

**TECHNICAL DRAINAGE STUDY
UPDATE No. 1
Skye Canyon Phase 3B/3C Infrastructure**

City of Las Vegas, Nevada

Job No.: OLY1609.000

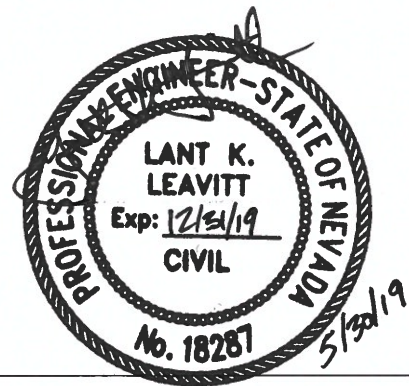
Date: May 2019

Prepared By:

Slater Hanifan Group a Westwood Team
5740 S. Arville Street, Suite 216
Las Vegas, Nevada 89118
Phone: 702-284-5300 • Fax: 702-284-5399

Prepared For:

Ninety-Five Management, LLC
11411 Southern Highlands Parkway, Suite 300
Las Vegas, Nevada 89141
Phone: 702-220-6565 • Fax: 702-220-6566



Lant Leavitt, P.E.
NV Professional Engineer No. 18287

HYDROLOGIC CRITERIA AND DRAINAGE DESIGN MANUAL
DRAINAGE STUDY INFORMATION FORM

Name of Development: Skye Canyon – Phase 3B/3C Infrastructure (Update #1) Date: May 2019
Location of Development: a) Descriptive (Cross Streets): North/South: Skye Village Road
East/West: Grand Canyon Drive
b) Section: 7 Township: 19 South Range: 60 East
c) APN: 125-07-201-007 and a portion of 125-07-101-009

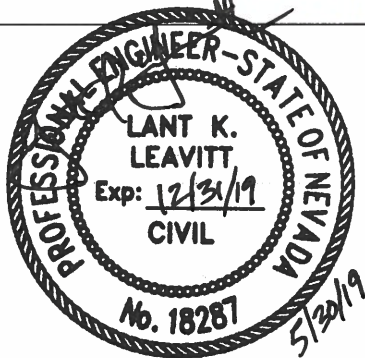
Name of Owner/Developer: M F Land, LLC / Ninety-Five Management, LLC
Telephone No.: 702-220-6565 Fax No.: 702-220-6566 E-mail Address: mbolduc@olympiacompanies.com
Address: 11411 Southern Highlands Parkway, Suite 300; Las Vegas, NV 89141

Contact Person – Name: Lant Leavitt, P.E. Telephone No.: 702-284-5300
*E-mail Address: lleavitt@shg-inc.com Fax No.: 702-284-5399
Firm: Slater Hanifan Group
Address: 5740 S. Arville Street, Suite 216; Las Vegas, NV 89118

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 Infrastructure

1. Total Owned Land Area: At Site: 665 Acres Being Developed/Disturbed: 20 Acres +/-
2. Is a portion or all of the subject property located in a 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 & Storm Drain Infrastructure
5. Approximate upstream land area which drains to the subject site: 1800 acre +/-
6. Has the site drainage been evaluated in the past? ☒ Yes** ☐ No If yes, please identify documentation: Master Drainage Study for Skye Canyon Update #4 (SHG, DS4420)
7. If known, please briefly identify the proposed discharge point(s) of runoff from the site: Skye Village Road thru MOHU 0036.
8. Briefly describe your proposed schedule for the subject project: ASAP Upon Substantial Completion of Detention Basin 2 Facilities.
Phase 3B/3C – Roadway Infrastructure per this TDS; Future Phase 3B/3C Residential Subdivisions to follow by separate TDS.



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.

***Newly Required Field**

**Review and concurrence of the Clark County Regional Flood Control District is required

Revision	Date

Local Entity File No. _____

REFERENCE: **SHG Job No. OLY1609.000**

STANDARD FORM 1

Updated 05/01/2008



OLY1609.000

May 30, 2019

Albert Sung, P.E.
Flood Control Project Engineer
City of Las Vegas Department of Public Works
333 N. Rancho Drive
Las Vegas, Nevada 89106

Subject: Technical Drainage Study Update No. 1 for Skye Canyon Phase 3B/3C Infrastructure (DS 4953)

Mr. Sung:

Submitted for your review is this *Technical Drainage Study Update for Skye Canyon Phase 3B/3C Infrastructure* (hereinafter referred to as the Update Study). The original *Technical Drainage Study for Skye Canyon Phase 3B/3C Infrastructure* (hereinafter referred to as the Original Study) prepared by Slater Hanifan Group (SHG) was conditionally approved by the City of Las Vegas (City) on October 10, 2018. The conditional approval letter for the Original Study is provided in Appendix B. The Original Study addressed the development of roadway and infrastructure improvements intended to support the development of approximately 160 acres in the Skye Canyon master planned development, labeled as Phase 3B/3C, see Development Phasing Exhibit provided in Appendix B. Since the approval of the Original Study, preparation of the improvement plans has progressed and coordination with other disciplines has taken place. One of the results of that coordination is that the proposed storm drain in Iron Mountain Road is proposed to be moved 1-ft to the north to make room for a proposed water line.

Purpose: The purpose of this Update Study is to provide hydraulic analysis of changes to the proposed storm drain facility in Iron Mountain Road. The following revisions to the storm drain are proposed with this update:

- Proposed storm drain alignment moved 1-ft to the north starting at storm drain manhole at Station "IMR" 107+46.33, near Shaumber Road intersection, and continuing to the east.
- Proposed storm drain alignment shift ends at storm drain manhole proposed at Station "IMR" 83+26.07, approx. 300-ft west of Skye Village Road. Iron Mountain Road begins to flare out approaching Skye Village Road, and the required water line spacing is met beyond this point without moving the storm drain alignment.

Hydraulics

The WSPGW model for the proposed Iron Mountain Road storm drain is revised to include the storm drain alignment changes described above, see Appendix A. In general, the effect on the proposed storm drain hydraulics from the 1-ft alignment shift is minimal. The hydraulic grade line (HGL) for the storm drain is similar to the Original Study. Also, original requirements for the storm drain are still being met, including maintaining the HGL at least 1-ft below finished grade, and providing 1-inch sacrificial concrete thickness where velocities exceed 25 fps.

Conclusion

This Update Study provides hydraulic analysis of changes to the conditionally approved storm drain facility in Iron Mountain Road. The storm drain facility alignment is shifted 1-ft to the north to provide the required clearance with a proposed water line to the south. This alignment shift does not negatively impact storm drain hydraulics, and the proposed facility conforms to the requirements of the Original Study. In addition, this Update Study and the proposed improvements are in conformance with the following:

- This project is in compliance with all the applicable drainage laws as recognized by the state of Nevada as well as all the applicable design standards stipulated in the CCRFCD *“Hydrologic Criteria and Drainage Design Manual”*.
- This project is in compliance with the 2018 CCRFCD “Master Plan Update.”
- The entire project site is located outside of the FEMA designated Special Flood Hazard Area (SFHA). The site and the proposed improvements are located within a FEMA flood Zone “X” (unshaded). Therefore, notification and/or coordination with FEMA are not required for this project.

The revised improvement plans are included with this submittal to support the conclusions detailed in this study. If you have any questions or require additional information, please contact us at (702) 284-5300.

Respectfully Submitted,

SLATER HANIFAN GROUP
a WESTWOOD TEAM



Lant Leavitt, P.E.
Flood Control Division

pc: Mark Failla, P.E., CFM – SHG
Jerry Slater, P.E. – SHG
Rhonda Miller – SHG

LIST OF APPENDICIES

- Appendix A Hydraulic Analyses**
- Iron Mountain Road Storm Drain WSPGW Analysis
- Appendix B Technical Drainage Study for Skye Canyon Phase 3B/3C Infrastructure**
- Approval Letter
 - Development Phasing Exhibit
 - Referenced Drainage Exhibits
 - Referenced Hydraulic Data
 - Referenced Improvement Plans
- Appendix C CD of Electronic Files (PDF)**

APPENDIX A

Hydraulic Analyses

Ultimate Condition WSPG Summary								
Mainline in Iron Mountain Road along Northern Boundary of Project Site								
WSPGW Station	Invert Elevation (ft)	Equivalent Roadway Station	Improvement Plan Sheet	Storm Drain Dimension	Q ₁₀₀ (cfs)	WSE (ft)	Velocity (ft/s) ¹	HGL Check ²
940.69	2824.89	N/A	PP-08	7' x 5' RCB	405	2835.80	11.57	N/A
951.69	2825.59	N/A	PP-08	7' x 5' RCB	405	2835.87	11.57	2839.55
1020.93	2830.16	79+10.78	PP-08	7' x 5' RCB	405	2836.68	11.57	2839.55
1034.93	2830.23	79+24.78	PP-08	7' x 5' RCB	405	2836.77	11.57	2839.55
1117.78	2830.64	80+07.63	PP-08	7' x 5' RCB	405	2837.55	11.11	2840.64
1129.79	2832.20	81+11.79	PP-08	7' x 5' RCB	405	2834.65	19.76	2841.05
1233.34	2832.39	81+23.88	PP-08	7' x 5' RCB	389	2834.43	23.76	2842.63
1241.34	2832.60	81+31.79	PP-08	TRANS STRCT	389	2835.99	22.03	2842.76
1435.26	2833.78	83+26.07	PP-07	66" RCP	389	2836.41	28.58	2848.02
1435.26	2834.28	83+26.07	PP-07	60" RCP	389	2837.26	27.74	2848.02
1773.92	2850.68	86+65.17	PP-07	60" RCP	339	2850.15	27.89	2859.32
2113.00	2860.30	90+04.25	PP-06	60" RCP	339	2863.27	27.95	2872.80
2313.00	2868.30	92+04.25	PP-06	60" RCP	339	2871.31	27.43	2880.81
2524.64	2876.27	94+15.89	PP-05	60" RCP	339	2879.31	27.13	2889.29
2524.64	2876.77	98+15.89	PP-05	54" RCP	279	2879.57	26.82	2889.29
2924.64	2892.75	98+15.89	PP-05	54" RCP	279	2895.57	26.62	2905.31
3184.64	2903.15	100+75.89	PP-04	54" RCP	279	2906.04	25.80	2915.72
3468.17	2914.35	103+59.42	PP-04	54" RCP	279	2917.63	22.46	2926.95
3751.34	2922.56	106+42.59	PP-03	54" RCP	279	2926.91	17.72	2934.55
3751.34	2922.56	106+42.59	PP-03	54" RCP	173	2928.65	17.98	2934.55
3855.40	2925.64	107+46.33	PP-03	54" RCP	173	2931.98	17.98	2936.30
3855.40	2925.64	107+46.33	PP-03	42" C900	157	2933.58	16.32	2936.30
4250.98	2932.49	111+41.91	PP-02	42" RCP	157	2943.42	16.32	2951.57
4515.40	2937.07	114+06.33	PP-02	42" RCP	157	2950.07	16.32	2966.05
4630.98	2939.07	115+21.91	PP-02	42" RCP	157	2953.09	16.32	2971.36
4961.97	2964.23	118+52.90	PP-01	42" RCP	157	2966.30	26.44	2985.10
5077.69	2973.02	119+36.99	PP-01	42" RCP	157	2975.56	20.98	2988.57
5077.69	2973.02	119+36.99	PP-01	60" RCP	157	2974.99	21.83	2988.57
5237.69	2978.54	120+96.99	PP-01	60" RCP	157	2980.54	21.41	2991.00

UIRM1UP.WSW

T1 SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C									
T2 BY OLYMPIA COMPANIES									
T3 IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDITION)									
SO	940.6902824.890	1	.013						
R	951.6902825.590	1	.013						
R	1020.9302830.160	1	.013					77.922	.000 0
JX	1034.9302830.230	1	.013		0.00		2830.230	00.0	
JX	1117.7802830.640	1	24 18.013		8.0		2830.64	45.0	45.0
JX	1129.7902832.200	1	30 .013		50.00		2834.480	45.0	
R	1233.3402832.390	1	.013						
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R	1435.2602833.780	66	.013						
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R	2313.0102868.300	60	.013						00.00 1
R	2524.6402876.270	60	.013						00.00 1
JX	2524.6402876.770	54	18 36.013		6.0	54.0	2879.77	45.0	45.0
R	2924.6402892.750	54	.013						00.00 1
R	3184.6402903.150	54	.013						00.00 1
R	3468.1702914.350	54	.013						00.00 1
R	3751.3402922.560	54	.013						00.00 1
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JX	3855.4002925.640	42	18 18.013		8.0	8.0	2927.64	45.0	45.0
R	4250.9802925.640	42	.013						00.00 1
R	4515.4002937.070	42	.013						00.00 1
R	4630.9802939.070	42	.013						00.00 1
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R	4961.9692964.229	42	.013						15.00
R	4961.9702964.230	42	.013						15.00
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R	5077.6892973.019	60	.013						15.00

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R	5077.6902973.020	60	.013			
R	5237.6902978.540	60	.013			
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CD	24	4	1	2.000	.000	.00
CD	30	4	1	2.500	.000	.00
CD	36	4	1	3.000	.000	.00
CD	42	4	1	3.500	.000	.00
CD	48	4	1	4.000	.000	.00
CD	54	4	1	4.500	.000	.00
CD	60	4	1	5.000	.000	.00
CD	66	4	1	5.500	.000	.00
CD	72	4	1	6.000	.000	.00
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Q	157.000	.0	7.000			

Program Package Serial Number: 7189

Date: 5-20-2019 Time: 9:49:13

WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow 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
940.690	2824.890	10.910	2835.800	405.00	11.57	2.08	2837.88	.00	4.70	7.00	5.000	7.000	.00	0 .0
11.000	.0637					.0062	.07	10.91	.91	1.79	.013	.00	.00	BOX
951.690	2825.590	10.278	2835.868	405.00	11.57	2.08	2837.95	.00	4.70	7.00	5.000	7.000	.00	0 .0
69.240	.0660					.0062	.43	.00	.91	1.77	.013	.00	.00	BOX
1020.930	2830.160	6.524	2836.684	405.00	11.57	2.08	2838.76	.00	4.70	7.00	5.000	7.000	.00	0 .0
JUNCT STR	.0050					.0062	.09	.00	.91		.013	.00	.00	BOX
1034.930	2830.230	6.541	2836.771	405.00	11.57	2.08	2838.85	.00	4.70	7.00	5.000	7.000	.00	0 .0
JUNCT STR	.0049					.0057	.47	6.54	.91		.013	.00	.00	BOX
1117.780	2830.640	6.911	2837.551	389.00	11.11	1.92	2839.47	.00	4.58	7.00	5.000	7.000	.00	0 .0
JUNCT STR	.1299							6.91	.88		.013	.00	.00	BOX
1129.790	2832.200	2.451	2834.651	339.00	19.76	6.06	2840.71	.00	4.18	7.00	5.000	7.000	.00	0 .0
24.130	.0018					.0195	.47	2.45	2.22	5.00	.013	.00	.00	BOX
1153.920	2832.244	2.351	2834.595	339.00	20.60	6.59	2841.18	.00	4.18	7.00	5.000	7.000	.00	0 .0
27.136	.0018					.0221	.60	2.35	2.37	5.00	.013	.00	.00	BOX
1181.057	2832.294	2.242	2834.536	339.00	21.60	7.25	2841.78	.00	4.18	7.00	5.000	7.000	.00	0 .0
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1207.553	2832.343	2.138	2834.480	339.00	22.66	7.97	2842.45	.00	4.18	7.00	5.000	7.000	.00	0 .0
25.787	.0018					.0289	.74	2.14	2.73	5.00	.013	.00	.00	BOX

WATER SURFACE PROFILE LISTING

Date: 5-20-2019 Time: 9:49:13

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.-FT	Height/ or I.D.	Base Wt	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch	
1233.340	2832.390	2.038	2834.428	339.00	23.76	8.77	2843.20	.00	4.18	7.00	5.000	7.000	.00	0	.0
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1259.542	2832.711	3.331	2836.042	339.00	22.52	7.88	2843.92	.00	4.97	5.38	5.500	.000	.00	1	.0
38.068	.0061					.0234	.89	3.33	2.37	5.50	.013		.00	.00	PIPE
1297.610	2832.943	3.201	2836.144	339.00	23.62	8.67	2844.81	.00	4.97	5.43	5.500	.000	.00	1	.0
36.557	.0061					.0264	.97	3.20	2.56	5.50	.013		.00	.00	PIPE
1334.167	2833.165	3.079	2836.244	339.00	24.78	9.53	2845.78	.00	4.97	5.46	5.500	.000	.00	1	.0
35.084	.0061					.0299	1.05	3.08	2.76	5.50	.013		.00	.00	PIPE
1369.251	2833.378	2.962	2836.341	339.00	25.98	10.48	2846.83	.00	4.97	5.48	5.500	.000	.00	1	.0
33.677	.0061					.0339	1.14	2.96	2.97	5.50	.013		.00	.00	PIPE
1402.928	2833.583	2.852	2836.435	339.00	27.25	11.53	2847.97	.00	4.97	5.50	5.500	.000	.00	1	.0
32.332	.0061					.0385	1.24	2.85	3.19	5.50	.013		.00	.00	PIPE
1435.260	2833.780	2.747	2836.527	339.00	28.58	12.69	2849.21	.00	4.97	5.50	5.500	.000	.00	1	.0
JUNCT STR	.0000					.0396	.00	2.75	3.43		.013		.00	.00	PIPE
1435.260	2834.280	2.984	2837.264	339.00	27.74	11.95	2849.21	.00	4.79	4.91	5.000	.000	.00	1	.0
338.660	.0381					.0384	13.02	2.98	3.10	2.99	.013		.00	.00	PIPE

WATER SURFACE PROFILE LISTING

Date: 5-20-2019 Time: 9:49:13

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
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IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.	Height/FT or I.D.	Base Wt	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Proude N	Norm Dp	"N"	X-Fall	ZR		Type Ch
1773.920	2847.180	2.970	2850.150	339.00	27.89	12.08	2862.23	.00	4.79	4.91	5.000	.000	.00	1	.0
339.090	.0387					.0388	13.16	2.97	3.12	2.97	.013	.00	.00	PIPE	
2113.010	2860.300	2.965	2863.265	339.00	27.95	12.13	2875.39	.00	4.79	4.91	5.000	.000	.00	1	.0
200.000	.0400					.0380	7.60	2.97	3.13	2.94	.013	.00	.00	PIPE	
2313.010	2868.300	3.012	2871.312	339.00	27.43	11.68	2882.99	.00	4.79	4.89	5.000	.000	.00	1	.0
211.630	.0377					.0366	7.74	3.01	3.04	3.00	.013	.00	.00	PIPE	
2524.640	2876.270	3.040	2879.310	339.00	27.13	11.43	2890.74	.00	4.79	4.88	5.000	.000	.00	1	.0
JUNCT STR	.0000					.0380	.00	3.04	2.99		.013	.00	.00	PIPE	
2524.640	2876.770	2.800	2879.570	279.00	26.82	11.17	2890.74	.00	4.35	4.36	4.500	.000	.00	1	.0
4.849	.0399					.0399	.19	2.80	3.06	2.80	.013	.00	.00	PIPE	
2529.489	2876.964	2.800	2879.764	279.00	26.82	11.17	2890.93	.00	4.35	4.36	4.500	.000	.00	1	.0
395.151	.0399					.0396	15.64	2.80	3.06	2.80	.013	.00	.00	PIPE	
2924.640	2892.750	2.818	2895.568	279.00	26.62	11.00	2906.57	.00	4.35	4.35	4.500	.000	.00	1	.0
260.000	.0400					.0377	9.81	2.82	3.02	2.80	.013	.00	.00	PIPE	
3184.640	2903.150	2.895	2906.044	279.00	25.80	10.34	2916.38	.00	4.35	4.31	4.500	.000	.00	1	.0
146.435	.0395					.0344	5.04	2.89	2.87	2.81	.013	.00	.00	PIPE	
3331.074	2908.934	3.006	2911.941	279.00	24.71	9.48	2921.42	.00	4.35	4.24	4.500	.000	.00	1	.0
83.804	.0395					.0308	2.58	3.01	2.67	2.81	.013	.00	.00	PIPE	

WATER SURFACE PROFILE LISTING
SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
BY OLYMPIA COMPANIES

Date: 5-20-2019 Time: 9:49:13

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.	Height/FT or I.D.	Base Wt	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Proude N	Norm Dp	"N"	X-Fall	ZR	Type	Ch
3414.878	2912.245	3.138	2915.383	279.00	23.56	8.62	2924.00	.00	4.35	4.13	4.500	.000	.00	1	.0
53.292	.0395					.0275	1.46	3.14	2.45	2.81	.013	.00	.00	PIPE	
3468.170	2914.350	3.280	2917.630	279.00	22.46	7.84	2925.47	.00	4.35	4.00	4.500	.000	.00	1	.0
124.330	.0290					.0246	3.06	3.28	2.25	3.14	.013	.00	.00	PIPE	
3592.500	2917.955	3.430	2921.385	279.00	21.45	7.14	2928.53	.00	4.35	3.83	4.500	.000	.00	1	.0
70.364	.0290					.0222	1.56	3.43	2.05	3.14	.013	.00	.00	PIPE	
3662.864	2919.995	3.601	2923.595	279.00	20.45	6.49	2930.09	.00	4.35	3.60	4.500	.000	.00	1	.0
44.745	.0290					.0201	.90	3.60	1.85	3.14	.013	.00	.00	PIPE	
3707.609	2921.292	3.794	2925.086	279.00	19.50	5.90	2930.99	.00	4.35	3.27	4.500	.000	.00	1	.0
29.207	.0290					.0185	.54	3.79	1.64	3.14	.013	.00	.00	PIPE	
3736.816	2922.139	4.025	2926.164	279.00	18.59	5.37	2931.53	.00	4.35	2.77	4.500	.000	.00	1	.0
14.524	.0290					.0177	.26	4.02	1.41	3.14	.013	.00	.00	PIPE	
3751.340	2922.560	4.350	2926.910	279.00	17.72	4.88	2931.79	.00	4.35	1.62	4.500	.000	.00	1	.0
JUNCT STR	.0000					.0236	.00	4.35	1.00		.013	.00	.00	PIPE	
3751.340	2922.560	6.089	2928.649	173.00	17.98	5.02	2933.67	.00	3.44	.00	3.500	.000	.00	1	.0
104.060	.0296					.0296	3.08	6.09	.00	2.87	.013	.00	.00	PIPE	
3855.400	2925.640	6.337	2931.977	173.00	17.98	5.02	2937.00	.00	3.44	.00	3.500	.000	.00	1	.0
JUNCT STR	.0000					.0270	.00	6.34	.00		.013	.00	.00	PIPE	

Program Package Serial Number: 7189

Date: 5-20-2019 Time: 9:49:13

WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

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 or I.D.	Base Wt ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Proude N	Norm Dp	"N"	X-Fall ZR	Type Ch
3855.400	2925.640	7.943	2933.583	157.00	16.32	4.13	2937.72	.00	3.41	.00	3.500	.000	.00 1 .0
395.580	.0000	-	-	-	-	.0244	9.63	7.94	.00	.00	.013	.00	PIPE
4250.980	2925.640	17.783	2943.423	157.00	16.32	4.13	2947.56	.00	3.41	.00	3.500	.000	.00 1 .0
264.420	.0432	-	-	-	-	.0244	6.44	17.78	.00	2.26	.013	.00	PIPE
4515.400	2937.070	12.998	2950.068	157.00	16.32	4.13	2954.20	.00	3.41	.00	3.500	.000	.00 1 .0
115.580	.0173	-	-	-	-	.0244	2.81	13.00	.00	3.50	.013	.00	PIPE
4630.980	2939.070	14.020	2953.090	157.00	16.32	4.13	2957.22	.00	3.41	.00	3.500	.000	.00 1 .0
105.725	.0760	-	-	-	-	.0244	2.57	14.02	.00	1.88	.013	.00	PIPE
4736.705	2947.106	8.726	2955.833	157.00	16.32	4.13	2959.97	.00	3.41	.00	3.500	.000	.00 1 .0
HYDRAULIC JUMP													
4736.705	2947.106	1.911	2949.018	157.00	29.21	13.25	2962.27	.00	3.41	3.49	3.500	.000	.00 1 .0
30.037	.0760	-	-	-	-	.0722	2.17	1.91	4.15	1.88	.013	.00	PIPE
4766.742	2949.389	1.918	2951.307	157.00	29.09	13.14	2964.44	.00	3.41	3.48	3.500	.000	.00 1 .0
133.384	.0760	-	-	-	-	.0676	9.02	1.92	4.12	1.88	.013	.00	PIPE
4900.126	2959.528	1.994	2961.521	157.00	27.73	11.94	2973.46	.00	3.41	3.47	3.500	.000	.00 1 .0
61.841	.0760	-	-	-	-	.0597	3.69	1.99	3.82	1.88	.013	.00	PIPE
4961.971	2964.230	2.074	2966.304	157.00	26.44	10.86	2977.16	.00	3.41	3.44	3.500	.000	.00 1 .0
34.534	.0759	-	-	-	-	.0533	1.84	2.07	3.55	1.89	.013	.00	PIPE

WATER SURFACE PROFILE LISTING

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Height/ Dia.-FT or "N"	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp		X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
4996.505	2966.852	2.146	2968.999	157.00	25.38	10.00	2979.00	.00	3.41	3.41	3.500	.000	.00	1 .0
28.981	.0759					.0476	1.38	2.15	3.32	1.89	.013	.00	.00	PIPE
5025.486	2969.053	2.235	2971.288	157.00	24.20	9.09	2980.38	.00	3.41	3.36	3.500	.000	.00	1 .0
21.733	.0759					.0423	.92	2.24	3.07	1.89	.013	.00	.00	PIPE
5047.220	2970.703	2.330	2973.033	157.00	23.07	8.27	2981.30	.00	3.41	3.30	3.500	.000	.00	1 .0
16.945	.0759					.0376	.64	2.33	2.83	1.89	.013	.00	.00	PIPE
5064.165	2971.990	2.432	2974.422	157.00	22.00	7.52	2981.94	.00	3.41	3.22	3.500	.000	.00	1 .0
13.521	.0759					.0335	.45	2.43	2.61	1.89	.013	.00	.00	PIPE
5077.686	2973.016	2.542	2975.558	157.00	20.98	6.83	2982.39	.00	3.41	3.12	3.500	.000	.00	1 .0
JUNCT STR	1.0000					.0327	.00	2.54	2.39		.013	.00	.00	PIPE
5077.690	2973.020	1.971	2974.991	157.00	21.83	7.40	2982.39	.00	3.59	4.89	5.000	.000	.00	1 .0
160.000	.0345					.0329	5.26	1.97	3.17	1.96	.013	.00	.00	PIPE
5237.690	2978.540	2.000	2980.540	157.00	21.41	7.12	2987.66	.00	3.59	4.90	5.000	.000	.00	1 .0

APPENDIX B

Excerpts from Skye Canyon Phase 3B/3C Infrastructure TDS:

- **Approval Letters**
- **Development Phasing Exhibit**
- **Referenced Drainage Exhibits**
- **Referenced Hydraulic Data**
- **Referenced Improvement Plans**

CITY OF LAS VEGAS		DATE:
INTER-OFFICE MEMORANDUM		October 10, 2018
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:	
	Skye Canyon – Phases 3B & 3C Infrastructure	
Cross Streets:	NWC of Skye Village Road & Skye Canyon Park Drive	
File Number:	F:\Depot\DSMemos\DS4953B.doc	
Parcel Number:	126-12-101-002	
Zoning Action:		
FEMA Flood Zone	YES	NO X
Proposed Storm Drain	YES X	NO
COPIES TO:		
		Slater Hanifan Group
		M F Land LLC / Ninety-Five Management LLC
		Bart Anderson, P.E., DevCo
		CCRFC

HISTORY	DATE RECEIVED	DATE REVIEWED	COMMENTS	REVIEW FEES	FEES PAID Payment Trn #
1 st Submittal	2/8/2017	3/9/2018 & 5/15/2018	Not Approved	\$400.00	493315: \$400
2 nd Submittal	9/11/2018	10/10/2018	See Comments Below	\$400.00	498970: \$400
			TOTAL FEES (LDDRS):	\$800.00	----

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.

