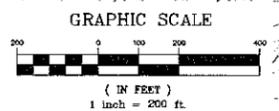
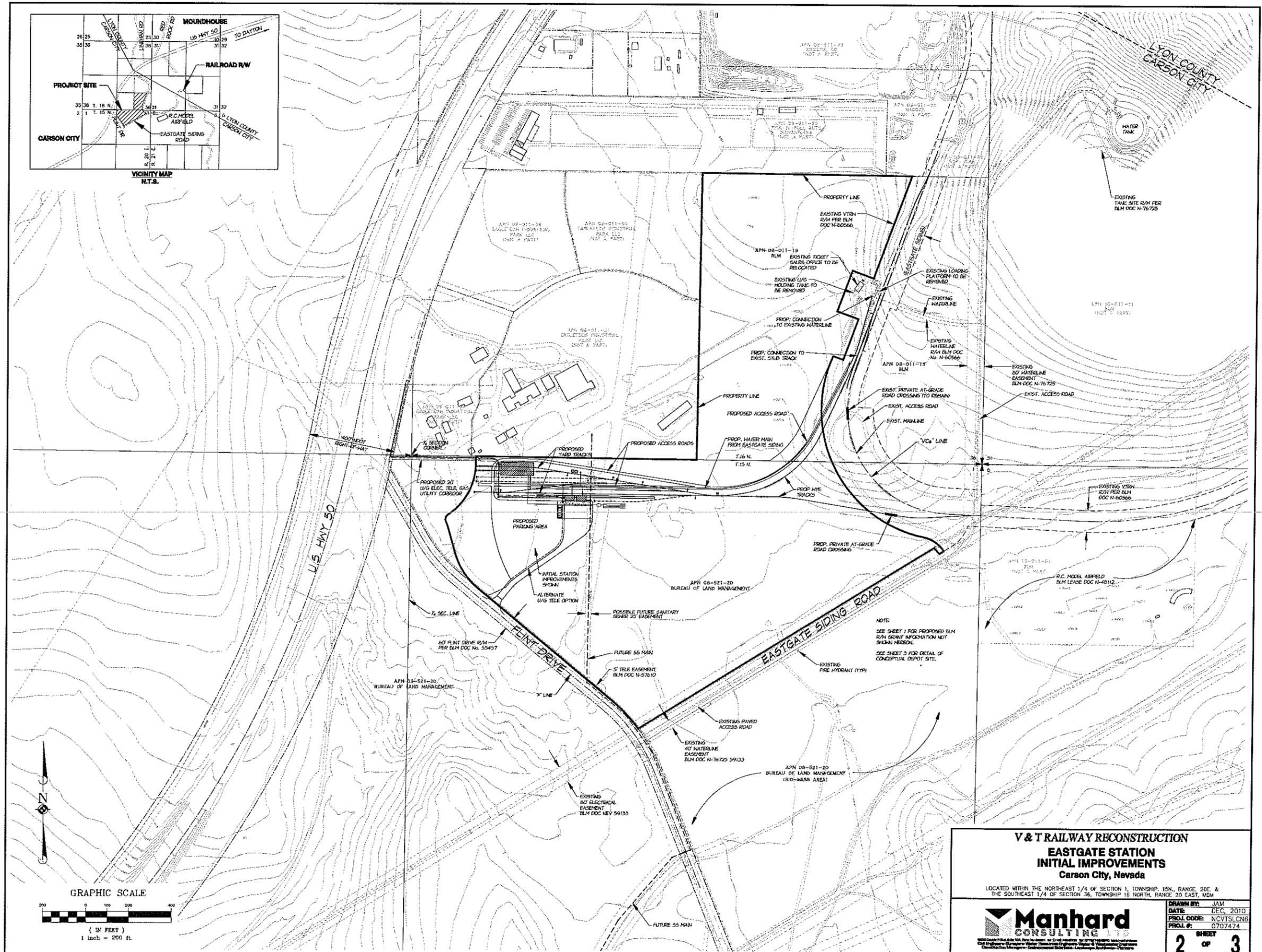
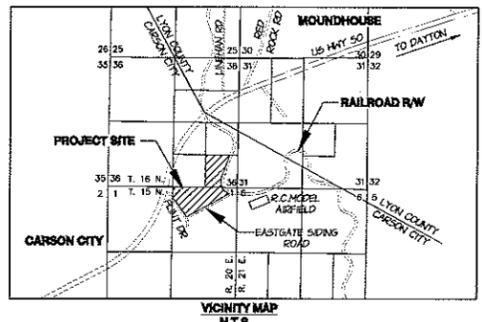


