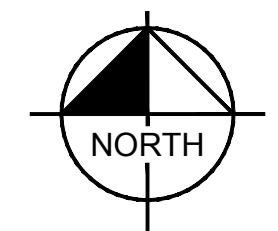
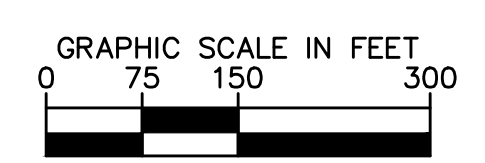
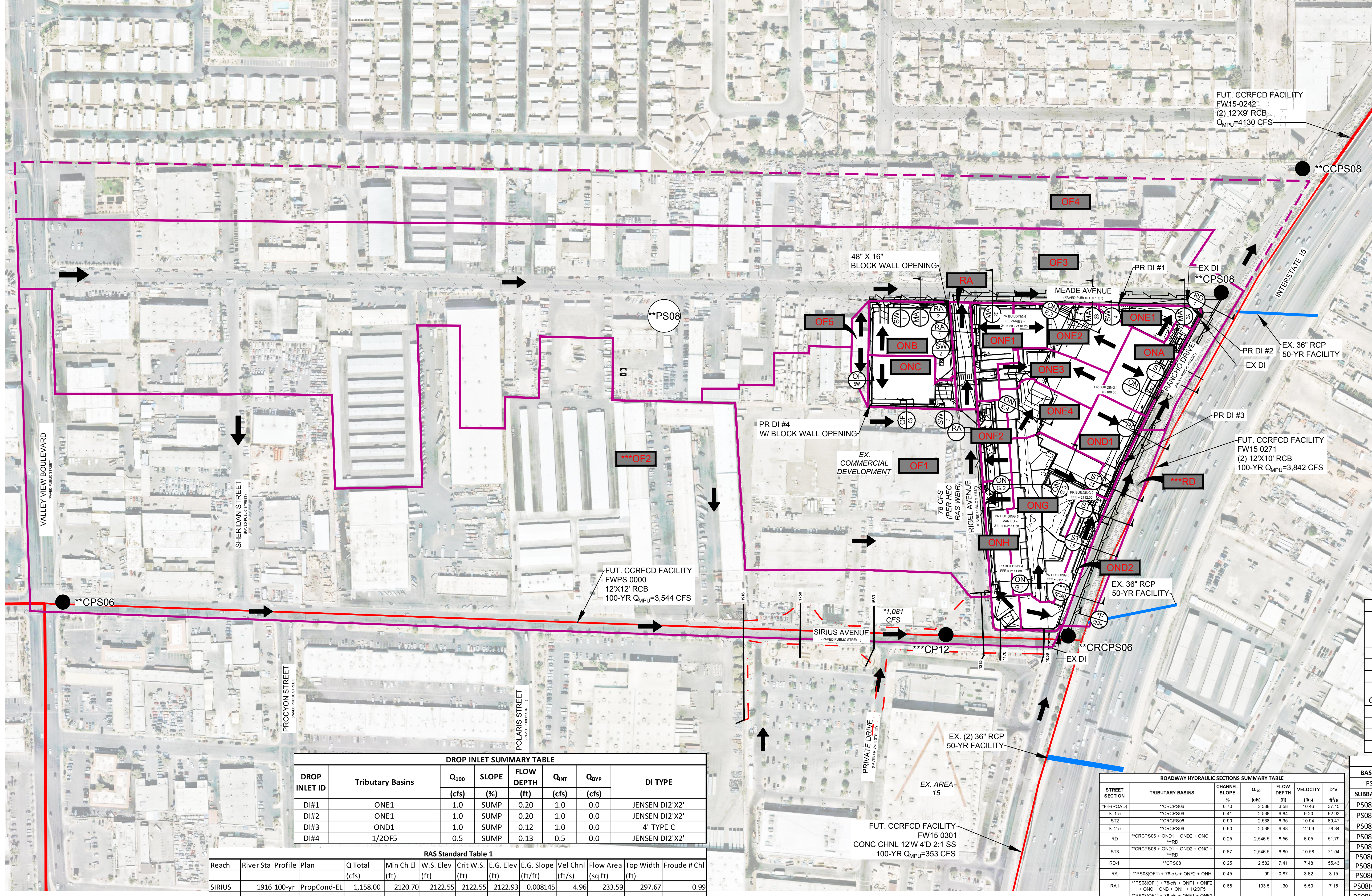


