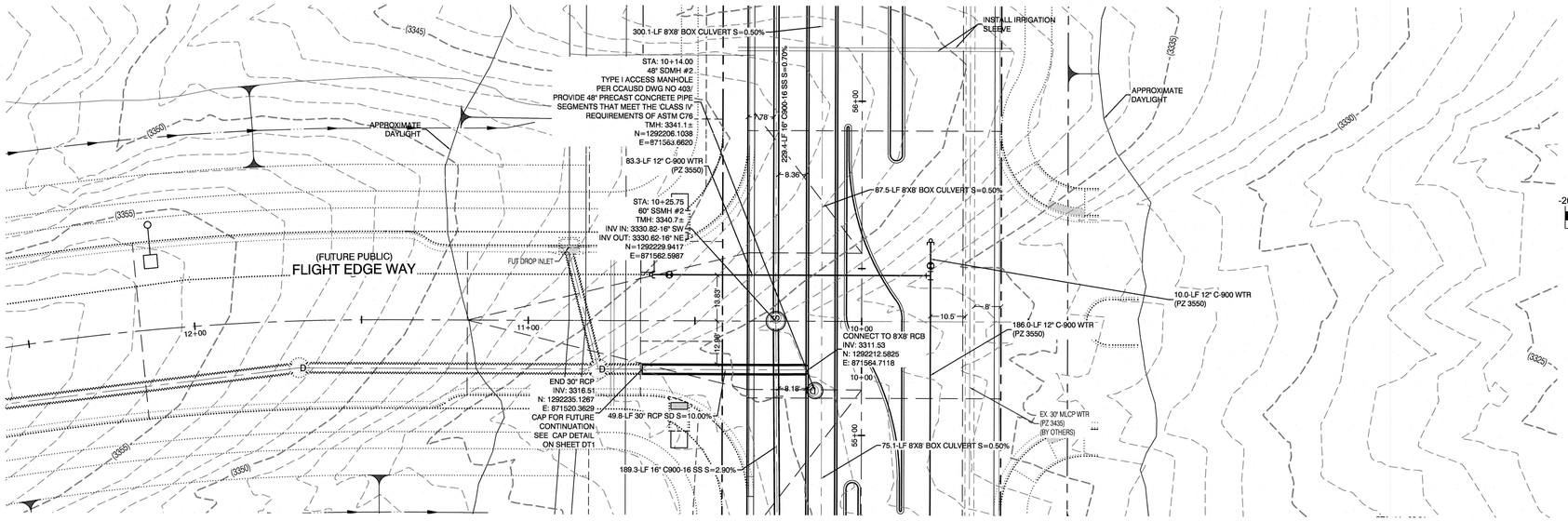

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
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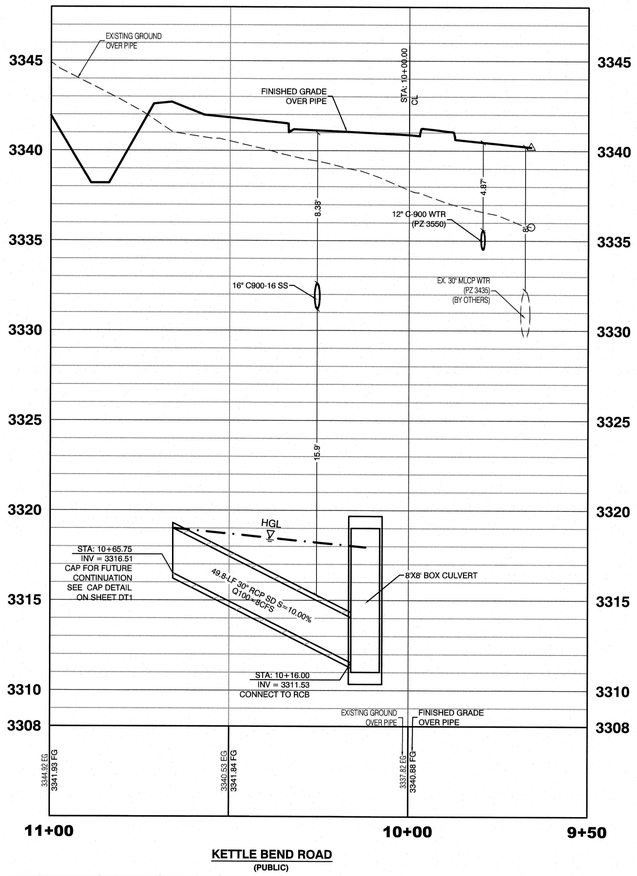

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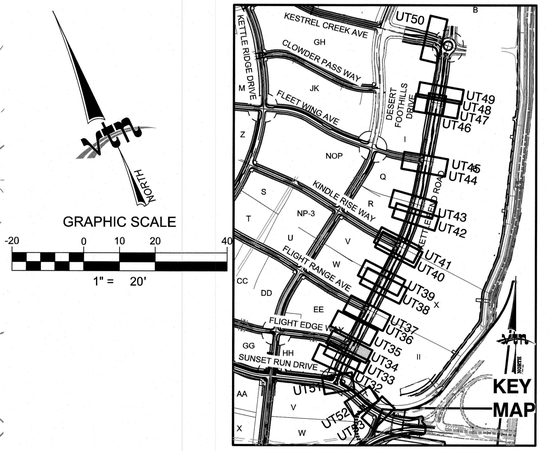

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WATERLINE TRENCH NOTE:

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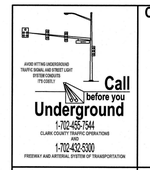



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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

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UTILITY PLAN & PROFILE 34
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019	SCALE: HORIZ. 1"=20' VERT. 1"=4'
DESIGNED BY: BCC	09/10/2019	
CHECKED BY: WJM	08/28/2020	
PROJECT NO: 7861		

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
15745
2020-08-31

SHEET
UT34
74 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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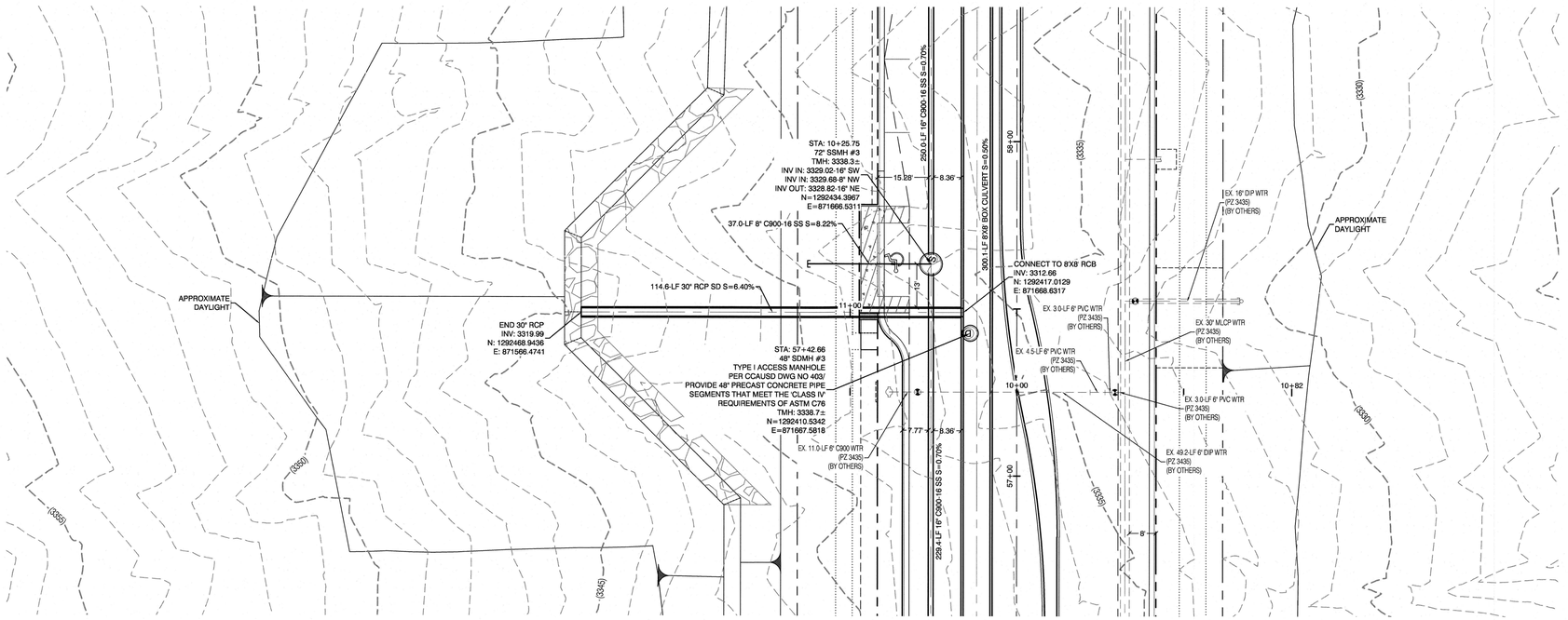

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
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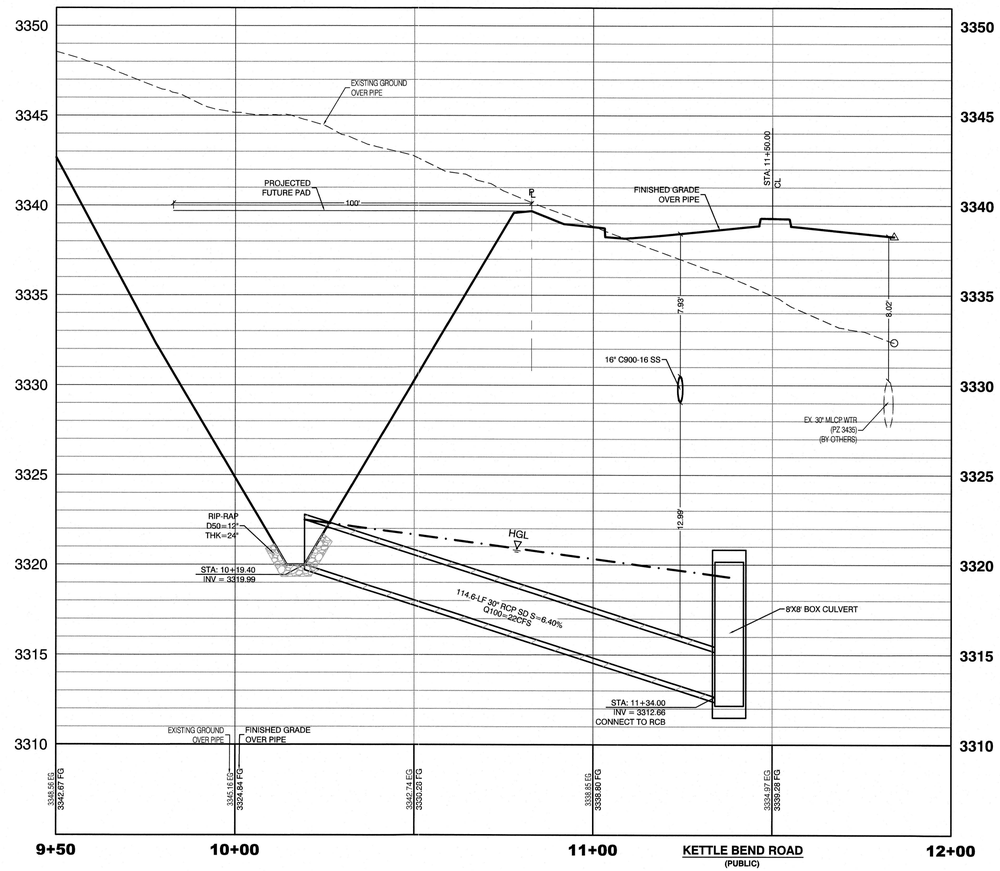

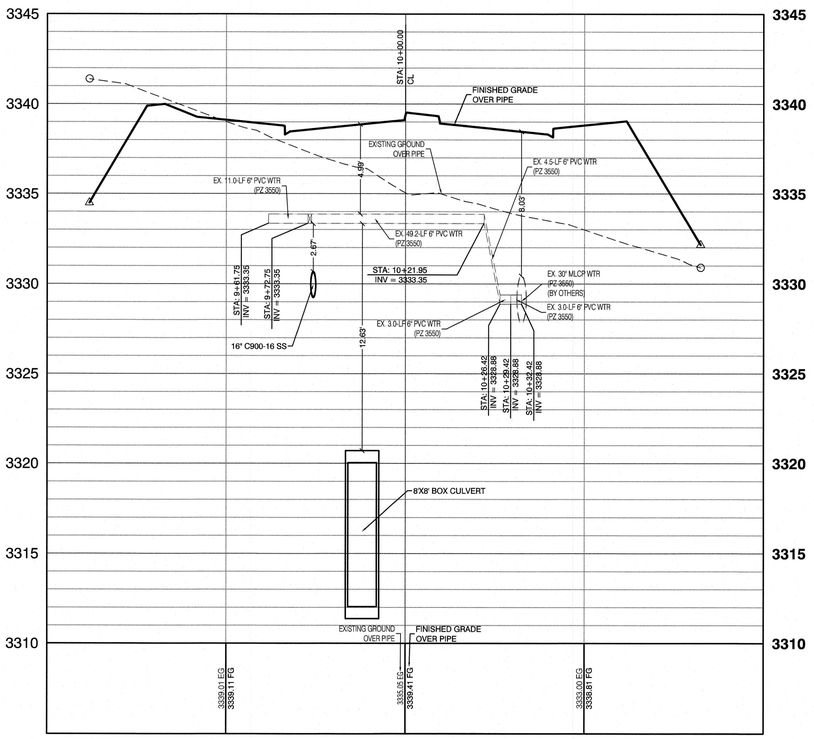

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WATER PRESSURE ZONE:

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CALL BEFORE YOU DO OVERHEAD
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Call before you Dig
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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

CITY OF LAS VEGAS

UTILITY PLAN & PROFILE 35
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 09/10/2019
DESIGNED BY: BCC 09/10/2019
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7861
SCALE: HORZ 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT35
75 OF 107 SHEETS

DRAWING NO.
L20-01282
107V9449

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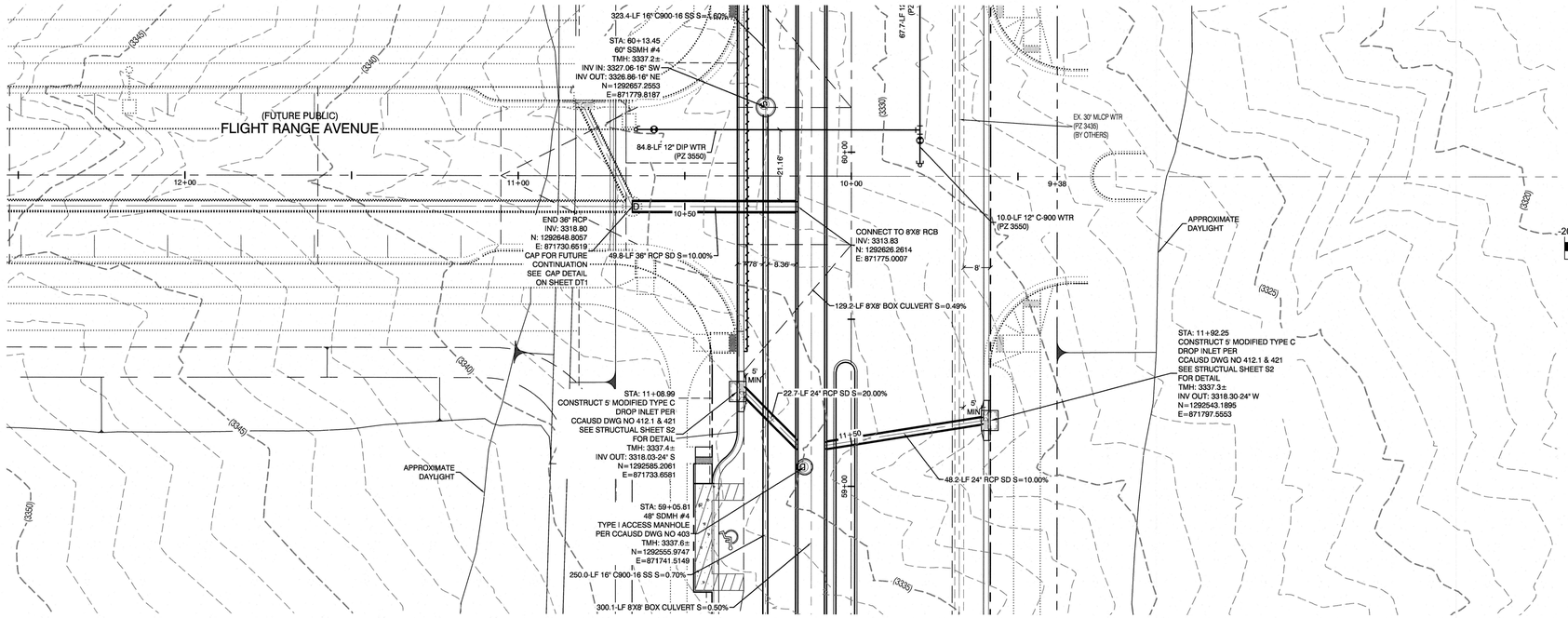