# **Appendix A:**

## **Preliminary Site Plans**

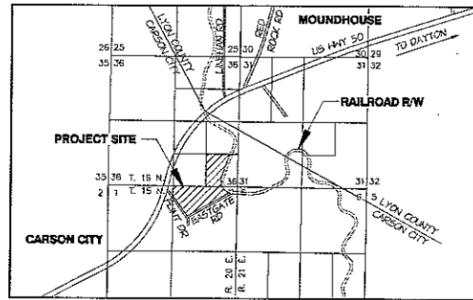
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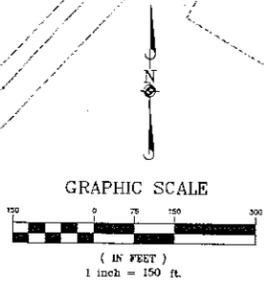
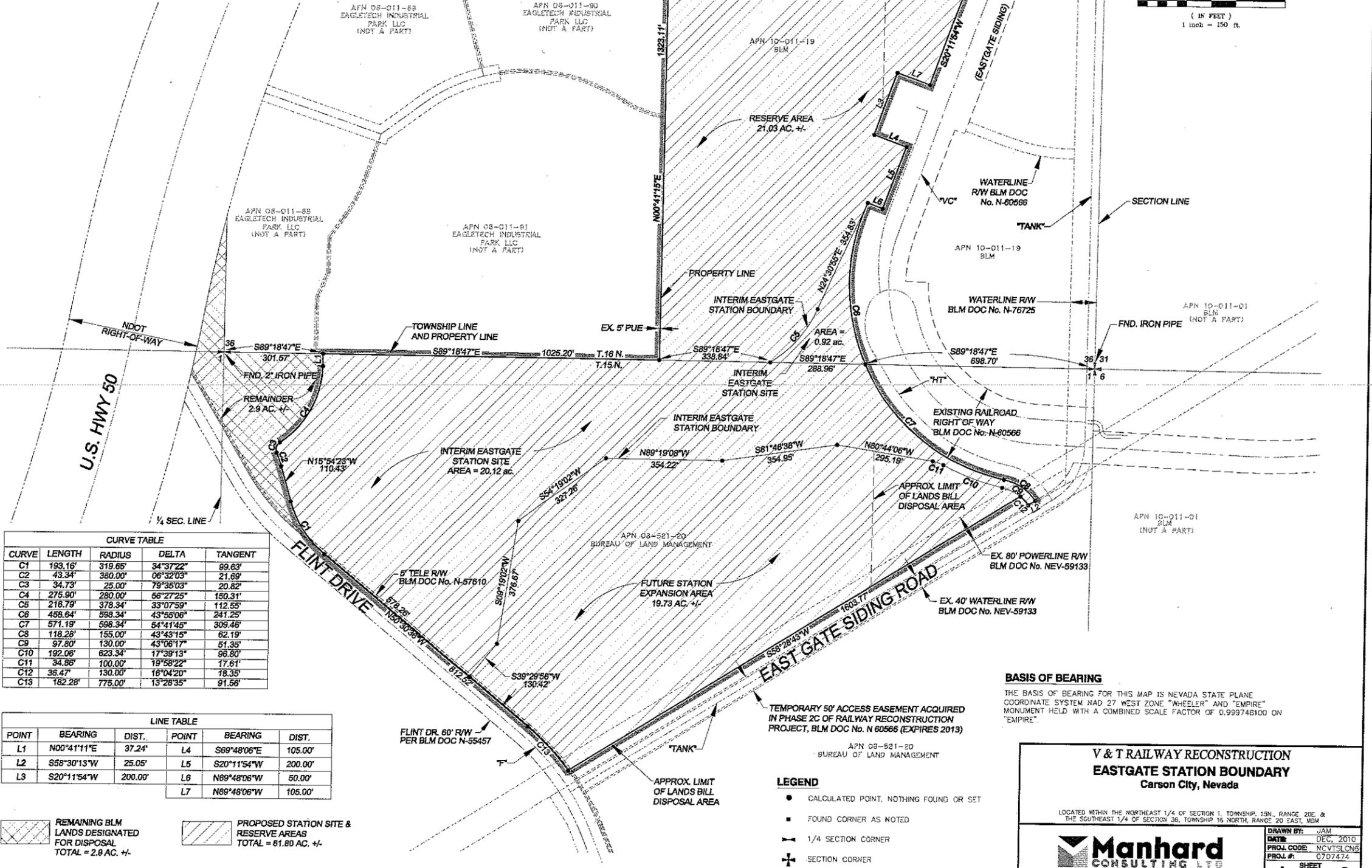
**V & T RAILWAY RECONSTRUCTION**  
**EASTGATE STATION**  
**INITIAL IMPROVEMENTS**  
**Carson City, Nevada**

LOCATED WITHIN THE NORTHEAST 1/4 OF SECTION 1, TOWNSHIP 15N., RANGE 20E. & THE SOUTHEAST 1/4 OF SECTION 36, TOWNSHIP 16 NORTH, RANGE 20 EAST, MDM

<b>Manhard CONSULTING</b>	<b>DRAWN BY:</b> JAM
<small>Manhard Consulting, Inc. is a registered professional engineering and architectural firm. It is not responsible for the accuracy or completeness of the information provided herein. The user of this information assumes all liability for its use.</small>	<b>DATE:</b> DEC, 2010
	<b>PROJ. CODE:</b> NCVTSLCNS6
	<b>PROJ. #:</b> 0707474
<b>2</b>	<b>3</b>



VICINITY MAP  
N.T.S.



CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	193.16'	319.65'	34°37'22"
C2	43.34'	380.00'	06°32'03"
C3	34.73'	25.00'	79°36'03"
C4	275.90'	290.00'	56°27'25"
C5	218.79'	378.34'	33°07'59"
C6	458.64'	598.34'	43°55'06"
C7	571.19'	598.34'	54°41'45"
C8	118.28'	155.00'	43°43'15"
C9	97.80'	130.00'	43°06'17"
C10	192.06'	623.34'	17°39'13"
C11	34.88'	100.00'	19°58'22"
C12	36.47'	130.00'	16°04'20"
C13	182.28'	775.00'	13°28'35"

LINE TABLE					
POINT	BEARING	DIST.	POINT	BEARING	DIST.
L1	N00°41'11"E	37.24'	L4	S69°48'06"E	105.00'
L2	S58°30'13"W	25.05'	L5	S20°11'54"W	200.00'
L3	S20°11'54"W	200.00'	L6	N69°48'06"W	50.00'
			L7	N69°48'06"W	105.00'

REMAINING BLM LANDS DESIGNATED FOR DISPOSAL TOTAL = 2.9 AC. +/-  
 PROPOSED STATION SITE & RESERVE AREAS TOTAL = 61.80 AC. +/-

TEMPORARY 50' ACCESS EASEMENT ACQUIRED IN PHASE 2C OF RAILWAY RECONSTRUCTION PROJECT, BLM DOC No. N 60566 (EXPIRES 2013)

- LEGEND**
- CALCULATED POINT, NOTHING FOUND OR SET
  - FOUND CORNER AS NOTED
  - ⊥ 1/4 SECTION CORNER
  - ⊕ SECTION CORNER
  - OVERALL BOUNDARY

**BASIS OF BEARING**  
 THE BASIS OF BEARING FOR THIS MAP IS NEVADA STATE PLANE COORDINATE SYSTEM NAD 27 WEST ZONE "WHEELER" AND "EMPIRE" MONUMENT HELD WITH A COMBINED SCALE FACTOR OF 0.999748100 ON "EMPIRE".

**V & T RAILWAY RECONSTRUCTION  
 EASTGATE STATION BOUNDARY  
 Carson City, Nevada**

LOCATED WITHIN THE NORTHEAST 1/4 OF SECTION 1, TOWNSHIP 15N., RANGE 20E. & THE SOUTHEAST 1/4 OF SECTION 36, TOWNSHIP 16 NORTH, RANGE 20 EAST, MDN

DRAWN BY: JAM  
 DATE: DEC, 2010  
 PROJ. CODE: NCVTSLCNS6  
 PROJ. #: 0707474  
**1** SHEET **3**

**Manhard CONSULTING**  
3800 South 1100 West, Suite 100, Provo, UT 84601-1000  
 801-733-8888  
 CMT: Engineering, Surveying, Planning, Construction Management, Environmental Sciences, Landscape Architecture, Planning