1. The site is adjacent to or crosses an existing or proposed *Clark County Regional Flood Control District* (CCRFC) master planned facility. Therefore, CCRFC concurrence is required prior to final approval of the drainage study. CCRFC requires receipt of structural approval from the Building Department prior to concurrence.
2. *Skye Canyon Phases 3B & 3C* onsite developments are to be flood protected by *Detention Basin 2* and the *Skye Canyon Phase 3A Infrastructure*. No occupancy permits within onsite *Phases 3B & 3C* will be issued prior to the substantial completion of *Detention Basin 2 with the outfall facility (from Detention Basin 2 in Iron Mountain Road to Skye Village Road)* and the substantial completion of the *Skye Canyon Phase 3A Infrastructure*.
3. The future MPU facility within Skye Village Road north of the Skye Village/Grand Canyon/Iron Mountain intersection to the proposed MPU facility at the Kyle Canyon interchange area shall be substantially complete before occupancy of residential Units beyond Phases 3A, 3B and 3C. This includes residential development within Phases 4 & 6 and the development of Phase 5 as shown on the *Development Phasing Exhibit* dated 12/4/2017.
4. The implementation of the CCRFC Master Plan for the Skye Canyon Master Development is being progressed with the recent 90% design submittal of the *Moccasin Rd. CCRFC Flood Control Facility – US95/Kyle Canyon Rd Interchange to Moccasin Rd. (Skye Canyon Developer Funded)* and

the *Moccasin Rd. CCRFCD Flood Control Facility – Moccasin Rd to CCRFCD Facility LVUP 1076/1077(CCRFCD Funded)*. Once building permits are released for 75% of the Skye Canyon Development west of US-95 these critical facilities shall be substantially complete in accordance with the provisions of Title 19.02.130 D.

5. The implementation of the CCRFCD Master Plan is being progressed with the recent bid opening of the NDOT US-95 facilities from the CC-215 interchange north to the Kyle Canyon interchange. Construction of the associated CCRFCD MPU facilities allows for the utilization of the existing MPU facilities constructed with the Horse Interchange. The development of Phases 3A, 3B and 3C west of US-95 shall maximize the flow collection into this facility prior to allowing flows to cross US-95 using the existing culvert system.
6. *Flood Control* acknowledges that the new *Skye Canyon Master Plan Amendment (MPA)* is being included as a part of the 2018 MPU process. Any changes not incorporated in the 2018 MPU must be approved by *City of Las Vegas* and *Clark County Regional Flood Control District (CCRFCD)* and shall be adopted by the *City of Las Vegas City Council* prior to the final approval of the subject improvement plans.
7. The subject *Phases 3B and 3C Infrastructure Drainage Study* addresses the included street improvements of *Iron Mountain Road, Skye Canyon Park Drive, Shaumber Road*, culvert crossings and storm drain systems with the streets. Technical drainage studies will be required for the future onsite parcels as they develop.
8. Since the streets network and the associated storm drain facilities will eventually be accepted by 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 approval of the improvement plans.
9. Structural plans for the storm drain improvements must be submitted for review by *Flood Control* and the *Building Department*. Provide a soil report, structural calculations and specifications, wet stamped structural sets and a grading plan to the *City of Las Vegas Building Department* for processing (call *Building Department* to confirm their submittal requirements). The engineer must provide a copy of *Building Department* approval of the structures to *City Flood Control Section* prior to the final acceptance of the improvement plans.
10. Phase 3A, 3B, and 3C include storm drain improvements that will be abandoned in the future. These abandoned facilities will impact the adjoining Phase 3B and 3C development parcels. The individual parcel development shall address the impact and removal of these improvements as well as include the removal of these items in the associated improvements and Bond.
11. The project proposed to build temporary drainage facilities including drainage berms/swales over the *Phases 3B, 3C* site and along the west side of *Shaumber Road*. Prior to the final plans approval the developer must complete a **Maintenance and 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 construction the facility and an exhibit that adequately shows the location and limits of the drainage facilities to *City Flood Control* for approval. Once the drainage study is conditionally approved, the engineer/developer should contact the *City's Land Development Section (702-229-6371)* 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 berms/swales are no longer necessary and can be removed.

12. Revise the typical access road sections on Sheet DTL-01 of each plan set to clearly show 1% minimum cross slope.
13. Provide nominal inlets along the arterial streets that do not exceed 660' maximum spacing.

14. Provide off-site grading permission for areas outside of the Skye Canyon Development impacted by these infrastructure improvements. Provide the notarized letter of off-site grading permission prior to final approval of the improvement plans.
15. Provide drop inlets upstream of the roadway cross fall transitions to collect flow before it spills across the intersections.
16. The interim channels adjacent to the infrastructure roadways are the Maintenance responsibility of the Master Developer.

17. **Iron Mountain Road Improvement Plans:**

Provide ½ street roadway improvements in Iron Mountain between the Sheep Mountain Parkway and Shaumber Road. Revise the plans and sections accordingly.

Sheet PP-04 to Sheet PP-07: Offsite grading is proposed in the adjacent parcels to the north of *Iron Mountain Road*. The land parcels are owned by various private owners and the BLM. Obtain notarized letter of permission for grading from all the impacted owners and BLM prior to the final acceptance of the improvement plans.

Sheet PP-04: Explain why the drop inlet is in a "sump" condition.

Sheet PP-05: Label the length of the proposed drop inlet at Sta. 94+36.89 (**second request**).

18. **Skye Canyon Park Drive Improvement Plans:**

Sheet PP-02 and Sheet PP-03: The City requires nominal drop inlet at a maximum spacing of 600' in public right of ways. The distance between a proposed drop inlet in *Skye Canyon Park Drive* (see Sheet PP-03) and the *Shaumber Road* intersection is more than 1,200 feet. Extend the proposed 18" storm drain to approximately Sta. 46+00 with a nominal inlet on the north side and a stub to the south (**second request**).

19. **Shaumber Road Improvement Plans:**

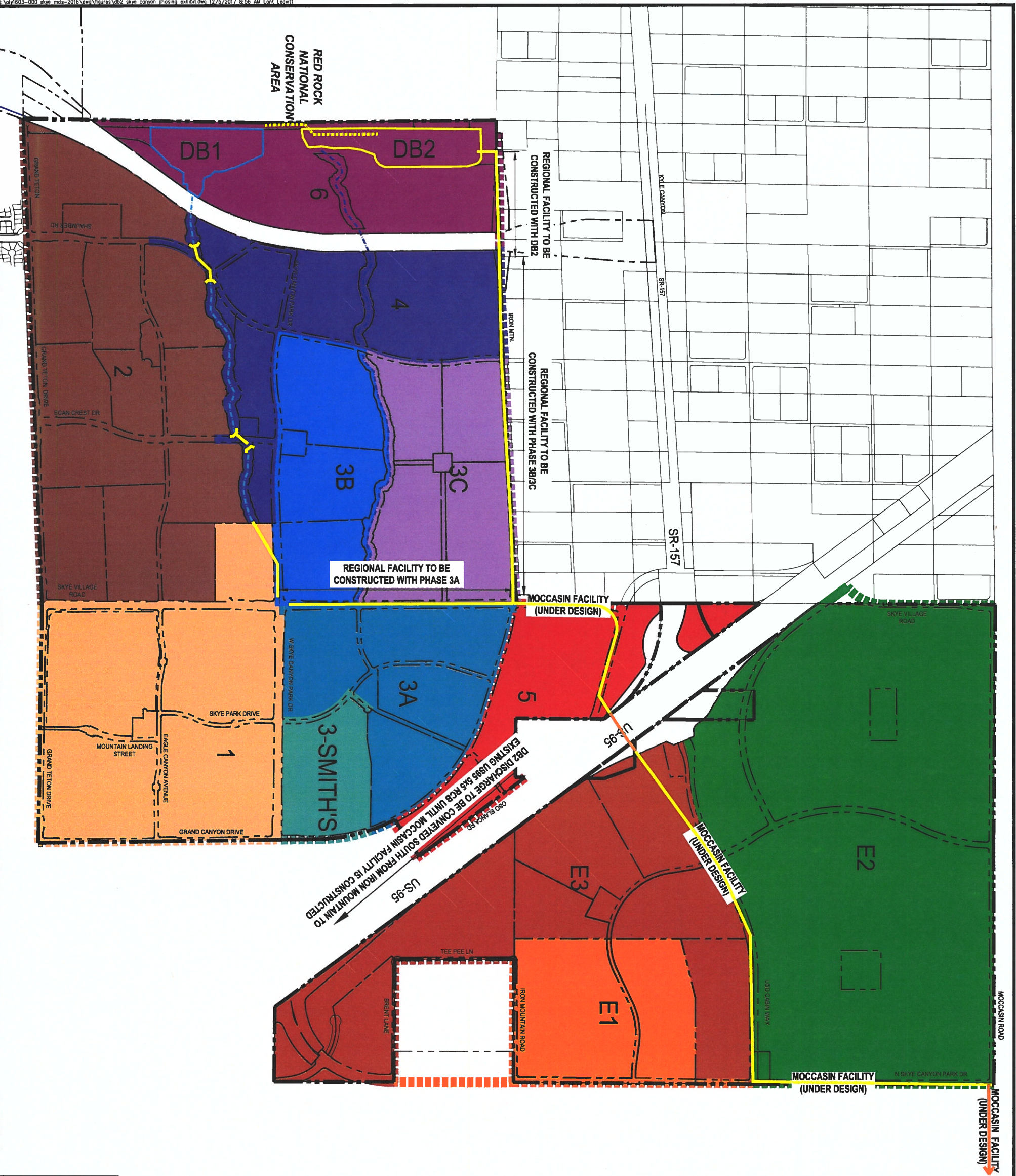
Sheet PP-03 and Sheet PP-04: Extend the storm drain at SDMH #20 to the south with an 18" pipe to approximately Sta. 36+00. Provide two stubs at the end of the 18"-storm drain (**second request**).

Sheets PP-06 to PP-08: Extend the storm drain at SDMH #65 (in Sheet PP-08) to the south with an 18" pipe to approximately Sta. 56+00. Provide two stubs at the end of the 18" storm drain (Sheet PP-06) and another two stubs at approximately Sta. 62+00 (Sheet PP-07) (**second request**).

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/pbj

T/R/S: T19S/R59E/12
AREA: F-12



LEGEND

WEST SIDE INFRASTRUCTURE

- PHASE 1 (CONSTRUCTED)
- PHASE 2 (CONSTRUCTED)
- PHASE 3-SMITH'S (CONSTRUCTED)
- PHASE 3A (CURRENTLY IN DESIGN - REQUIRES COMPLETION OF DB2)
- PHASE 3B (CURRENTLY IN DESIGN - REQUIRES COMPLETION OF DB2, PHASE 3A)
- PHASE 3C (CURRENTLY IN DESIGN - REQUIRES COMPLETION OF DB2, PHASE 3A)
- PHASE 4 (REQUIRES COMPLETION OF DB2, PHASE 3A, AND MOCCASIN FACILITY)
- PHASE 5 (REQUIRES COMPLETION OF DB2, PHASE 3A, AND MOCCASIN FACILITY)
- PHASE 6 (REQUIRES COMPLETION OF DB2, PHASE 3A, AND MOCCASIN FACILITY)

EAST SIDE INFRASTRUCTURE

- PHASE E1
- PHASE E2 (REQUIRES COMPLETION OF MOCCASIN FACILITY)
- PHASE E3 (REQUIRES COMPLETION OF DB2, PHASE 3A, AND MOCCASIN FACILITY)

PHASE/SUBPHASE BOUNDARY

- FULL STREET
- HALF STREET

PROPOSED REGIONAL FACILITIES (BY DEVELOPER)

PROPOSED REGIONAL FACILITIES (BY CLV)

EXISTING CORFCD REGIONAL FACILITIES

DEVELOPMENT PHASING EXHIBIT

SLATER

SKYE CANYON

OLYMPIA COMPANIES

CONSULTING ENGINEERS & PLANNERS

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118

PHONE (702) 284-5300 FAX (702) 284-5399

DATE: 12/04/17

Model "UIRM1" - Mainline

Ultimate Condition WSPG Summary									
Mainline in Iron Mountain Road along Northern Boundary of Project Site									
WSPG Station	Equivalent Roadway Station	Improvement Plan Sheet	Storm Drain Dimension	Invert Elevation (ft)	Q ₁₀₀ (cfs)	WSE (ft)	Velocity (ft/s)	FG Elevation	HGL Check ¹
943.00	Existing SD	PP-08	7' x 5' RCB	2824.89	405	2835.80	11.57	2838.00	OK
954.00	Existing SD	PP-08	7' x 5' RCB	2825.59	405	2835.87	11.57	2838.10	OK
1023.24	Existing SD	PP-08	7' x 5' RCB	2830.16	405	2836.64	11.57	2839.30	OK
1037.24	Existing SD	PP-08	7' x 5' RCB	2830.23	405	2836.77	11.57	2839.50	OK
1116.09	Existing SD	PP-08	7' x 5' RCB	2830.64	405	2837.26	11.57	2840.28	OK
1118.40	80+07.63	PP-08	7' x 5' RCB	2830.64	389	2837.56	11.11	2840.28	OK
1221.97	81+11.79	PP-08	7' x 5' RCB	2832.20	389	2834.20	24.20	2842.02	OK
1234.00	81+23.88	PP-08	7' x 5' RCB	2832.39	339	2834.37	24.52	2842.23	OK
1242.00	81+31.79	PP-08	66" RCP	2832.60	339	2835.88	22.93	2842.37	OK
1368.40	82+58.64	PP-07	66" RCP	2833.37	339	2842.20	27.15	2845.87	OK
1368.40	82+58.64	PP-07	60" RCP	2833.87	339	2840.75	26.22	2845.87	OK
1713.01	86+04.25	PP-07	60" RCP	2844.81	339	2848.08	27.90	2857.03	OK
2113.01	90+04.25	PP-06	60" RCP	2860.30	339	2863.56	27.95	2872.78	OK
2313.01	92+04.25	PP-06	60" RCP	2868.30	339	2871.63	27.43	2880.79	OK
2524.65	94+15.89	PP-05	60" RCP	2876.27	339	2879.31	27.13	2889.27	OK
2524.65	94+15.89	PP-05	54" RCP	2876.77	279	2879.57	26.82	2889.27	OK
3184.64	100+75.89	PP-04	54" RCP	2903.15	279	2906.04	25.81	2915.70	OK
3468.17	103+59.42	PP-04	54" RCP	2914.35	279	2917.63	22.47	2926.93	OK
3751.34	106+42.59	PP-03	54" RCP	2922.56	279	2922.56	17.72	2934.64	OK
3751.34	106+42.59	PP-03	42" RCP	2923.56	173	2923.56	17.98	2934.64	OK
3855.40	107.46.33	PP-03	42" RCP	2925.64	173	2931.98	17.98	2935.95	OK
3855.40	107.46.33	PP-03	42" RCP	2925.64	157	2933.58	16.32	2936.66	OK
4334.07	112+25.00	PP-02	42" RCP	2933.93	157	2945.45	16.32	2955.88	OK
4630.98	115+21.91	PP-02	42" RCP	2939.07	157	2953.09	16.32	2972.06	OK
4961.97	118+52.90	PP-01	42" RCP	2964.23	157	2966.30	26.50	2985.15	OK
5077.69	119+36.99	PP-01	42" RCP	2973.02	157	2974.99	21.83	2984.43	OK

T2 BY OLYMPIA COMPANIES

SO	943.0002824.890	1	.013	2835.800
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[illegible]

Program Package Serial Number: 1704

Date: 9-10-2018 Time: 7:13:36

WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Height/Dia.-FT or I.D.	No Wth
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N" X-Fall	Prs/Pip
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
943.000	2824.890	10.910	2835.800	405.00	11.57	2.08	2837.88	.00	4.70	7.00	5.000	0 .0
11.000	.0637					.0062	.07	10.91	.91	1.79	.013	BOX
954.000	2825.590	10.278	2835.868	405.00	11.57	2.08	2837.95	.00	4.70	7.00	5.000	0 .0
69.240	.0660					.0062	.43	.00	.91	1.77	.013	BOX
1023.240	2830.160	6.524	2836.684	405.00	11.57	2.08	2838.76	.00	4.70	7.00	5.000	0 .0
JUNCT STR	.0050					.0062	.09	6.52	.91		.013	BOX
1037.240	2830.230	6.541	2836.771	405.00	11.57	2.08	2838.85	.00	4.70	7.00	5.000	0 .0
78.850	.0052					.0062	.49	6.54	.91	4.48	.013	BOX
1116.090	2830.640	6.620	2837.260	405.00	11.57	2.08	2839.34	.00	4.70	7.00	5.000	0 .0
JUNCT STR	.0000					.0057	.01	6.62	.91		.013	BOX
1118.400	2830.640	6.920	2837.560	389.00	11.11	1.92	2839.48	.00	4.58	7.00	5.000	0 .0
JUNCT STR	.0151							6.92	.88		.013	BOX
1221.970	2832.200	2.001	2834.201	339.00	24.20	9.10	2843.30	.00	4.18	7.00	5.000	0 .0
12.030	.0158					.0331	.40	2.00	3.02	2.59	.013	BOX
1234.000	2832.390	1.975	2834.365	339.00	24.52	9.34	2843.70	.00	4.18	7.00	5.000	0 .0
TRANS STR	.0263					.0283	.23	1.98	3.07		.013	BOX
1242.000	2832.600	3.281	2835.881	339.00	22.93	8.17	2844.05	.00	4.97	5.40	5.500	1 .0
20.646	.0061					.0238	.49	3.28	2.44	5.50	.013	PIPE

Date: 9-10-2018 Time: 7:13:36

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C
BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.	Height / or I.D.	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	Type Ch
1262.646	2832.726	3.211	2835.937	339.00	23.53	8.60	2844.53	.00	4.97	5.42	5.500	.000	.00
36.707	.0061					.0262	.96	3.21	2.54	5.50	.013	.00	.00
1299.352	2832.949	3.088	2836.038	339.00	24.68	9.46	2845.50	.00	4.97	5.46	5.500	.000	.00
35.215	.0061					.0296	1.04	3.09	2.74	5.50	.013	.00	.00
1334.567	2833.164	2.971	2836.135	339.00	25.88	10.40	2846.54	.00	4.97	5.48	5.500	.000	.00
33.823	.0061					.0336	1.14	2.97	2.95	5.50	.013	.00	.00
1368.390	2833.370	2.861	2836.231	339.00	27.15	11.44	2847.67	.00	4.97	5.50	5.500	.000	.00
JUNCT STR	.0000					.0344	.00	2.86	3.17		.013	.00	.00
1368.390	2833.870	3.129	2837.000	339.00	26.22	10.67	2847.67	.00	4.79	4.84	5.000	.000	.00
139.511	.0317					.0337	4.70	3.13	2.83	3.17	.013	.00	.00
1507.901	2838.299	3.091	2841.390	339.00	26.60	10.99	2852.38	.00	4.79	4.86	5.000	.000	.00
205.109	.0317					.0365	7.49	3.09	2.89	3.17	.013	.00	.00
1713.010	2844.810	2.970	2847.780	339.00	27.90	12.08	2859.86	.00	4.79	4.91	5.000	.000	.00
400.000	.0387					.0388	15.53	2.97	3.13	2.97	.013	.00	.00
2113.010	2860.300	2.965	2863.265	339.00	27.95	12.13	2875.39	.00	4.79	4.91	5.000	.000	.00
200.000	.0400					.0380	7.60	2.97	3.13	2.94	.013	.00	.00
2313.010	2868.300	3.012	2871.312	339.00	27.43	11.68	2882.99	.00	4.79	4.89	5.000	.000	.00
211.630	.0377					.0366	7.74	3.01	3.04	3.00	.013	.00	.00

Program Package Serial Number: 1704

Date: 9-10-2018 Time: 7:13:36

WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.	Height/FT or I.D.	Base Wt	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
2524.640	2876.270	3.040	2879.310	339.00	27.13	11.43	2890.74	.00	4.79	4.88	5.000	.000	.00	1 .0
JUNCT STR	.0000					.0380	.00	3.04	2.99		.013	.00	.00	PIPE
2524.640	2876.770	2.800	2879.570	279.00	26.82	11.17	2890.74	.00	4.35	4.36	4.500	.000	.00	1 .0
4.814	.0399					.0399	.19	2.80	3.06	2.80	.013	.00	.00	PIPE
2529.454	2876.962	2.800	2879.763	279.00	26.82	11.17	2890.93	.00	4.35	4.36	4.500	.000	.00	1 .0
395.186	.0399					.0396	15.64	2.80	3.06	2.80	.013	.00	.00	PIPE
2924.640	2892.750	2.818	2895.568	279.00	26.62	11.00	2906.57	.00	4.35	4.35	4.500	.000	.00	1 .0
260.000	.0400					.0377	9.81	2.82	3.02	2.80	.013	.00	.00	PIPE
3184.640	2903.150	2.894	2906.044	279.00	25.81	10.34	2916.38	.00	4.35	4.31	4.500	.000	.00	1 .0
146.476	.0395					.0344	5.04	2.89	2.87	2.81	.013	.00	.00	PIPE
3331.116	2908.936	3.006	2911.942	279.00	24.71	9.48	2921.42	.00	4.35	4.24	4.500	.000	.00	1 .0
83.839	.0395					.0308	2.58	3.01	2.67	2.81	.013	.00	.00	PIPE
3414.954	2912.248	3.137	2915.385	279.00	23.56	8.62	2924.01	.00	4.35	4.14	4.500	.000	.00	1 .0
53.216	.0395					.0275	1.46	3.14	2.45	2.81	.013	.00	.00	PIPE
3468.170	2914.350	3.280	2917.630	279.00	22.47	7.84	2925.47	.00	4.35	4.00	4.500	.000	.00	1 .0
124.558	.0290					.0246	3.07	3.28	2.25	3.14	.013	.00	.00	PIPE
3592.728	2917.961	3.430	2921.392	279.00	21.45	7.14	2928.53	.00	4.35	3.83	4.500	.000	.00	1 .0
70.259	.0290					.0222	1.56	3.43	2.05	3.14	.013	.00	.00	PIPE