KETTLE BEND ROAD
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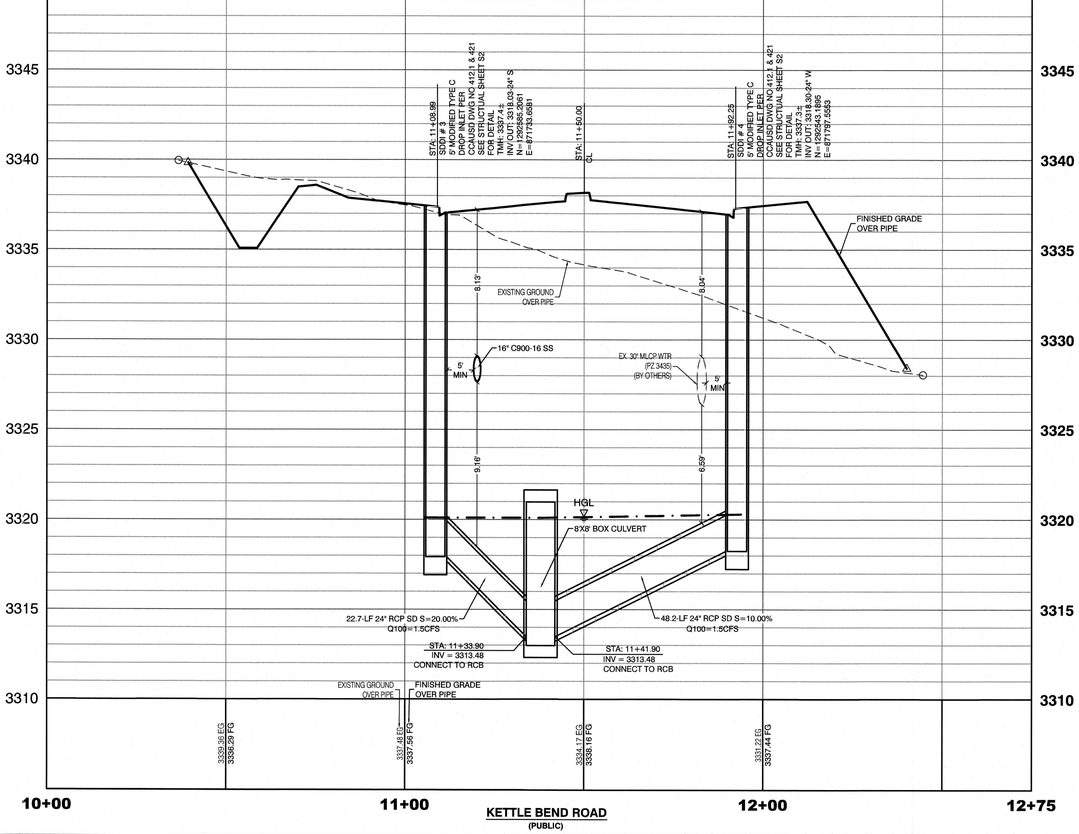

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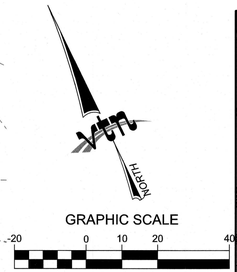

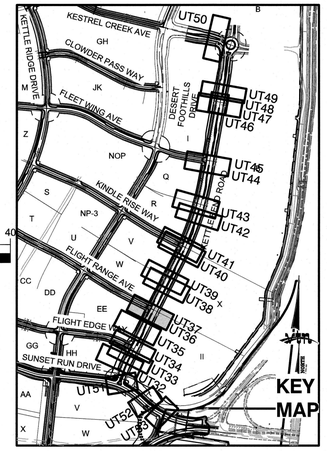

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THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR ZONE:

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 TRIAL SHUTDOWN.

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

LVVWD EXISTING FACILITIES NOTE:

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED
PAVEMENT MARKERS ARE TO BE INSTALLED:

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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03

UTILITY CROSSING NOTE:

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

DROP INLET SEPARATION NOTE

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Avoid cutting underground utility lines. It's costly.
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OR
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AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 36
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE:
BCC 08/10/2019	BCC 09/10/2019	VJM 08/28/2020	7981	1"=20' HORZ. 1"=4' VERT.

PROFESSIONAL ENGINEER - STATE OF NEVADA
No. 15145
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
2020-08-31

SHEET
UT36
76 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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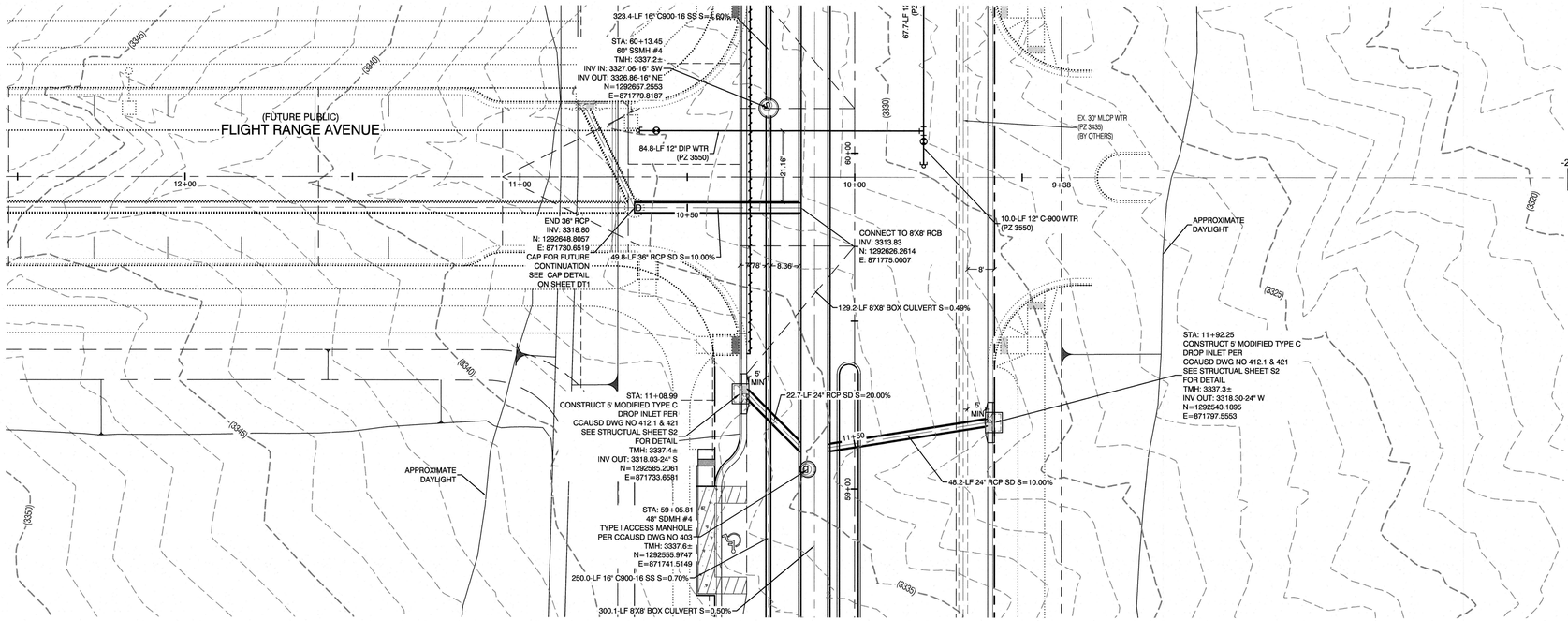
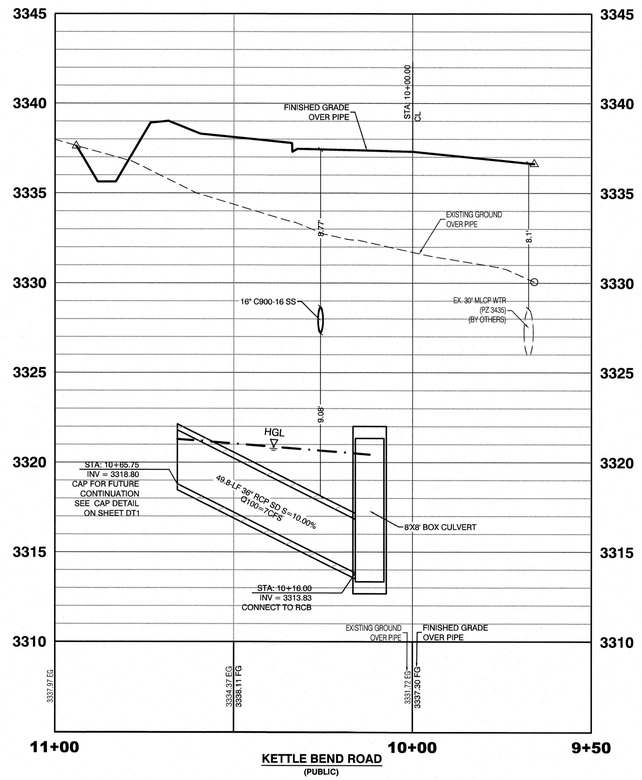


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE

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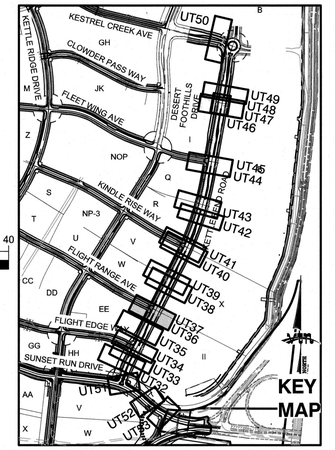
1" = 20'



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WATERLINE TRENCH NOTE:

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WATER PRESSURE ZONE:

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.ITINNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 37
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE:
BCC 08/10/2019	BCC 08/10/2019	MJM 08/28/2020	7981	HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
UT37
77 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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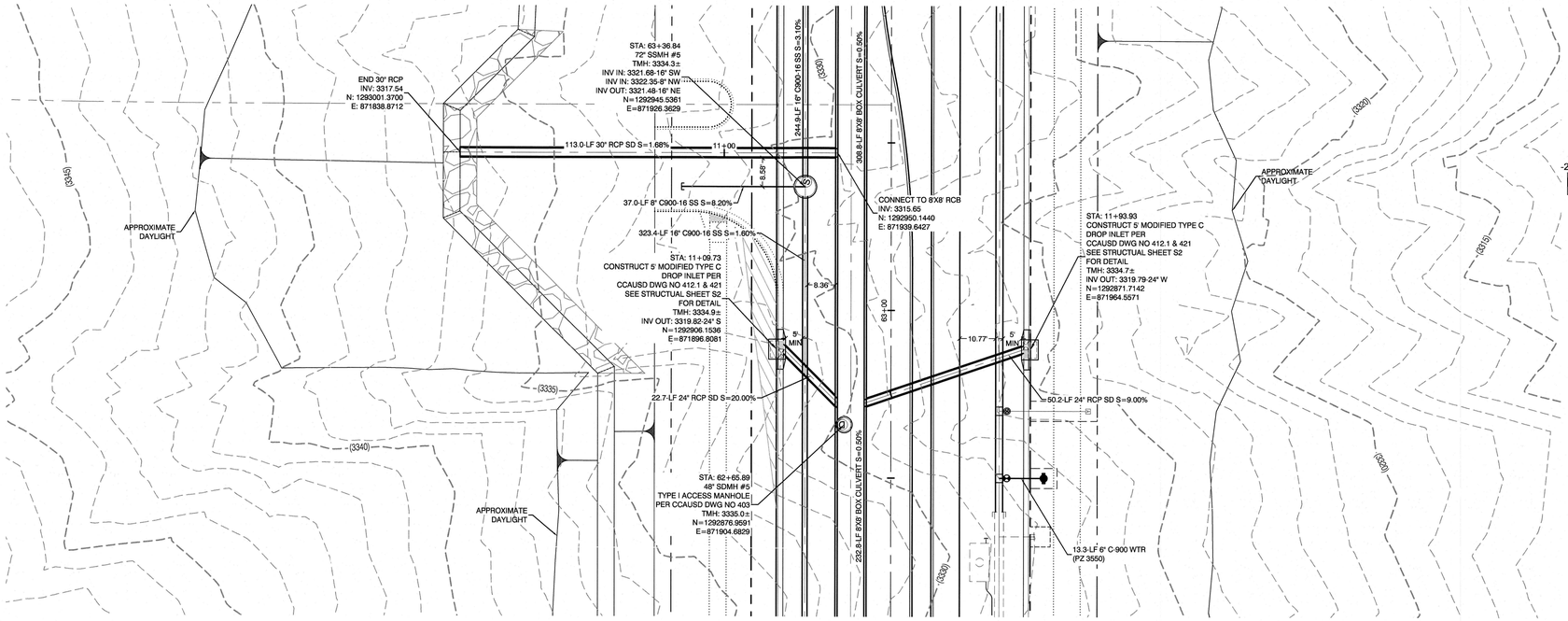

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
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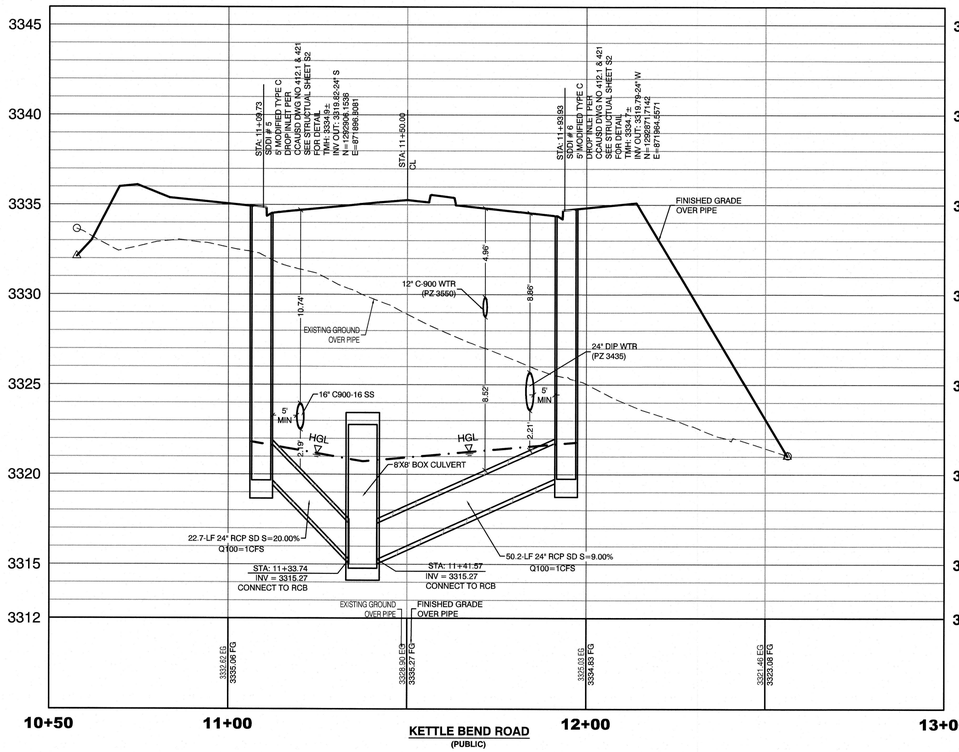

KETTLE BEND ROAD
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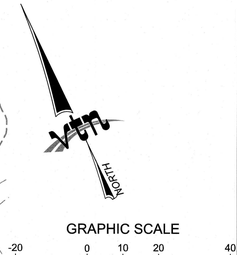

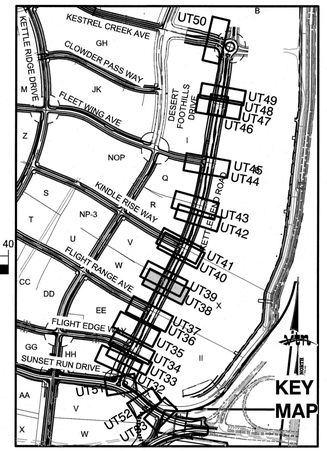

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INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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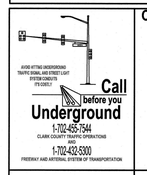





APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 38
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019		
DESIGNED BY: BCC	09/10/2019		
CHECKED BY: HAM	08/28/2020	SCALE:	1"= 20' HORIZ. 1"=4' VERT.
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT38
78 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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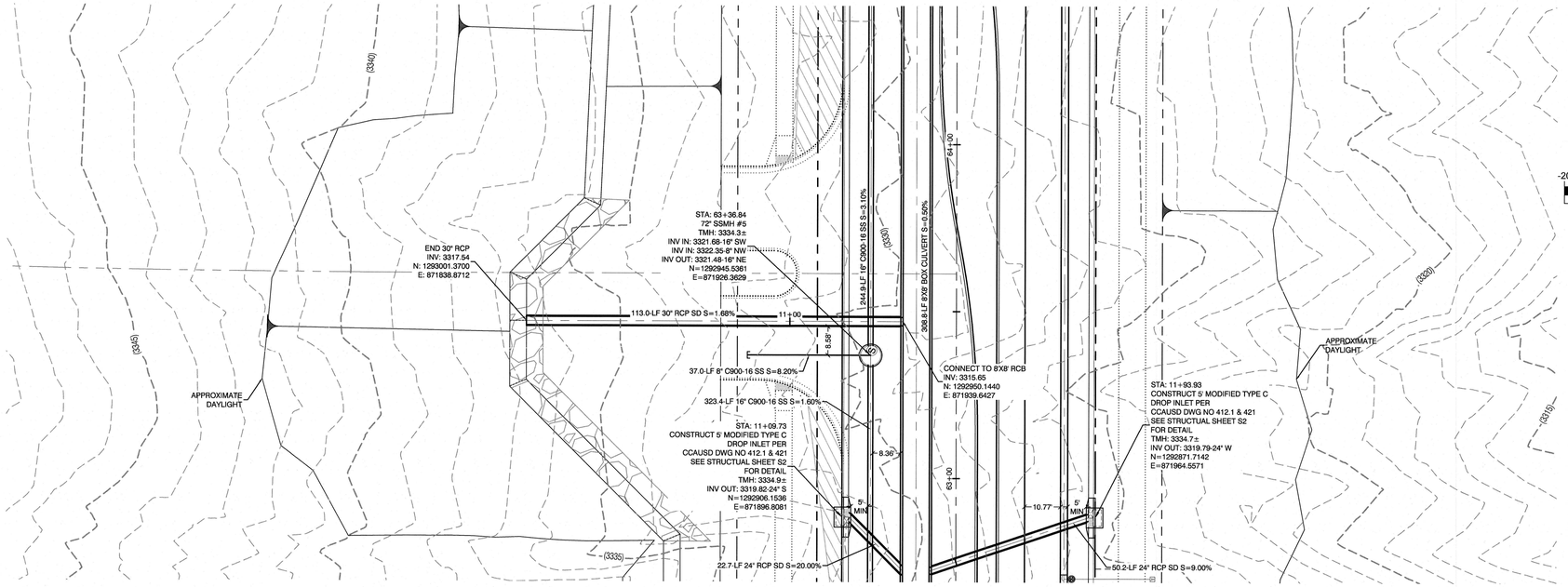

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

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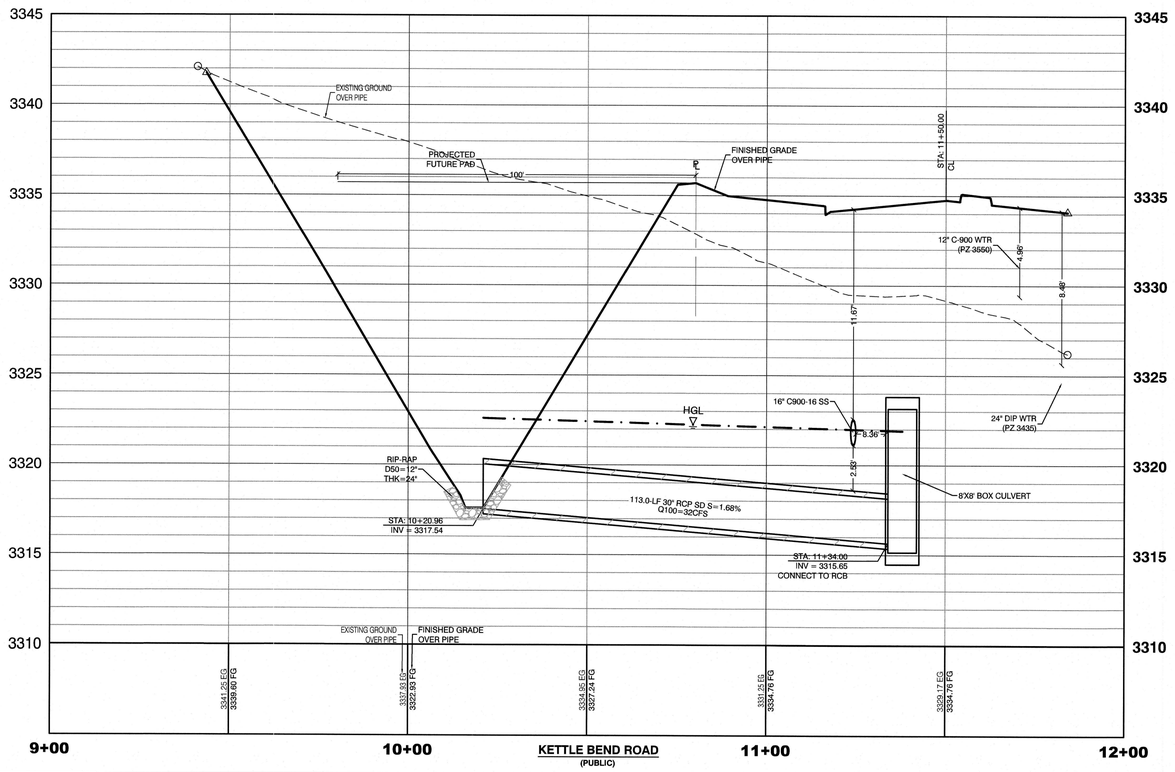

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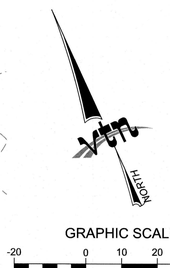

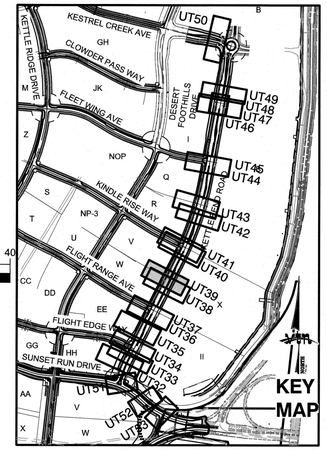

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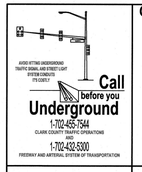
DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).







APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

REV	DATE	BY	REVISION

UTILITY PLAN & PROFILE 39
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019		
DESIGNED BY: BCC	09/10/2019		
CHECKED BY: WM	08/28/2020	SCALE:	HORIZ. 1"=20' VERT. 1"=4'
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT39
79 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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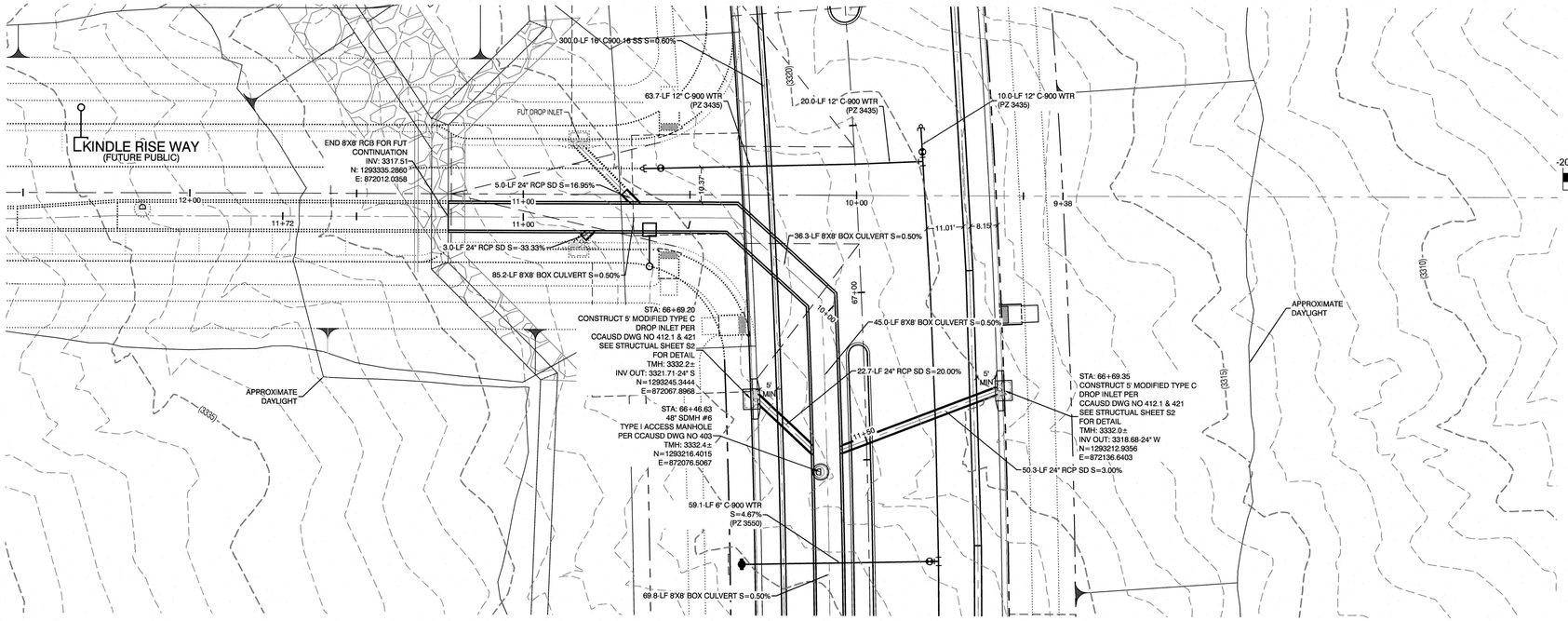
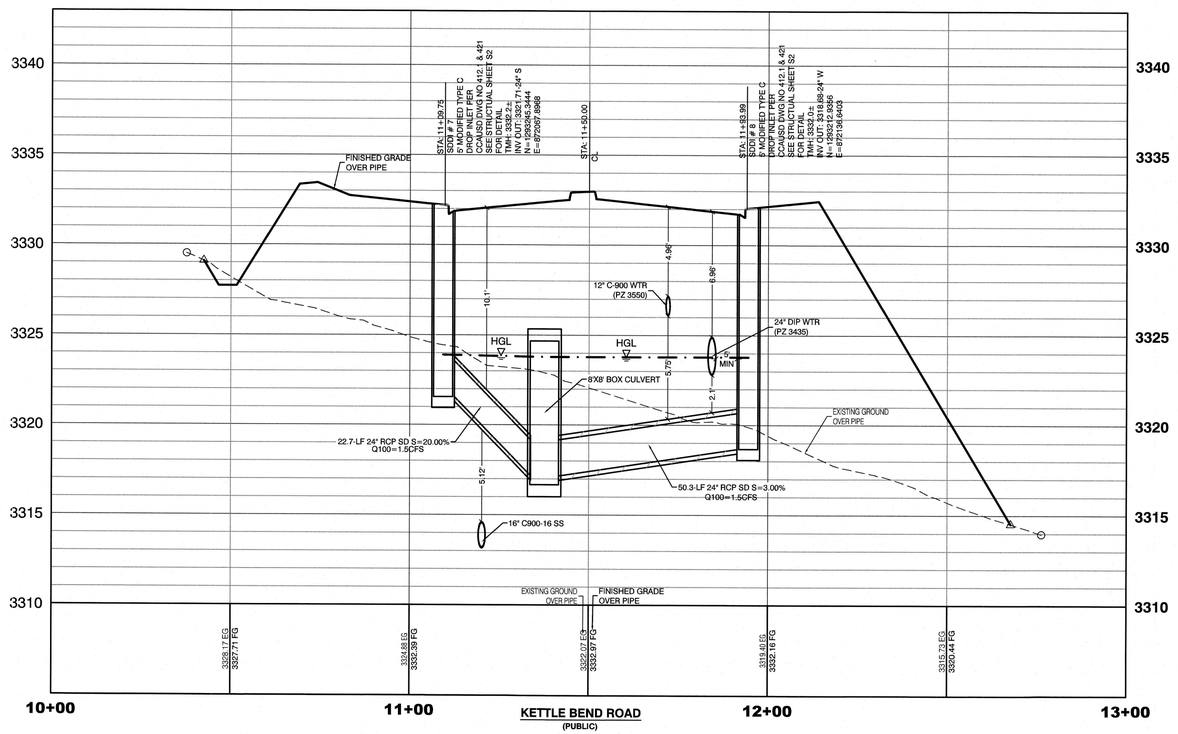
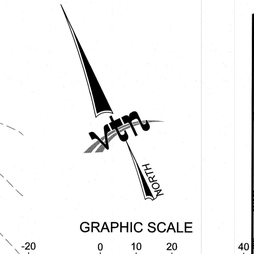


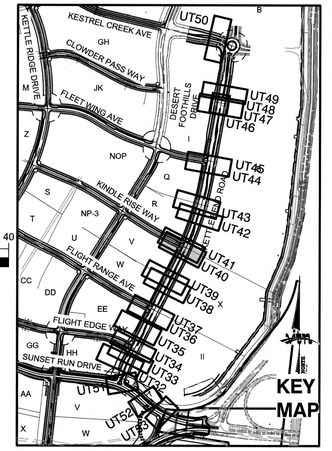
KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'







CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR ZONE:

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 TRIAL SHUTDOWN.

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

LVVWD EXISTING FACILITIES NOTE:

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET.

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

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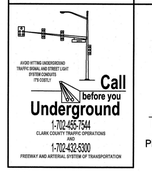
Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR 1-800-642-2444 AND 1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 40
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC — 09/10/2019
DESIGNED BY: BCC — 09/10/2019
CHECKED BY: WJM — 08/28/2020
PROJECT NO: 7861
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT40
80 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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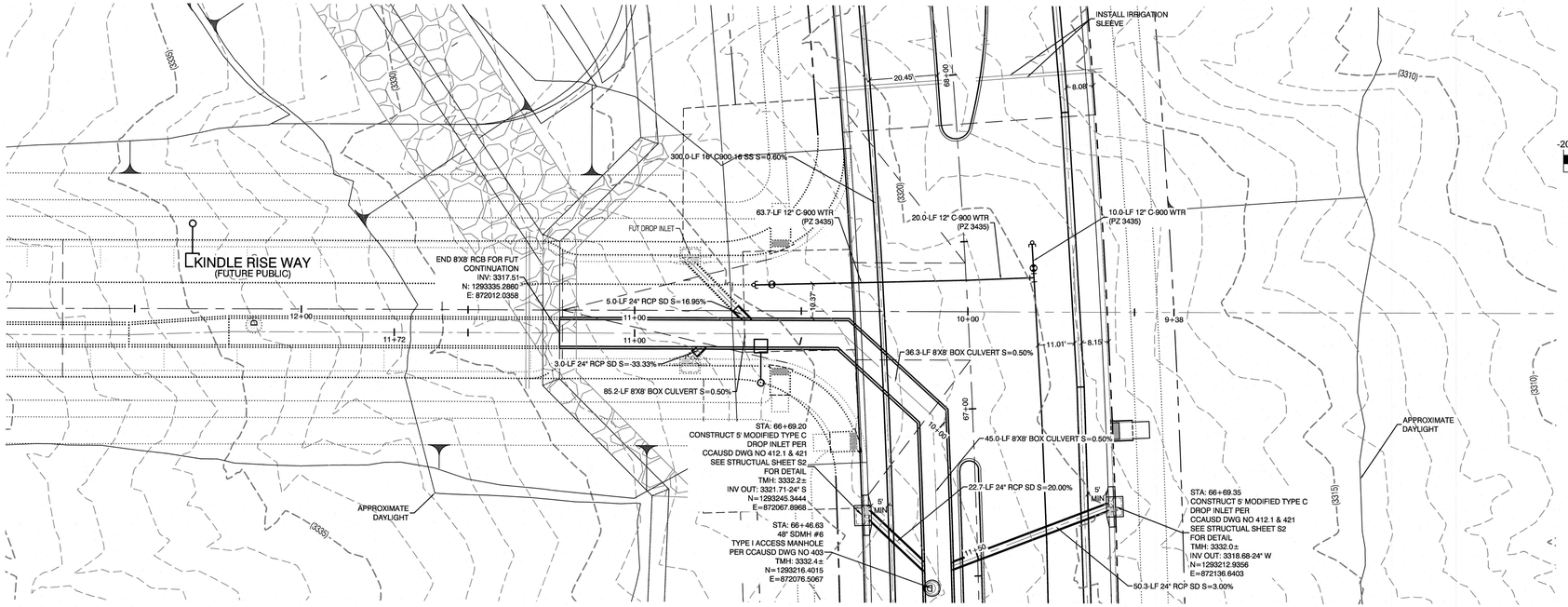
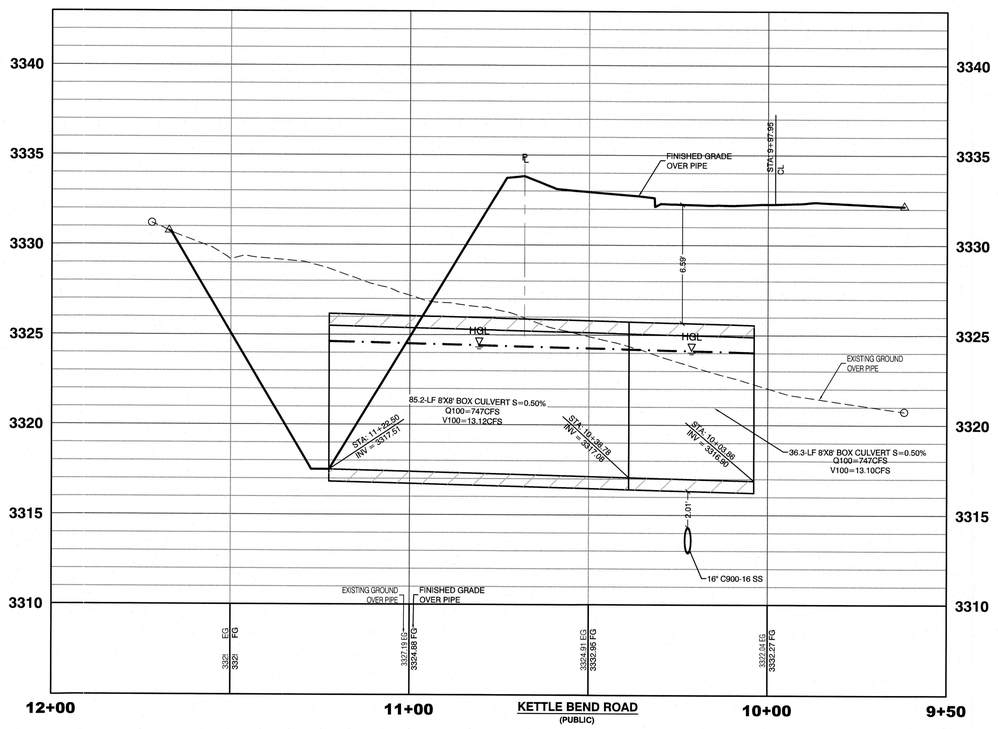