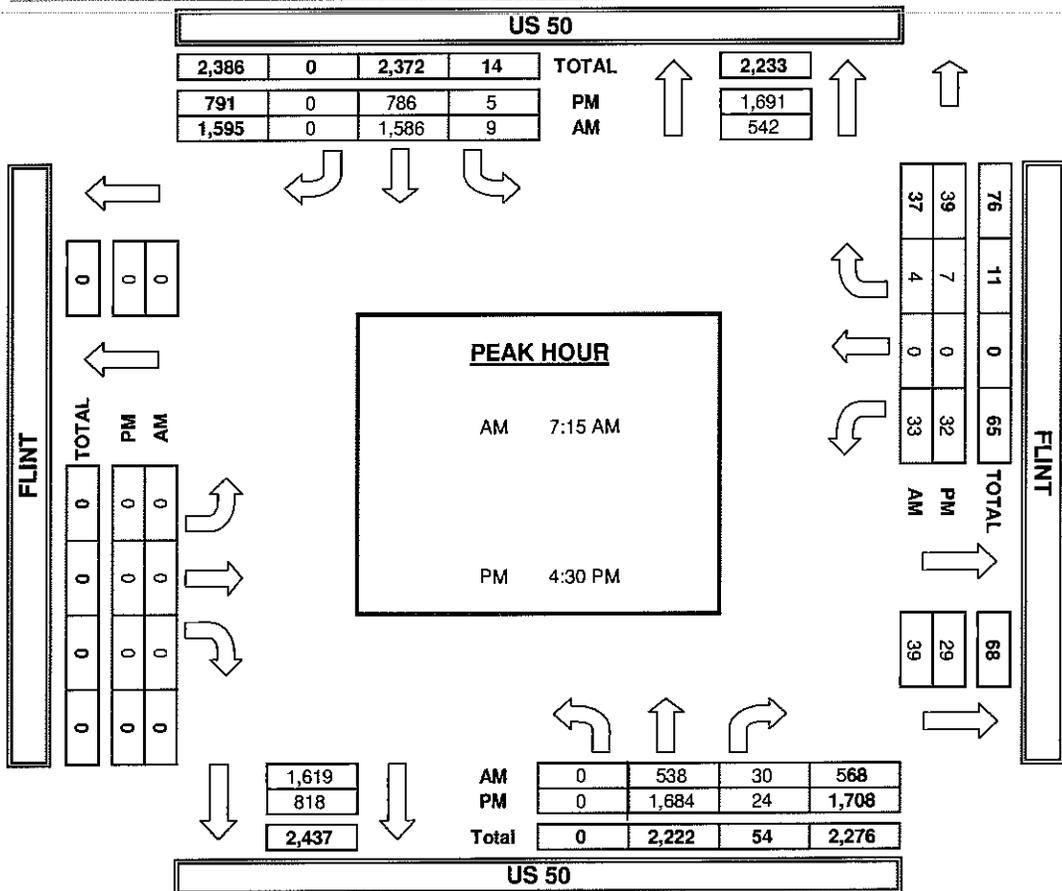
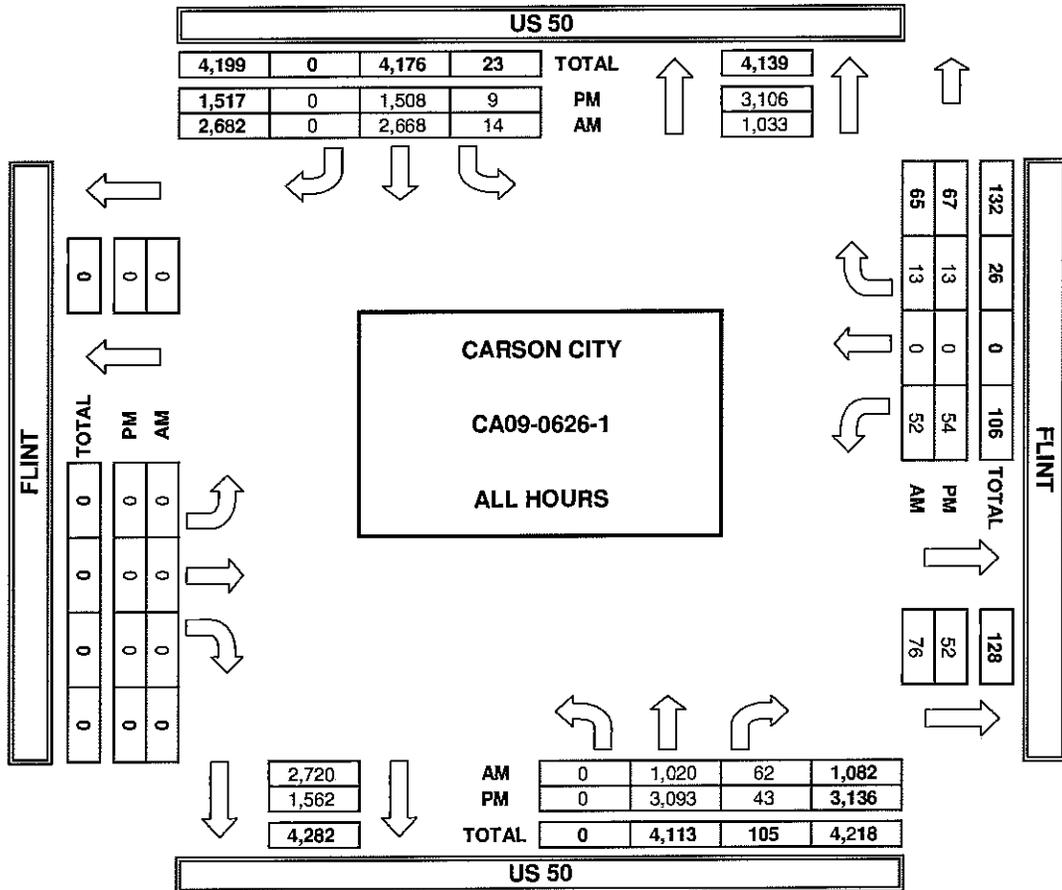