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WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top Dia.	Height/FT or I.D.	Base Wt	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Proude N	Norm Dp	"N"	X-Fall		ZR	Type Ch
3662.987	2919.999	3.601	2923.600	279.00	20.45	6.49	2930.09	.00	4.35	3.60	4.500	.000	.00	1	.0
44.758	.0290					.0201	.90	3.60	1.85	3.14	.013	.00	.00		PIPE
3707.745	2921.296	3.794	2925.090	279.00	19.50	5.90	2930.99	.00	4.35	3.27	4.500	.000	.00	1	.0
29.118	.0290					.0185	.54	3.79	1.64	3.14	.013	.00	.00		PIPE
3736.863	2922.140	4.025	2926.166	279.00	18.59	5.37	2931.53	.00	4.35	2.77	4.500	.000	.00	1	.0
14.477	.0290					.0177	.26	4.03	1.41	3.14	.013	.00	.00		PIPE
3751.340	2922.560	4.351	2926.911	279.00	17.72	4.88	2931.79	.00	4.35	1.61	4.500	.000	.00	1	.0
JUNCT STR	.0000					.0236	.00	4.35	1.00		.013	.00	.00		PIPE
3751.340	2923.560	5.089	2928.649	173.00	17.98	5.02	2933.67	.00	3.44	.00	3.500	.000	.00	1	.0
104.060	.0200					.0296	3.08	5.09	.00	3.50	.013	.00	.00		PIPE
3855.400	2925.640	6.337	2931.977	173.00	17.98	5.02	2937.00	.00	3.44	.00	3.500	.000	.00	1	.0
JUNCT STR	.0000					.0270	.00	6.34	.00		.013	.00	.00		PIPE
3855.400	2925.640	7.943	2933.583	157.00	16.32	4.13	2937.72	.00	3.41	.00	3.500	.000	.00	1	.0
478.670	.0173					.0244	11.66	7.94	.00	3.50	.013	.00	.00		PIPE
4334.070	2933.930	11.516	2945.446	157.00	16.32	4.13	2949.58	.00	3.41	.00	3.500	.000	.00	1	.0
181.330	.0173					.0244	4.42	11.52	.00	3.50	.013	.00	.00		PIPE
4515.400	2937.070	12.998	2950.068	157.00	16.32	4.13	2954.20	.00	3.41	.00	3.500	.000	.00	1	.0
115.580	.0173					.0244	2.81	13.00	.00	3.50	.013	.00	.00		PIPE

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WATER SURFACE PROFILE LISTING

SKYE CANYON INFRASTRUCTURE - PHASE 3B, 3C

BY OLYMPIA COMPANIES

IRON MOUNTAIN MAIN STORM DRAIN ALIGNMENT MODEL "UIRM1" (ULTIMATE CONDI

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Width	Top 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
4630.980	2939.070	14.019	2953.089	157.00	16.32	4.13	2957.22	.00	3.41	.00	3.500	.000	.00	1 .0
105.349	.0760					.0244	2.57	14.02	.00	1.88	.013	.00	.00	PIPE
4736.329	2947.078	8.745	2955.823	157.00	16.32	4.13	2959.96	.00	3.41	.00	3.500	.000	.00	1 .0
HYDRAULIC JUMP														
4736.329	2947.078	1.910	2948.988	157.00	29.23	13.27	2962.25	.00	3.41	3.49	3.500	.000	.00	1 .0
21.292	.0760					.0725	1.54	1.91	4.15	1.88	.013	.00	.00	PIPE
4757.621	2948.696	1.914	2950.610	157.00	29.15	13.20	2963.81	.00	3.41	3.48	3.500	.000	.00	1 .0
140.858	.0760					.0680	9.58	1.91	4.13	1.88	.013	.00	.00	PIPE
4898.479	2959.402	1.989	2961.391	157.00	27.80	12.00	2973.39	.00	3.41	3.47	3.500	.000	.00	1 .0
63.489	.0760					.0601	3.82	1.99	3.84	1.88	.013	.00	.00	PIPE
4961.970	2964.230	2.070	2966.300	157.00	26.50	10.91	2977.21	.00	3.41	3.44	3.500	.000	.00	1 .0
10.656	.0775					.0555	.59	2.07	3.56	1.87	.013	.00	.00	PIPE
4972.626	2965.055	2.090	2967.146	157.00	26.19	10.65	2977.79	.00	3.41	3.43	3.500	.000	.00	1 .0
34.019	.0775					.0516	1.75	2.09	3.49	1.87	.013	.00	.00	PIPE
5006.645	2967.691	2.176	2969.867	157.00	24.97	9.68	2979.55	.00	3.41	3.39	3.500	.000	.00	1 .0
24.823	.0775					.0457	1.13	2.18	3.23	1.87	.013	.00	.00	PIPE
5031.468	2969.615	2.267	2971.882	157.00	23.81	8.80	2980.68	.00	3.41	3.34	3.500	.000	.00	1 .0
19.049	.0775					.0406	.77	2.27	2.99	1.87	.013	.00	.00	PIPE



IMPROVEMENT PLANS
FOR
SKYE CANYON PHASE 3B, 3C
IRON MOUNTAIN ROAD
SHAUMBER RD TO SKYE VILLAGE RD
APN:126-12-101-002
12.6 AC



APPROVALS

CITY ENGINEER-ALLEN E. PAVELKA PE #9029 DATE _____

APPROVAL OF THESE PLANS BY THE CITY ENGINEER IS LIMITED TO THOSE IMPROVEMENTS CONSTRUCTED IN THE DEDICATED OF RIGHT-OF-WAY, AND/OR DEDICATED EASEMENTS. THIS APPROVAL DOES NOT AUTHORIZE CONSTRUCTION OF ANY IMPROVEMENTS THAT DEVIATE FROM ADOPTED STANDARDS AND/OR SPECIFICATIONS EXCEPT THOSE SPECIALLY LISTED UNDER DEVIATIONS FORM STANDARDS. THE ENGINEER SHALL RESOLVE ANY DEVIATION OTHER THAN THOSE LISTED IN DEVIATIONS FROM STANDARDS IN FAVOR OF THE UNIFORM STANDARD DRAWINGS AND SPECIFICATIONS, CLARK COUNTY AREA, NEVADA.

CHRIS KNIGHT
DIRECTOR, BUILDING AND SAFETY

DATE

THIS PLAN MEETS THE APPLICABLE STANDARDS OF THE PLANNING DEPARTMENT

APPROVED FOR CONSTRUCTION

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
PROJECT NO. XXXXX DATE: _____
SHEETS: _____
LYWMD APPROVED FIRE FLOW XXXX GPM AT XX PSI RESIDUAL

APPROVAL BY THE FIRE DEPARTMENT HAVING JURISDICTION IS REQUIRED PRIOR TO OBTAINING FINAL APPROVAL FROM THE LAS VEGAS VALLEY WATER DISTRICT.

LAS VEGAS FIRE AND RESCUE DATE

DATE	NO ENERGY
------	-----------

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

CENTRAL TELEPHONE CO, DBA CENTURYLINK DATE

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.

SOUTHWEST GAS CORPORATION

COX COMMUNICATIONS LAS VEGAS, INC.	DATE

INDEX OF DRAWINGS		
SHT. NO.	DWG NO.	DESCRIPTION
1	G-01	COVER SHEET
2	G-02	GENERAL NOTES
3	G-03	ABBREVIATIONS, LEGEND, AND QUANTITIES
4	TY-01	ROADWAY SECTIONS
5	PP-01	CONSTRUCTION PLAN - "M" 120+75 TO "M" 117+00
6	PP-02	CONSTRUCTION PLAN - "M" 117+00 TO "M" 111+00
7	PP-03	CONSTRUCTION PLAN - "M" 111+00 TO "M" 105+50
8	PP-04	CONSTRUCTION PLAN - "M" 105+50 TO "M" 99+50
9	PP-05	CONSTRUCTION PLAN - "M" 99+50 TO "M" 93+50
10	PP-06	CONSTRUCTION PLAN - "M" 93+50 TO "M" 87+50
11	PP-07	CONSTRUCTION PLAN - "M" 87+50 TO "M" 81+75
12	PP-08	CONSTRUCTION PLAN - "M" 81+75 TO "M" 75+50
13	LA-01	STORM DRAIN LATERALS
14	GR-01	GRADING PLAN
15	DT-01	STORM DRAIN DETAILS
16	UT-01	UTI PLAN & PROFILE - "M" 111+00 TO "M" 105+50
17	UT-02	UTI PLAN & PROFILE - "M" 105+50 TO "M" 99+50
18	UT-03	UTI PLAN & PROFILE - "M" 99+50 TO "M" 93+50
19	UT-04	UTI PLAN & PROFILE - "M" 93+50 TO "M" 87+50
20	UT-05	UTI PLAN & PROFILE - "M" 87+50 TO "M" 81+75
21	UT-06	UTI PLAN & PROFILE - "M" 81+75 TO "M" 75+50
22	UT-07	UTILITY LATERAL I
23	UT-08	UTILITY LATERAL II
24	TR-01	TRAFFIC PLAN I
25	TR-02	TRAFFIC PLAN II
26	TR-03	TRAFFIC PLAN III
27	TR-04	TRAFFIC PLAN IV

**SLATER
'HANIFAN
GROUP**
a Westwood team
3, LAS VEGAS, NV 89118
FAX (702) 284-5399

S-I-G
5740 S. ARVILLE STREET #210
PHONE (702) 284-3300

[illegible]

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PHASE 3BC

IRON MOUNTAIN ROAD

COVER SHEET

DATE: 9/8/18

DRAFTER: HH

DESIGNER: HIF

CHECKED: BY

OLY1609-000



G-01

SHEET 1 OF 27

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DESIGN AND CONSTRUCTION STANDARDS FOR WASTEWATER COLLECTION SYSTEMS AND THE UNIFORM STANDARD CONDITIONS OF CONTRACT, AS AMENDED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BE AWARE OF THE CONTENTS OF THE ABOVE SPECIFICATIONS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERSONAL CONSTRUCTION AS PER ANY ADDITIONS, DELETIONS, OR CHANGES SHALL FIRST MEET WITH THE APPROVAL OF THE CITY ENGINEER.
3. CHISEL, "O" OR "C" CURBS WHERE SEWER OR GAS LATERALS PASS UNDER THE CURB.
4. POLYVINYL (PVC) SEWER PIPE SHALL MEET SAE A-204 SDR 35 SPECIFICATIONS, INSTALLED WITH SAND BEDDING AND BACKFILL OF THE A RECOMMENDED GRADE.
5. ALL LATERALS SHALL HAVE A STRENGTH RATIO (R80) FOOT IN AND LARGER SHALL HAVE CONCRETE COLLARS.
6. ALL LATERALS SHALL HAVE A STRENGTH RATIO (R80) FOOT IN AND LARGER SHALL HAVE CONCRETE COLLARS.
7. ALL LATERALS SHALL HAVE A STRENGTH RATIO (R80) FOOT IN AND LARGER SHALL HAVE CONCRETE COLLARS.
8. ALL CONSTRUCTIONS INVOLVING SEWER MAINS THAT WILL BE UNDER THE JURISDICTION OF THE CITY OF LAS VEGAS MUST BE STATE OF NEVADA CLASS "A" CONSTRUCTIONS.
9. THE CITY OF LAS VEGAS WILL NOT ACCEPT ANY SEWER MAINS WHICH HAVE A VERTICAL DEFLECTION OF MORE THAN ONE TENTH (0.1") OF A FOOT FROM THE APPROVED CONSTRUCTION PLANS AT ANY LOCATION. SEWER MAINS SHALL BE PROTECTED BY A PROTECTIVE COVERING PRIOR TO ANY EXCAVATION OR REMOVAL OF THE COVERING.
10. INSTALLATION OF CURBED SEWER REQUIRES THE USE OF C-900 PIPE WHICH ALLOWS FOR PIPE DEFLECTION AT THE JOINTS.

[illegible]

1. NO WORK SHALL BE DONE UNTIL THE WATER PIPES HAVE BEEN APPROVED FOR CONSTRUCTION BY THE LVWD. FOLLOWING WATER MAIN INSTALLATION, NOTICE SHALL BE GIVEN TO THE LVWD COMMUNICATIONS SUPPORT CENTER ((562-717) AND 210) OF THE BUSINESS ADDRESS AND LOCATION OF THE PROJECT. A LVD INSPECTION, OPEN RECORDING MEETING, PLEASE REFER TO THE PROJECT LOG LOCATED ABOVE.
2. ALL WORK SHALL CONFORM TO LVWD STANDARD PLATES, DRAWINGS, AND SPECIFICATIONS, AND TO THE 2010 EDITION OF THE UNIFORM DESIGN AND CONSTRUCTION STANDARDS FOR OUTLET WITH SYSTEMS (JOISTS). THE LATEST EDITION OF DOWNS SHALL SUPPLEMENT ANY CONFLICTS CONTAINED IN THE APPROVED DRAWINGS AND/OR SPECIFICATIONS.
3. ALL WORK, EXCEPT AS NOTED BY OR BY NOTE 2 ABOVE, SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT DRAFT EDITION OF THE UNIFORM SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION OFFSITE IMPROVEMENT, OTHER THAN NEW.
4. A SINGLE PIPE MATERIAL SHALL BE USED THROUGHOUT THE PROJECT UNLESS OTHERWISE APPROVED BY THE LVWD.
5. ALL SERVICE LATERALS AND (2) JOINTS IN DIAPHRAGM AND SHALLER SHALL BE TYPE X COPPER TUBING WITH LVWD APPROVED SERVICE SIZES.

ALL WATER ENTRY BOXES SHALL BE LOCATED OUTSIDE OF DRIVEWAY AREAS.

LAS VEGAS VALLEY WATER DISTRICT ENGINEERING SERVICES MANAGER
DATE _____ LVWMD PROJECT # XXXXXX

[illegible]

12. ALL LOCATIONS TO BE SHOWN ON PLANS.
13. ALL BUILDING NAME SHALL CORRESPOND TO THE SOILS REPORT AS PREPARED BY SOILWATER TECHNOLOGICAL, REPORT DATES, 8/24/02.
14. THE CITY ENGINEER, AND HIS STAFF, ON THESE PLANS:
15. EXACT LOCATION OF ALL EXISTING LOTS SHALL BE ADJUSTED TO CORRESPOND TO THE PLATS BY A CITY OF LOS ANGELES ENGINEER IF THE ENGINEER SHALL FIND THAT THE EXISTING LOTS DO NOT CORRESPOND TO THE PLATS.
16. THE ENGINEER SHALL HAVE ALL RECORDS NECESSARY TO PROTECT EXISTING SURVEY MONUMENTS, AND MONUMENTS DISTURBED SHALL BE RECORDED AND LOCATED PER AVAILABLE RECORDS IN ACCORDANCE WITH M.L.S. STATUTE NO. 652, 650, A CITY OF LOS ANGELES TITLE 18, SECTION 01.
17. UTILITY COMPANY LETTERS, WATER, GAS, AND POWER, ETC., SHALL BE LOCATED OUT OF DRAINWAYS, DRAINAGE AREAS, FLOODWAYS, AND CROSS UTILITIES UNLESS SHOWN OTHERWISE. IT IS THE DUTY OF THE UTILITY COMPANY AND THE CITY ENGINEER. ALL EXISTING UTILITY LOCATIONS SHALL BE SHOWN TO THE SUFFICIENCY OF THE PLANS.
18. ALL UTILITIES NEW OR EXISTING ARE ONLY SHOWN ON ONE PLAT FOR THE PURPOSE OF REFLECTING EXISTING RELATIONSHIPS, FLOOD PLAINS, AND CROSS UTILITIES. INTERFERENCES WITH UTILITIES EXISTING A DEPENDENT PLAT AND DESTRUCTION BY THE DRAINAGE DEPARTMENT.
19. ASSESSMENT AND DESIGN MUST BE SUBMITTED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE PRESENTATION OF ASSESSMENT WHEN CITY OF LOS ANGELES.
20. CONTRACTOR SHALL ADJUST ALL NEW AND EXISTING UTILITIES, WATER, GAS, AND POWER, AND OTHER CLEAN UTILITIES, ETC., TO MATCH EXISTING UTILITIES, WHETHER OR NOT THEY ARE SHOWN ON THE PLANS.
21. MATERIALS, HANGING, AND PLACEMENT OF PORTLAND CEMENT CONCRETE SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE CITY OF LOS ANGELES SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.
22. WHEN INSTALLING UNDERGROUND UTILITIES SHALL REQUIRE UNDERGROUND LOCATING DEVICES SUCH AS BATTERY BATTERS, LOCATING DEVICES, ETC., TO BE INSTALLED IN ACCORDANCE WITH THE CITY OF LOS ANGELES SPECIFICATIONS (AS APPLICABLE) AND THE PLANS AND DETAILS SHOWN HEREON.

[illegible]

1. NO DETENTION OF STREET LIGHT, RAIL BOX, CONDUNIT (E.T.C.) LOCATIONS SHALL BE PERMITTED WITHOUT WRITTEN CONSTRUCTION OF 3-ITE IMPROVEMENTS, CLARK COUNTY AREA, NETWORK, LATEST REVISION, AND ANY ADOPTED SPECIAL AREA STANDARDS.
2. APPROVAL OF TRAFFIC ENGINEERING AND THE CITY ENGINEER.
3. ALL EXISTING STREET LIGHTING SHALL REMAIN OPERATIONAL, DURING CONSTRUCTION.
4. ALL STREET LIGHTING CONDUNIT SHALL BE AT LEAST ONE FOOTER FROM THE WALK, AS TRUCKER AND DRIVER MUST BE ABLE TO SEE THE LIGHTS FROM A MINIMUM OF 2 FT.
5. ANY STRUCTURE SUCH AS DOCK WALLS, CHAIN LINK FENCES, REMAINING WALLS, ETC., SHALL LEAVE A MINIMUM CLEARANCE IN ACCORDANCE WITH THE USD NO. 350A.
6. AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE CITY PRIOR TO ANY PRE-FINAL INSPECTION. THE AS-BUILT DRAWINGS NEED TO BE CORROBORATED WITH AN ENERGY COMPANY, AND WHEREVER POSSIBLE, BE LOCATED NEAR THE CENTER OF THE CONDUIT. SERVICE POINTS SHALL BE SHOWN ON THE OLD PLANS.
7. IT SHALL BE ASSURED THAT IN THE ABSENCE OF AN EXISTING, WORKABLE CIRCUIT TO ATTACH TO, ALL INSTALLATIONS SHALL REQUIRE A NEW SERVICE FOR OPERATION OF THE CIRCUIT.
8. WHEREVER THERE IS AN OVERHEAD UTILITY THAT COMES INTO CONTACT WITH THE INSTALLATION OF STREET LIGHTING AND THERE IS NO PROTECTIVE COVER, THE CITY OF LAS VEGAS, BEFORE STREETLIGHT BARRIS ARE INSTALLED, THE CONTRACTOR SHALL FURNISH COMPLETE SERVICE TO TRANSFORMERS AND CONTROL SYSTEMS IF REQUIRED ON PLANS.
9. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUBMIT A POWER TO ALL NEW PUBLIC STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. THE DEVELOPER/OWNER WILL BE REQUIRED TO SUBMIT A POWER TO ALL NEW PRIVATE STREET LIGHTS INSTALLED UNDER THIS DESIGN PRIOR TO BOND RELEASE OR PROJECT COMPLETION. REFER TO THE PLAN FOR ANY NEW SERVICE REQUIREMENTS. THE TRANSFER OF OWNERSHIP FROM THE DEVELOPER/OWNER TO THE CITY OF LAS VEGAS WILL BE COMPLETED IN CONJUNCTION WITH THE PROJECT COMPLETION. COORDINATE ALL MAINTENANCE AND OPERATIONAL TRANSFERS WITH THE CITY OF LAS VEGAS TRAFFIC ENGINEERING DEPARTMENT (TED) AT (702) 223-8331.

1. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE L.A. VEAS FIRE AND RESCUE SPECIFICATIONS.
2. ONLY FIRE HYDRANTS THAT ARE ON THE L.A. VEAS VALLEY WATER DISTRICTS-APPROVED EQUIPMENT LIST ARE ALLOWED TO BE INSTALLED.
3. A PERMIT IS REQUIRED FROM L.A. VEAS FIRE AND RESCUE FOR THE INSTALLATION OF ON-SITE UNDERGROUND FIRE HYDRANTS. THE PERMITTING PROCESS SHALL BE COMPLETED BEFORE THE COMMENCEMENT OF WORK. [C § 105.71.2]
4. ON ANY RESIDENTIAL OR COMMERCIAL INSTALLATIONS, FIRE HYDRANTS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE L.A. VEAS FIRE AND RESCUE SPECIFICATIONS. ALL FIRE HYDRANTS SHALL BE IN GOOD WORKING ORDER AND BE AVAILABLE FOR IMMEDIATE USE.
5. TO IDENTIFY THE FIRE HYDRANT LOCATIONS, THE CONTRACTOR SHALL PLACE A BLUE REFLECTIVE MARKER AT THE CENTER LINE OF THE STREET ADJACENT TO THE FIRE HYDRANT. [C § 507.5.7]
6. ALL UNDERGROUND INSPECTIONS, PRESSURE AND FLUSH VERIFICATIONS OF ALL FIRE HYDRANTS AND FIRE LINES, SHALL BE CONDUCTED BEFORE COVERING THE LINES. CENTER LOCATIONS FOR THE HYDRO TESTS WITH PRIOR FIRE PREVENTION APPROVAL. [C § 105.3]
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. [C § 507.21, NFPA 24]
8. PAINTING OF CURBS, FIRE HYDRANTS, PAVES, PROTECTION OF FIRE HYDRANTS FROM PHYSICAL DAMAGE SHALL BE COMPLETED BEFORE OPERATION. [C § 507]
9. PRIVATE HYDRANTS SHALL BE PAINTED RED. [C § 507.5.71]

12. WHERE THE FIRE HYDRANTS ARE EXTENDED ALONG STREETS OR NEW STREETS ARE INSTALLED WHERE THE 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. EACH HYDRANT SHALL BE INSTALLED WITHIN 100 FT OF THE CURB OR SIDEWALK. ALL HYDRANTS SHALL HAVE A TRAFFIC CONE OF MORE THAN 30000 PSI PER DAY. HYDRANTS ARE REQUIRED ON EACH SIDE OF THE STREET SPACED AT 500 FT ON AN ALTERNATING BASIS. [cfc § ciz018]
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. [cfc § ciz012]
15. A MAXIMUM DISTANCE FROM A FIRE HYDRANT TO A ONE-TO TWO-FAMILY DWELLING SHALL NOT EXCEED 300 FT AS MEASURED BY AN APPROVED ROUTE. [cfc § ciz014]
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. [cfc § ciz017]
17. THE MAXIMUM DISTANCE FROM A HYDRANT TO THE END OF A DEAD-END STREET SHALL NOT EXCEED 200 FT. [cfc § ciz016]
18. TWO (2) SOURCES OF SUPPLY ARE REQUIRED WHEREVER THERE IS A 4 OR MORE FIRE HYDRANTS/SPRINKLER LEAD-INS ARE INSTALLED ON A SINGLE STREET, REGIONAL CONTROL VALVES SHALL BE INSTALLED SO THAT NO MORE THAN 2 FIRE HYDRANTS CAN BE OUT OF SERVICE DUE TO A BREAK IN A WATER MAIN. [cfc § ciz014]
19. ALL FIRE APPARATUS ACCESS ROADS SHALL BE PAVED TO PROVIDE ALL-WEATHER DRIVING

DEVIATION FROM STANDARDS

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

	HORIZONTAL	VERTICAL
A. PAVEMENT AREA SUBGRADE	0.12	+0.0' TO -0.1'
B. UNPAVED AREAS	0.32	+0.1' TO -0.1'
C. ENGINEERED FILL		
6. COMPACTION (ESPECIALLY WILL BE PERFORMED BY THE OWNER OR HIS REPRESENTATIVE) COMPACTION SHALL COMPLY WITH THE REQUIREMENTS OF THE ENGINEER.
7. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
8. THE USE OF PORTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER.
9. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWAYS AND ALL OTHER PUBLIC RIGHT-OF-WAY IN A

DRAINAGES, SUCH ITEM SHALL BE PROVIDED, AS DIRECTED BY THE CITY ENGINEER, AT NO EXPENSE TO THE CITY OF LAS VEGAS. TEMPORARY CONSTRUCTION INCLUDES DITCHES, BERMS, ROAD SIGNS AND BARRICADES, ETC.

DEVIATION FROM STANDARDS

2. THE STREET SIGN CONTRACTOR SHALL OBTAIN STREET NAMES AND BLOCK NUMBERING FROM THE PLANNING DEPARTMENT PRIOR TO CONSTRUCTION.
3. WHEN 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 FIRST. GRADING WORK IS ACCOMPLISHED, AND SHALL MAINTAIN SAID SIGNS UNTIL PERMANENT SIGNS ARE INSTALLED.
4. WHEN A DESIGNATED "SUGGESTED ROUTE TO SCHOOL" IS ENDOCHARGED UPON BY A CONSTRUCTION WORK ZONE, AND PUBLIC WORKS STAFF IDENTIFIES A NEED FOR STUDENTS TO BE ASSISTED IN THE SAFE CROSSING AHEAD OF THE WORK, THE QUAID SHALL BE PRESENT FOR THE FULL DURATION OF THAT TIME CHARGED TO BE PRESENT.
5. IF THE IMPROVEMENTS NECESSITATE THE ORIENTATION, TEMPORARY OBSTRUCTION, TEMPORARY REMOVAL, OR RELOCATION OF ANY EXISTING TRAFFIC PAVEMENT MARKING, SIGN PAVEMENT MARKING SHALL BE RESTORED OR REPLACED WITH NEW MATERIALS TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL PERMANENT SIGNS SHOWING THE CORRECT ROUTE TO SCHOOLS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING PROTECTIVE REFLECTIVE SHEETING OR APPROVED COLOR, ALL NEW TRAFFIC SIGNS, EXCEPT STREET NAME AND SCHOOL SIGNED LIGHT SIGNS, SHALL HAVE AN 8" X 12" OR 12" X 18" PROTECTIVE EQUIVALENT AND INSULATED PROTECTIVE FLAT, SHIELD NAME SIGNS SHALL CONFORM IN THEIR ENTIRETY TO CURRENT CITY STANDARDS. ALL OTHER SIGNS SHALL BE MAINTAINED WITH THE CURRENT CITY STANDARDS ON THE PLANS. ALL SIGN POSTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT CITY STANDARDS.