Plotted By: Schaeffler, Sean    Sheet: S-10    Date: 10/20/2023    10:20:54am    K:\NAV\_Civil\092965012 - Area 15 District 2 - (Fisher Brothers)\Reports\DRAINAGE\02-ADD\Figures\FRO\_ADD.dwg  
 This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

ONSITE HYDRAULIC SECTIONS														
ONSITE SECTION	TRIBUTARY BASINS	SLOPE %	Q <sub>100</sub> (cfs)	FLOW DEPTH (ft)	FLOW LINE (ft)	FLOW LINE + 2D (ft)	FFE BLDG1 (ft)	FFE BLDG2 (ft)	FFE BLDG3 (ft)	FFE BLDG4 (ft)	FFE BLDG5 (ft)	FFE BLDG6 (ft)	BLDG PROTECT ED? YES/NO	BLDG PROTECT ED? YES/NO
ONA	ONA	0.54	2	0.35	2107.10	2107.80	2108.00	-	-	-	-	2107.20	YES	YES
ONE2	ONE2	0.50	2.5	0.14	2106.90	2107.18	2108.00	-	-	-	-	-	YES	YES
ONE4	ONE4	3.60	1	0.06	2107.25	2107.37	2108.00	-	-	-	-	-	YES	YES
ONG1	1/2ONG	0.15	2	0.19	2111.35	2111.73	-	-	2111.70	2111.80	-	-	**	YES
ONG2	1/2ONG	0.80	2	0.13	2110.90	2111.16	-	2112.00	-	-	2110.00	-	YES	**
ONG3N	1/2ONG	0.10	2	0.26	2107.40	2107.92	2108.00	-	-	-	-	-	YES	-
ONG3S	1/2ONG	3.02	2	0.14	2111.70	2111.98	-	2112.00	-	-	-	-	YES	-

\*\*Trench Drains have been provided adjacent to building



**LEGEND**

- XXX BASIN ID
- XXXX PRORATED BASIN ID
- BASIN BOUNDARY
- PRORATED BASIN BOUNDARY
- FUTURE CCRFCD REGIONAL FACILITY
- EXISTING DRAINAGE FACILITY
- FLOW ARROW
- CPX CONCENTRATION POINT
- XX SECTION ID
- 1036 HEC-RAS CROSS SECTION & ID
- 2-FT CONTOURS
- 1-FT CONTOURS
- PROPOSED CONTOURS
- PROPOSED 100-YR INUNDATION LIMITS

\* REFERENCED FROM AREA 15 STUDY (DS-4921)  
 \*\* REFERENCED FROM CITY OF LAS VEGAS CENTRAL NEIGHBORHOOD STUDY  
 \*\*\* REFERENCED FROM AREA 15 EVENT PARKING LOT (DS-5288)

NOTE:  
 1,081-CFS REFERENCED FOR FLOWRATE AT INTERSECTION OF PRIVATE DRIVEWAY & SIRIUS AVENUE. REFER TO APPENDIX D FOR REFERENCE Q.