**Appendix B:**  
Traffic Count and Crash Data

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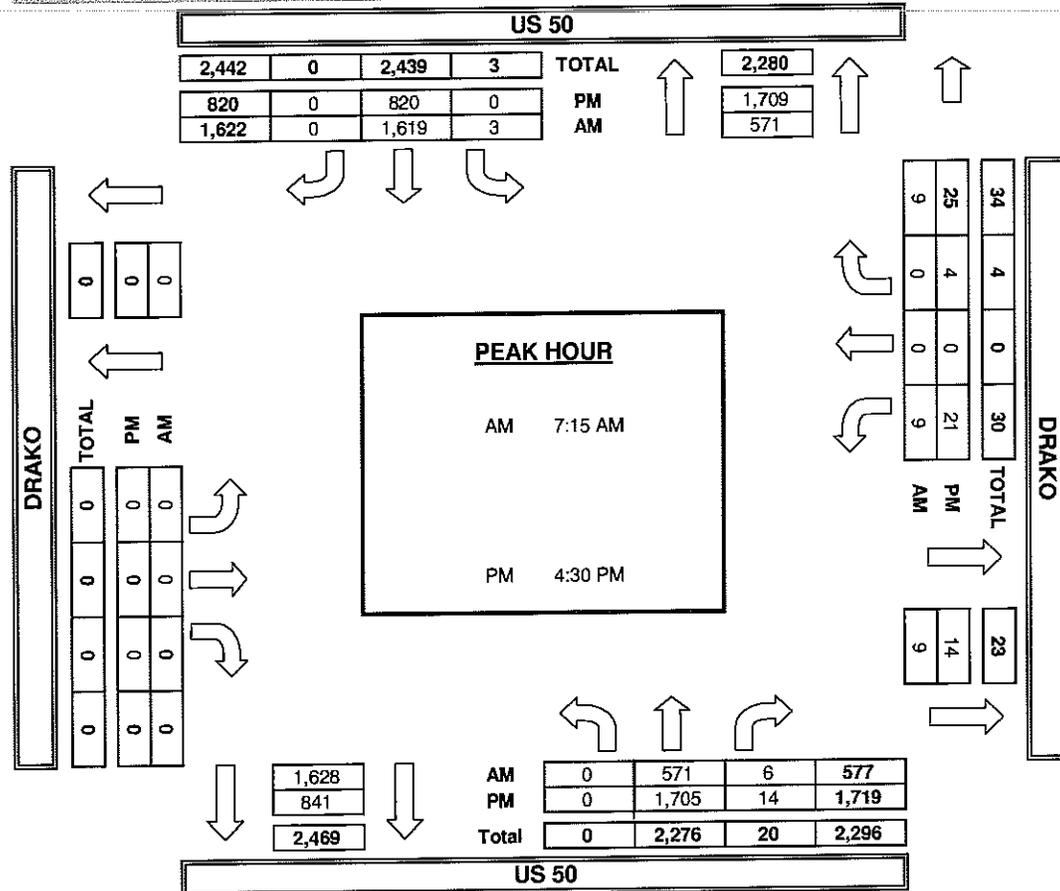
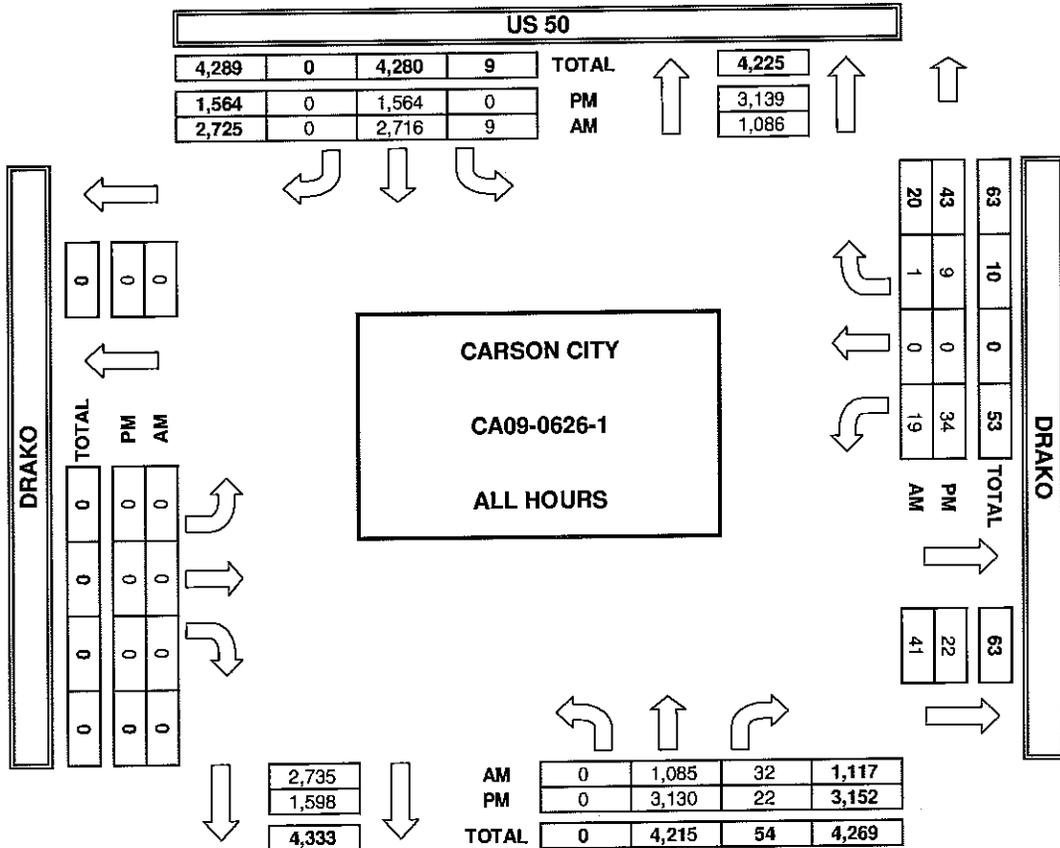


**PACIFIC TRAFFIC DATA SERVICES**  
TURNING MOVEMENT COUNTS





**PACIFIC TRAFFIC DATA SERVICES**  
TURNING MOVEMENT COUNTS



INTERSECTION DETAIL  
 US-50 @ FLINT DRIVE  
 Beginning Crash Date : '01-Jan-2006' , Ending Crash Date : '01-Jan-2009'

County: CARSON CITY

Crash_Date	Crash_Year	Crash_Time	Primary_Street	Distance_Dir	Secondary_Street	Weather	Fatalities	Injured	Property_Damage_Only	Injury_Type
19-Jun-2006	2006	05:04 PM	7001 HWY 50 EAST	150 S	FLINT	Clear	0	0	PDO	
SUM							0	0		
TOTAL CRASHES							0	0	1	

Crash_Type	Total_Vehicles	Veh_1	V1_Type	V1_Dir	V1_Lane_Num	V1_Action	V1_Driver_Factor	V1_Vehicle_Factor
Non-collision	1	1	Pickup	S	1	GOING STRAIGHT	Apparently normal	Mechanical Defects

V2_Type	V2_Dir	V2_Lane_Num	V2_Action	Factor_Nonmotor	Roadway_Factor	Lighting_Cond	Factors_Env	Accident_Num
					Dry	Daylight	None	CC20064175