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

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CONTRACTOR ZONE:

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

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NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED
PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.20 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH: (702) 873-7550 FAX (702) 382-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 41
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019	SCALE:	HORIZ. 1"=20'
DESIGNED BY: BCC	09/10/2019		VERT. 1"=4'
CHECKED BY: KAM	08/28/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15749
2020-08-31

SHEET
UT41
81 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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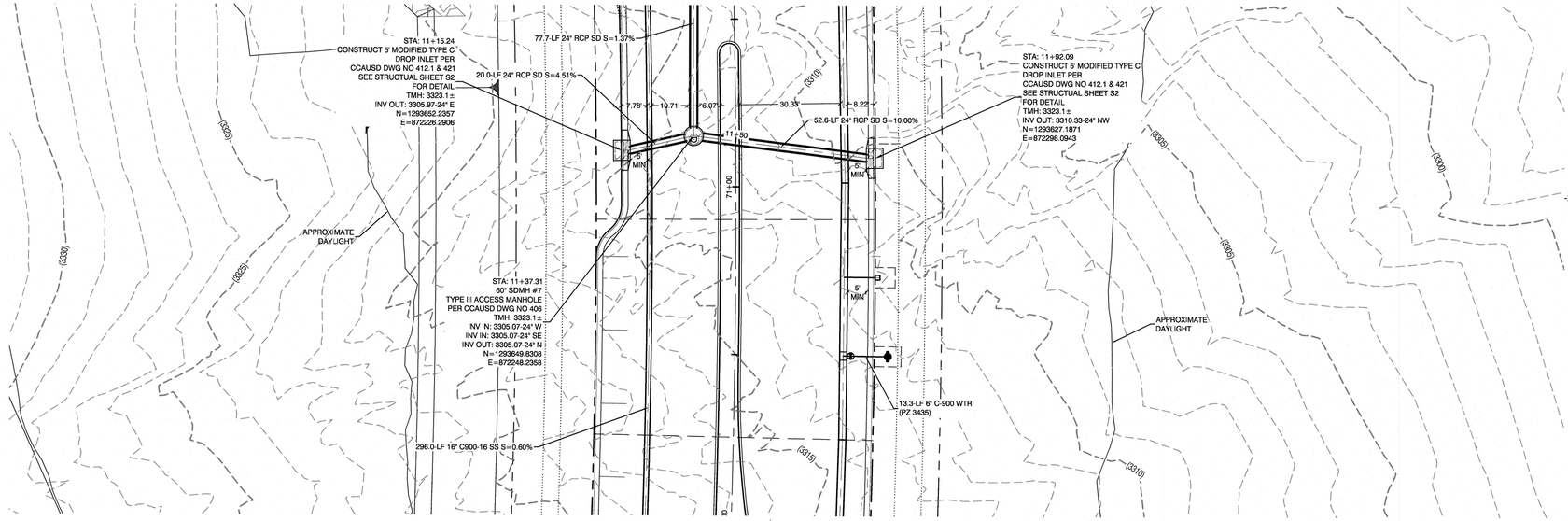
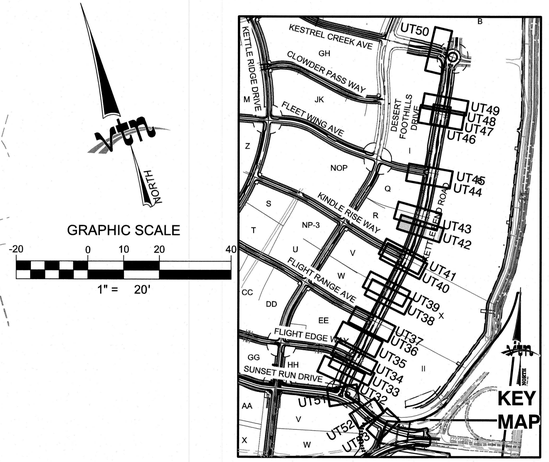
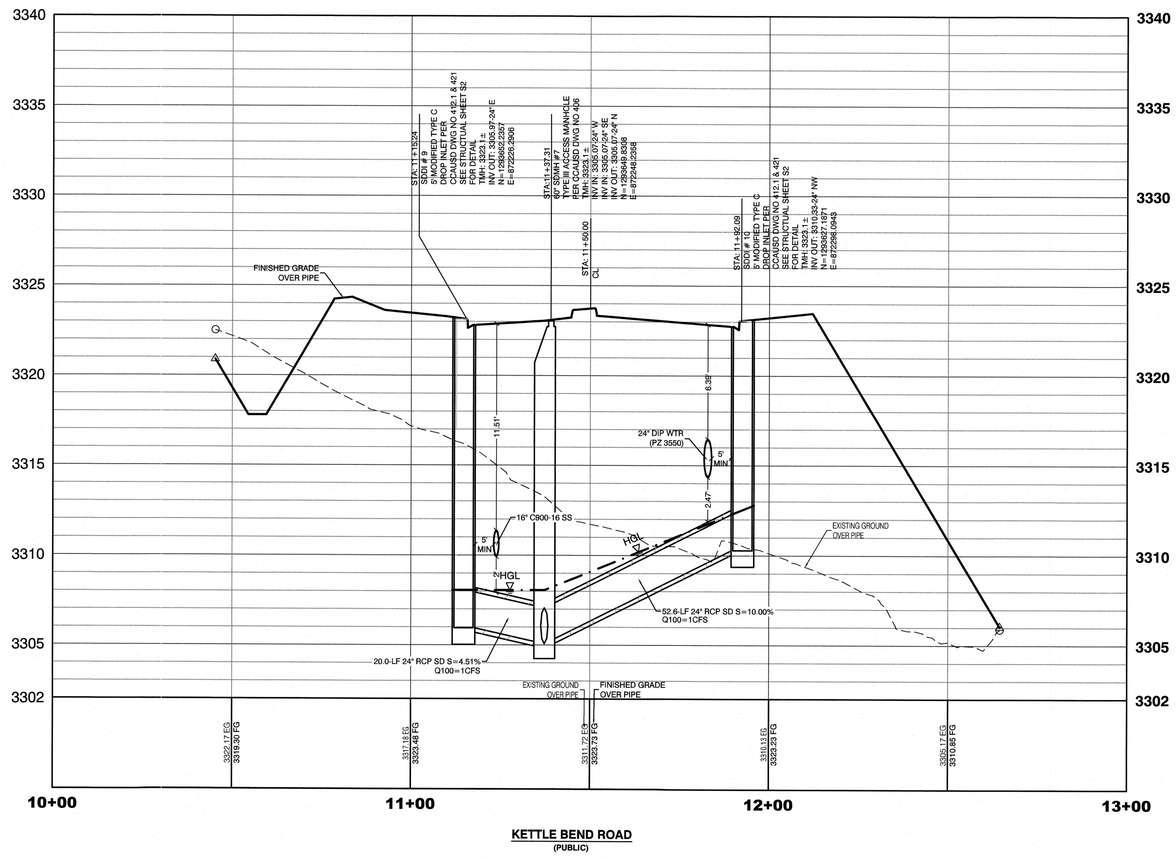




KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)

CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

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CONTRACTOR ZONE:

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NOTE:

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WATER LINE MARKER BALLS NOTE

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FIRE HYDRANT MARKER NOTES

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2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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DROP INLET SEPARATION NOTE

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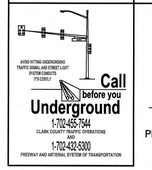

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2697 WEB WWW.LTNRV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 42
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019		
DESIGNED BY: BCC	09/10/2019		
CHECKED BY: WJM	08/28/2020	SCALE:	1"=20' HORIZ. 1"=4' VERT.
PROJECT NO: 7861			

WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
PROFESSIONAL ENGINEER
STATE OF NEVADA
2020-08-31

SHEET
UT42
82 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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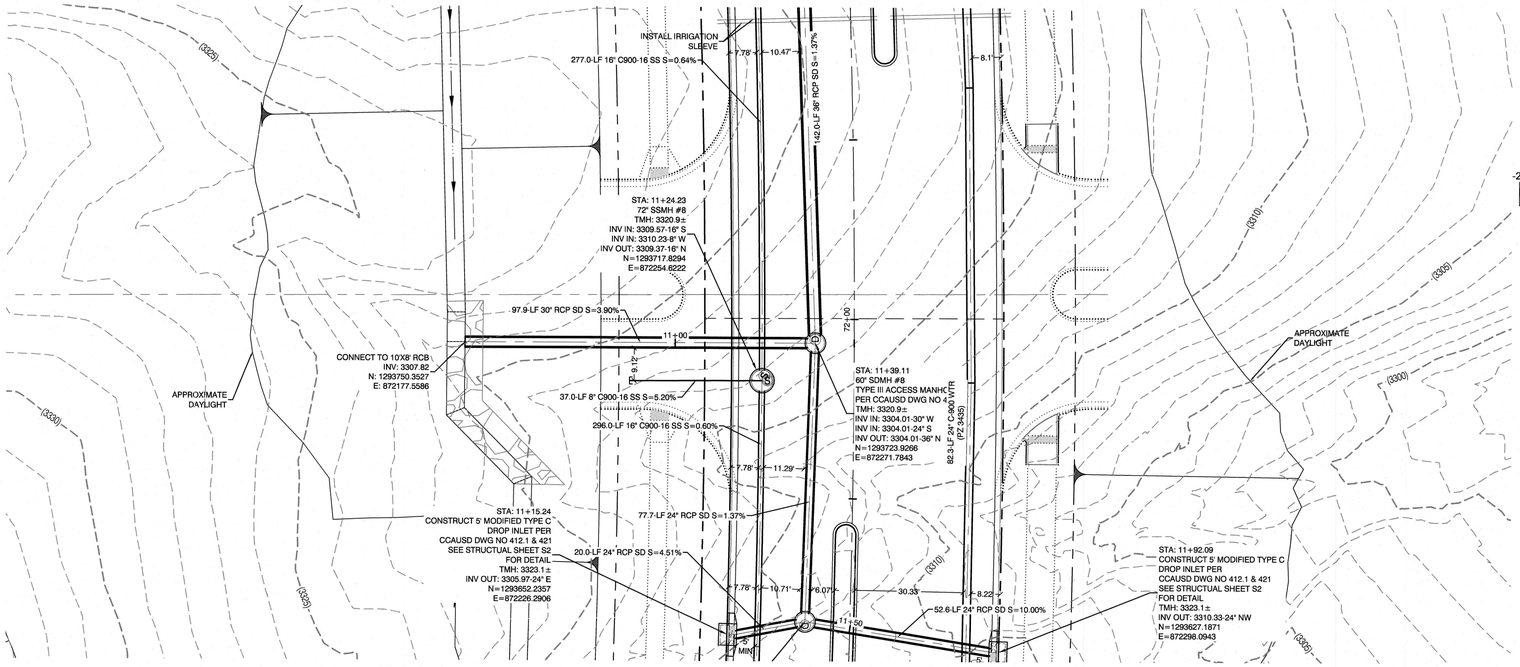
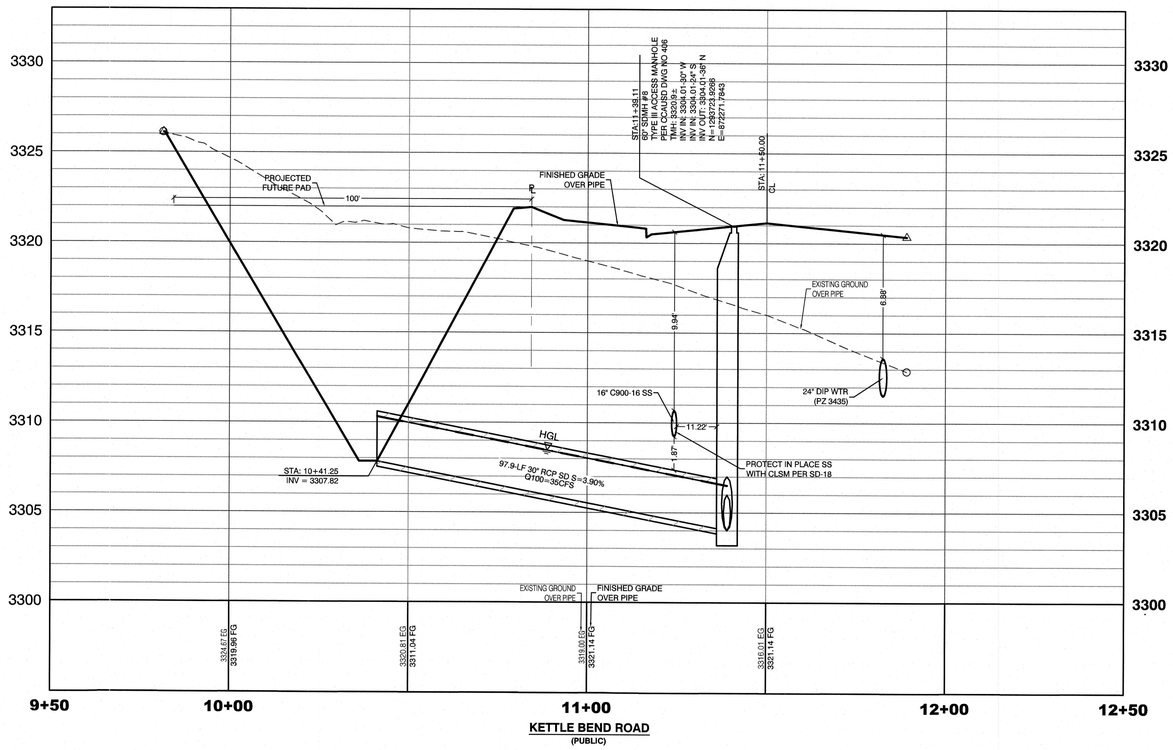


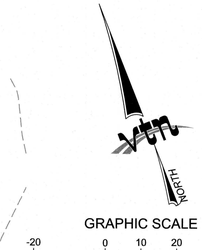
KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=40'



KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE

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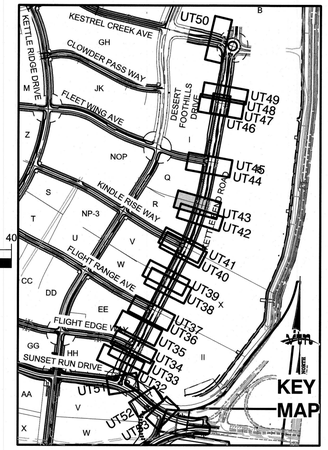
1" = 20'



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

LVVWD EXISTING FACILITIES NOTE:

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WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

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DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
(702) 791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5146
PH. (702) 873-7550 FAX (702) 382-2397 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 43
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE:	HORIZ.
BCC	BCC	WJM	7861	1"=20'	VERT.
09/10/2019	09/10/2019	08/28/2020		1"=40'	