DROP INLET SUMMARY TABLE							
DROP INLET ID	Tributary Basins	Q <sub>100</sub> (cfs)	SLOPE (%)	FLOW DEPTH (ft)	Q <sub>INT</sub> (cfs)	Q <sub>EXP</sub> (cfs)	DI TYPE
DI#1	ONE1	1.0	SUMP	0.20	1.0	0.0	JENSEN DI2'X2'
DI#2	ONE1	1.0	SUMP	0.20	1.0	0.0	JENSEN DI2'X2'
DI#3	OND1	1.0	SUMP	0.12	1.0	0.0	4' TYPE C
DI#4	1/2OF5	0.5	SUMP	0.13	0.5	0.0	JENSEN DI2'X2'

RAS Standard Table 1														
Reach	River Sta	Profile	Plan	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude #	Chl
SIRIUS	1916	100-yr	PropCond-EL	1,158.00	2120.70	2122.55	2122.55	2122.93	0.008145	4.96	233.59	297.67	0.99	
SIRIUS	1750	100-yr	PropCond-EL	1,158.00	2116.50	2118.23	2118.93	2120.74	0.015487	14.09	95.80	97.00	2.14	
SIRIUS	1533	100-yr	PropCond-EL	1,158.00	2112.00	2113.71	2114.66	2117.09	0.017377	15.05	79.46	83.06	2.29	
SIRIUS	1245		Lat Struct											
SIRIUS	1215	100-yr	PropCond-EL	1,095.50	2109.25	2110.68	2111.04	2111.89	0.011742	10.27	129.87	184.50	1.88	
SIRIUS	1170	100-yr	PropCond-EL	1,081.44	2108.93	2109.81	2110.22	2111.24	0.016094	9.89	117.19	197.44	1.98	
SIRIUS	1036	100-yr	PropCond-EL	1,081.44	2108.20	2110.52	2110.52	2111.60	0.002889	8.52	132.14	61.50	1.01	

CHANNEL HYDRAULIC SECTIONS SUMMARY TABLE										
ID	TRIBUTARY BASINS	CHANNEL SLOPE %	Q <sub>100</sub> (cfs)	FLOW DEPTH (ft)	VELOCITY (ft/s)	D'V	TYPE	SIDE SLOPES	BOTTOM WIDTH (ft)	Req'd d <sub>50</sub> (ft)
*F-F(CHNL)	Channel Capacity	0.70	2701	3.00	6.43	19.29	TRAP	4:1	N/A	N/A
SW1	ONB	1.00	2	0.54	1.73	0.93	V-Ditch	4:1	N/A	6"
SW2	ONB	0.25	2	0.70	1.03	0.72	V-Ditch	4:1	N/A	6"
SW3	ONC+1/2OF5	1.00	2.5	0.58	1.83	1.06	V-Ditch	4:1	N/A	6"
SW4	ONE1	1.01	1	0.15	2.36	0.35	V-Ditch	50:1	N/A	N/A
OF5W	1/2OF5	2.74	0.5	0.06	2.81	0.17	Concrete Flume	0:1	3	N/A
OF5S	1/2OF5 + ONC	1.01	2.5	0.40	3.87	1.55	V-Ditch	4:1	N/A	N/A

ROADWAY HYDRAULIC SECTIONS SUMMARY TABLE						
STREET SECTION	TRIBUTARY BASINS	CHANNEL SLOPE %	Q <sub>100</sub> (cfs)	FLOW DEPTH (ft)	VELOCITY (ft/s)	D'V
*F-F(ROAD)	**CRCP506	0.70	2,538	3.58	10.46	37.45
ST1 S	**CRCP506	0.41	2,538	6.84	9.20	62.93
ST2	**CRCP506	0.90	2,538	6.35	10.94	66.47
ST2 S	**CRCP506	0.90	2,538	6.48	12.09	75.94
RD	**CRCP506 + OND1 + OND2 + ONG + ONH	0.25	2,546.5	8.56	6.05	51.79
ST3	**CRCP506 + OND1 + OND2 + ONG + ONH	0.67	2,546.5	6.80	10.58	71.94
RD-1	**CP508	0.25	2,542	7.41	7.49	55.43
RA	**PS08(OFF1) + 78-cfs + ONF2 + ONH	0.45	99	0.87	3.62	3.15
RA1	**PS08(OFF1) + 78-cfs + ONF1 + ONF2 + ONC + ONB + ONH + 1/2OF5	0.68	103.5	1.30	5.50	7.15
RA2	**PS08(OFF1) + 78-cfs + ONF1 + ONF2 + ONC + ONB + ONH + 1/2OF5	0.60	103.5	1.33	5.26	7.00
MA1	**PS08(OFF3) + 1/2OF5	3.37	85.0	0.69	6.32	3.36
MA2A	**PS08(OFF1) + **PS08(OFF3) + **PS08(OFF5) + 78-cfs + RA + ONB + ONC + ONE1 + ONE2 + ONE3 + ONE4 + ONF1 + ONF2 + ONH	0.30	190.5	1.22	4.21	5.14
MA2B	**PS08(OFF1) + **PS08(OFF3) + **PS08(OFF5) + 78-cfs + RA + ONB + ONC + ONE1 + ONE2 + ONE3 + ONE4 + ONF1 + ONF2 + ONH	0.51	195.5	1.07	4.92	5.26
MA2C	**PS08(OFF1) + **PS08(OFF3) + **PS08(OFF5) + 78-cfs + RA + ONB + ONC + ONF1 + ONF2 + ONH	1.40	190	0.87	6.62	5.76