27. ALL APPROXIMATE ACCESS ROADS SHALL BE MARKED BY PLACING APPROVED SIGNS AT THE START OF THE DESIGNATED FREE ZONE. ONE SIGN AT THE END OF THE FREE ZONE AND WITH SIGNS 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) BEING PROVIDED SHALL BE PAINTED WITH A RED WEATHER RESISTANT PAINT IN ADDITION TO THE SIGNS. [P.C. § 503.5]

28. ELECTRICALLY CONTROLLED ACCESS SIGNS SHALL BE PROVIDED WITH AN APPROVED AGENCY VEHICLE DETECTOR/RECEIVER SYSTEM SAID SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE P.C. § 503.5 AND P.C. APPENDIX M.

ADOPTED 3/1/16

AN EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCED CONSTRUCTION. NO REPRESENTATION IS MADE THAT THE PROPER LOCATION, THE DEPTH BELOW GRADE OF THE VARIOUS UTILITIES DEPICTED ON THE PLANS VARIES THROUGHOUT THE PROJECT AREA. THE CONTRACTOR SHALL EXERCISE EXTREME CARE WHEN EXCAVATING AND REMOVING THE SUBBASE IN THE VICINITY OF UTILITIES TO AVOID DAMAGE TO THE LATTER.

ALL EXISTING UTILITIES SHALL BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED.

S-I-G
5740 S. ARVILLE STREET #216
PHONE (702) 284-5300

[illegible]

NINETY-FIVE MANAGEMENT LLC

**SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
GENERAL NOTES**

DATE: 9/8/18

PROJECT NO.
OLY1609-000

REMOVED 05/05/08



LEGEND

— TEL. 5'-4" —	EXISTING TELEPHONE CABLE	STREET CENTERLINE
— 12" SS —	EXISTING SANITARY SEWER LINE	EASEMENT LINE
— 12" W —	EXISTING WATER LINE	APP
— 18" SD —	EXISTING STORM DRAIN LINE	PROPOSED SIGN
— ELE. UG 1'-4" —	EXISTING UNDERGROUND ELECTRICAL LINE	CONCRETE SURFACE
— OH# —	EXISTING OVERHEAD POWER LINE	PLANTING BITUMINOUS SURFAC
— OH# / TEL# —	EXISTING OVERHEAD POWER AND TELEPHONE LINE	FLOWLINE
— 4" PE GAS —	EXISTING GAS LINE	SANICUT LINE
— CATV —	EXISTING CABLE TELEVISION LINE	CONTOUR LINE
EXISTING CUMB & GUTTER		ELEVATION
EXISTING RIGHT-OF-WAY LINE		PUTURE ELEVATION
EXISTING PROPERTY LINE		STORM DRAIN MANHOLE
EXISTING CHAIN-LINK FENCE		SANITARY SEWER MANHOLE
EXISTING STREET LIGHT CONDUIT		100 WATT STREET LIGHT
EXISTING MANHOLE OR VAULT		250 WATT STREET LIGHT
EXISTING VALVE (GAS OR WATER)		FAST ITS CONDUIT
EXISTING FIRE HYDRANT		FAST P30 PULLBOX
		FAST TYPE 200 SPRUCE VAULT

ABBREVIATIONS

[illegible]

QUANTITIES

DRAINAGE		DESCRIPTION			
1	DROP INLET 5' TYPE CM2	EA	-	-	
2	DROP INLET 11'S TYPE CM2	EA	-	2	
3	DROP INLET 20' TYPE CM2	EA	-	1	
4	STRUCTURAL DROP INLET	EA	-	-	
5	60" TYPE II MANHOLE	EA	-	10	
6	48" TYPE I MANHOLE	EA	-	9	
7	INDOT TYPE 4 MANHOLE	EA	-	-	
8	RCA ACCESS MANHOLE	EA	-	-	
9	18" RCP	UF	-	368	
10	24" RCP	UF	-	-	
11	30" RCP	UF	-	89	
12	36" RCP	UF	-	75	
13	42" RCP	UF	-	1589	
14	54" RCP	UF	-	1233	
15	60" RCP	UF	-	1156	
16	66" RCP	UF	-	146	
17	96" RCP	UF	-	95	
18	PRECAST 6'X6' RCP	UF	-	-	
19	PRECAST 8'X8' RCP	UF	-	-	
20	PRECAST 8'X7' RCA	UF	-	-	
21	PRECAST 10'X8' RCA	UF	-	-	
22	STRUCTURAL HEADWALL	UF	-	-	
23	INDOT TYPE II HEADWALL	UF	-	-	
24	18" END SECTION	UF	-	-	
25	30" END SECTION	UF	-	1	
26	36" END SECTION	UF	-	-	
27	42" END SECTION	UF	-	-	
28	RRRAP	CF	-	182	
29	BREEZE INLET	EA	-	1	

SEWER SYSTEM

1.	8' SODS P&C SINKS PRE	15'	-	2.3M
2.	STANDARD 48" SINKS MANHOLE	EA	-	7
3.	8' SINKS PRE CUP	EA	-	3
4.				
5.				

WATER SYSTEM

1	PER INDUCTION ASSEMBLY W/ 6" GATE W/ 100 PER DUNGS PLATE NO. 40	EA	3
2	17" C-300 POC WATER PUMP (CLASS 150)	UF	-
3	17" C-300 POC WATER PUMP (CLASS 150)	UF	2,214
4	17" C-300 POC WATER PUMP (CLASS 150)	UF	126
5	17" C-300 POC WATER PUMP (CLASS 150)	UF	107
6	17" GATE W/ 100 PER DUNGS PLATE NO. 30 & 39	EA	1
7	6" GATE W/ 100 PER DUNGS PLATE NO. 30 & 39	EA	3
8	6" GATE W/ 100 PER DUNGS PLATE NO. 30 & 39	EA	1
9	6" GATE W/ 100 PER DUNGS PLATE NO. 30 & 39	EA	2
10	6" GATE W/ 100 PER DUNGS PLATE NO. 30 & 39	EA	1
11	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	3
12	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	5
13	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	3
14	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	5
15	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	-
16	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	-
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69	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	-
70	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	-
71	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	-
72	17" X 12" 17" PER DUNGS PLATE NO. 31	EA	-

STREET IMPROVEMENTS

[illegible]

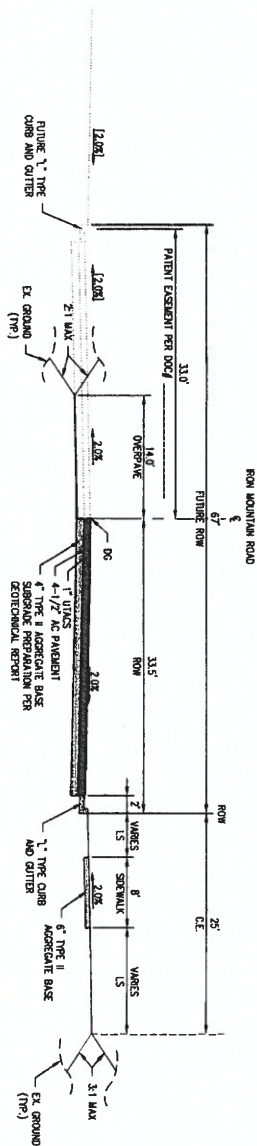
TRAFFIC SIGNAL

EFFECT OF SHORTCUTS	
1. STOP SIGN WITH FOOT (H-1)	EA -
2. STOP SIGN WITH FOOT (H-2)	EA -
3. STREET NAME SIGN (O-1, BROWN W/ WHITE LETTERS) (6 FEET x 2 PER FOOT-12)	EA -
3. BLUE CORNER REFLECTIVE MOUNTED PARALLEL MARKER	EA -
4. CROSSWALK MARKINGS	UF -
5.	
6.	
7.	

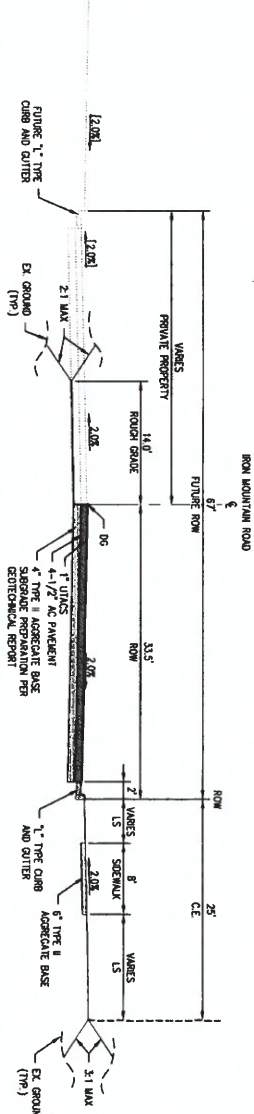
DRY UTILITIES

DATE OF RELEASE	DESCRIPTION	EA	-
1	1000 H.P.S. DUMMAGE STREET LIGHT W/RECONNECTING POLE	EA	-
2	1000 H.P.S. DUMMAGE STREET LIGHT W/RECONNECTING POLE	EA	-
3	1000 H.P.S. DUMMAGE STREET LIGHT W/RECONNECTING POLE	EA	-
4	1000 H.P.S. DUMMAGE STREET LIGHT W/RECONNECTING POLE	EA	-
5	1000 H.P.S. DUMMAGE STREET LIGHT W/RECONNECTING POLE	EA	-
6	1000 H.P.S. DUMMAGE STREET LIGHT W/RECONNECTING POLE	EA	-

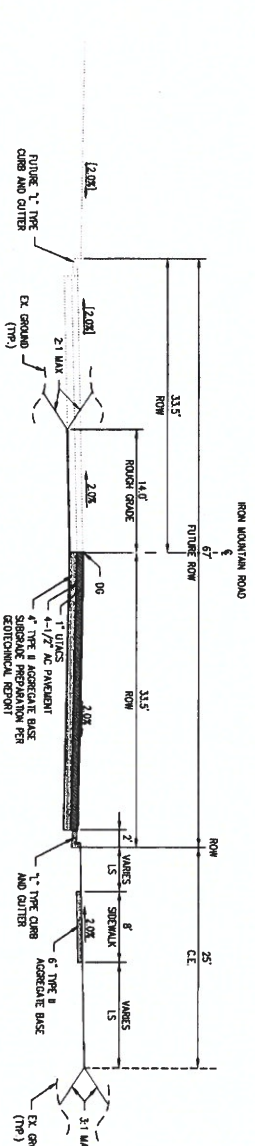
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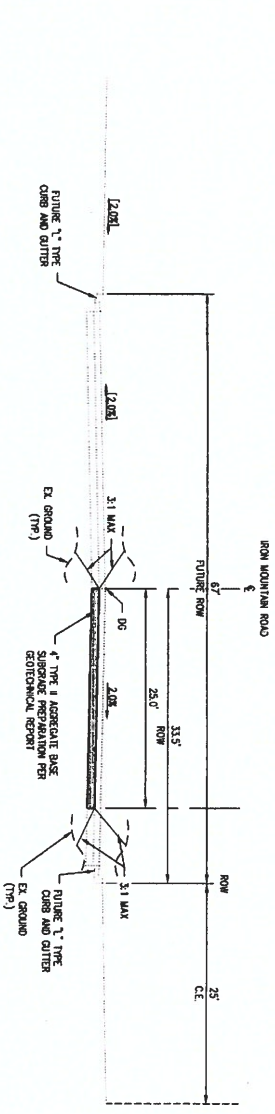
IRON MOUNTAIN ROAD (SKYE VILLAGE TO SHAUMBER ROAD)
D



IRON MOUNTAIN ROAD (SKYE VILLAGE TO SHAUMBER ROAD)
C



IRON MOUNTAIN ROAD (SKYE VILLAGE TO SHAUMBER ROAD)
B



IRON MOUNTAIN ROAD (SHAUMBER ROAD TO SHEEP MOUNTAIN PKWY)
A

NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

S-I-G

SLATER
HANIFAN
GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-6360 FAX (702) 284-6399

NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
ROADWAY SECTIONS

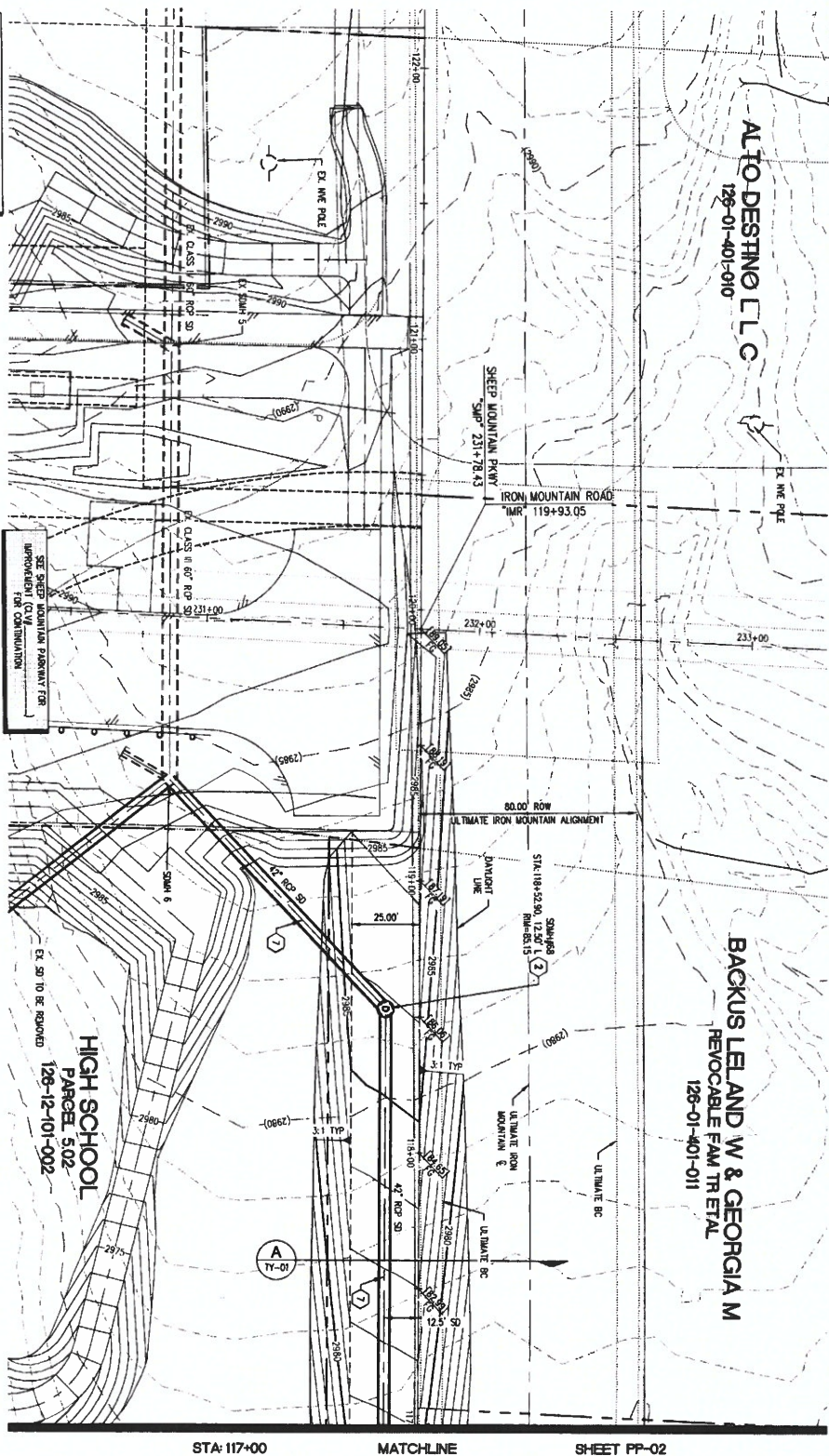
DATE: 9/8/18
DRAFTER: HF
DESIGNER: HF
CHECKED: DY
PROJECT NO: OLY1609-000

TY-01

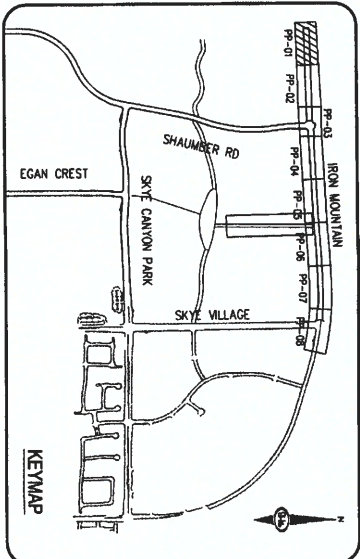
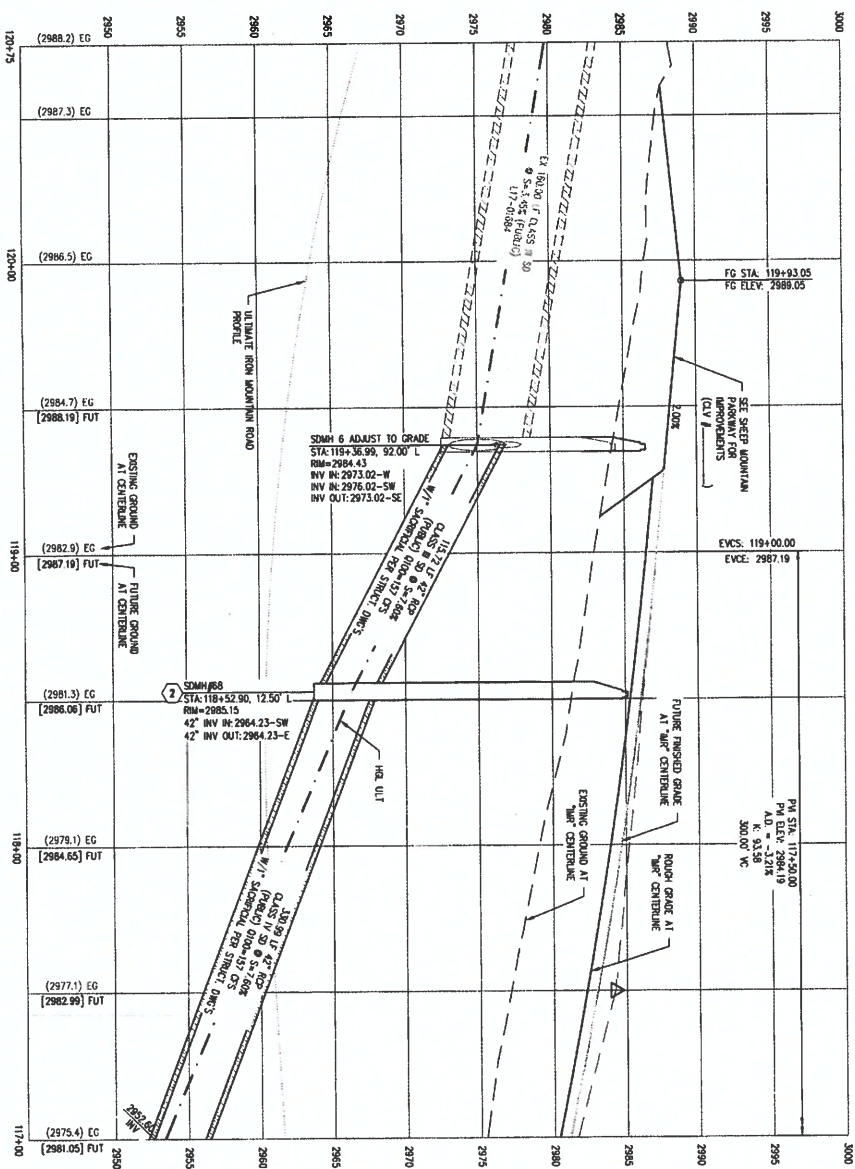
SHEET 4 OF 27

PROFESSIONAL SEAL
DERICK D.J. TORO
STATE OF NEVADA
No. 16388
9/8/18

TY-01
SHEET 4 OF 27



IRON MOUNTAIN RD - PROFILE VIEW
 HORZ: 1" = 30'
 VERT: 1" = 6'



CONSTRUCTION NOTES	
1	CONSTRUCT 1' UNITS OVER 4.5" PYS OVER 4" TYPE 1 ASBESTIC BASE (SEE IV SHEETS)
2	CONSTRUCT 1' UNITS OVER 3.5" PYS OVER 6" TYPE 1 ASBESTIC BASE (SEE IV SHEETS)
3	CONSTRUCT "X" TYPE ISLAND CURB (ISOSCA STD. DWG. NO. 219)
4	CONSTRUCT "L" TYPE CURB AND GUTTER (ISOSCA STD. DWG. NO. 218)
5	CONSTRUCT SIDEWALK RAMP (CASE 9) WITH TRAFFIC WARNING PANEL (ISOSCA STD. DWG. NO. 220)
6	CONSTRUCT BUS TURN-OUT (ISOSCA STD. DWG. NO. 234.1)
7	CONSTRUCT CONCRETE SIDEWALK (ISOSCA STD. DWG. 234)
8	PROTECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. IMPROVEMENT)

STORM DRAIN NOTES	
1	CONSTRUCT 48" TYPE B-50 MANHOLE (OSBOCA STD. DMC. NO. 405.2)
2	CONSTRUCT 60" TYPE B MANHOLE (OSBOCA STD. DMC. NO. 493.1)
3	INSTALL 16" RCP (OSBOCA STD. DMC. NO. 503.2)
4	INSTALL 24" RCP (OSBOCA STD. DMC. NO. 503.2)
5	INSTALL 36" RCP (OSBOCA STD. DMC. NO. 503.2)
6	INSTALL 36" RCP (OSBOCA STD. DMC. NO. 503.2)
7	INSTALL 42" RCP (OSBOCA STD. DMC. NO. 503.2)
8	INSTALL 48" RCP (OSBOCA STD. DMC. NO. 503.2)
9	INSTALL 60" RCP (OSBOCA STD. DMC. NO. 503.2)
10	INSTALL 72" RCP (OSBOCA STD. DMC. NO. 503.2)
11	INSTALL 36" RCP END SECTION (NOOT STD. PLAN R-2.11)
12	INSTALL 36" RCP END SECTION (NOOT STD. PLAN R-2.11)
13	INSTALL 42" RCP END SECTION (NOOT STD. PLAN R-2.11)
14	INSTALL 72" RCP END SECTION (NOOT STD. PLAN R-2.11)
15	CONSTRUCT TYPE "D" DROP INLET SIZE PER PLAN (OSBOCA STD. DMC. NO. 412.1 & 421)
16	STRUCTURAL MANHOLE
17	CONSTRUCT CONCRETE CULVERT (SEE DETAIL 3/011-01)
18	CONSTRUCT INTERIOR BRICK AND MORTAR PLUG SEE DETAIL 2/011-01
19	INSTALL 24" RCP END SECTION (NOOT STD. PLAN R-2.11)
20	INSTALL 34" RCP END SECTION (NOOT STD. PLAN R-2.11)
21	INSTALL 60" RCP END SECTION (NOOT STD. PLAN R-2.11) W/1" SHOROTON CONCRETE FOR STRUCTURAL DMS

NOTES

1. ALL GPS'S BE CLASS 1 UNLESS OTHERWISE SHOWN
2. ALL PERMITS ARE REQUIRED, ALONG WITH PERMITS TO CENTER OF MAINTENANCE OR INSIDE EDGE OF DRAINAGE
3. ALL GPS METERS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD D-00-003-004
4. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS
5. ALL PERMITS ARE REQUIRED, ALONG WITH PERMITS TO CENTER OF MAINTENANCE OR INSIDE EDGE OF DRAINAGE
6. SEE T-SHEETS FOR TYPICAL SECTIONS
7. SEE T-SHEETS FOR WATER AND STORM PLANS AND PROFILES

DROP INLET NOTE:
 HIDE IN JEET DRAINAGE SEPARATION IS NOT PRACTICABLE.
 CUT-IN AND ANCHORING POLE WITH WATERSIDE BETWEEN SLAB AND WALLS BASE. WALLS AND TOP
 TO BE CONCRETE WITH WATERSIDE, CENTER BUILT.
 OR POLY STIRP (WALLS, DISCREETLY POLE, PROTECTORS OR APPROVED EQUAL).