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT43
83 OF **107** SHEETS

DRAWING NO.
L20-01282
107VB449

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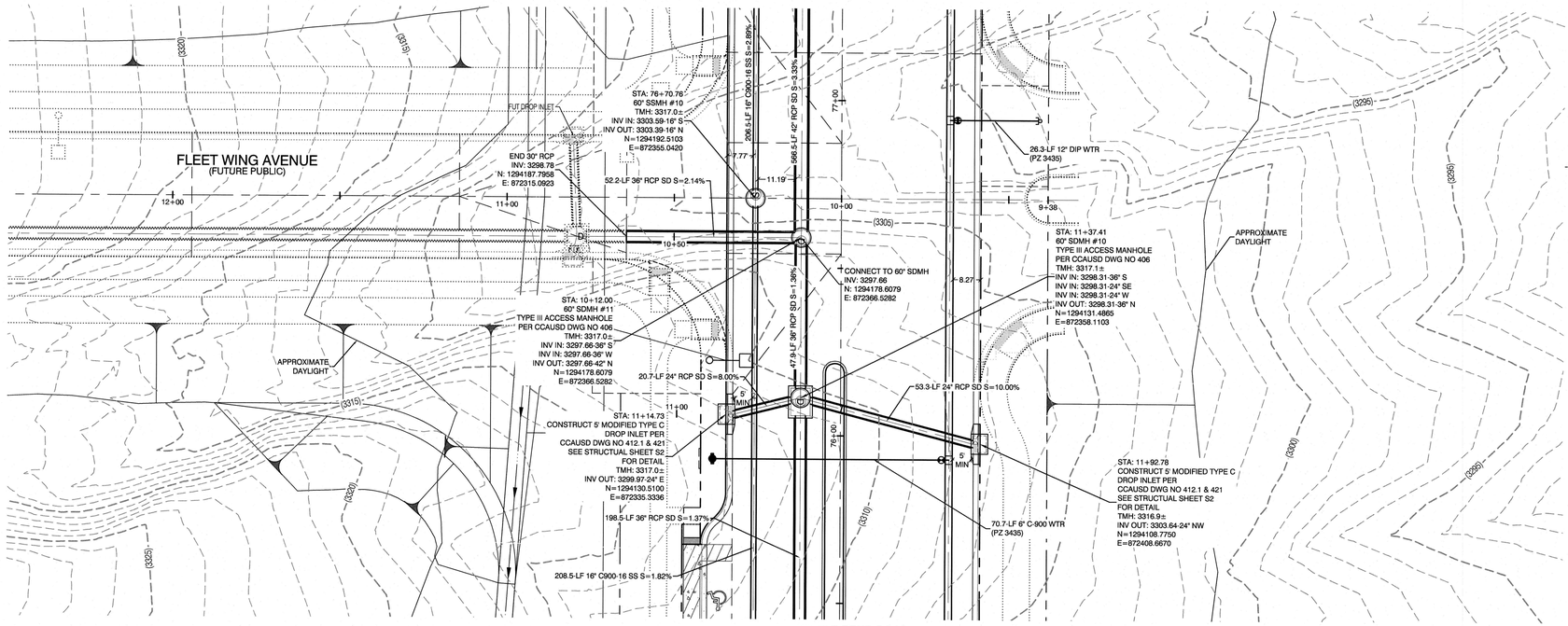
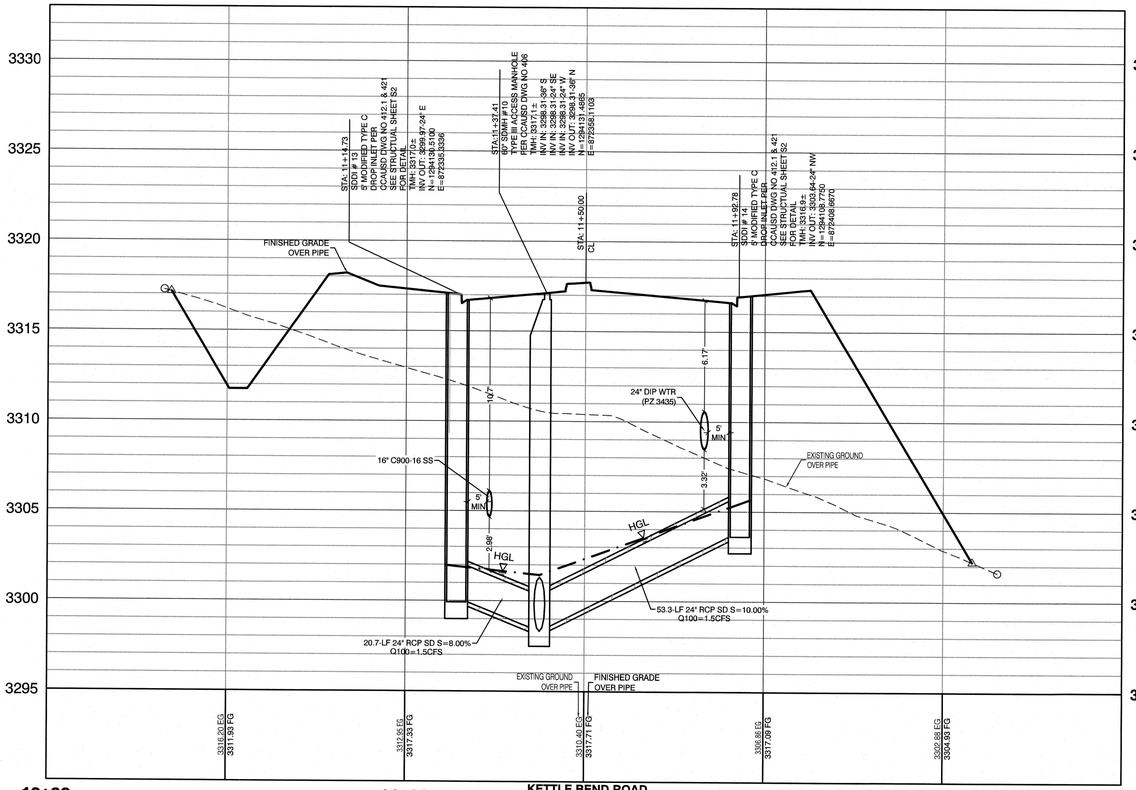
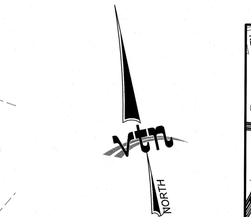
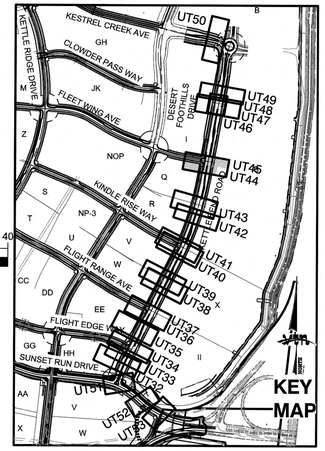


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'







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Call before you Dig
Avoid cutting underground utility lines. It's costly.
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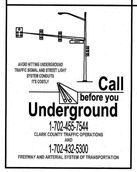
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS



APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2697 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 44
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	SCALE:	
BCC	BCC	WJM	1"=20'	HORIZ.
09/10/2019	09/10/2019	08/28/2020	1"=4'	VERT.

PROJECT NO: 7861

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 17575
2020-08-31

SHEET
UT44
84 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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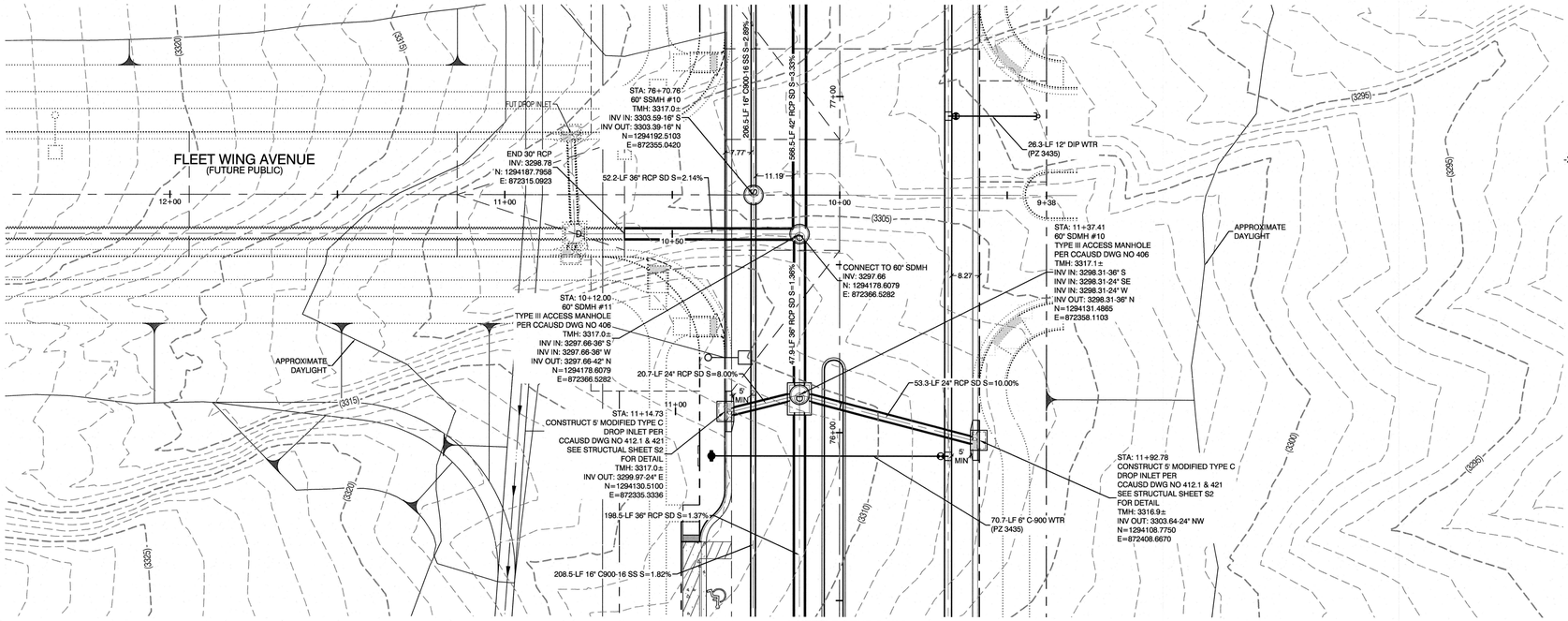
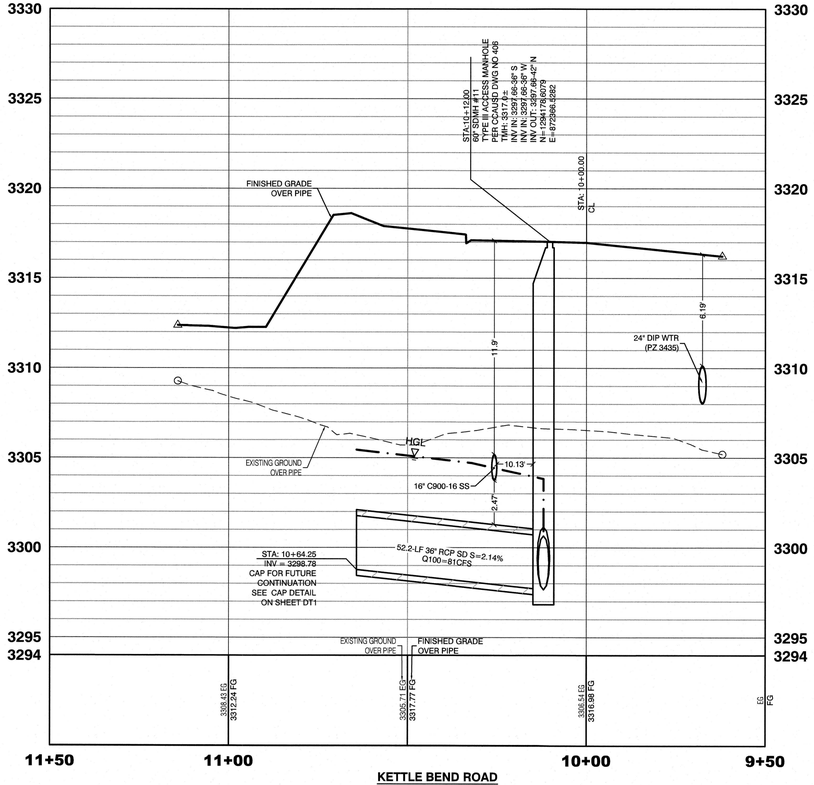


KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)

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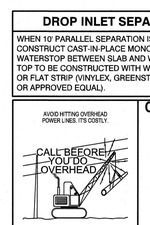

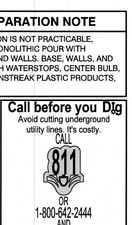





GRAPHIC SCALE
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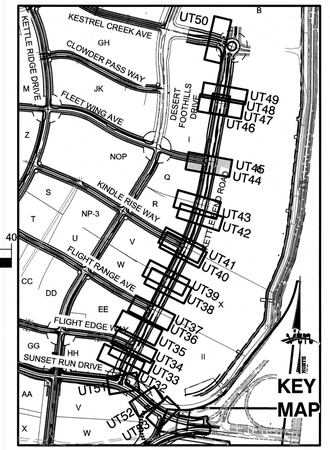
1" = 20'



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WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

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PAVEMENT MARKERS ARE TO BE INSTALLED:

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WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 360-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 45
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC 09/10/2019
DESIGNED BY: BCC 09/10/2019
CHECKED BY: WJM 08/28/2020
PROJECT NO: 7861
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
NO. 15745
2020-08-31

SHEET
UT45
85 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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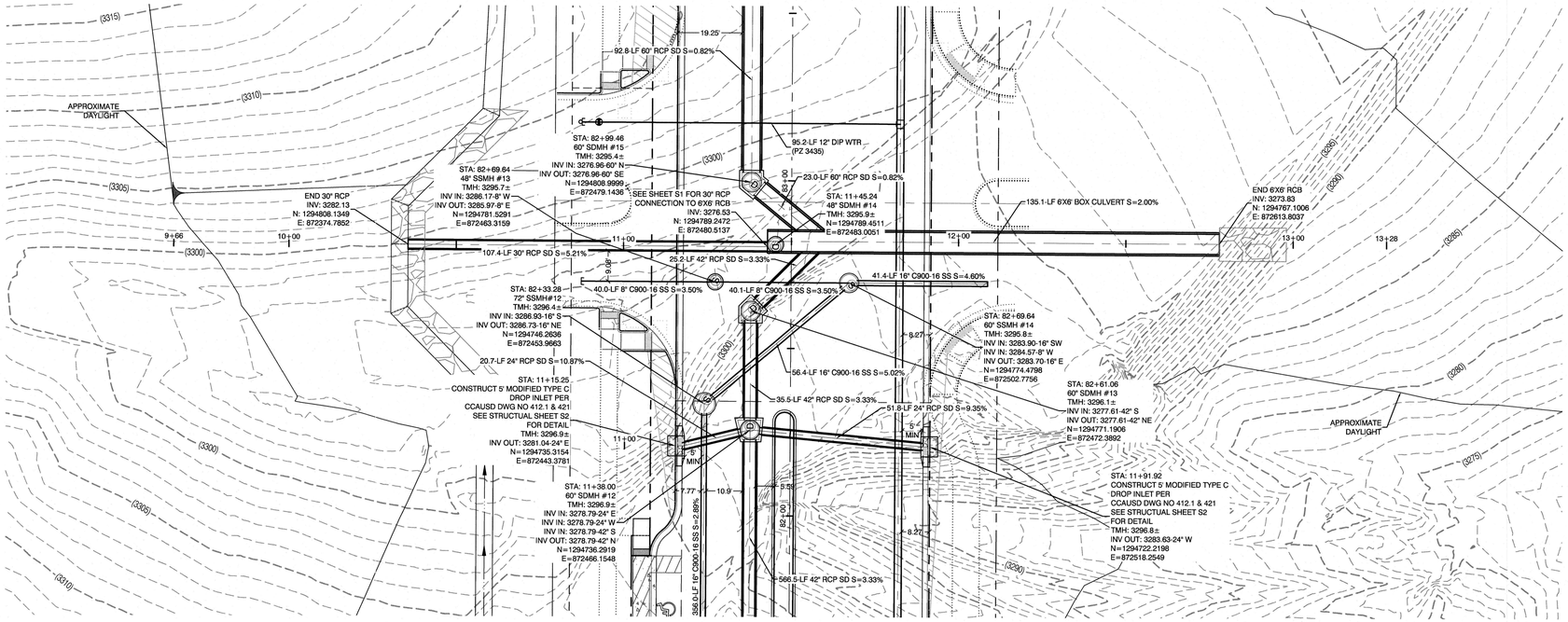

KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
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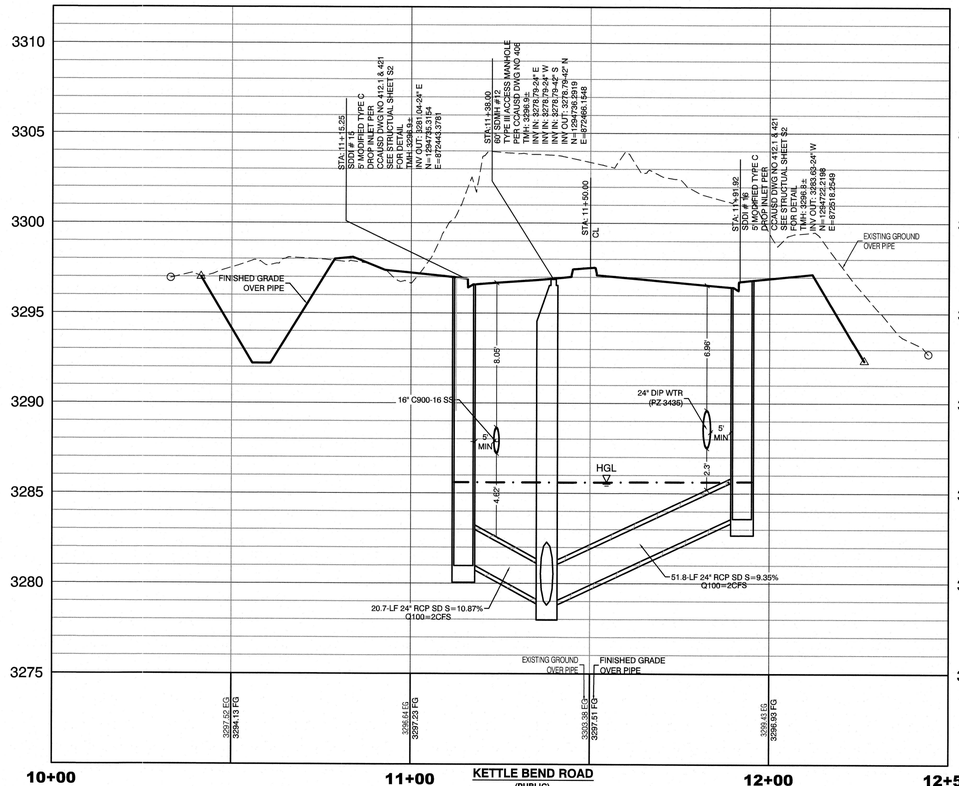

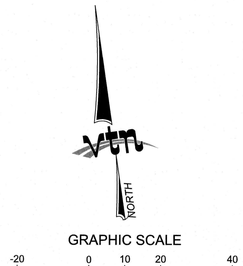

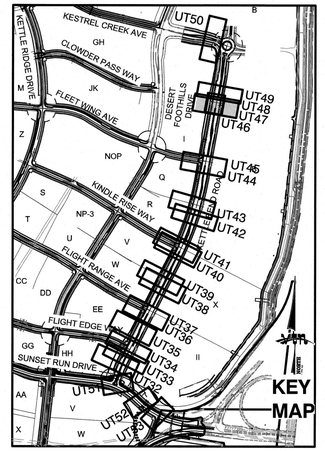

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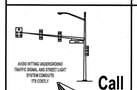
DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).