NO DATA FOUND FOR US-50 @ DRAKO WAY

**Appendix C:**  
Growth Rate Calculation Data

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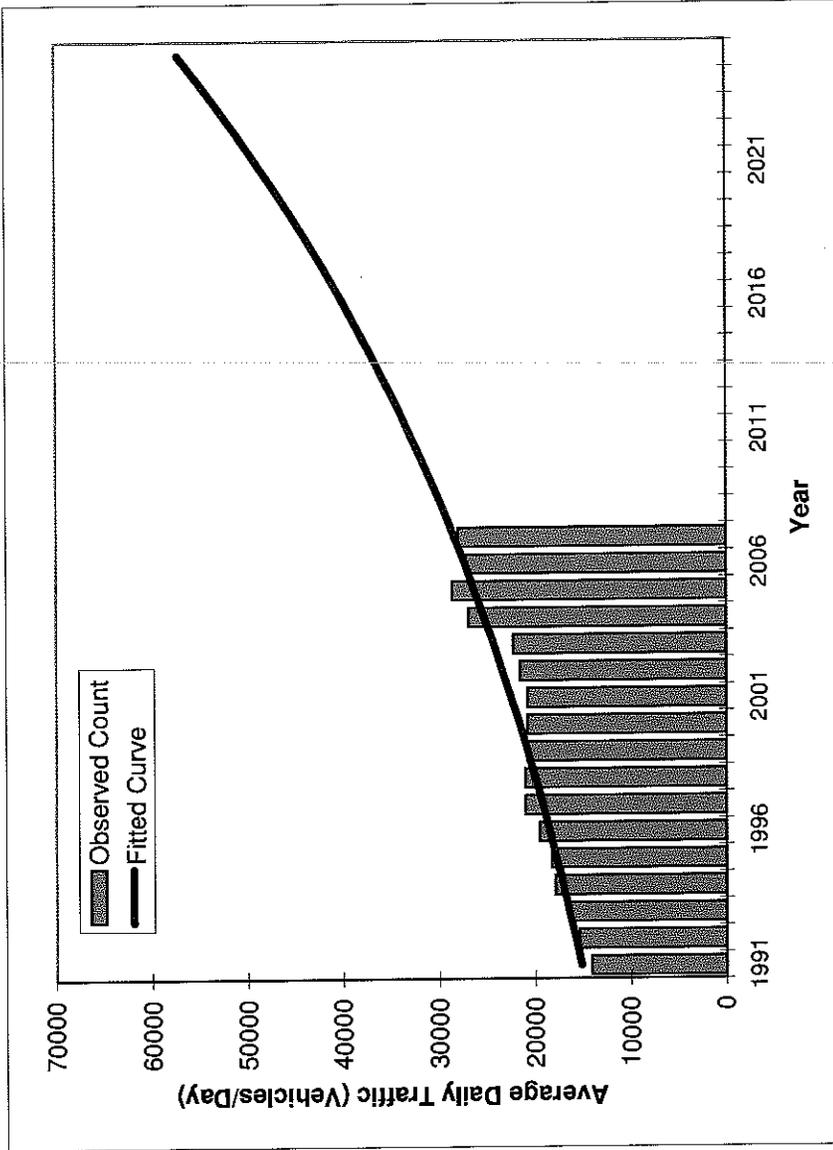
**Table 3 - Annual Average Daily Traffic at Portable Traffic Count Station**

<b>Station</b>	25-0044
<b>County</b>	Carson City
<b>Location</b>	US50, at the Carson-Lyon County line.
<b>Hourly</b>	
<b>AADT</b>	
<b>1991</b>	14050
<b>1992</b>	15400
<b>1993</b>	16545
<b>1994</b>	17900
<b>1995</b>	18330
<b>1996</b>	19500
<b>1997</b>	21000
<b>1998</b>	21000
<b>1999</b>	20800
<b>2000</b>	20800 *
<b>2001</b>	20800 *
<b>2002</b>	21600 *
<b>2003</b>	22300 *
<b>2004</b>	26900
<b>2005</b>	28600
<b>2006</b>	27200
<b>2007</b>	28000
<b>Note: * = Data Adjusted or Estimated</b>	

# TRAFFIC TRENDS

## US-50 -- Carson-Lyon County Line

<b>County:</b> <b>Station #:</b> <b>Highway:</b>	Carson City 25-0044 US-50
--	---------------------------------



Year	Traffic (ADT/AADT)	
	Count*	Trend**
1991	14100	15200
1992	15400	15800
1993	16500	16500
1994	17900	17100
1995	18300	17800
1996	19500	18500
1997	21000	19200
1998	21000	20000
1999	20800	20800
2000	20800	21600
2001	20800	22500
2002	21600	23400
2003	22300	24300
2004	26900	25300
2005	28600	26300
2006	27200	27300
2007	28000	28400
2011 Opening Year Trend		
2011	N/A	33200
2012 Mid-Year Trend		
2012	N/A	34500
2014 Design Year Trend		
2014	N/A	37300
TRANPLAN Forecasts/Trends		

<b>Trend R-squared:</b> <b>Compounded Annual Historic Growth Rate:</b> <b>Compounded Growth Rate (2007 to Design Year):</b> <b>Printed:</b>	91.9% 4.40% 4.18% 08-Jul-09
<b>Exponential Growth Option</b>	

\*Axle-Adjusted

**Appendix D:**  
Capacity Analyses Worksheets

1: Flint Dr. & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵		↑↑	↗	↖	↑↑
Volume (veh/h)	33	4	538	30	9	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	38	5	611	34	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLT		TWLT	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	632	306			645	
vC1, stage 1 conf vol	611					
vC2, stage 2 conf vol	20					
vCu, unblocked vol	632	306			645	
iC, single (s)	7.0	7.1			4.2	
iC, 2 stage (s)	6.0					
iF (s)	3.6	3.4			2.2	
p0 queue free %	92	99			99	
cM capacity (veh/h)	472	670			916	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	306	306	34	10	0	0
Volume Left	38	0	0	0	10	0	0
Volume Right	5	0	0	34	0	0	0
cSH	487	1700	1700	1700	916	1700	1700
Volume to Capacity	0.09	0.18	0.18	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	7	0	0	0	1	0	0
Control Delay (s)	13.1	0.0	0.0	0.0	9.0	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	13.1	0.0			9.0		
Approach LOS	B						

Intersection Summary			
Average Delay		0.9	
Intersection Capacity Utilization		24.9%	ICU Level of Service A
Analysis Period (min)		15	