LEGEND

STORM DRAIN LATERAL # (SEE LAT SHEETS)

X

NOTE: THIS FORM IS TO BE RETURNED TO MANUFACTURER'S REPRESENTATIVE, BUT NOT TO THE FLOOD ZONE. IF YOU ARE RETURNING TO MANUFACTURER'S REPRESENTATIVE, PLEASE SIGN AND DATE IN THE SPACE PROVIDED FOR THE SIGNATURE OF THE MANUFACTURER'S REPRESENTATIVE.	IDENTIFY THE THIS GAMING AREA IS IN CONJUNCTION WITH THE APPROVED TECHNICAL DESIGN AND THE APPROVED FLOOD ZONE AND THE FLOOD ZONE FOR THE SUBJECT PRODUCT	FLOOD ZONE THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED ZONE "X" (OUTSIDE THE 500-YEAR FLOOD ZONE) WITHIN THE 500-YEAR FLOOD PLAIN (FEMA FLOOD ZONE 1796C, DATED SEPTEMBER 21, 2007)
	DATE: 10/15/08 SIGNATURE: [Signature]	

APPROVED FOR CONSTRUCTION

LYWID ENGINEERING SERVICES MANAGER

PROJECT NO. 126408

DATE



CALL BEFORE YOU DIG
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1-702-227-2829



FAST
Call before you dig
800-4-A-DIG
1-702-227-2829

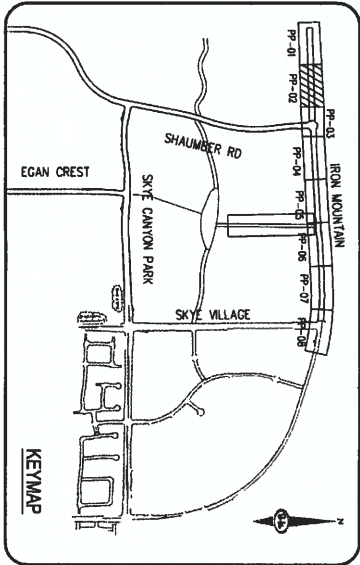
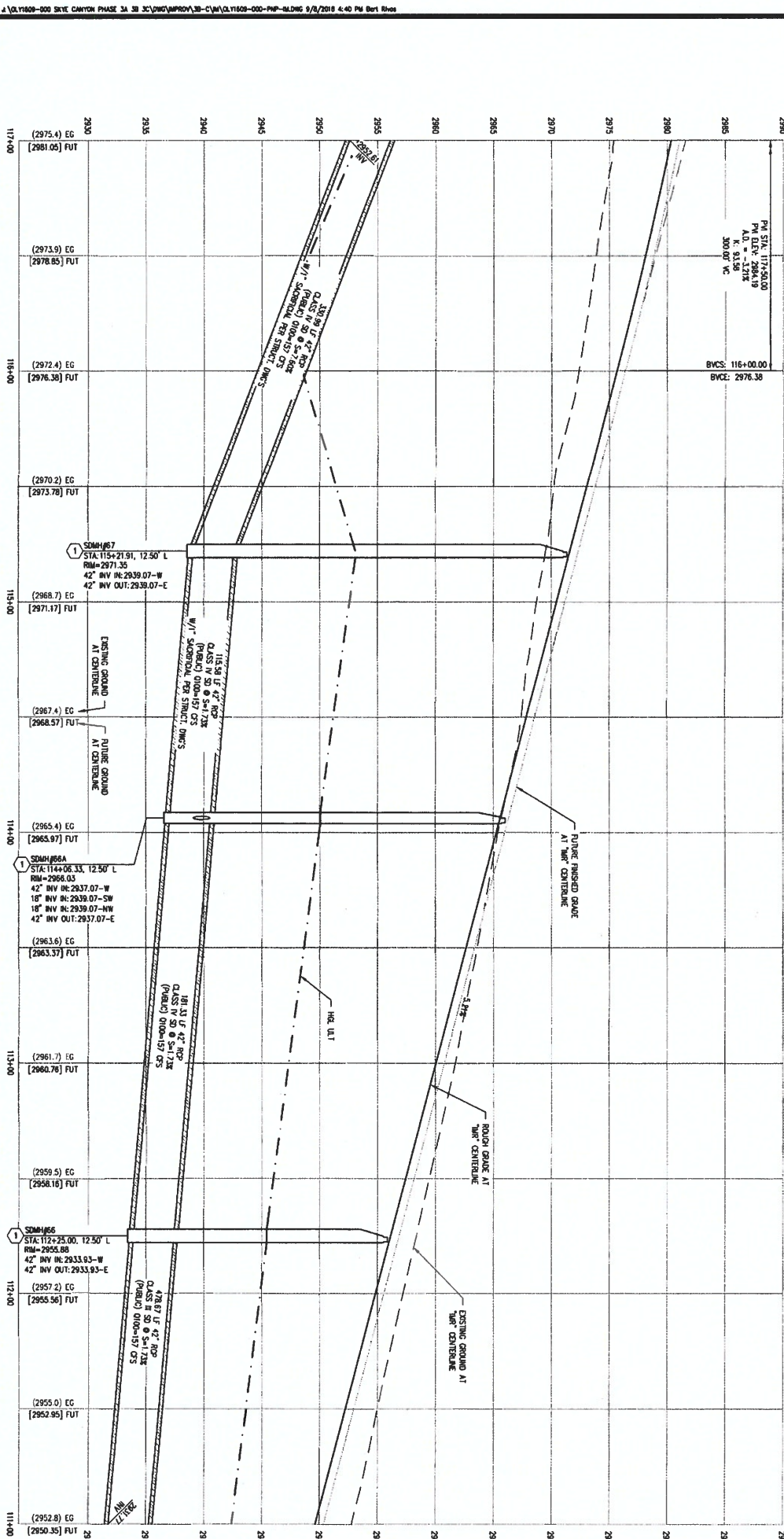
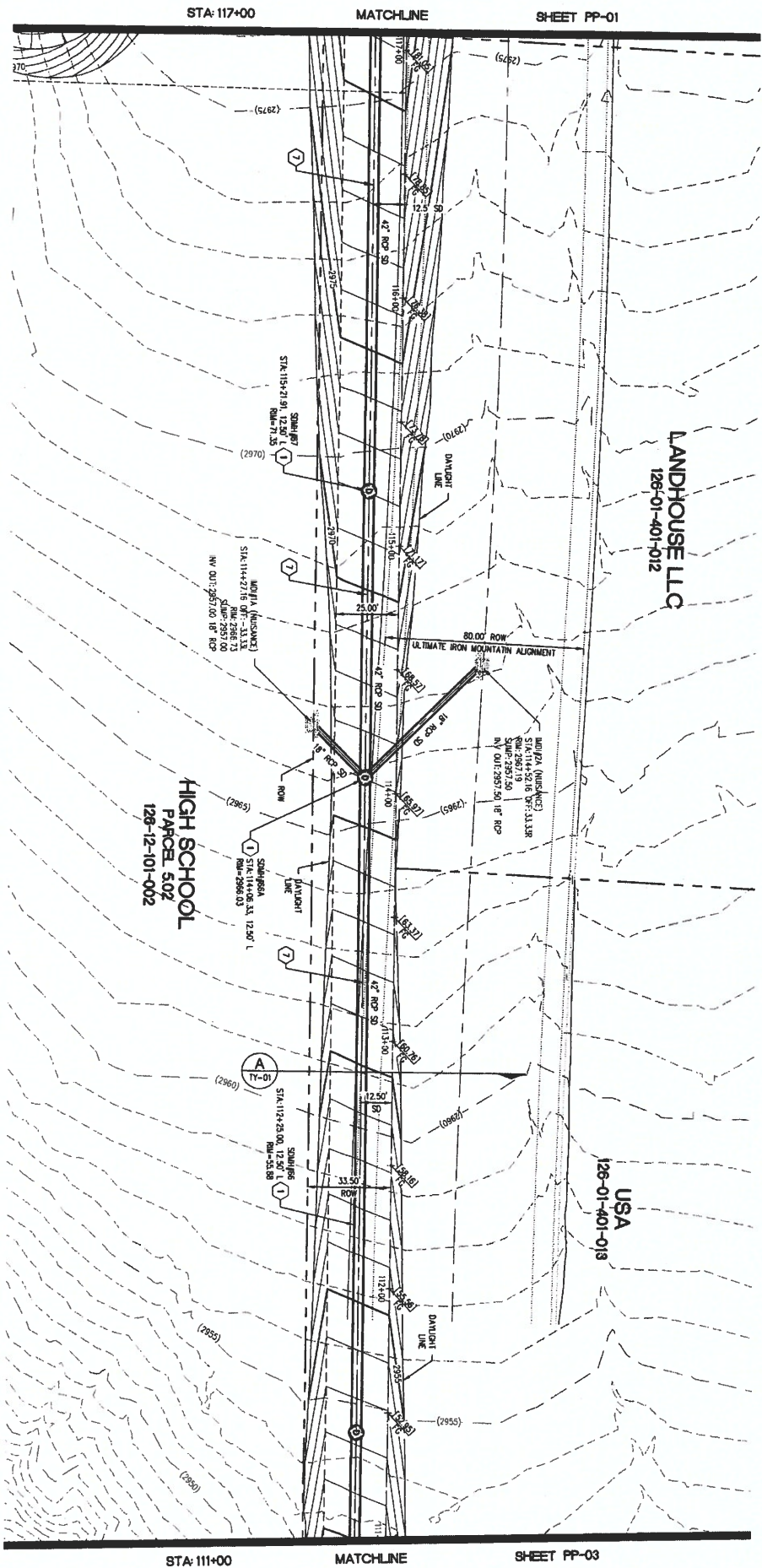


Call before you dig
800-4-A-DIG
1-702-227-2829

[illegible]

**S-I-G SLATER
HANIFAN
GROUP**
a Westwood team

5740 S. ARVILLE STREET #210, LAS VEGAS, NV 89115
PHONE (702) 284-5300 FAX (702) 284-5395



- CONSTRUCTION NOTES**
1. CONSTRUCT 1" UNITS OVER 4" PPS OVER 4" TYPE II ASPHALT BASE (SEE TV SHEETS)
 2. CONSTRUCT 1" UNITS OVER 5.5" PPS OVER 8" TYPE II ASPHALT BASE (SEE TV SHEETS)
 3. CONSTRUCT 1" TYPE II ISLAND CURB (USDOCA STD. DMC. NO. 219)
 4. CONSTRUCT 1" TYPE II CURB AND GUTTER (USDOCA STD. DMC. NO. 216)
 5. CONSTRUCT SLOPEWASH RAMP (CASE II) WITH TRAFFIC WARNING PANEL (USDOCA STD. DMC. NO. 235)
 6. CONSTRUCT BUS TURN-OUT (USDOCA STD. DMC. NO. 234)
 7. CONSTRUCT CONCRETE SLOPEWASH (USDOCA STD. DMC. 234)
 8. PROTECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. IMPROVEMENT)

- STORM DRAIN NOTES**
1. CONSTRUCT 48" TYPE II-B-50 MANHOLE (USDOCA STD. DMC. NO. 463.2)
 2. CONSTRUCT 60" TYPE II MANHOLE (USDOCA STD. DMC. NO. 463.1)
 3. INSTALL 16" ROP (USDOCA STD. DMC. NO. 303.2)
 4. INSTALL 34" ROP (USDOCA STD. DMC. NO. 303.2)
 5. INSTALL 30" ROP (USDOCA STD. DMC. NO. 303.2)
 6. INSTALL 36" ROP (USDOCA STD. DMC. NO. 303.2)
 7. INSTALL 42" ROP (USDOCA STD. DMC. NO. 303.2)
 8. INSTALL 48" ROP (USDOCA STD. DMC. NO. 303.2)
 9. INSTALL 54" ROP (USDOCA STD. DMC. NO. 303.2)
 10. INSTALL 72" ROP (USDOCA STD. DMC. NO. 303.2)
 11. INSTALL 30" ROP END SECTION (N001 STD. PLAN R-2.31)
 12. INSTALL 36" ROP END SECTION (N001 STD. PLAN R-2.31)
 13. INSTALL 42" ROP END SECTION (N001 STD. PLAN R-2.31)
 14. INSTALL 48" ROP END SECTION (N001 STD. PLAN R-2.31)
 15. CONSTRUCT TYPE "C" DRAIN INLET SIZE PER PLAN (USDOCA STD. DMC. NO. 4121 & 421)
 16. STRUCTURAL MANHOLE
 17. CONSTRUCT CONCRETE COLLAR (SEE DETAIL 3/01-01)
 18. CONSTRUCT INTERIOR BRICK AND MORTAR PLUG SEE DETAIL 2/01-01
 19. INSTALL 34" ROP END SECTION (N001 STD. PLAN R-2.31)
 20. INSTALL 48" ROP END SECTION (N001 STD. PLAN R-2.31) W/1" SUPERIOR CONCRETE FOR STRUCTURAL DMS

NOTES

1. ALL ROP SHALL BE CLASS II UNLESS OTHERWISE SHOWN
2. ALL ROP SHALL BE MANHOLE ALONG PPS CONTRIBUTING TO CENTER OF MANHOLE OR INSIDE EDGE OF ROP OR ROP/POC
3. ALL DROP INLETS SHALL INCLUDE STORM WATER MANHOLEWATER STRAP AND DETAIL PER USDOCA STD. 303.2
4. SEE STRUCTURAL PLANS FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS
5. ALL PPS ARE PUBLICLY MAINTAINED
6. ADD SPECIAL INSPECTION REQUIRED FOR PRE-SEGMENTS WITH SUPERIOR CONCRETE
7. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CONCRETE MANUALS (CONCRETE MANUAL) SEE TV-SHEETS FOR WATER AND SEWER PLANS AND PROFILES

DRAIN INLET NOTE

WHERE 10 FEET PARALLEL SEPARATION IS NOT PRACTICABLE, SEE DETAIL 3/01-01 FOR ALTERNATE INLET DETAIL. SEE DETAIL 3/01-01 FOR ALTERNATE INLET DETAIL. SEE DETAIL 3/01-01 FOR ALTERNATE INLET DETAIL.

LEGEND

- STORM DRAIN LATERAL, # (SEE LAT SHEETS)

FLOOD ZONE

THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE (FLOOD INSURANCE RATE MAP (FIRM) NO. 17040B, EFFECTIVE DATE: SEPTEMBER 27, 2002)

NOTE: OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES (BMP) AS SET OUT NOT LIMITED TO THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

APPROVED FOR CONSTRUCTION

DATE

PROJECT NO. 17040B

DATE

DATE

DATE

DATE

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89116
PHONE (702) 284-6300 FAX (702) 284-5399

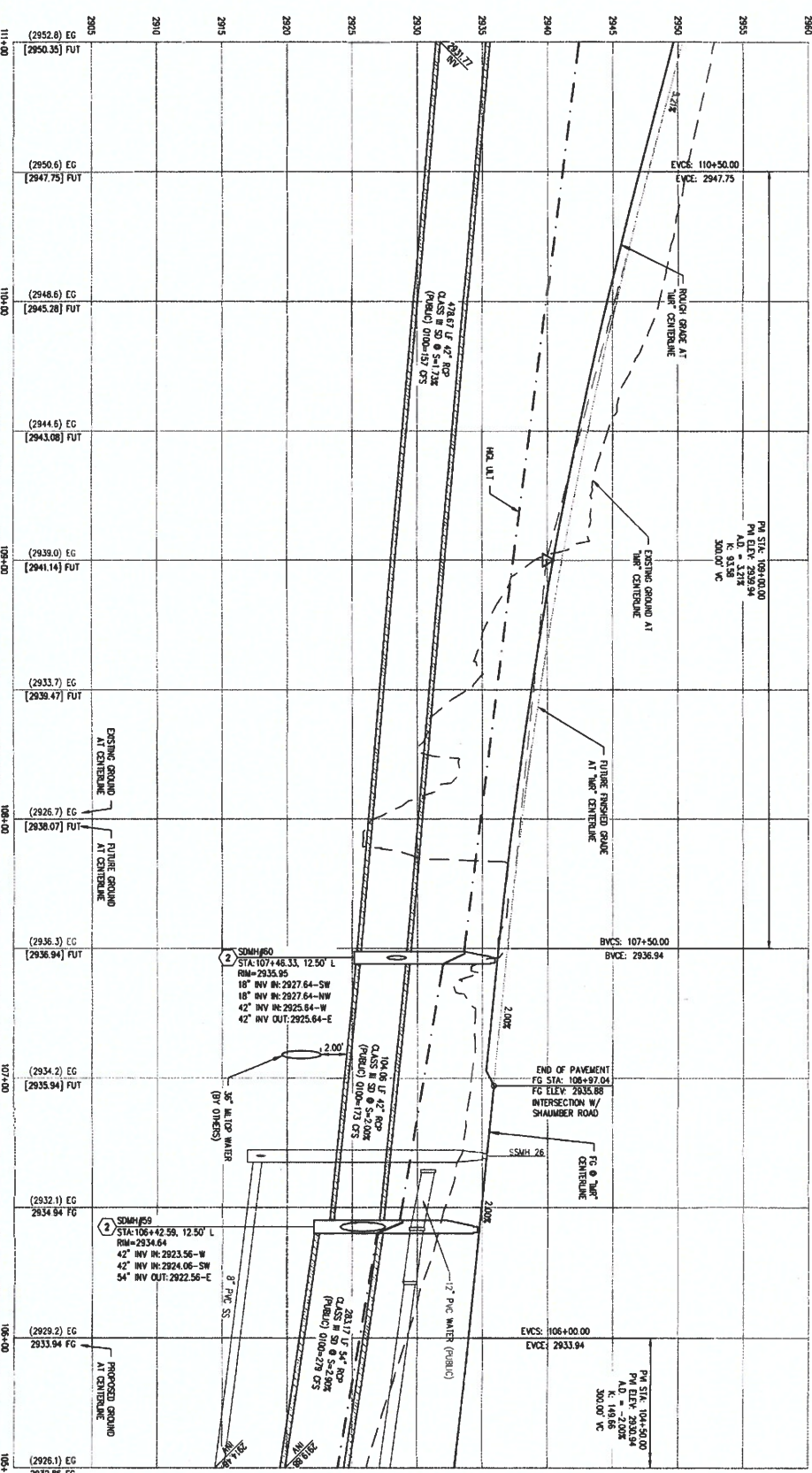
NO.	DESCRIPTION	DATE	BY	APP. DATE	APP.

NINETY-FIVE MANAGEMENT LLC
SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
CONSTRUCTION PLAN - "IM" 117+00 TO "IM" 111+00

PP-02
SHEET 6 OF 27

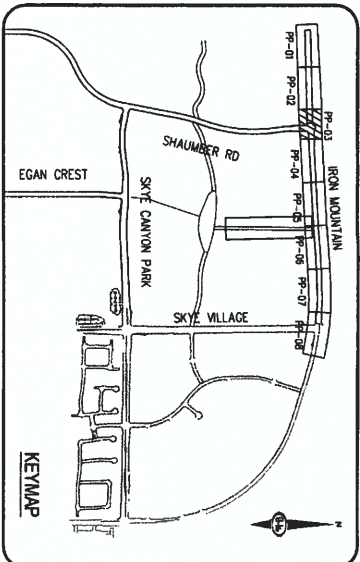
PROFESSIONAL ENGINEER
DRICK D.J.
17040B
SEP 27, 2002

DESIGNER: HF
CHECKED: DY
PROJECT NO. 17040B
DATE: 9/8/18



IRON MOUNTAIN RD - PROFILE VIEW

HORIZ: $1^{\circ} = 30'$
VERT: $1^{\circ} = 6'$



CONSTRUCTION NOTES

- | | |
|---|---|
| 1 | CONSTRUCT 1' VENTS OVER 4.5' RMS OVER 4' TYPE B MODERATE BASE (SEE TYP SHEETS) |
| 2 | CONSTRUCT 1' VENTS OVER 4.5' RMS OVER 4' TYPE B MODERATE BASE (SEE TYP SHEETS) |
| 3 | CONSTRUCT "A" TYPE LEAD AND CASTER (USDOCA STD. DMC. NO. 219) |
| 4 | CONSTRUCT "A" TYPE CUM AND CASTER (USDOCA STD. DMC. NO. 216) |
| 5 | CONSTRUCT STAINLESS STEEL PUMP (USE 9" WITH INACTIVE WELDING PANEL (USDOCA STD. DMC. NO. 235) |
| 6 | CONSTRUCT BBS TURN-OUT (USDOCA STD. DMC. NO. 234.1) |
| 7 | CONSTRUCT CONCRETE STAINLESS (USDOCA STD. DMC. 234) |
| 8 | PROJECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. APPROXIMATE) |

STORM DRAIN NOTES

- [illegible]

NOTES

- [illegible]

OKOP NLEAT NOIE

CAST-IN-PLACE MONOLITHIC POOL WITH WATERSTOP BETWEEN SLAB AND WALLS. 1 TO BE CONSTRUCTED WITH WATERSTOPS, CENTER BULB, OR FLAT STRIP (WATTEK, GREENSTREAK PLASTIC PRODUCTS OR APPROVED EQUAL).

LEGEND

STORM DRAIN LATERAL. ∇ (SEE LAT SHEETS)

ZONE

THE PROJECT SITE IS LOCATED WITHIN A FLOOD DESIGNATED ZONE "X" (OUTSIDE THE 500-YEAR FLOOD PLAN) ON THE FLOOD INSURANCE MAP (FIRM) PANEL 32003C752C, DATED 9/10/76

1

RULE: V
PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO, THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

APPROVED FOR CONSTRUCTION

LYNND ENGINEERING SERVICES MANAGER
PROJECT NO. 126408

[illegible]

**S-I SLATER
HANIFAN
GROUP**
a Westwood team

5740 S. ARVILLE STREET #218, LAS VEGAS, NV 89118
PHONE (702) 284-8300 FAX (702) 284-3399

NINETY-FIVE MANAGEMENT LLC

**SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD**

CONSTRUCTION PLAN - "IM" 111+00 TO "IM" 105+50

DATE: 9/8/18

DRAFTER: HF

DESIGNER: HF

CHECKED: DY

PROJECT NO.

0171609-0

11/1/2011

DERICK D.J
YORO

Exp: 06/30/2020

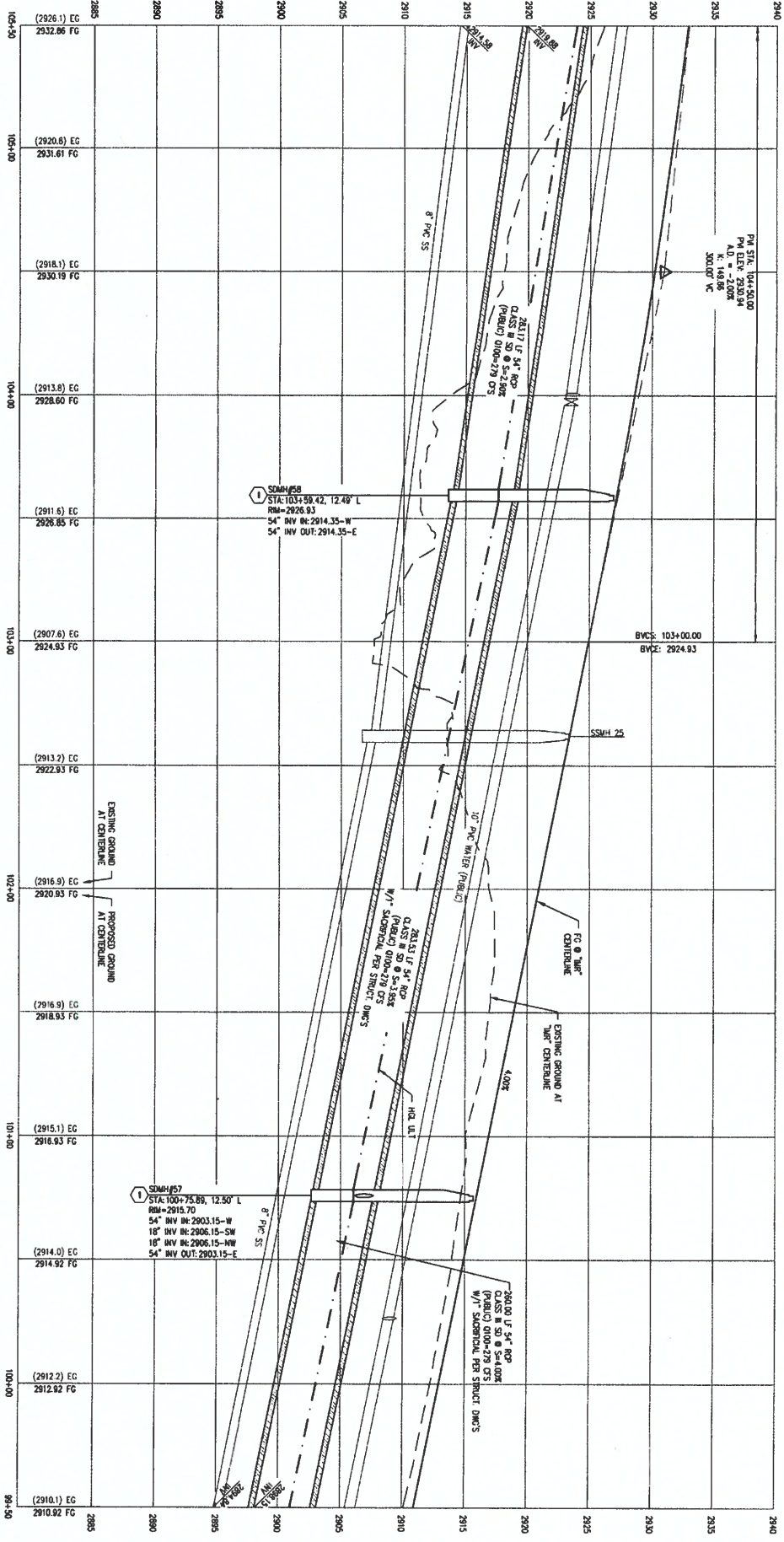
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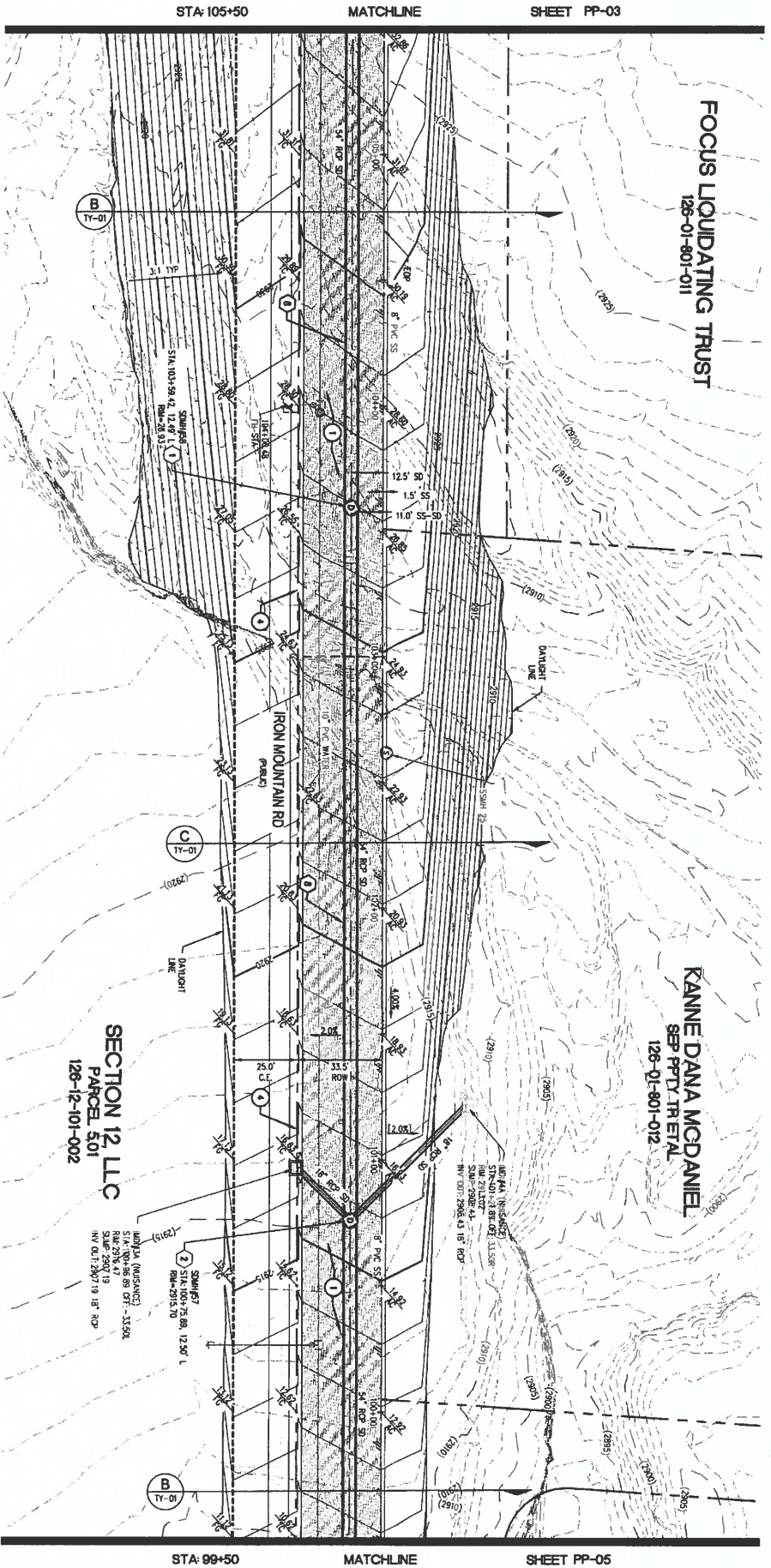
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SHEET 7 OF 7