1-702-227-2929

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811
OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS



Call before you **Underground**
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 600
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 875-7550 FAX (702) 362-2997 WEB.WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 46
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019		
DESIGNED BY: BCC	09/10/2019		
CHECKED BY: WJM	08/28/2020	SCALE:	1"=20' HORIZ. 1"=4' VERT.
PROJECT NO: 7861			

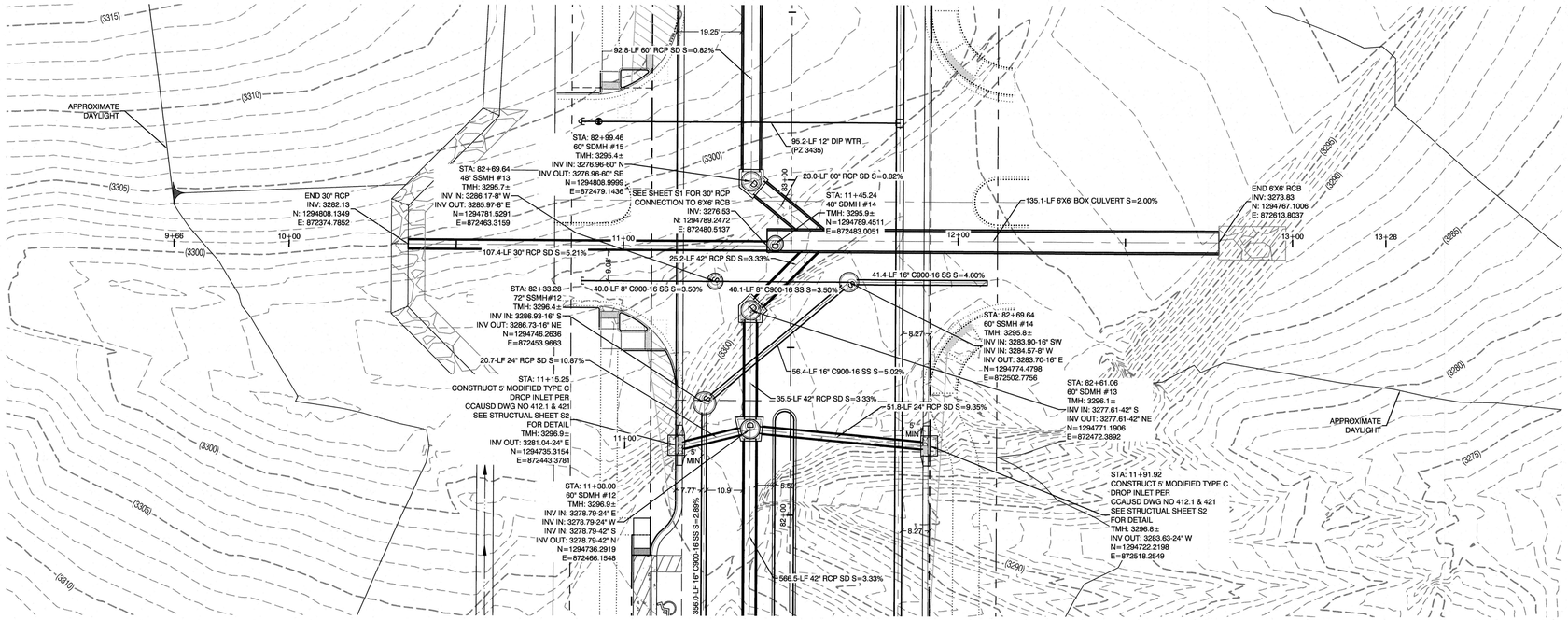
PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745

2020-08-31

SHEET
UT46
86 OF 107 SHEETS

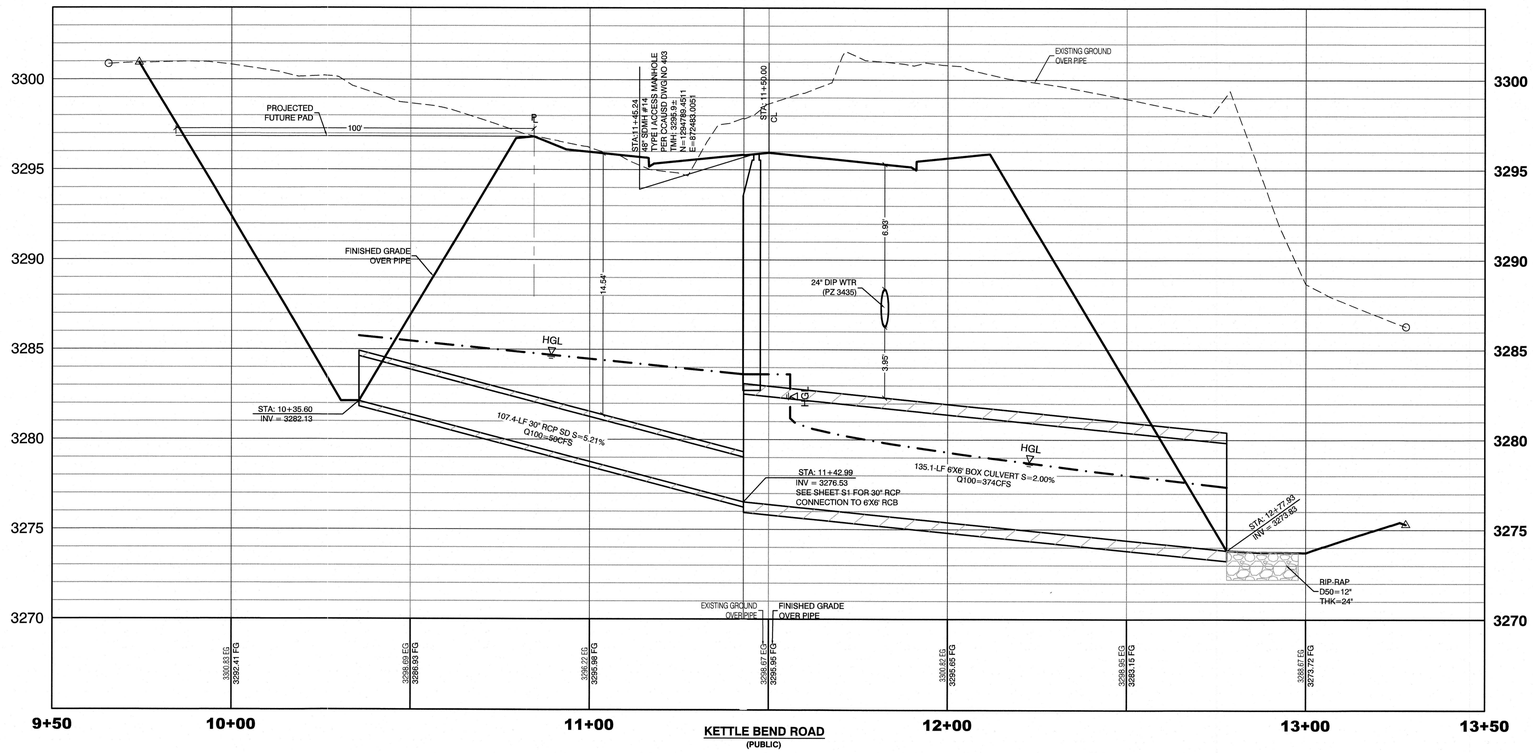
DRAWING NO.
L20-01282
107V8449

H:\7861\Kettle Bend Road\Sheet Set\7861-UT-SD LAT 3.dwg,8/28/2020 8:19 AM,brandonc



KETTLE BEND ROAD
(PUBLIC)

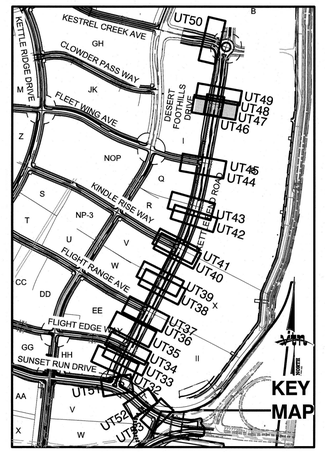
PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE
-20 0 10 20 40
1" = 20'



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR ZONE:

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 TRIAL SHUTDOWN.

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

LVVWD EXISTING FACILITIES NOTE:

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

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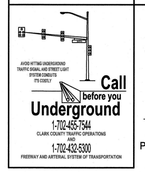

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

REVISION	BY	DATE

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2997 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 47
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019
DESIGNED BY: BCC	09/10/2019
CHECKED BY: WJM	08/28/2020
PROJECT NO: 7861	SCALE: HORZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT47
87 OF 107 SHEETS

DRAWING NO.
L20-01282
107V9449

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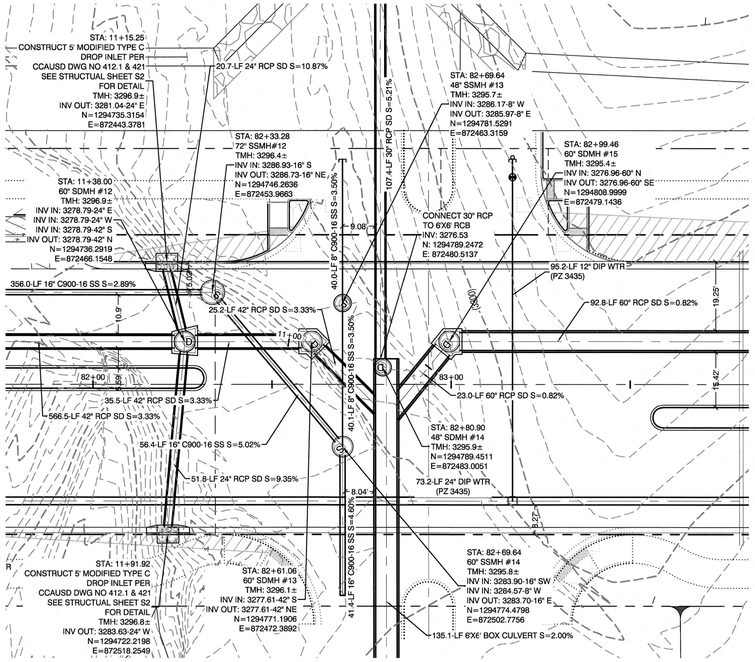
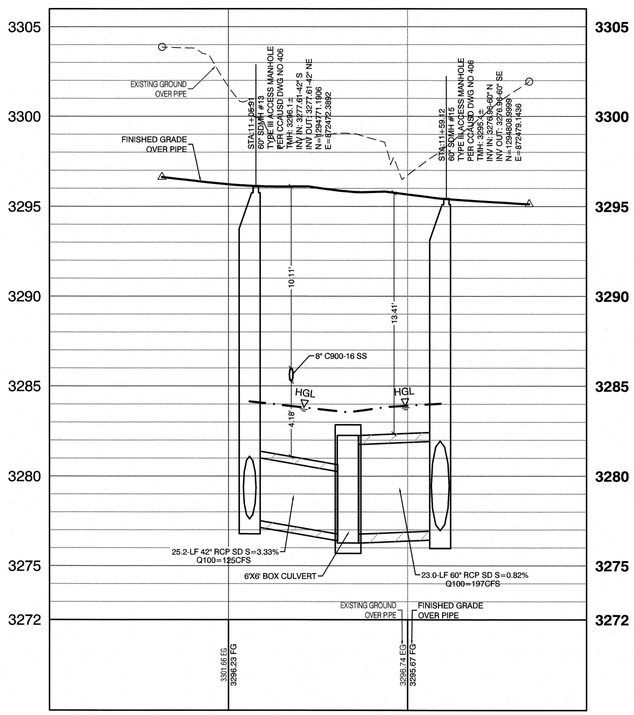
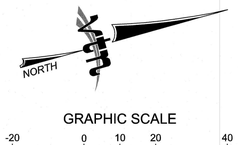


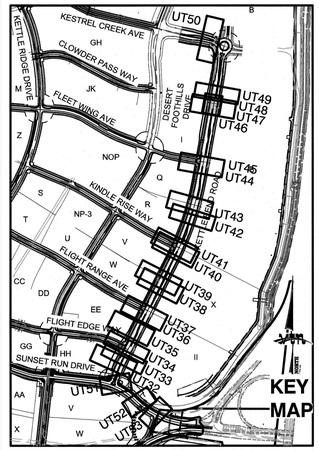
PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)





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WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

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WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

Call before you Dig
Avoid cutting underground utility lines. It's costly.
CALL 811 OR
1-800-642-2444
AND
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS

AVOID HITTING UNDERGROUND TRAFFIC SIGNAL AND STREET LIGHT SYSTEM CONDUITS TO DIG!!
Call before you Underground
1-702-455-7544
CLARK COUNTY TRAFFIC OPERATIONS
1-702-432-5300
FREEWAY AND ARTERIAL SYSTEM OF TRANSPORTATION

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-261-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 48
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC — 09/10/2019
DESIGNED BY: BCC — 09/10/2019
CHECKED BY: WME — 08/28/2020
PROJECT NO: 7881
SCALE: HORIZ. 1"=20' VERT. 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15743
2020-08-31

SHEET
UT48
88 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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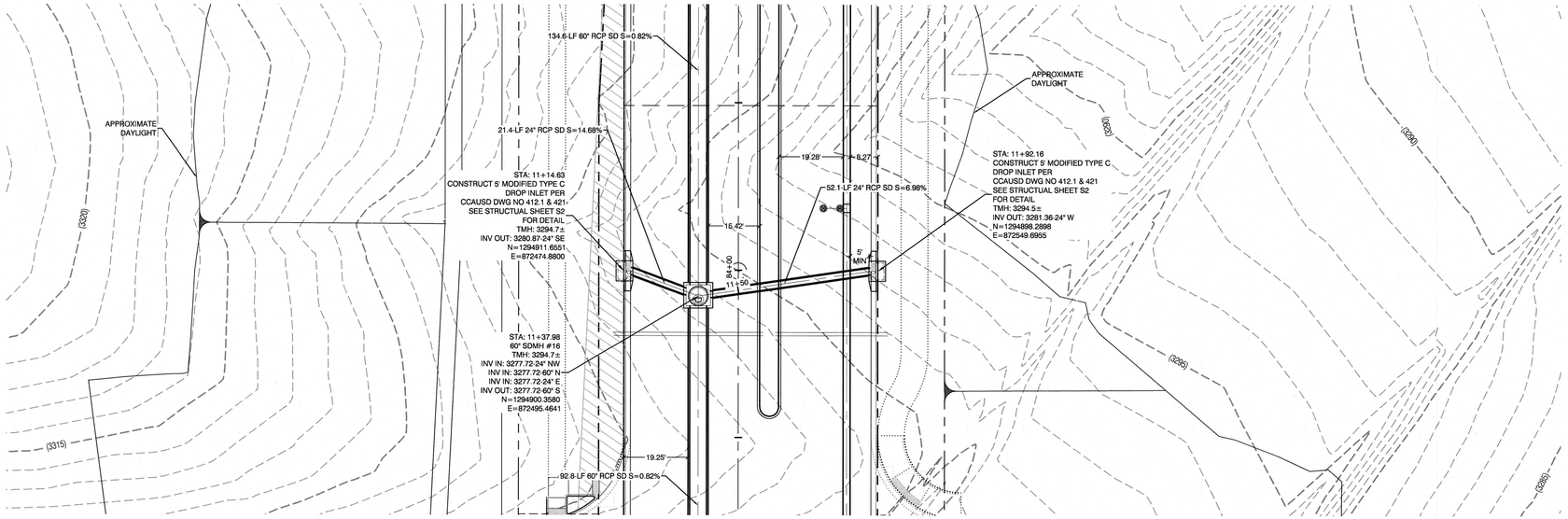