2: Drako Way & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↑	↗	↘	↑↑
Volume (veh/h)	9	0	571	6	3	1619
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	10	0	649	7	3	1840
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1576	324			656	
vC1, stage 1 conf vol	649					
vC2, stage 2 conf vol	927					
vCu, unblocked vol	1576	324			656	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	96	100			100	
cM capacity (veh/h)	275	651			908	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	10	324	324	7	3	920	920
Volume Left	10	0	0	0	3	0	0
Volume Right	0	0	0	7	0	0	0
cSH	275	1700	1700	1700	908	1700	1700
Volume to Capacity	0.04	0.19	0.19	0.00	0.00	0.54	0.54
Queue Length 95th (ft)	3	0	0	0	0	0	0
Control Delay (s)	18.6	0.0	0.0	0.0	9.0	0.0	0.0
Lane LOS	C				A		
Approach Delay (s)	18.6	0.0			0.0		
Approach LOS	C						

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		54.8%	ICU Level of Service A
Analysis Period (min)		15	

1: Flint Dr. & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑	↔	↔	↑↑
Volume (veh/h)	32	7	1684	24	5	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	8	1830	26	5	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWTL		TWTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1841	915			1857	
vC1, stage 1 conf vol	1830					
vC2, stage 2 conf vol	11					
vCu, unblocked vol	1841	915			1857	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	66	97			98	
cM capacity (veh/h)	102	262			310	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	42	915	915	26	5	0	0
Volume Left	35	0	0	0	5	0	0
Volume Right	8	0	0	26	0	0	0
cSH	114	1700	1700	1700	310	1700	1700
Volume to Capacity	0.37	0.54	0.54	0.02	0.02	0.00	0.00
Queue Length 95th (ft)	38	0	0	0	1	0	0
Control Delay (s)	54.0	0.0	0.0	0.0	16.8	0.0	0.0
Lane LOS	F				C		
Approach Delay (s)	54.0	0.0			16.8		
Approach LOS	F						

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization		56.6%	ICU Level of Service B
Analysis Period (min)		15	

## 2: Drako Way & US-50

## HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑	↗	↘	↑↑
Volume (veh/h)	21	4	1705	14	0	820
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	4	1853	15	0	891
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWTL		TWTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2299	927			1868	
vC1, stage 1 conf vol	1853					
vC2, stage 2 conf vol	446					
vCu, unblocked vol	2299	927			1868	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	77	98			100	
cM capacity (veh/h)	98	257			307	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	27	927	927	15	0	446	446
Volume Left	23	0	0	0	0	0	0
Volume Right	4	0	0	15	0	0	0
cSH	109	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.25	0.55	0.55	0.01	0.00	0.26	0.26
Queue Length 95th (ft)	23	0	0	0	0	0	0
Control Delay (s)	48.9	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	E						
Approach Delay (s)	48.9	0.0			0.0		
Approach LOS	E						

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)		15	



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT		TT	T	T	TT
Volume (veh/h)	36	4	584	33	10	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	41	5	664	38	11	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	686	332			701	
vC1, stage 1 conf vol	664					
vC2, stage 2 conf vol	23					
vCu, unblocked vol	686	332			701	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	91	99			99	
cM capacity (veh/h)	443	644			872	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	45	332	332	38	11	0	0
Volume Left	41	0	0	0	11	0	0
Volume Right	5	0	0	38	0	0	0
cSH	457	1700	1700	1700	872	1700	1700
Volume to Capacity	0.10	0.20	0.20	0.02	0.01	0.00	0.00
Queue Length 95th (ft)	8	0	0	0	1	0	0
Control Delay (s)	13.7	0.0	0.0	0.0	9.2	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	13.7	0.0			9.2		
Approach LOS	B						

Intersection Summary							
Average Delay			1.0				
Intersection Capacity Utilization			26.1%		ICU Level of Service		A
Analysis Period (min)			15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↑	↗	↖	↑↑
Volume (veh/h)	40	5	660	37	11	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	45	6	750	42	12	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	775	375			792	
vC1, stage 1 conf vol	750					
vC2, stage 2 conf vol	25					
vCu, unblocked vol	775	375			792	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	89	99			98	
cM capacity (veh/h)	398	603			805	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	51	375	375	42	12	0	0
Volume Left	45	0	0	0	12	0	0
Volume Right	6	0	0	42	0	0	0
cSH	414	1700	1700	1700	805	1700	1700
Volume to Capacity	0.12	0.22	0.22	0.02	0.02	0.00	0.00
Queue Length 95th (ft)	10	0	0	0	1	0	0
Control Delay (s)	14.9	0.0	0.0	0.0	9.5	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	14.9	0.0			9.5		
Approach LOS	B						

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	28.2%		ICU Level of Service A
Analysis Period (min)		15	

2: Drako Way & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙↘		↑↑	↗	↖	↑↑
Volume (veh/h)	11	1	701	7	4	1987
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	12	1	797	8	5	2258
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLT		TWLT	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1935	398			805	
vC1, stage 1 conf vol	797					
vC2, stage 2 conf vol	1138					
vCu, unblocked vol	1935	398			805	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	94	100			99	
cM capacity (veh/h)	211	582			796	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	14	398	398	8	5	1129	1129
Volume Left	12	0	0	0	5	0	0
Volume Right	1	0	0	8	0	0	0
cSH	222	1700	1700	1700	796	1700	1700
Volume to Capacity	0.06	0.23	0.23	0.00	0.01	0.66	0.66
Queue Length 95th (ft)	5	0	0	0	0	0	0
Control Delay (s)	22.2	0.0	0.0	0.0	9.5	0.0	0.0
Lane LOS	C				A		
Approach Delay (s)	22.2	0.0			0.0		
Approach LOS	C						

Intersection Summary			
Average Delay		0.1	
Intersection Capacity Utilization		64.9%	ICU Level of Service C
Analysis Period (min)		15	

1: Flint Dr. & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↑	↗	↘	↑↑
Volume (veh/h)	35	8	1828	26	5	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	40	9	2077	30	6	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWTLT		TWTLT	
Median storage (veh)			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2089	1039			2107	
vC1, stage 1 conf vol	2077					
vC2, stage 2 conf vol	11					
vCu, unblocked vol	2089	1039			2107	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	46	96			98	
cM capacity (veh/h)	74	216			246	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	1039	1039	30	6	0	0
Volume Left	40	0	0	0	6	0	0
Volume Right	9	0	0	30	0	0	0
cSH	84	1700	1700	1700	246	1700	1700
Volume to Capacity	0.58	0.61	0.61	0.02	0.02	0.00	0.00
Queue Length 95th (ft)	66	0	0	0	2	0	0
Control Delay (s)	95.7	0.0	0.0	0.0	20.0	0.0	0.0
Lane LOS	F				C		
Approach Delay (s)	95.7	0.0			20.0		
Approach LOS	F						