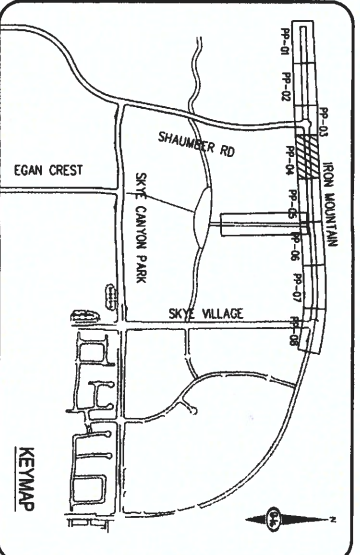
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IRON MOUNTAIN RD - PROFILE VIEW



SECTION 12, LLC
PAGE 501
126-12-101-002



CONSTRUCTION NOTES

1. CONSTRUCT 1' VIEWS OVER 4.5' PEGS OVER 4" TYPE 8 AGGREGATE BASE (SEE TY SHEETS)
2. CONSTRUCT 1' VIEWS OVER 4.5' PEGS OVER 6" TYPE 8 AGGREGATE BASE (SEE TY SHEETS)
3. CONSTRUCT "X" TYPE ISLAND CURB (USDOCA STD. DMC. NO. 219)
4. CONSTRUCT "Y" TYPE CURB AND GUTTER (USDOCA STD. DMC. NO. 219)
5. CONSTRUCT SIDEWALK RAMP (CASE 1) WITH TACTILE WARNING PANEL (USDOCA STD. DMC. NO. 235)
6. CONSTRUCT BUS TURN-OUT (USDOCA STD. DMC. NO. 234.1)
7. CONSTRUCT CONCRETE SIDEWALK (USDOCA STD. DMC. 234)
8. PROTECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. IMPROVEMENT)

STORM DRAIN NOTES

1. CONSTRUCT 48" TYPE II-SO MANHOLE (USDOCA STD. DMC. NO. 403.2)
2. CONSTRUCT 60" TYPE II MANHOLE (USDOCA STD. DMC. NO. 403.1)
3. INSTALL 18" RCP (USDOCA STD. DMC. NO. 503.2)
4. INSTALL 24" RCP (USDOCA STD. DMC. NO. 503.2)
5. INSTALL 30" RCP (USDOCA STD. DMC. NO. 503.2)
6. INSTALL 36" RCP (USDOCA STD. DMC. NO. 503.2)
7. INSTALL 42" RCP (USDOCA STD. DMC. NO. 503.2)
8. INSTALL 54" RCP (USDOCA STD. DMC. NO. 503.2)
9. INSTALL 60" RCP (USDOCA STD. DMC. NO. 503.2)
10. INSTALL 72" RCP (USDOCA STD. DMC. NO. 503.2)
11. INSTALL 30" RCP END SECTION (NOOT STD. PLAN R-2.3.1)
12. INSTALL 36" RCP END SECTION (NOOT STD. PLAN R-2.3.1)
13. INSTALL 42" RCP END SECTION (NOOT STD. PLAN R-2.3.1)
14. INSTALL 72" RCP END SECTION (NOOT STD. PLAN R-2.3.1)
15. CONSTRUCT TYPE "C" DROP INLET, SIZE PER PLAN (USDOCA STD. DMC. NO. 412.1 & 421)
16. STRUCTURAL MANHOLE
17. CONSTRUCT CONCRETE COLLAR (SEE DETAIL 3/01-01)
18. CONSTRUCT INTERIOR BRICK AND MORTAR PLUS SEE DETAIL 2/01-01
19. INSTALL 24" RCP END SECTION (NOOT STD. PLAN R-2.3.1)
20. INSTALL 54" RCP END SECTION (NOOT STD. PLAN R-2.3.1)
21. INSTALL 60" RCP END SECTION (NOOT STD. PLAN R-2.3.1) W/7" SLOPED CONCRETE PER STRUCTURAL DMS

NOTES

1. ALL RCP SHALL BE CLASS II UNLESS OTHERWISE SHOWN.
2. ALL RCP LENGTHS ARE MEASURED ALONG THE CENTERLINE TO CENTER OF MANHOLE OR INLET EDGE OF DMC NO. 421.
3. ALL DROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT STAMP AND DETAIL PER USDOCA STD. DMC. NO. 421.
4. ALL RCP SHALL BE PLACED FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS.
5. ALL PIPS ARE PERMANENTLY MAINTAINED.
6. AND SPECIAL INSPECTION REQUIRED FOR PRE-SEGMENTS WITH SLOPED CONCRETE.
7. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
8. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
9. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
10. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
11. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
12. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
13. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
14. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
15. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
16. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
17. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
18. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
19. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
20. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.
21. SEE USDOCA STD. DMC. NO. 421 FOR CONSTRUCTION OF CONCRETE.

DROP INLET NOTE

WHERE TO FEEL PRESSURE, SEPARATION IS NOT PRACTICABLE.
CAST-IN-PLACE MONITORING, HOUR WITH INTERESTING BETWEEN SLAB AND WALLS BASE, WALLS AND TOP OF CONCRETE WITH MONITORING CENTER SLAB.
OR LAY STAMP (WHILE) OVERSTATION FACING PRODUCTS OR APPROVED EQUAL.

LEGEND

- STORM DRAIN LATERAL (SEE LAT SHEETS)
- FLOOD ZONE
- THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE "X" (OUTSIDE THE 500-YEAR FLOOD PLAIN) ON THE FLOOD INSURANCE RATE MAP (FIRM) NO. 1702-227-2000, DATED SEPTEMBER 27, 2000.

NOTE: PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO THE MAINTENANCE OF OBSTRUCTIONS BETWEEN AND BEHIND AND AHEAD OF VEHICLES.

APPROVED FOR CONSTRUCTION

LIVAD ENGINEERING SERVICES NUMBER
PROJECT NO. 126408
DATE

1-702-227-2000

CALL BEFORE YOU DIG
1-800-271-5000

CALL BEFORE YOU DIG
1-800-271-5000

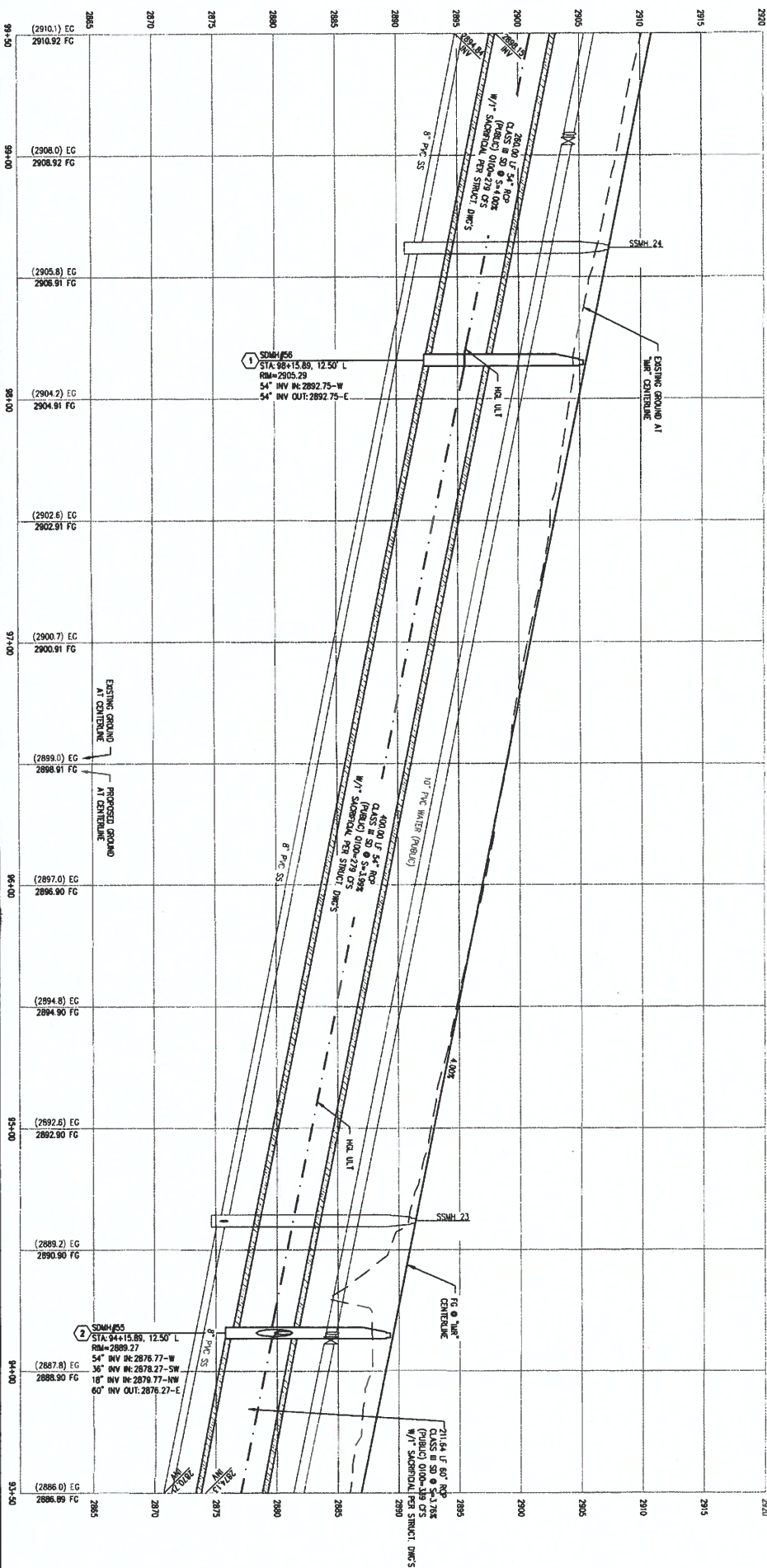
PP-04
SHEET 8 OF 27

PROFESSIONAL ENGINEER
BERICK D.J.
TOWNSHIP OF NEWARK
NO. 16396

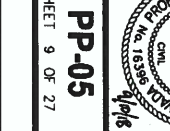
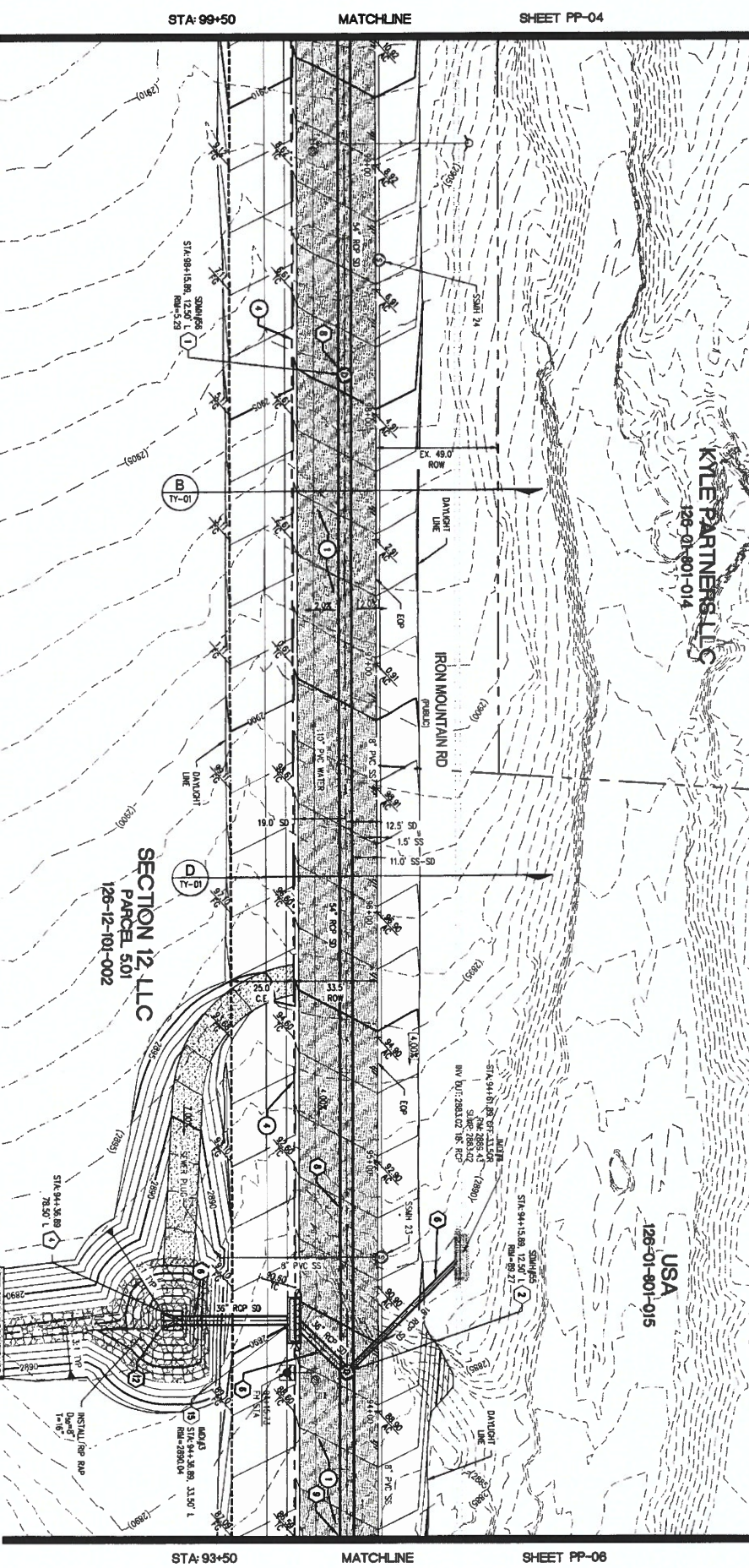
DATE: 9/8/18
DRAFTER: HF
DESIGNER: HF
CHECKED: DY
PROJECT NO. OLY1609-000

NINETY-FIVE MANAGEMENT LLC
SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
CONSTRUCTION PLAN - "IM" 105+50 TO "IM" 99+50

SLATER HANIFAN GROUP
a Westwood team
5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89116
PHONE (702) 284-5300 FAX (702) 284-5396



IRON MOUNTAIN RD - PROFILE VIEW



APPROVED FOR CONSTRUCTION

DATE: 9/10/18

DESIGNER: HF

CHECKED: DY

PROJECT NO. 01Y1609-000

DATE: 9/10/18

DESIGNER: HF

CHECKED: DY

PROJECT NO. 01Y1609-000

DATE: 9/10/18

DESIGNER: HF

CHECKED: DY

PROJECT NO. 01Y1609-000

DATE: 9/10/18

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CHECKED: DY

PROJECT NO. 01Y1609-000

DATE: 9/10/18

DESIGNER: HF

CHECKED: DY

PROJECT NO. 01Y1609-000

DATE: 9/10/18

DESIGNER: HF

CHECKED: DY

PROJECT NO. 01Y1609-000

DATE: 9/10/18

DESIGNER: HF

PP-05
SHEET 9 OF 27

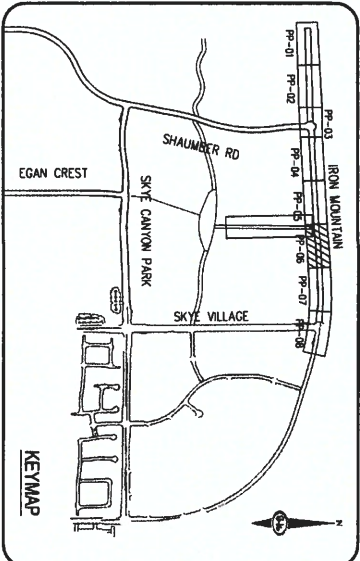
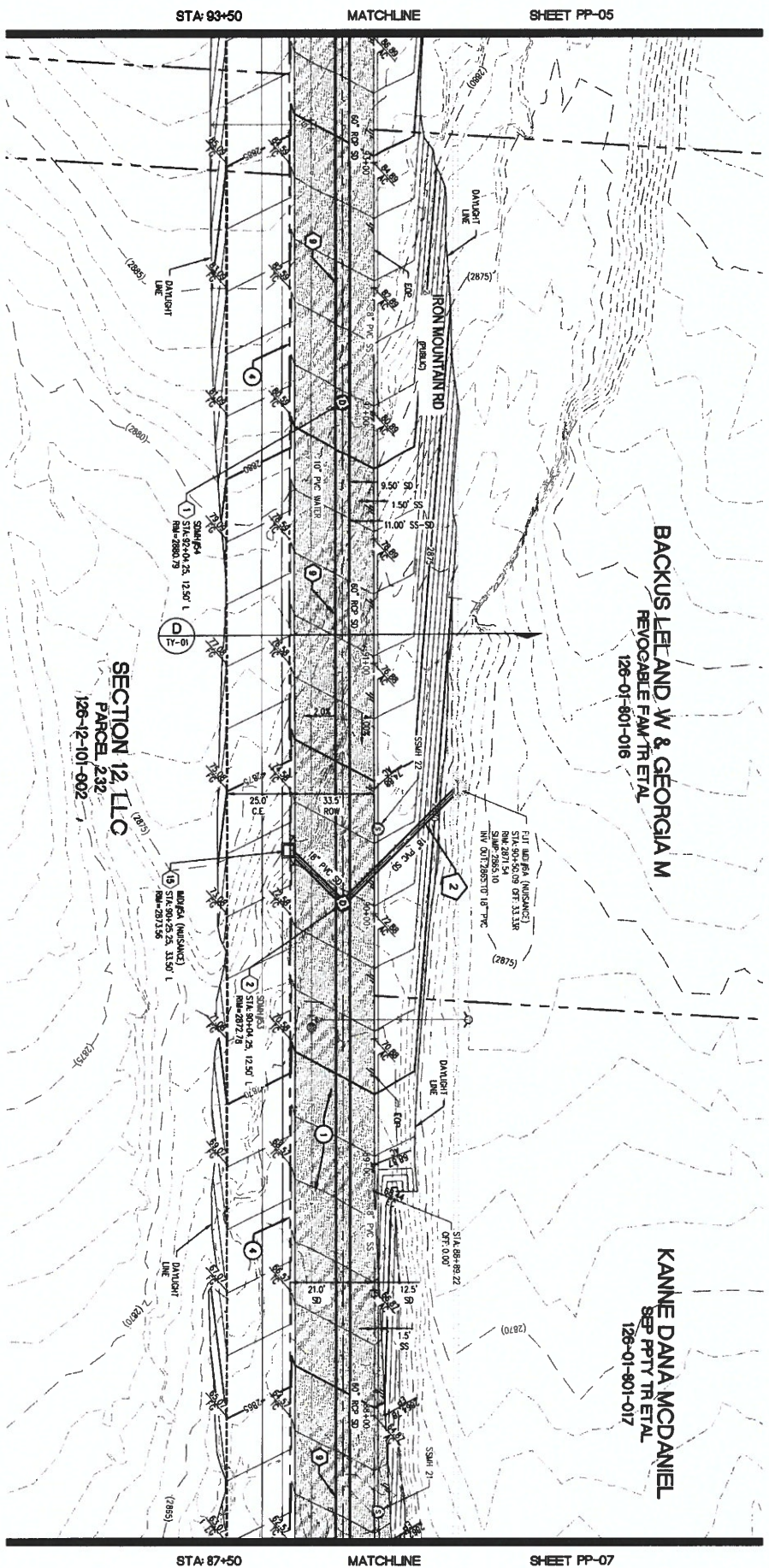
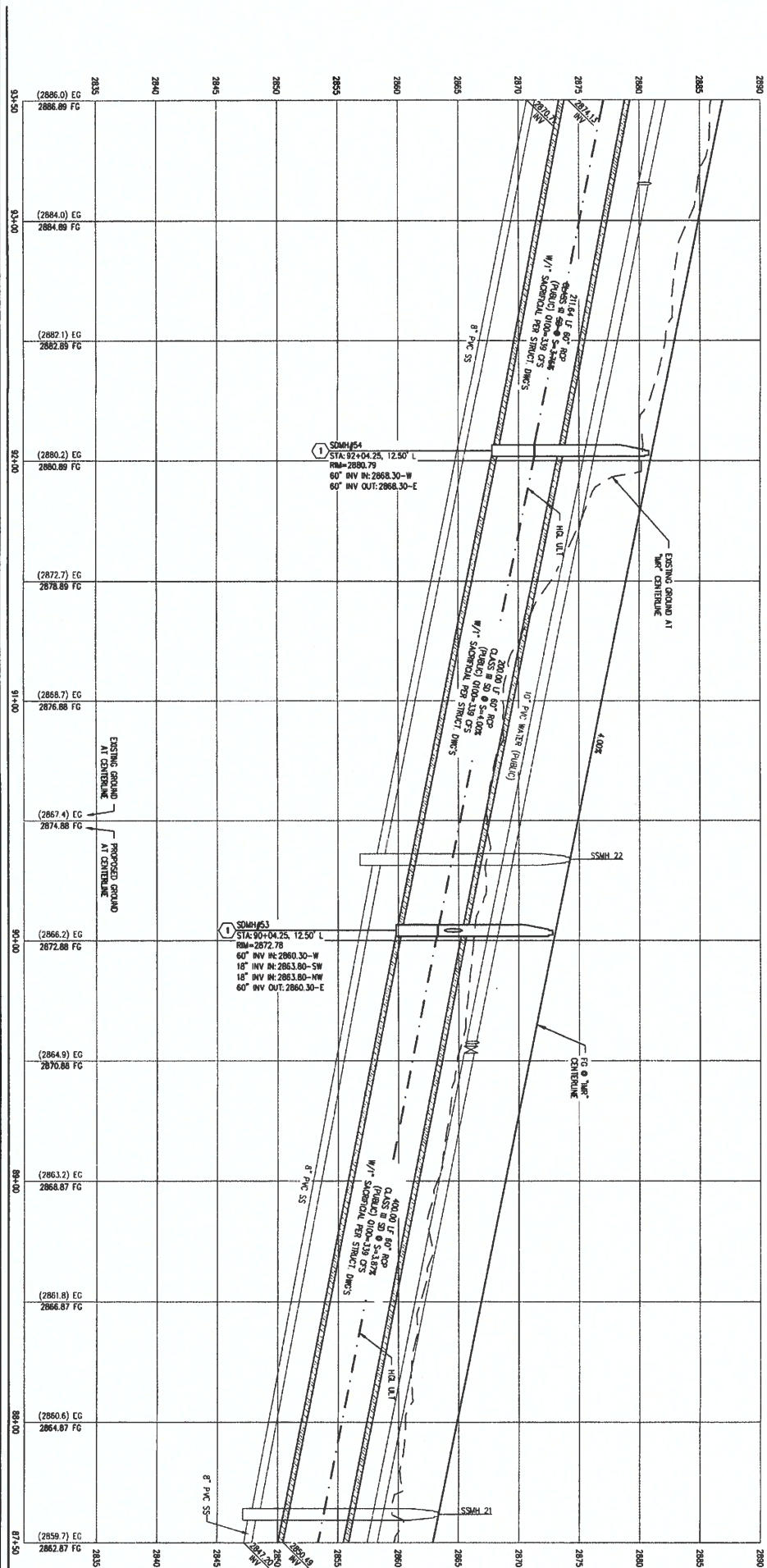
NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
CONSTRUCTION PLAN - "IM" 99+50 TO "IM" 93+50

SLATER HANIFAN GROUP

a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399



CONSTRUCTION NOTES	
1	CONSTRUCT 1" DIMS OVER 4.5" PRE-CAST 4" TYPE II AGGREGATE BASE (SEE TV SHEETS)
2	CONSTRUCT 1" DIMS OVER 4.5" PRE-CAST 6" TYPE II AGGREGATE BASE (SEE TV SHEETS)
3	CONSTRUCT 4" TYPE SLAND CURB (ASCOCA STD. DIM. NO. 219)
4	CONSTRUCT 1" TYPE CURB AND GUTTER (ASCOCA STD. DIM. NO. 216)
5	CONSTRUCT SIDEWALK RAMP (CASE D) WITH INCLTE WALKING PANEL (ASCOCA STD. DIM. NO. 226)
6	CONSTRUCT BUS TURN-OUT (ASCOCA STD. DIM. NO. 224.1)
7	CONSTRUCT CONCRETE SIDEWALK (ASCOCA STD. DIM. 224)
8	PROJECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. IMPROVEMENT)

STORM DRAIN NOTES	
1	CONSTRUCT 48" TYPE B-SO MANHOLE (USDOCA STD. DWG. NO. 405-2)
2	CONSTRUCT 60" TYPE B MANHOLE (USDOCA STD. DWG. NO. 406-1)
3	INSTALL 18" RCP (USDOCA STD. DWG. NO. 501-2)
4	INSTALL 24" RCP (USDOCA STD. DWG. NO. 501-3)
5	INSTALL 30" RCP (USDOCA STD. DWG. NO. 501-3)
6	INSTALL 36" RCP (USDOCA STD. DWG. NO. 501-3)
7	INSTALL 42" RCP (USDOCA STD. DWG. NO. 501-3)
8	INSTALL 54" RCP (USDOCA STD. DWG. NO. 501-3)
9	INSTALL 60" RCP (USDOCA STD. DWG. NO. 501-3)
10	INSTALL 72" RCP (USDOCA STD. DWG. NO. 501-3)
11	INSTALL 36" RCP END SECTION (MOOT STD. PLAN R-2-11)
12	INSTALL 36" RCP END SECTION (MOOT STD. PLAN R-2-11)
13	INSTALL 42" RCP END SECTION (MOOT STD. PLAN R-2-11)
14	INSTALL 72" RCP END SECTION (MOOT STD. PLAN R-2-11)
15	CONSTRUCT TYPE "C" 60" DRAIN INLET SIZE PER PLAN (USDOCA STD. DWG. NO. 412-1 & 417)
16	STRUCTURAL MANHOLE
17	CONSTRUCT CONCRETE CULVERT (SEE DETAIL 2/01--01)
18	CONSTRUCT INTERIOR BRICK AND MORTAR PLUG SEE DETAIL 2/01--01
19	INSTALL 24" RCP END SECTION (MOOT STD. PLAN R-2-11)
20	INSTALL 36" RCP END SECTION (MOOT STD. PLAN R-2-11)
21	INSTALL 60" RCP END SECTION (MOOT STD. PLAN R-2-11) W/7" SLOPE/DRIP CONCRETE PER STRUCTURAL

[illegible]

DROP INLET NOTE

WHERE TO FEEL DRAINAGE, SEPARATION IS NOT PRACTICABLE. CAST-IN PLACE MONOLITHIC FORM WITH INTERFERS BETWEEN SLAB AND WALLS. BASE WALLS HAVE TOP REINFORCING WITH DISCRETE, CAST-IN PLACE, CONCRETE PRODUCTS OR APPROVED EQUAL.