GRAPHIC SCALE

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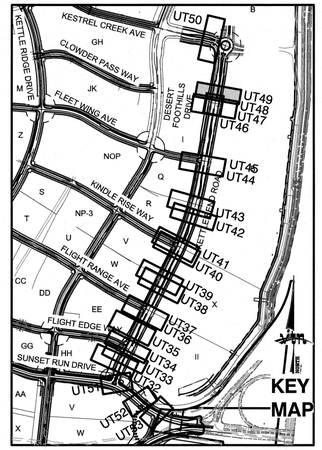
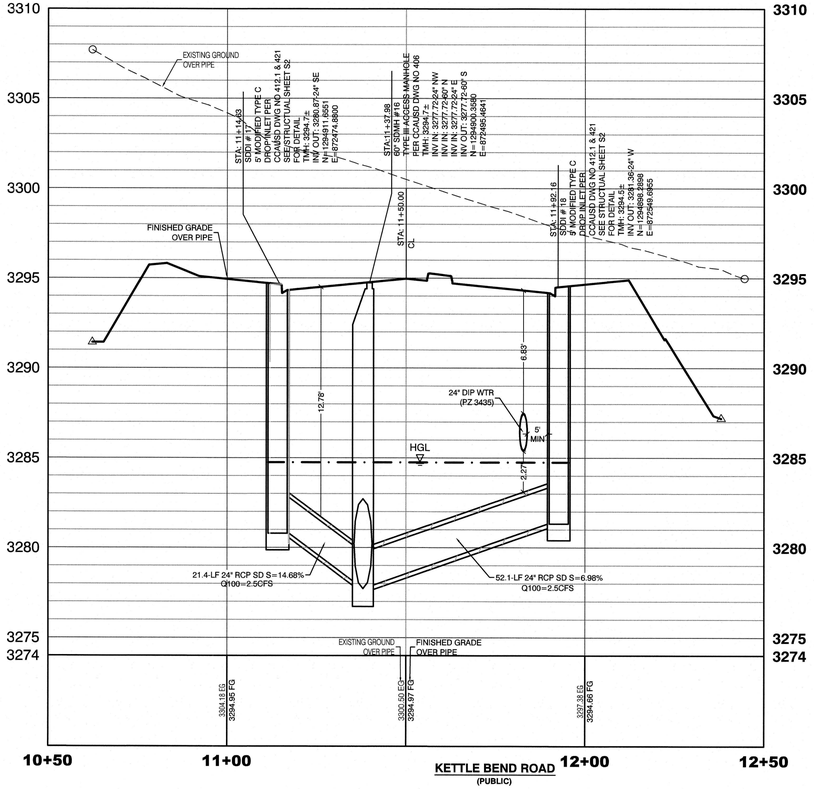
1" = 20'



KETTLE BEND ROAD
(PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'



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NOTE:

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WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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WATERLINE TRENCH NOTE:

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WATER PRESSURE ZONE:

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT: 137333 FIRST APPROVED DATE: _____

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 150
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.ITNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

REV	DATE	BY	REVISION

UTILITY PLAN & PROFILE 49
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	09/10/2019	SCALE:	HORIZ. 1"=20' VERT. 1"=4'
DESIGNED BY: BCC	09/10/2019		
CHECKED BY: WJM	08/28/2020		
PROJECT NO: 7891			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15745
2020-08-31

SHEET
UT49
89 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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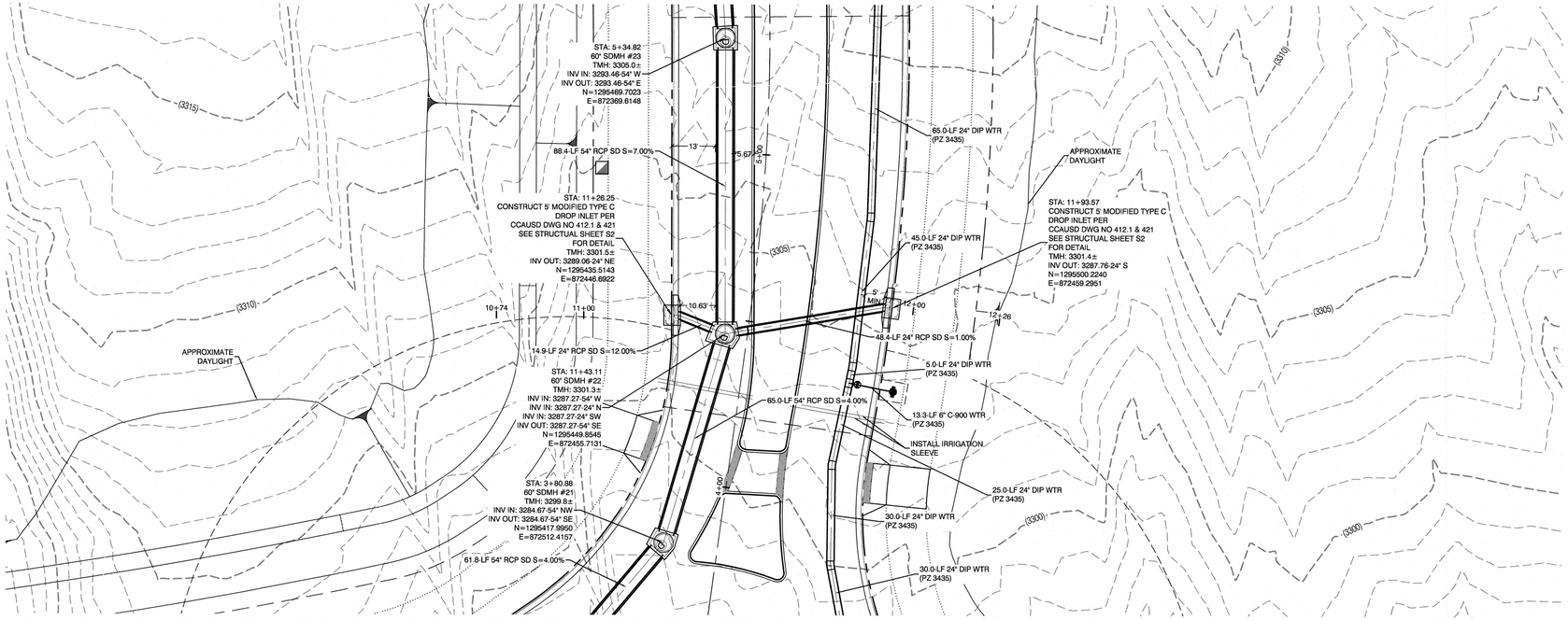
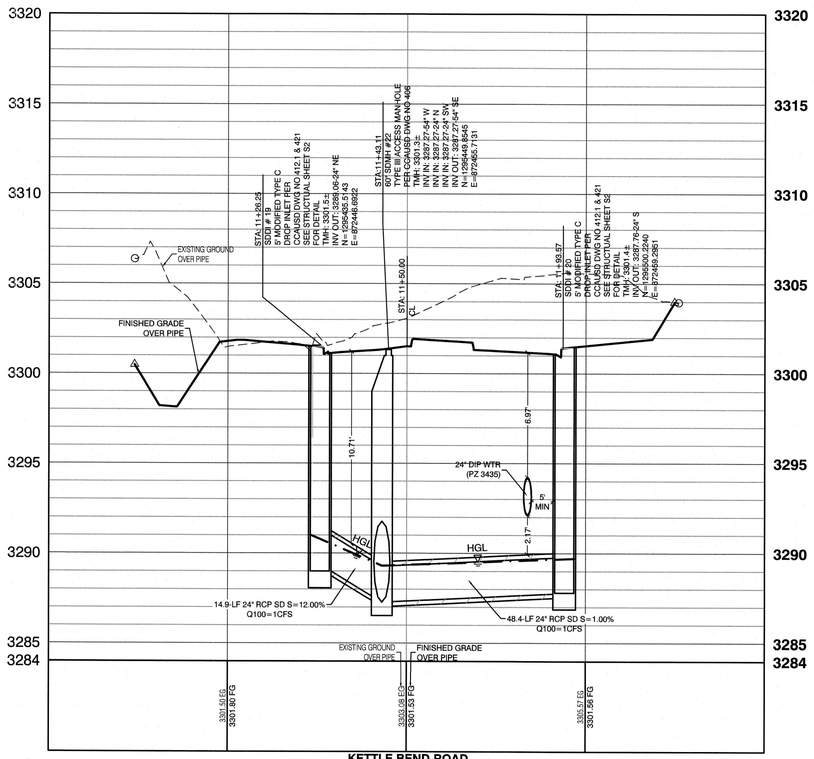
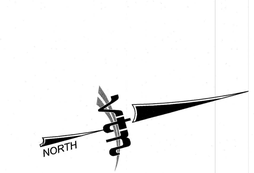


KETTLE BEND ROAD
(PUBLIC)

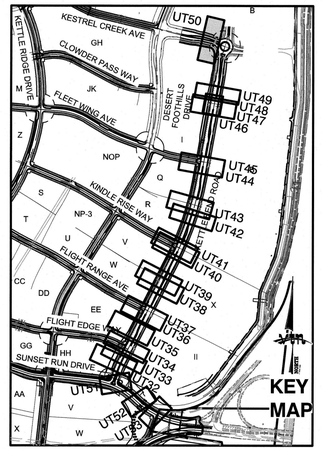
PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'



KETTLE BEND ROAD
(PUBLIC)



GRAPHIC SCALE
-20 0 10 20 40
1" = 20'



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPER'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR ZONE:

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 TRIAL SHUTDOWN.

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

LVVWD EXISTING FACILITIES NOTE:

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS, PER UDACS PLATE NO. 15.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED
PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR PORTABL WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONE.

DEPTH OF COVER DURING CONSTRUCTION:

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

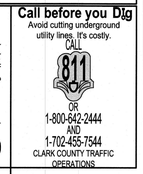
TO ENSURE LVVWD ACCESS WITHIN EASEMENT

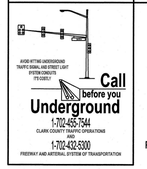
ALL ABOVE GROUND OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO, LANDSCAPE BOULDERS, FENCES / WALLS (TO INCLUDE NO FOOTINGS), AND SIGNS ARE STRICTLY PROHIBITED WITHIN EASEMENT.

DROP INLET SEPARATION NOTE

WHEN 10' PARALLEL SEPARATION IS NOT PRACTICABLE, CONSTRUCT 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).







APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.LTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 50
STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN
DRIVE TO KESTREL CREEK AVENUE

DRAWN BY:	DESIGNED BY:	CHECKED BY:	PROJECT NO:	SCALE: HORIZ. / VERT.
BCC 09/10/2019	BCC 09/10/2019	WJM 08/28/2020	7881	1"=20' / 1"=4'

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15749
2020-08-31

SHEET
UT50
90 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8448

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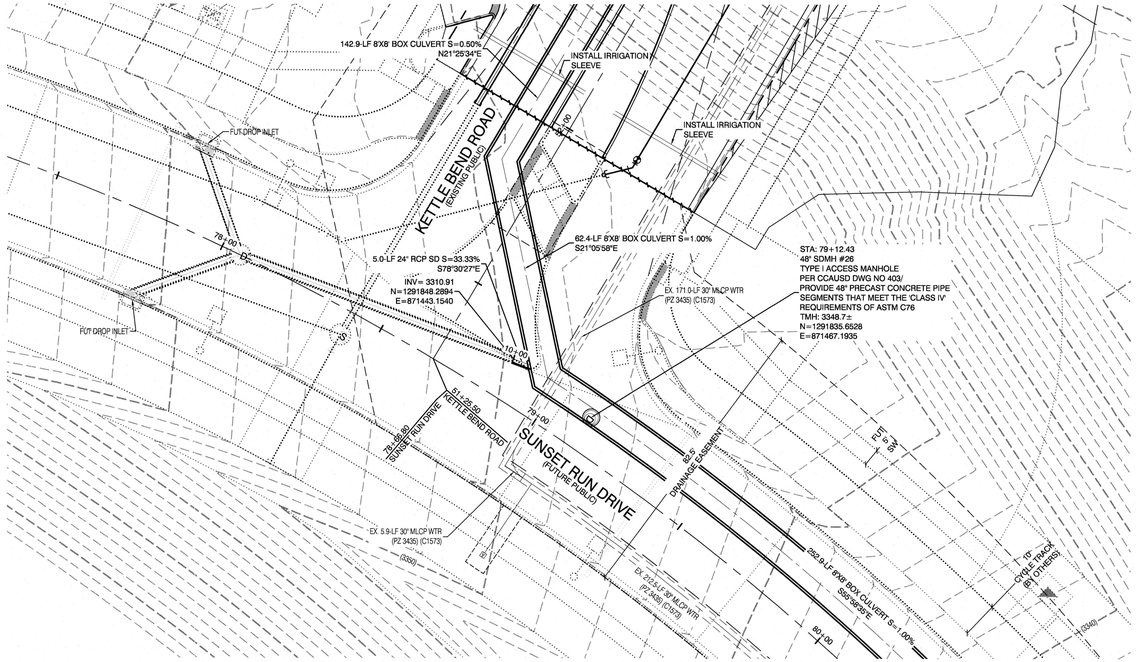
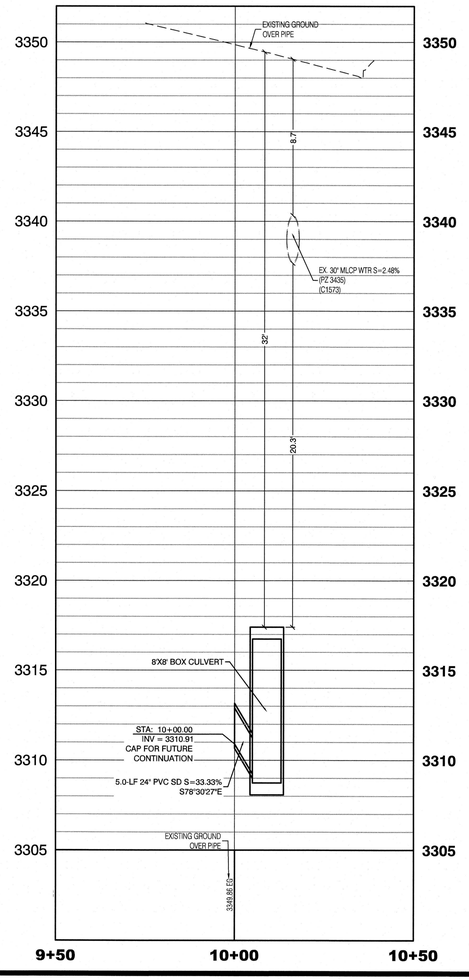
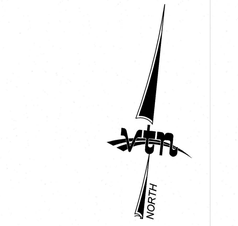
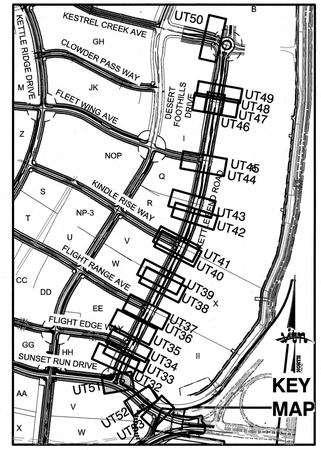


SUNSET RUN DRIVE
(FUTURE PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'







CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

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CONTRACTOR NOTE:

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS PER UDACS PLATE No. 15 AND 19.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

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

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

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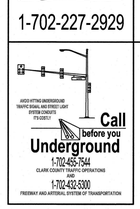

CONSTRUCTION NOTES

WATER

(FH W)	⬢	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
(2 W)	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
(3 W)	⊂	12" CAP & BLOW OFF (PER UDACS PLATE 36)
(4 W)	⊂	24" CAP & BLOW OFF (PER UDACS PLATE 36)
(5 W)	⊃	12"X12" TEE (PER UDACS PLATE 31)
(6 W)	⊃	24"X12" TEE (PER UDACS PLATE 31)
(7 W)	⌐	24" 5° BEND (PER UDACS PLATE 31)
(8 W)	⌐	24" 11° BEND (PER UDACS PLATE 31)
(9 W)	⌐	24" 22° BEND (PER UDACS PLATE 31)
(10 W)	⌐	12" 45° BEND (PER UDACS PLATE 31)
(11 W)	⌐	12" 5° BEND (PER UDACS PLATE 31)
(12 W)	⊸⊸	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #8 AND SHEET DT7
(24X6 W)	⊃	24"X6" TEE (PER UDACS PLATE 31)
	———	6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	———	24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
(POC)		WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