Existing / Proposed Condition Flow Summary			
Basin ID / Comb Pt	Area / Tributary Area (ac)	Q <sub>100</sub> (cfs)	Q <sub>10</sub> (cfs)
**CPS06	N/A	1045	405
*CP05	N/A	31	18
*EX10	N/A	7	4
***CP12	N/A	1158	459
**CRCP506	N/A	2538	873
**PS08	114.56	235	100
**CPS08	N/A	2582	917
**CCPS08	N/A	3762	1226

Prorated Flow Summary					
BASIN ID	Q <sub>100</sub> (cfs)	Q <sub>10</sub> (cfs)	AREA (ac)	Q <sub>100</sub> (cfs/ac)	Q <sub>10</sub> (cfs/ac)
PS08	235	100	114.6	2.05	0.87
SUBBASIN ID	Q <sub>100</sub> (cfs)	Q <sub>10</sub> (cfs)	AREA (ac)	Q <sub>100</sub> (cfs/ac)	Q <sub>10</sub> (cfs/ac)
PS08(OFF1)	19	8	9.2	2.05	0.87
PS08(OFF2)	77	33	37.5	2.05	0.87
PS08(OFF3)	84	36	40.9	2.05	0.87
PS08(OFF4)	29	12	14.2	2.05	0.87
PS08(OFF5)	1	<1	0.3	2.05	0.87
PS08(ONA)	2	1	0.8	2.05	0.87
PS08(ONB)	2	1	1.0	2.05	0.87
PS08(ONC)	2	1	0.8	2.05	0.87
PS08(OND1)	1	0.5	0.7	2.05	0.87
PS08(OND2)	1	0.5	0.7	2.05	0.87
PS08(ONE1)	1	<1	0.4	2.05	0.87
PS08(ONE2)	2.5	1	1.1	2.05	0.87
PS08(ONE3)	1	0.5	0.7	2.05	0.87
PS08(ONE4)	2	1	0.8	2.05	0.87
PS08(ONF1)	1	0.5	0.7	2.05	0.87
PS08(ONF2)	1	0.5	0.5	2.05	0.87
PS08(ONF3)	4	2	2.1	2.05	0.87
PS08(ONH)	1	0.5	0.7	2.05	0.87
PS08(RD)	2.5	1	1.1	2.05	0.87
PS08(RA)	1	<1	0.4	2.05	0.87
<b>SUBTOTAL</b>	<b>235</b>	<b>100</b>	<b>114.6</b>	-	-

NO.	REVISIONS	DATE	BY

**Kimley-Horn**  
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KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
092965012	01/05/2023	AS SHOWN	TEA	SS	RD

**OVERALL PROPOSED CONDITION DRAINAGE MAP**

**AREA 15 DISTRICT 2 PREPARED FOR NEW VEGAS HOLDING COMPANY, LLC**