LEGEND

 STORM DRAIN LATERAL, # (SEE LAT. SHEETS)

NOTE: PROPERTY OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO, THE REMOVAL OF ACCUMULATED DEBRIS AND TREES, AND CURE OF WEATHERING.

FLOOD ZONE: FEMA
DESIGNATED FLOOD ZONE
FLOOD PLAIN ON THE FLOOD INSURANCE RATE
SERVICES MAP, DATED
SEPTEMBER 27, 2002

DATE: 4/6/03

DESIGNED BY: J.E. KESLER

APPROVED FOR CONSTRUCTION

LYND ENGINEERING SERVICES MANAGER

PROJECT NO. 128408

DATE

 FAST Cable Call before you dig 1-800-227-2888	 Call Before You Dig 1-800-227-2888	 Cable Call before you dig 1-800-227-2888
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[illegible]

**S-I-G SLATER
HANIFAN
GROUP**
a Westwood team

5740 S. ARVILLE STREET #216, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NINETY-FIVE MANAGEMENT LLC

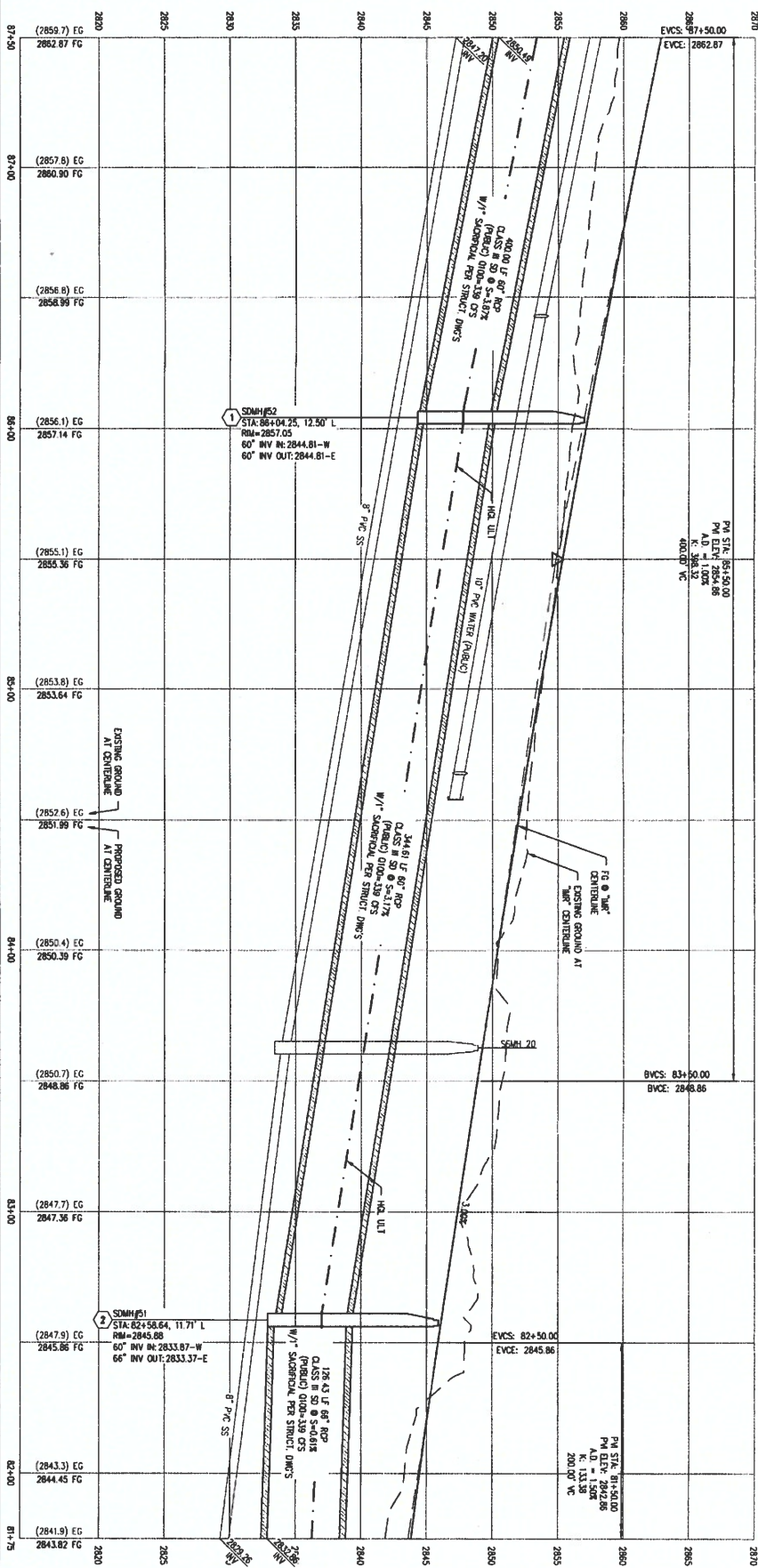
SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
CONSTRUCTION PLAN - "IM" 93+50 TO "IM" 87+50

DATE: 9/8/18
DRAFTER: HF
DESIGNER: HF
CHECKED: DY
PROJECT NO.
OLY7609-000

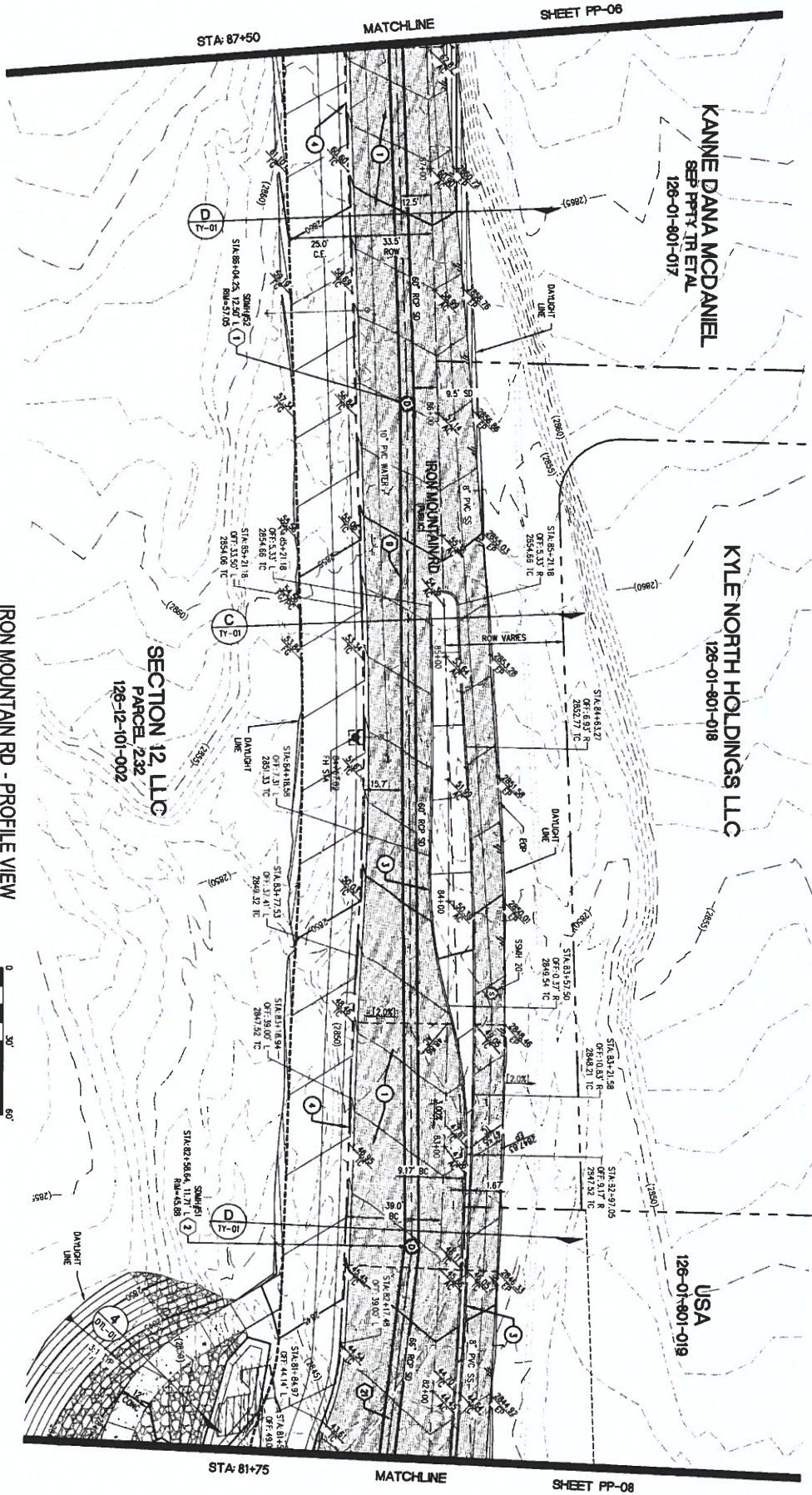
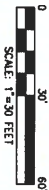
STATE OF NEVADA
DEPARTMENT OF REVENUE
DIVISION OF TAX SERVICES
OFFICE OF THE ASSISTANT ATTORNEY GENERAL
CIVIL
NO. 18368
SEP 10 2018
DERICK D.J.
YORO
09/10/2018

PP-06

SHEET 10 OF 27



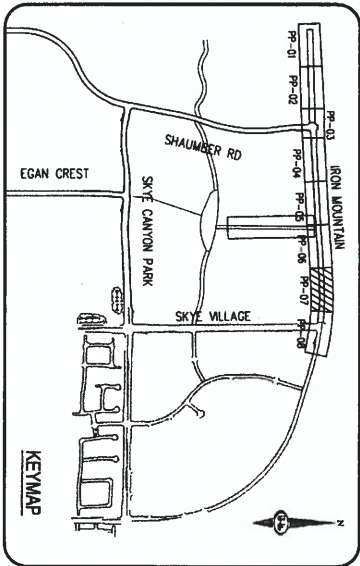
IRON MOUNTAIN RD - PROFILE VIEW
HORIZ: 1" = 50'
VERT: 1" = 6'



KANIE DANA MCDANIEL
SEP PRTY TR ETAL
126-01-801-017

KYLE NORTH HOLDINGS LLC
126-01-801-018

USA
126-01-801-019



CONSTRUCTION NOTES

1. CONSTRUCT 1" LUMS OVER 4.5" PPS OVER 4" TYPE II ASPHALT BASE (SEE T7 SHEET)
2. CONSTRUCT 1" LUMS OVER 5.5" PPS OVER 6" TYPE II ASPHALT BASE (SEE T7 SHEET)
3. CONSTRUCT 1" TYPE II ASPHALT OVER (USDOCA STD. DMC. NO. 219)
4. CONSTRUCT 1" TYPE II ASPHALT OVER (USDOCA STD. DMC. NO. 219)
5. CONSTRUCT SPOKEWAX PLANT (CASE 9) WITH TACTILE WARNING PANEL (USDOCA STD. DMC. NO. 235)
6. CONSTRUCT BUS TURN-OUT (USDOCA STD. DMC. NO. 234)
7. CONSTRUCT CONCRETE SPOKEWAX (USDOCA STD. DMC. 234)
8. PROTECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. IMPROVEMENT)

STORM DRAIN NOTES

1. CONSTRUCT 48" TYPE I-SD MANHOLE (USDOCA STD. DMC. NO. 405.2)
2. CONSTRUCT 60" TYPE II MANHOLE (USDOCA STD. DMC. NO. 406.1)
3. INSTALL 18" ROP (USDOCA STD. DMC. NO. 503.2)
4. INSTALL 24" ROP (USDOCA STD. DMC. NO. 503.2)
5. INSTALL 30" ROP (USDOCA STD. DMC. NO. 503.2)
6. INSTALL 36" ROP (USDOCA STD. DMC. NO. 503.2)
7. INSTALL 42" ROP (USDOCA STD. DMC. NO. 503.2)
8. INSTALL 48" ROP (USDOCA STD. DMC. NO. 503.2)
9. INSTALL 54" ROP (USDOCA STD. DMC. NO. 503.2)
10. INSTALL 60" ROP (USDOCA STD. DMC. NO. 503.2)
11. INSTALL 72" ROP (USDOCA STD. DMC. NO. 503.2)
12. INSTALL 36" ROP END SECTION (N007 STD. PLAN R-2.11)
13. INSTALL 42" ROP END SECTION (N007 STD. PLAN R-2.11)
14. INSTALL 48" ROP END SECTION (N007 STD. PLAN R-2.11)
15. CONSTRUCT TYPE "C" DRAIN INLET. SIZE PER PLAN (USDOCA STD. DMC. NO. 412.1 & 421)
16. STRUCTURAL MANHOLE
17. CONSTRUCT CONCRETE COLLAR (SEE DETAIL 3/011-01)
18. CONSTRUCT INTERIOR BRICK AND MORTAR PLUS SEE DETAIL 2/011-01
19. INSTALL 24" ROP END SECTION (N007 STD. PLAN R-2.11)
20. INSTALL 36" ROP END SECTION (N007 STD. PLAN R-2.11)
21. INSTALL 48" ROP END SECTION (N007 STD. PLAN R-2.11)
22. W/1" SPOKEWAX FOR STRUCT. DMS

NOTES

1. ALL ROP SHALL BE CLASS B UNLESS OTHERWISE SHOWN
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STORM DRAIN LAYOUT

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FLOOD ZONE

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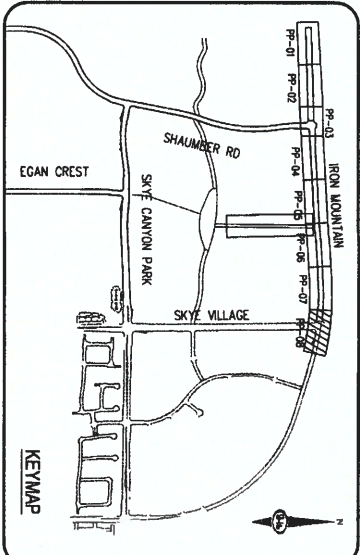
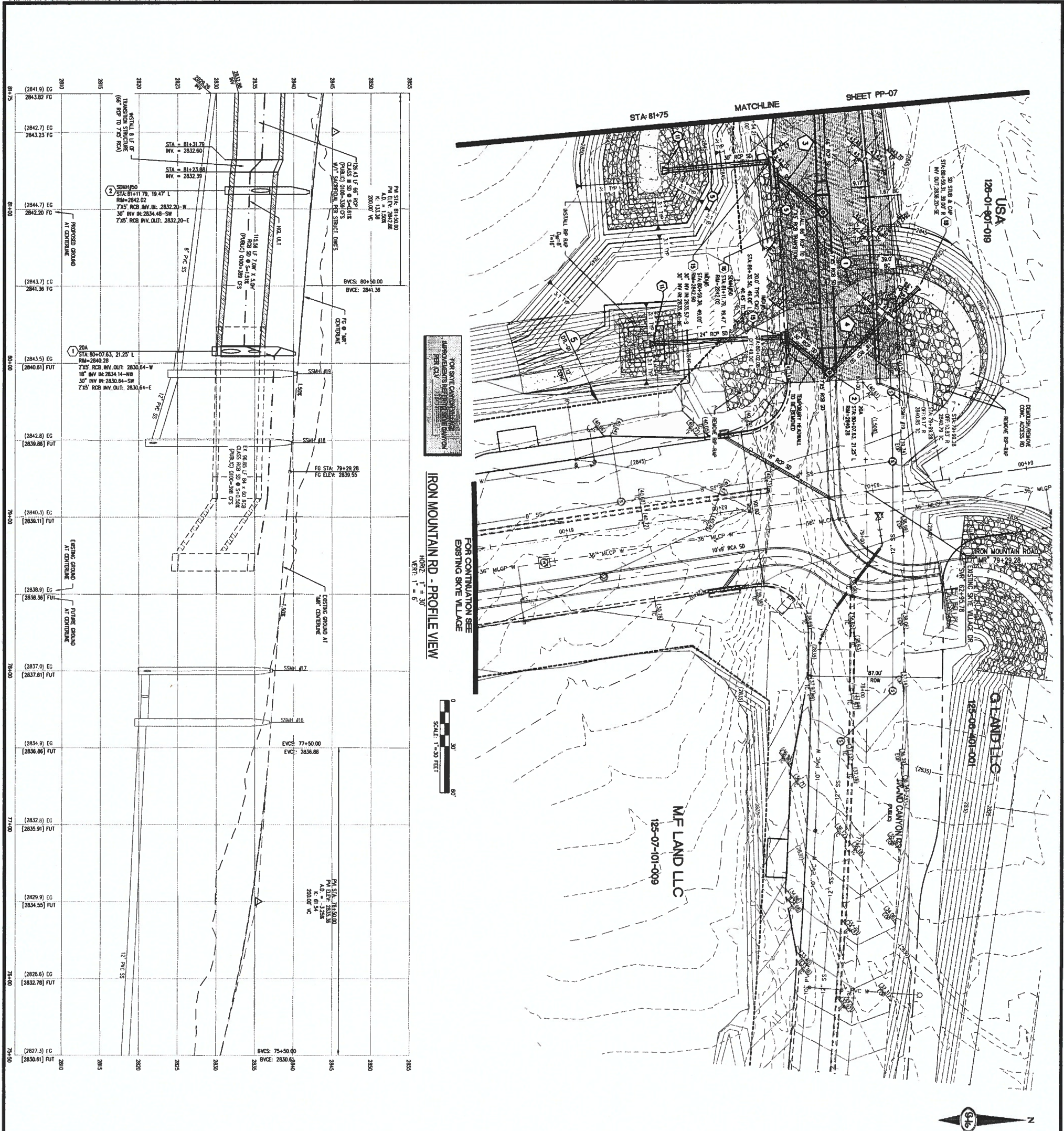
APPROVED FOR CONSTRUCTION

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CONSTRUCTION NOTES	
1	CONSTRUCT 1" DIMS OVER 4.5" PMS OVER 4" TYPE II ASBESTATE BASE (SEE 17 SHEETS)
2	CONSTRUCT 1" DIMS OVER 3.5" PMS OVER 6" TYPE II ASBESTATE BASE (SEE 17 SHEETS)
3	CONSTRUCT 1/4" TYPE ISLAND CURB (ISOSCOA STD. DIMS. NO. 219)
4	CONSTRUCT 1" TYPE CURB AND GUTTER (ISOSCOA STD. DIMS. NO. 216)
5	CONSTRUCT SIDEWALK PAV. (CASE 1) WITH FACILE WALKING PANEL (ISOSCOA STD. DIMS. NO. 225)
6	CONSTRUCT BUS TURN-OUT (ISOSCOA STD. DIMS. NO. 224.1)
7	CONSTRUCT CONCRETE SIDEWALK (ISOSCOA STD. DIMS. 224)
8	PROJECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. APPROACHMENT)

STORM DRAIN NOTES	
11	CONSTRUCT 6" TYPE B-D MANHOLE (USDOCA STD. DWG. NO. 405-2)
12	CONSTRUCT 6" TYPE B MANHOLE (USDOCA STD. DWG. NO. 406-1)
13	INSTALL 18" RCP (USDOCA STD. DWG. NO. 503-2)
14	INSTALL 24" RCP (USDOCA STD. DWG. NO. 503-2)
15	INSTALL 30" RCP (USDOCA STD. DWG. NO. 503-2)
16	INSTALL 36" RCP (USDOCA STD. DWG. NO. 503-2)
17	INSTALL 42" RCP (USDOCA STD. DWG. NO. 503-2)
18	INSTALL 54" RCP (USDOCA STD. DWG. NO. 503-2)
19	INSTALL 60" RCP (USDOCA STD. DWG. NO. 503-2)
20	INSTALL 72" RCP (USDOCA STD. DWG. NO. 503-2)
21	INSTALL 30" RCP AND SECTION (MOOT STD. PLAN R-2-31)
22	INSTALL 36" RCP AND SECTION (MOOT STD. PLAN R-2-31)
23	INSTALL 42" RCP AND SECTION (MOOT STD. PLAN R-2-31)
24	INSTALL 48" RCP AND SECTION (MOOT STD. PLAN R-2-31)
25	INSTALL 54" RCP AND SECTION (MOOT STD. PLAN R-2-31)
26	INSTALL 60" RCP AND SECTION (MOOT STD. PLAN R-2-31) W/ 1" SLOPEDOWN. CONCRETE FOR STRUCTURAL DMS.

PROJ. TITLE: REPAIR OF STORM DRAIN

CITY: CHICAGO

ADDRESS: 1000 N. LAUREL

OWNER: CHICAGO DEPT. OF PUBLIC WORKS

DATE: 1-7-02



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Underground

1-800-483-4800

anyone can dig



Call before you Dig

800-4-A-DIG

Underground

1-800-483-4800

anyone can dig



LAWNO ENGINEERING SERVICES MANAGER

PROJECT NO. 126408

DATE _____

APPROVED FOR CONSTRUCTION

NOTE: OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO, THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

FLOOD ZONE

THE PROJECT LOCATION IS IN A FLOOD DESIGNATED ZONE "X" (OUTSIDE THE 500-YEAR FLOOD PLAIN) ON THE FLOOD INSURANCE RATE MAP (FIRM) PANEL 130024172G. (DATED SEPTEMBER 17, 2002)

LEGEND

(SEE LAT SHEETS)



STORM DRAIN LATERAL # (SEE LAT SHEETS)

DROP INLET NOISE

WHERE TO FEEL PARALLEL SEPARATION IS NOT PRACTICABLE.

CAST-IN-PLACE MONOLITHIC PAVEMENT WITH MATS-TOP BETWEEN SLABS AND WALLS BASE, WALLS AND TOP TO BE CONSTRUCTED WITH MATS-TOP OVER EXISTING EXTERIOR DRIVE.

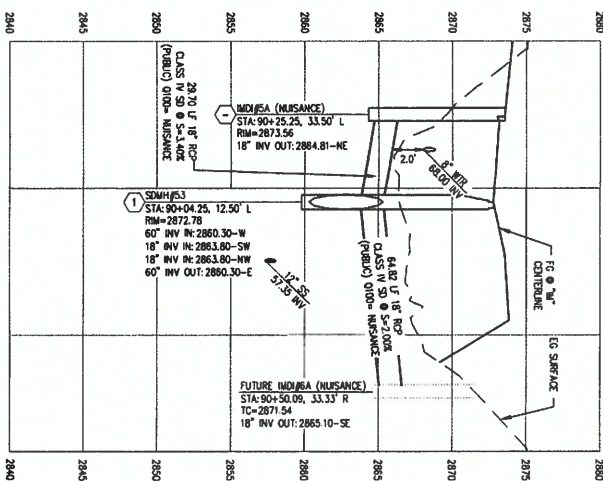
ON FLAT SHARP CORNERS, GREENSTEIN PASTIC PRODUCTS OR APPROVED EQUIV.