(S)		STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	———	8" C-900-16 SANITARY SEWER MAIN
	———	16" C-900-16 SANITARY SEWER MAIN
(SC S)	⊂	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
(POC)		SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

WATER MAIN COVER NOTE:

ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS
2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7590 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 51 STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	07/15/2020	SCALE:	HORIZ. 1"=20'
DESIGNED BY: BCC	07/15/2020		VERT. 1"=4'
CHECKED BY: WJM	07/15/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 14745

2020-08-31

SHEET
UT51
91 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

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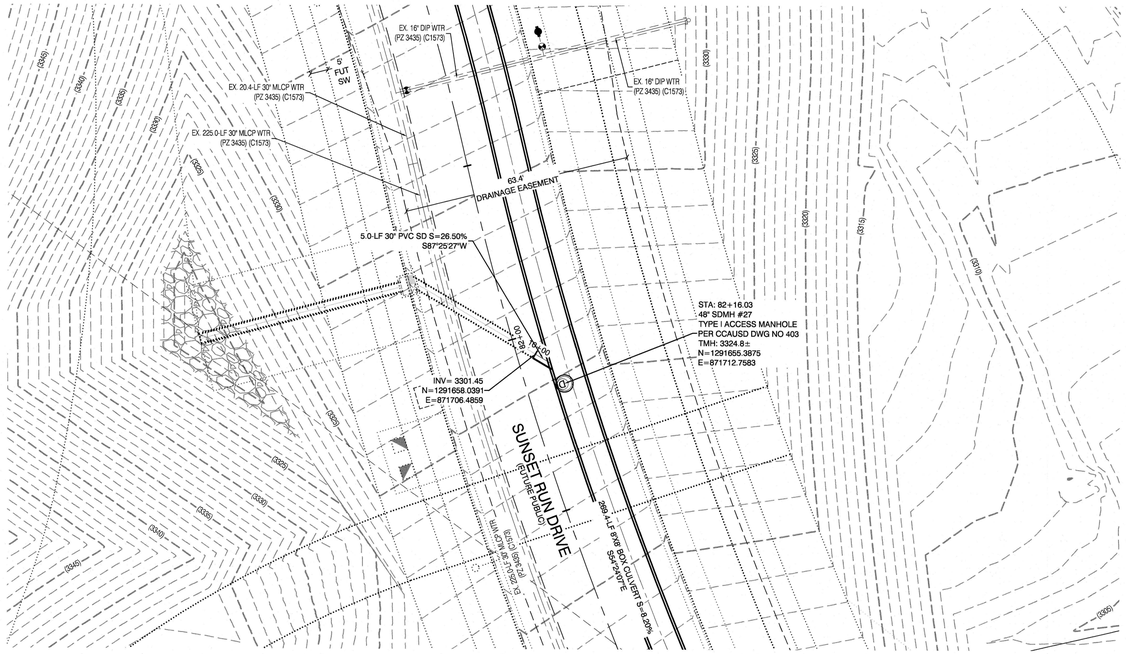
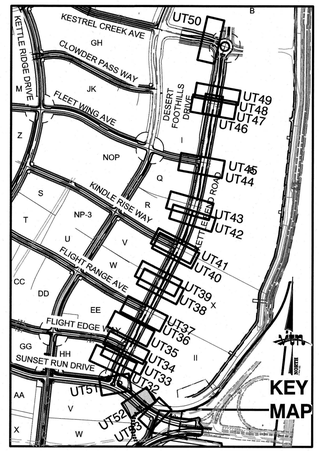


SUNSET RUN DRIVE
(FUTURE PUBLIC)

PROFILE SCALES:
HORIZ. = 1"=20'
VERT. = 1"=4'





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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS PER UDACS PLATE No. 15 AND 19.

FIRE HYDRANT MARKER NOTES

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WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

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UTILITY CROSSING NOTE:

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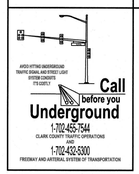

CONSTRUCTION NOTES

WATER

1 W	⬢	FIRE HYDRANT ASSEMBLY; INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
2 W	⊖	12" GATE VALVE (PER UDACS PLATE 30 & 39)
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4 W	⊂	24" CAP & BLOW OFF (PER UDACS PLATE 36)
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6 W	⊃	24"X12" TEE (PER UDACS PLATE 31)
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	PCC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

	Ⓢ	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	———	8" C-900-16 SANITARY SEWER MAIN
	———	16" C-900-16 SANITARY SEWER MAIN
1 S	⊂	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
	PCC	SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

WATER MAIN COVER NOTE:

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APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7500 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 52 STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	07/15/2020			
DESIGNED BY: BCC	07/15/2020			
CHECKED BY: WJM	07/15/2020	SCALE:	1"=20'	HORIZ.
PROJECT NO: 7861			1"=4'	VERT.

PROFESSIONAL ENGINEER - STATE OF NEVADA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. 15145

2020-08-31

SHEET
UT52
92 OF 107 SHEETS

DRAWING NO.
L20-01282
107V8449

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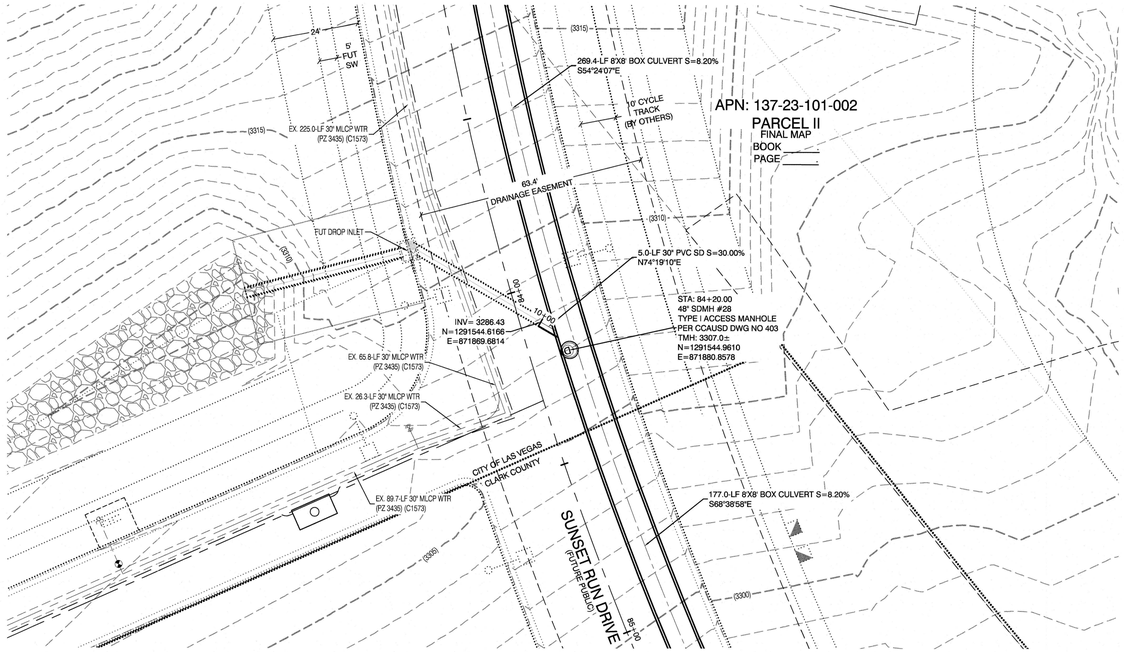
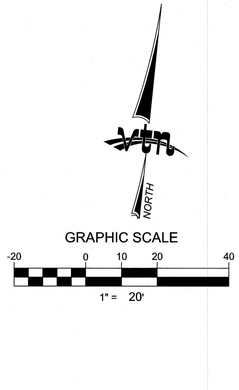
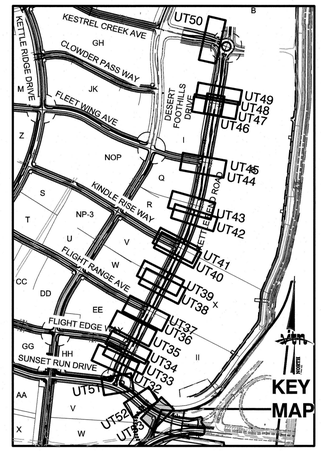


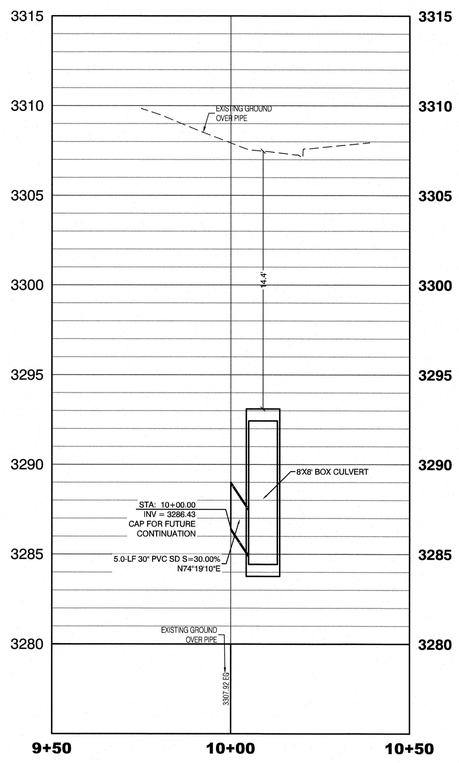




SUNSET RUN DRIVE
(FUTURE PUBLIC)

PROFILE SCALES:

HORIZ. = 1"=20'
VERT. = 1"=4'



CONDITIONAL APPROVAL OF VALVED OUTLET (6-INCH AND LARGER)

THE WATER PLANS SHOW ONE OR MORE VALVED OUTLETS EXTENDING OUT OF PAVED AREAS. INSTALLATION OF THESE OUTLETS IS ACCEPTABLE, HOWEVER, IF THE OUTLETS ARE INCORRECTLY LOCATED OR NOT USED FOR ANY REASON WHEN THE PROPERTY IS ACTUALLY DEVELOPED, THE DEVELOPER SHALL ABANDON THE OUTLETS AT THE CONNECTION TO THE ACTIVE MAIN IN ACCORDANCE WITH LVVWD STANDARDS AND AT THE DEVELOPERS'S EXPENSE. APPROVAL OF THE VALVED OUTLET DOES NOT PROVIDE OR IMPLY A WATER COMMITMENT.

CONTRACTOR NOTE:

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 TRIAL SHUTDOWN.

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

NOTE:

5' MINIMUM HORIZONTAL SEPARATION FROM OUTSIDE EDGE OF THE WATER MAIN TO OUTSIDE EDGE OF DROP INLET

WATER LINE MARKER BALLS NOTE

INSTALL PIPELINE MARKER BALLS PER UDACS PLATE No. 15 AND 19.

FIRE HYDRANT MARKER NOTES

BLUE COLORED REFLECTIVE RAISED PAVEMENT MARKERS ARE TO BE INSTALLED:

1. ON ROADWAYS WITH NO PARKING PERMITTED ON HYDRANT SIDE; LOCATE MAKER 8' FROM FACE OF CURB ON HYDRANT SIDE.
2. ON ROADWAYS WITH PARKING PERMITTED ON HYDRANT SIDE; LOCATE MARKER 16' FROM FACE OF CURB ON HYDRANT SIDE.

WATER MAIN JOINT DEFLECTION

WATER MAIN JOINT DEFLECTION, PER UDACS 2.07.01 AND 2.07.03.

LVVWD EXISTING FACILITIES NOTE:

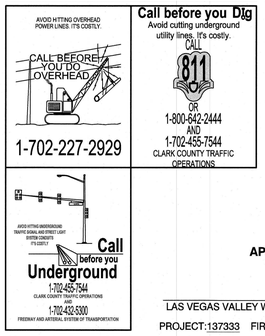
PROTECT IN PLACE AND ADJUST LVVWD EXISTING FACILITIES TO FINISHED GRADE PER UDACS. ALL LVVWD FACILITIES SHALL BE ACCESSIBLE AT ALL TIMES.

UTILITY CROSSING NOTE:

ALL SEWER/STORM DRAINS CROSSING WATER LINES MUST CONFORM TO SECTION 2.22 OF UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR POTABLE WATER SYSTEMS (UDACS) FOR WATER AND STORM MAIN CROSSINGS AND CLEARANCES.

ENGINEER DISCLAIMER NOTE:

UTILITY LOCATIONS SHOWN HERE ON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND NOTIFY THE DESIGN ENGINEER IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HERE ON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES NOT SHOWN OR UTILITIES NOT SHOWN IN THEIR PROPER LOCATION.



CONSTRUCTION NOTES

WATER

(1W)	FIRE HYDRANT ASSEMBLY: INCLUDING 12"X6" OR 24"X6" TEE WITH 6" G.V. (PER UDACS PLATE NO. 39 & 40)
(2W)	12" GATE VALVE (PER UDACS PLATE 30 & 39)
(3W)	12" CAP & BLOW OFF (PER UDACS PLATE 36)
(4W)	24" CAP & BLOW OFF (PER UDACS PLATE 36)
(5W)	12"X12" TEE (PER UDACS PLATE 31)
(6W)	24"X12" TEE (PER UDACS PLATE 31)
(7W)	24" 5° BEND (PER UDACS PLATE 31)
(8W)	24" 11° BEND (PER UDACS PLATE 31)
(9W)	24" 22° BEND (PER UDACS PLATE 31)
(10W)	12" 45° BEND (PER UDACS PLATE 31)
(11W)	12" 5° BEND (PER UDACS PLATE 31)
(12W)	1.5" TYPE K SOFT COPPER WATER LATERAL SERVICE WITH 1.5" METER PER UDACS PLATE #4 (IRRIGATION) AND 1.5" RPPA PER UDACS PLATE #9 AND SHEET DT7
(13W)	24"X6" TEE (PER UDACS PLATE 31)
	6" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	12" C-900 WATER MAIN PER UDACS 2.06.01 & PLATE 17
	12" DIP WATER MAIN PER UDACS 2.06.01 & PLATE 17
	24" DIP WATER MAIN RESTRAINED PER UDACS 2.06.01 & PLATE 17
POC	WATER POINT OF CONNECTION

CONSTRUCTION NOTES

SEWER

(S)	STANDARD MANHOLE WITH WATERTIGHT JOINTS PER DCSWCS SD-1, SD-2, SD-4, & SD-5 WITH DUAL CONCENTRIC LID AND CORROSION PROTECTION PER DCSWCS 3.16.8
	8" C-900-16 SANITARY SEWER MAIN
	16" C-900-16 SANITARY SEWER MAIN
(1SS)	SEWER CAP (SAME SIZE AS PIPE) PER STD 4.6 & 4.11.
POC	SEWER POINT OF CONNECTION

WATERLINE TRENCH NOTE:

CONSTRUCT WATERLINE TRENCH SECTION AND BACKFILL PER UDACS PLATE NO. 17.

WATER PRESSURE ZONE:

WATER SERVICE LOCATED IN THE 3435 & 3550 PRESSURE ZONES.

WATER MAIN COVER NOTE:

ALL NEW WATER MAIN TO HAVE MINIMUM DEPTH OF COVER PER UDACS SECTION 2.08

TO ENSURE LVVWD ACCESS WITHIN EASEMENT

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

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT PLANNING AND ENGINEERING SERVICES

PROJECT:137333 FIRST APPROVED DATE:_____

REV	DATE	BY	REVISION

HOWARD HUGHES COMPANY, LLC
A DELAWARE LIMITED LIABILITY COMPANY
10845 GRIFFITH PEAK DRIVE, SUITE 160
LAS VEGAS, NEVADA 89135
702-791-4000

CITY OF LAS VEGAS

2727 SOUTH RAINBOW BOULEVARD
LAS VEGAS, NEVADA 89146-5148
PH. (702) 873-7550 FAX (702) 362-2597 WEB WWW.VTNNV.COM
CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

UTILITY PLAN & PROFILE 53 STORM DRAIN LATERAL

SUMMERLIN WEST VILLAGE 22
KETTLE BEND ROAD-SUNSET RUN DRIVE TO KESTREL CREEK AVENUE

DRAWN BY: BCC	07/15/2020	SCALE:	HORIZ. 1"=20'
DESIGNED BY: BCC	07/15/2020		VERT. 1"=4'
CHECKED BY: WJM	07/15/2020		
PROJECT NO: 7861			

PROFESSIONAL ENGINEER STATE OF NEBRASKA
WILLIAM J. MEYER
EXP: 12/31/21
CIVIL
No. E-15745

2020-08-31

SHEET
UT53
93 OF **107** SHEETS

DRAWING NO.
L20-01282
107V8449

H:\7861\Kettle Bend Road\Sheet Set\7861-UT-SD LAT-5.dwg 8/31/2020 9:49 AM bnandonc