Intersection Summary							
Average Delay			2.2				
Intersection Capacity Utilization			60.5%		ICU Level of Service		B
Analysis Period (min)			15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↑↑	↗	↘	↑↑
Volume (veh/h)	39	9	2067	29	6	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	10	2247	32	7	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2260	1123			2278	
vC1, stage 1 conf vol	2247					
vC2, stage 2 conf vol	13					
vCu, unblocked vol	2260	1123			2278	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	28	95			97	
cM capacity (veh/h)	59	189			210	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	52	1123	1123	32	7	0	0
Volume Left	42	0	0	0	7	0	0
Volume Right	10	0	0	32	0	0	0
cSH	67	1700	1700	1700	210	1700	1700
Volume to Capacity	0.77	0.66	0.66	0.02	0.03	0.00	0.00
Queue Length 95th (ft)	89	0	0	0	2	0	0
Control Delay (s)	152.9	0.0	0.0	0.0	22.7	0.0	0.0
Lane LOS	F				C		
Approach Delay (s)	152.9	0.0			22.7		
Approach LOS	F						

Intersection Summary	
Average Delay	3.5
Intersection Capacity Utilization	67.1% ICU Level of Service C
Analysis Period (min)	15

2: Drako Way & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↑↑	↗	↘	↑↑
Volume (veh/h)	26	5	2092	17	1	1006
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	28	5	2274	18	1	1093
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			TWLTL		TWLTL	
Median storage (veh)			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2823	1137			2292	
vC1, stage 1 conf vol	2274					
vC2, stage 2 conf vol	549					
vCu, unblocked vol	2823	1137			2292	
tC, single (s)	7.0	7.1			4.2	
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4			2.2	
p0 queue free %	50	97			99	
cM capacity (veh/h)	56	185			208	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	34	1137	1137	18	1	547	547
Volume Left	28	0	0	0	1	0	0
Volume Right	5	0	0	18	0	0	0
cSH	63	1700	1700	1700	208	1700	1700
Volume to Capacity	0.53	0.67	0.67	0.01	0.01	0.32	0.32
Queue Length 95th (ft)	54	0	0	0	0	0	0
Control Delay (s)	113.3	0.0	0.0	0.0	22.4	0.0	0.0
Lane LOS	F				C		
Approach Delay (s)	113.3	0.0			0.0		
Approach LOS	F						

Intersection Summary							
Average Delay			1.1				
Intersection Capacity Utilization			67.8%		ICU Level of Service		C
Analysis Period (min)			15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Volume (veh/h)	132	36	584	129	42	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	143	39	635	140	46	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			TWLT		TWLT	
Median storage (veh)			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	726	317			775	
vC1, stage 1 conf vol	635					
vC2, stage 2 conf vol	91					
vCu, unblocked vol	726	317			775	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	69	94			94	
cM capacity (veh/h)	470	678			817	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	183	317	317	140	46	0	0
Volume Left	143	0	0	0	46	0	0
Volume Right	39	0	0	140	0	0	0
cSH	598	1700	1700	1700	817	1700	1700
Volume to Capacity	0.31	0.19	0.19	0.08	0.06	0.00	0.00
Queue Length 95th (ft)	32	0	0	0	4	0	0
Control Delay (s)	14.8	0.0	0.0	0.0	9.7	0.0	0.0
Lane LOS	B				A		
Approach Delay (s)	14.8	0.0			9.7		
Approach LOS	B						

Intersection Summary			
Average Delay		3.1	
Intersection Capacity Utilization		36.8%	ICU Level of Service A
Analysis Period (min)		15	

10: Flint Dr & Access # 1

HCM Unsignalized Intersection Capacity Analysis



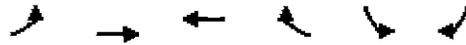
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑	↗		↘	
Volume (veh/h)	90	47	46	0	0	90
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	98	51	50	0	0	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	50				297	50
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	50				297	50
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				100	90
cM capacity (veh/h)	1537				644	1010

Direction Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	98	51	50	98
Volume Left	98	0	0	0
Volume Right	0	0	0	98
cSH	1537	1700	1700	1010
Volume to Capacity	0.06	0.03	0.03	0.10
Queue Length 95th (ft)	5	0	0	8
Control Delay (s)	7.5	0.0	0.0	8.9
Lane LOS	A			A
Approach Delay (s)	4.9		0.0	8.9
Approach LOS				A

Intersection Summary				
Average Delay		5.4		
Intersection Capacity Utilization		23.9%	ICU Level of Service	A
Analysis Period (min)		15		

20: Flint Dr & Access # 2

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Volume (veh/h)	38	9	8	0	0	38
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	10	9	0	0	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	9				101	9
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	9				101	9
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	96
cM capacity (veh/h)	1592				867	1064

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	51	9	41
Volume Left	41	0	0
Volume Right	0	0	41
cSH	1592	1700	1064
Volume to Capacity	0.03	0.01	0.04
Queue Length 95th (ft)	2	0	3
Control Delay (s)	6.0	0.0	8.5
Lane LOS	A		A
Approach Delay (s)	6.0	0.0	8.5
Approach LOS			A

Intersection Summary			
Average Delay		6.5	
Intersection Capacity Utilization		19.2%	ICU Level of Service A
Analysis Period (min)		15	

1: Flint Dr. & US-50

HCM Unsignalized Intersection Capacity Analysis



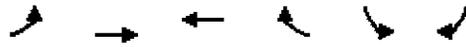
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	131	40	1828	122	37	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	142	43	1987	133	40	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			TWTLT		TWTLT	
Median storage (veh)			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2067	993			2120	
vC1, stage 1 conf vol	1987					
vC2, stage 2 conf vol	80					
vCu, unblocked vol	2067	993			2120	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	82			83	
cM capacity (veh/h)	90	244			244	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	186	993	993	133	40	0	0
Volume Left	142	0	0	0	40	0	0
Volume Right	43	0	0	133	0	0	0
cSH	110	1700	1700	1700	244	1700	1700
Volume to Capacity	1.69	0.58	0.58	0.08	0.17	0.00	0.00
Queue Length 95th (ft)	359	0	0	0	15	0	0
Control Delay (s)	414.5	0.0	0.0	0.0	22.7	0.0	0.0
Lane LOS	F				C		
Approach Delay (s)	414.5	0.0			22.7		
Approach LOS	F						