NOISE

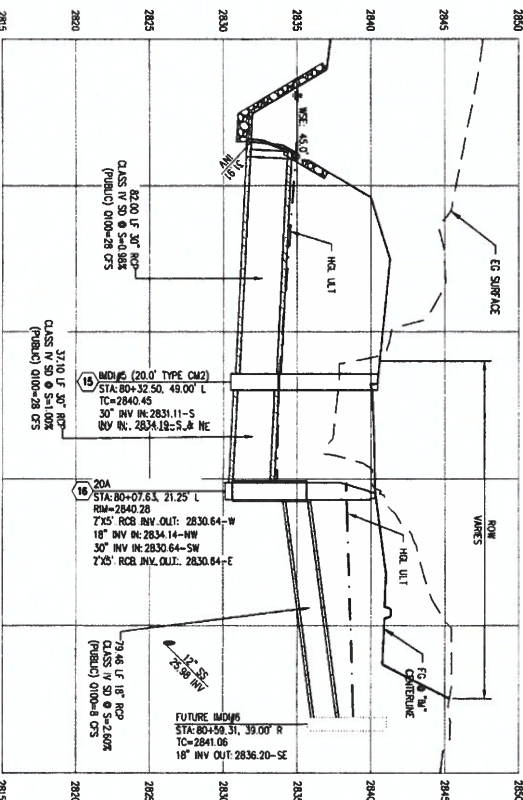
ALL PPE SHALL BE CLASS A UNLESS OTHERWISE SHOWN.

ALL PPE LOCATIONS ARE INDICATED ALONG PIPE CONTRIBUTE TO CENTER OF MANHOLE OR INSIDE EDGE OF CURB.

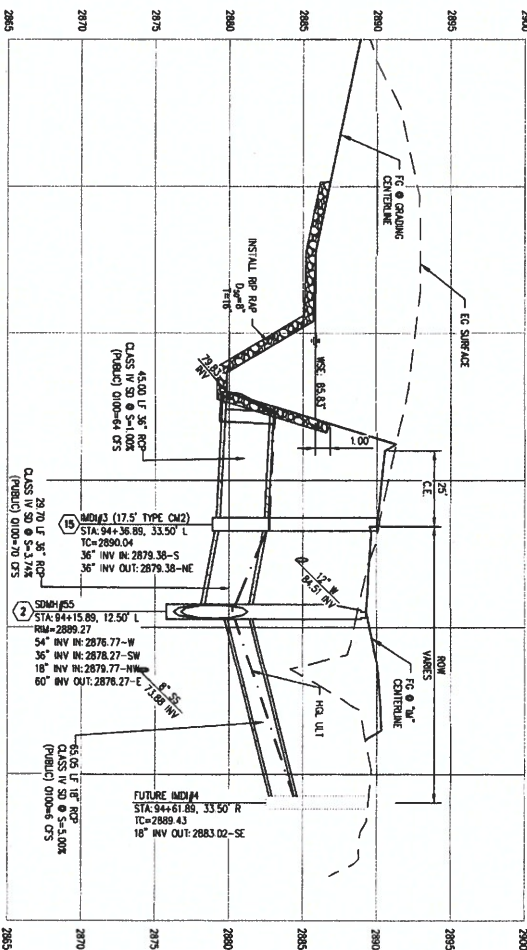
- ALL PPE MATS SHALL INCLUDE STORM WATER MANAGEMENT STUMP AND DETAIL PER USDOCA STD. ONE, NO. 421.
- ALL PPE MATS MUST BE PROPERLY MAINTAINED.
- ALL PPE ARE PROBABLY MAINTAINED.
- ALL SPECIAL INSPECTION REQUIRED FOR PPE SEGMENTS WITH SUPERIOR CONCRETE.
- REMOVAL SHALL BE TO BACK OF CURB, FACE OF CURB, OR FACE OF SIDEWALK UNLESS OTHERWISE NOTED.
- SET-UP SHEETS FOR WATER AND SCREW PUMP AND PROPPERS.



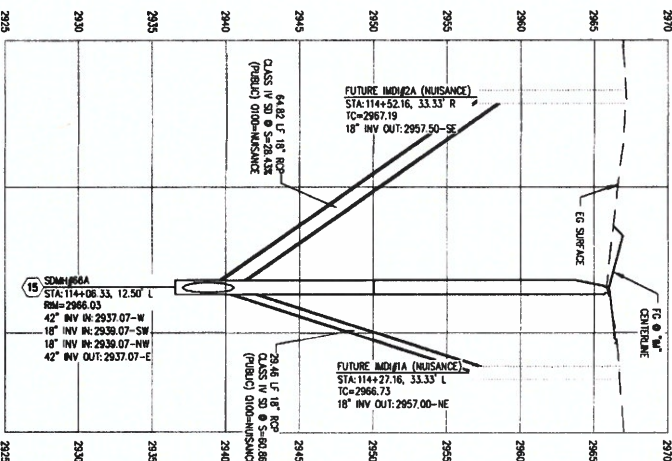
IRON MOUNTAIN RD
STORM DRAIN @ 90+04.25



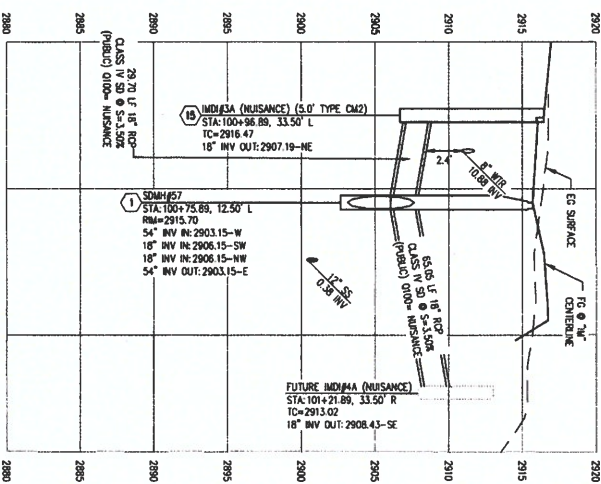
IRON MOUNTAIN RD
STORM DRAIN @ 80+07.63



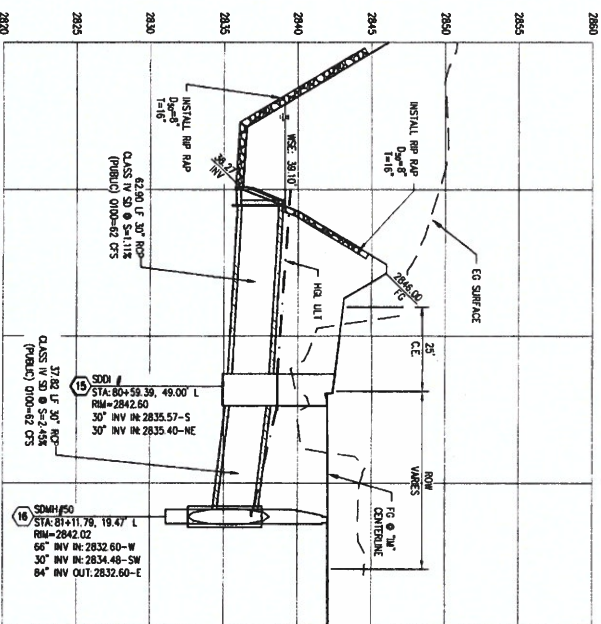
IRON MOUNTAIN RD
STORM DRAIN @ 94+15.89



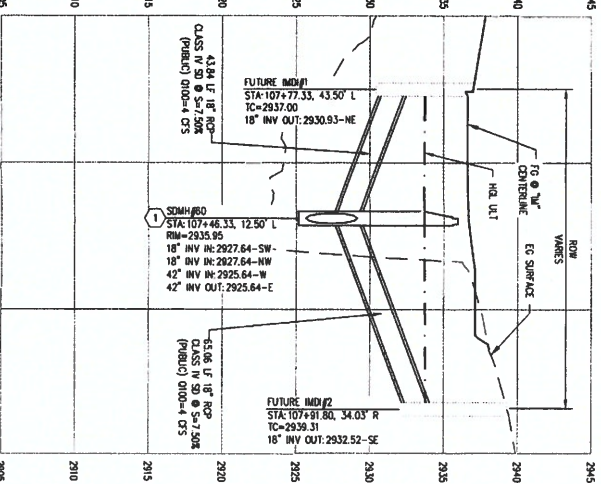
SCALE: HORIZ. 1"=30' VERT. 1"=6'
SEE SHEET: PP-06



SCALE: HORZ. 1"=30' VERT. 1"=6'
SEE SHEET: PP-08



SCALE: HORZ. 1"=30' VERT. 1"=6'
SEE SHEET: PP-05



7

STORM DRAIN @ 114+06.33



SCALE: HORZ. 1"=1'
SEE SHEET: PP-02



SCALE: HORIZ. 1"=30' VERT. 1"=6'
SEE SHEET: PP-04



SCALE: HORZ. 1"=30' VERT. 1"=6'
SEE SHEET: PP-08



3



SCALE: HORIZ. 1"=30' VERT. 1"=6'
SEE SHEET: PP-03

[illegible]

S-I **SLATER
HANIFAN
GROUP**
a Westwood team

5740 S. ARVILLE STREET #210, LAS VEGAS, NV 89118
PHONE (702) 284-5300 FAX (702) 284-5399

NINETY-FIVE MANAGEMENT LLC

**SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
STORM DRAIN LATERALS**

DATE: 9/8/18

DRAFTER: HF

DESIGNER: HF

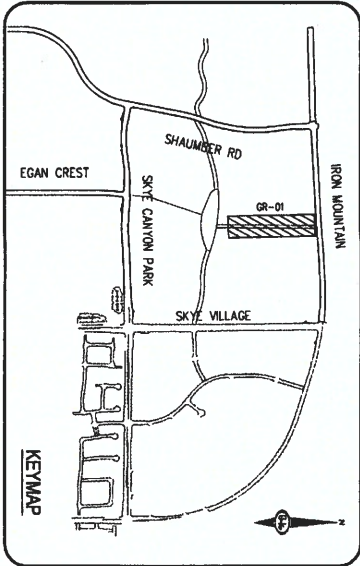
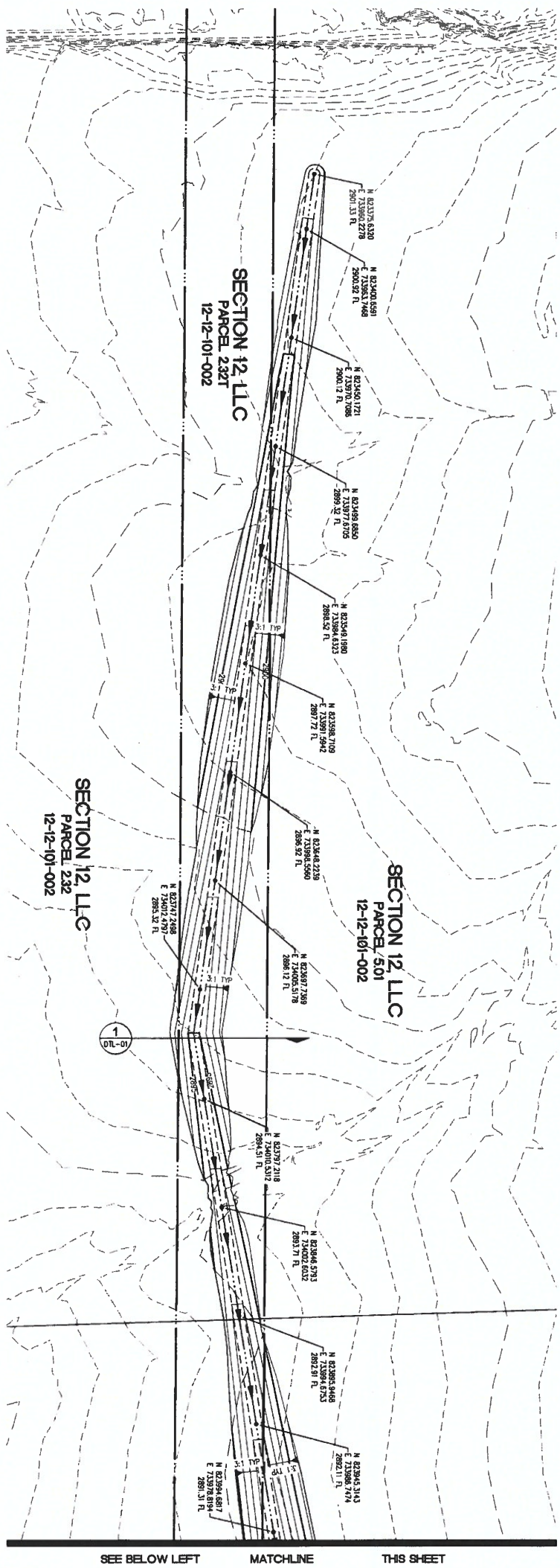
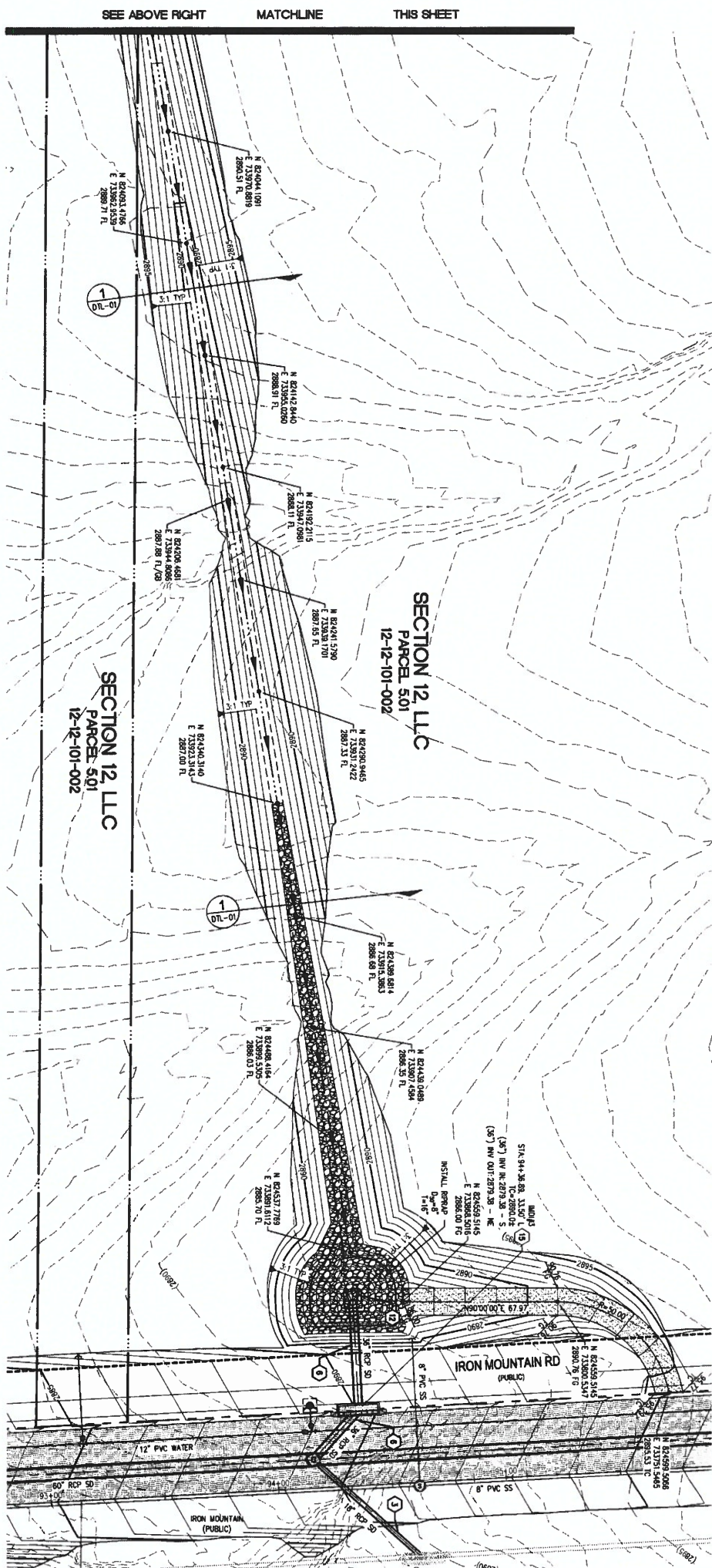
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LAT-01

SHEET 13 OF 27





CONSTRUCTION NOTES	
①	CONSTRUCT 1" W/MS OVER 4.5" FBS OVER 4" TYPE II AGGREGATE BASE (SEE TY SHEETS)
②	CONSTRUCT 1" W/MS OVER 4.5" FBS OVER 6" TYPE II AGGREGATE BASE (SEE TY SHEETS)
③	CONSTRUCT "X" TYPE CURB AND GUTTER (ASCOCA STD. DWG. NO. 219)
④	CONSTRUCT "Y" TYPE CURB AND GUTTER (ASCOCA STD. DWG. NO. 216)
⑤	CONSTRUCT SERRULAK RAUP (CASE 1) WITH MOBILE WASHING PANEL (ASCOCA STD. DWG. NO. 232)
⑥	CONSTRUCT BUS TURN-OUT (ASCOCA STD. DWG. NO. 234.1)
⑦	CONSTRUCT CONCRETE SERRULAK (ASCOCA STD. DWG. 234)
⑧	PROJECT IN PLACE (VERIFY LOCATION AND ELEVATION OF EX. IMPROVEMENT)

STORM DRAIN NOTES	
1	CONSTRUCT 48" TYPE II-50 MANHOLE (USDOCA STD. DWG. NO. 405-2)
2	CONSTRUCT 60" TYPE II MANHOLE (USDOCA STD. DWG. NO. 446-1)
3	INSTALL 18" RCP (USDOCA STD. DWG. NO. 503-2)
4	INSTALL 24" RCP (USDOCA STD. DWG. NO. 503-2)
5	INSTALL 30" RCP (USDOCA STD. DWG. NO. 503-2)
6	INSTALL 36" RCP (USDOCA STD. DWG. NO. 503-2)
7	INSTALL 42" RCP (USDOCA STD. DWG. NO. 503-2)
8	INSTALL 48" RCP (USDOCA STD. DWG. NO. 503-2)
9	INSTALL 60" RCP (USDOCA STD. DWG. NO. 503-2)
10	INSTALL 72" RCP (USDOCA STD. DWG. NO. 503-2)
11	INSTALL 30" RCP DIO SECTION (N601 STD. PLAN R-2-1)
12	INSTALL 36" RCP DIO SECTION (N601 STD. PLAN R-2-1)
13	INSTALL 42" RCP DIO SECTION (N601 STD. PLAN R-2-1)
14	INSTALL 48" RCP DIO SECTION (N601 STD. PLAN R-2-1)
15	CONSTRUCT TYPE "C" 24" DWP INLET. SIZE PER PLAN (USDOCA STD. DWG. NO. 412-1 & 403)
16	STRUCTURAL MANHOLE
17	CONSTRUCT CONCRETE CULVERT (SEE DETAIL 3-01I-40)
18	CONSTRUCT INTERIOR BRICK AND MORTAR PAVING SEE DETAIL 3-01I-40
19	INSTALL 24" RCP DIO SECTION (N601 STD. PLAN R-2-1)
20	INSTALL 36" RCP DIO SECTION (N601 STD. PLAN R-2-1)
21	INSTALL 48" RCP DIO SECTION (N601 STD. PLAN R-2-1) W/1" SLOPED CONCRETE PER STRUCTURAL DETAIL 3-01I-40

1. ALL ROP SHALL BE CLASS B UNLESS OTHERWISE SHOWN. 2. ALL ROP LEADINGS ARE REQUIRED ALONG PIPE CONTINUING TO CENTER OF DRAIN OR MORE EDGE OF 3. ALL ROP INLETS SHALL INCLUDE STORM WATER MANAGEMENT SLUMP AND DETAIL PER AISC/A STD. 4. DETAIL NO. 421. 5. ALL ROP SHALL BE PLUMB FOR ADDITIONAL STRUCTURAL DETAILS AND CONNECTIONS. 6. ALL ROP SHALL BE PROTECTED AGAINST CORROSION. 7. ADD SPECIAL INSPECTION REQUIRED FOR THE PIPE SECTIONS WITH SUFFICIENT CONCRETE 8. ADD SPECIAL INSPECTION REQUIRED FOR THE FACE OF CONCL. OR FACE OF MEDIAN UNLESS OTHERWISE NOTED 9. SEE U-SHEETS FOR WATER AND SEWER PLANS.	NOTES DROP INLET NOTE BRIDGE TO REEL CHANNEL SEPARATION IS NOT PROHIBITED. DO NOT IN-PLACE MANHOLES FOR THE PURPOSE OF REINFORCED SLAB AND WALLS BASE. WALLS AND TOP ON FLAT SLIMP. CONCRETE, GREENGLASS PLASTIC PRODUCTS OR APPROVED EQUIV.
1. CERTIFY THAT THE GRADING PLAN IS IN CONFORMANCE WITH THE APPROVED TECHNICAL DRAINAGE PLAN (SEE PLAN) ON FILE AT THE CITY OF LOS ANGELES. 2. THE PROJECT SHALL BE THE SUBJECT PROJECT. <i>4/10/8</i> DATE	X STORM DRAIN LATERAL (SEE L.A.T. SHEETS) LEGEND FLOOD ZONE- THE PROJECT SITE IS LOCATED WITHIN A FEMA DESIGNATED FLOOD ZONE (SEE FLOOD INSURANCE RATE MAP (FIRM) PLAN 20000421792C, DATED 03/19/2002)

NOTE: OWNER IS RESPONSIBLE TO MAINTAIN THE BEST MANAGEMENT PRACTICES, SUCH AS BUT NOT LIMITED TO, THE REMOVAL OF ACCUMULATED SEDIMENT AND DEBRIS AND CARE OF VEGETATION.

APPROVED FOR CONSTRUCTION

LYNNE ENGINEERING SERVICES MANAGER

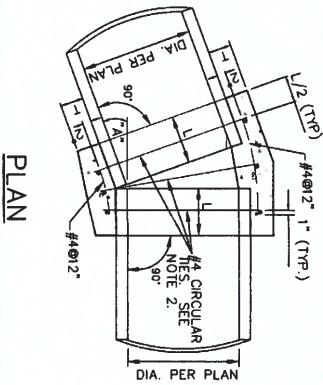
PROJECT NO. 1234AB

DATE _____

CALL CENTER, INC.
 1-703-227-9869

CALL CENTER, INC.
 1-703-227-9869

CALL CENTER, INC.
 1-703-227-9869



NOTES:

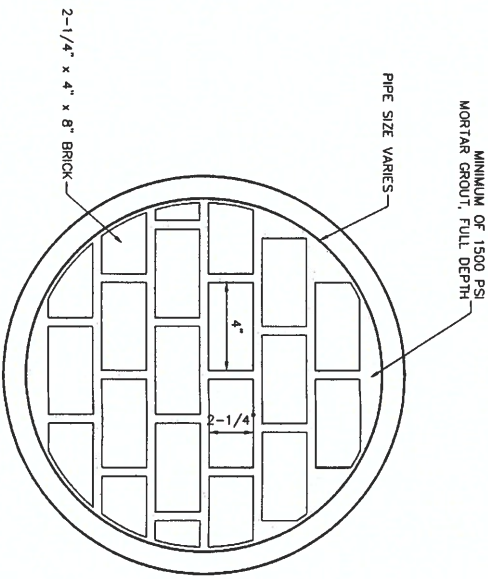
- WHERE THE SLOPE OF THE UPSTREAM PIPE IS GREATER THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN SOFFITS, WHERE THE SLOPE OF THE UPSTREAM PIPE IS LESS THAN THE SLOPE OF THE DOWNSTREAM PIPE, JOIN INVERTS.
- WHERE THE SPACE BETWEEN THE PIPE EXTREMITIES EXCEEDS 2 1/2 INCHES, THE NUMBER OF CIRCULAR TIES SHALL BE INCREASED TO MAINTAIN A MAXIMUM SPACING OF 6 INCHES. CENTER TO CENTER. CIRCULAR TIES SHALL HAVE A DIAMETER 5 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE LARGER PIPE.

CIRCULAR TIES

PIPE DIAMETER	SPACE BETWEEN PIPE EXTREMITIES	CIRCULAR TIES	NO. OF TIES	L	T
18"	2 1/2"		3	12"	5"
24"	2 1/2"		3	12"	6"
30"	2 1/2"		3	12"	7"
36"	2 1/2" or less		4	18"	9"
60"	2 1/2" or less		5	21"	11"

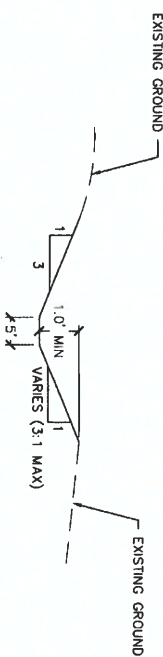
CONCRETE COLLAR

NOT TO SCALE



BRICK AND MORTAR PLUG

NOT TO SCALE



EARTHEN DITCH

NOT TO SCALE



NINETY-FIVE MANAGEMENT LLC

SKYE CANYON PHASE 3BC
IRON MOUNTAIN ROAD
STORM DRAIN DETAILS



DATE: 9/10/18

DRAWN: HF

DESIGNER: HF

CHECKED: DY

PROJECT NO.

OLY1609-000



DTL-01

SHEET 15 OF 27

S-I-G

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APPENDIX C

CD of Electronic Files