Intersection Summary			
Average Delay		33.2	
Intersection Capacity Utilization		64.5%	ICU Level of Service C
Analysis Period (min)		15	

10: Flint Dr & Access # 1

HCM Unsignalized Intersection Capacity Analysis



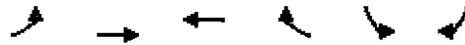
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	90	45	47	0	0	90
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	98	49	51	0	0	98
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	51				296	51
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	51				296	51
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				100	90
cM capacity (veh/h)	1536				645	1008

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	98	49	51	98
Volume Left	98	0	0	0
Volume Right	0	0	0	98
cSH	1536	1700	1700	1008
Volume to Capacity	0.06	0.03	0.03	0.10
Queue Length 95th (ft)	5	0	0	8
Control Delay (s)	7.5	0.0	0.0	9.0
Lane LOS	A			A
Approach Delay (s)	5.0		0.0	9.0
Approach LOS				A

Intersection Summary			
Average Delay		5.4	
Intersection Capacity Utilization		23.9%	ICU Level of Service A
Analysis Period (min)		15	

20: Flint Dr & Access # 2

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Volume (veh/h)	38	7	9	0	0	38
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	41	8	10	0	0	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	10				100	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	10				100	10
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	96
cM capacity (veh/h)	1590				868	1063

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	49	10	41
Volume Left	41	0	0
Volume Right	0	0	41
cSH	1590	1700	1063
Volume to Capacity	0.03	0.01	0.04
Queue Length 95th (ft)	2	0	3
Control Delay (s)	6.2	0.0	8.5
Lane LOS	A		A
Approach Delay (s)	6.2	0.0	8.5
Approach LOS			A

Intersection Summary			
Average Delay		6.6	
Intersection Capacity Utilization		19.1%	ICU Level of Service A
Analysis Period (min)		15	

1: Flint Dr. & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	148	41	660	145	47	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	168	47	750	165	53	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			TWLTL		TWLTL	
Median storage (veh)			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	857	375			915	
vC1, stage 1 conf vol	750					
vC2, stage 2 conf vol	107					
vCu, unblocked vol	857	375			915	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	59	93			93	
cM capacity (veh/h)	409	623			723	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	215	375	375	165	53	0	0
Volume Left	168	0	0	0	53	0	0
Volume Right	47	0	0	165	0	0	0
cSH	523	1700	1700	1700	723	1700	1700
Volume to Capacity	0.41	0.22	0.22	0.10	0.07	0.00	0.00
Queue Length 95th (ft)	50	0	0	0	6	0	0
Control Delay (s)	17.9	0.0	0.0	0.0	10.4	0.0	0.0
Lane LOS	C				B		
Approach Delay (s)	17.9	0.0			10.4		
Approach LOS	C						

Intersection Summary							
Average Delay			3.7				
Intersection Capacity Utilization			39.8%		ICU Level of Service		A
Analysis Period (min)			15				

2: Drako Way & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↘	↑↑	↘	↙	↑↑
Volume (veh/h)	119	37	701	115	40	1987
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	135	42	797	131	45	2258
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			TWLTTL		TWLTTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2016	398			927	
vC1, stage 1 conf vol	797					
vC2, stage 2 conf vol	1220					
vCu, unblocked vol	2016	398			927	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	31	93			94	
cM capacity (veh/h)	196	601			715	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	177	398	398	131	45	1129	1129
Volume Left	135	0	0	0	45	0	0
Volume Right	42	0	0	131	0	0	0
cSH	257	1700	1700	1700	715	1700	1700
Volume to Capacity	0.69	0.23	0.23	0.08	0.06	0.66	0.66
Queue Length 95th (ft)	114	0	0	0	5	0	0
Control Delay (s)	45.7	0.0	0.0	0.0	10.4	0.0	0.0
Lane LOS	E				B		
Approach Delay (s)	45.7	0.0			0.2		
Approach LOS	E						

Intersection Summary						
Average Delay		2.5				
Intersection Capacity Utilization		68.2%		ICU Level of Service		C
Analysis Period (min)		15				

10: Flint Dr & Access # 1

HCM Unsignalized Intersection Capacity Analysis



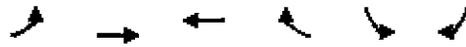
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↕		↘	
Volume (veh/h)	101	53	52	0	0	101
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	115	60	59	0	0	115
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	59				349	59
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	59				349	59
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				100	89
cM capacity (veh/h)	1526				594	998

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	115	60	59	115
Volume Left	115	0	0	0
Volume Right	0	0	0	115
cSH	1526	1700	1700	998
Volume to Capacity	0.08	0.04	0.03	0.11
Queue Length 95th (ft)	6	0	0	10
Control Delay (s)	7.6	0.0	0.0	9.1
Lane LOS	A			A
Approach Delay (s)	5.0		0.0	9.1
Approach LOS				A

Intersection Summary			
Average Delay		5.5	
Intersection Capacity Utilization		25.2%	ICU Level of Service A
Analysis Period (min)		15	

20: Flint Dr & Access # 2

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↘	
Volume (veh/h)	43	10	9	0	0	43
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	49	11	10	0	0	49
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	10				119	10
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	10				119	10
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	95
cM capacity (veh/h)	1590				842	1062

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	60	10	49
Volume Left	49	0	0
Volume Right	0	0	49
cSH	1590	1700	1062
Volume to Capacity	0.03	0.01	0.05
Queue Length 95th (ft)	2	0	4
Control Delay (s)	6.0	0.0	8.6
Lane LOS	A		A
Approach Delay (s)	6.0	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay		6.5	
Intersection Capacity Utilization		19.6%	ICU Level of Service A
Analysis Period (min)		15	

100: Access # 1 & Drako Way

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	0	0	0	0	4	0	140	0	4	140	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	0	0	0	0	5	0	159	0	5	159	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	336	331	163	331	335	159	167			159		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	336	331	163	331	335	159	167			159		
tC, single (s)	7.2	6.6	6.2	7.2	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	99	100			100		
cM capacity (veh/h)	607	581	874	615	579	878	1393			1402		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	5	159	172
Volume Left	8	0	0	5
Volume Right	0	5	0	8
cSH	607	878	1393	1402
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	1	0	0	0
Control Delay (s)	11.0	9.1	0.0	0.2
Lane LOS	B	A		A
Approach Delay (s)	11.0	9.1	0.0	0.2
Approach LOS	B	A		

Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		23.5%	ICU Level of Service A
Analysis Period (min)		15	

200: Access # 2 & Drako Way

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	LT			TH	TH	RT
Volume (veh/h)	108	0	0	32	32	108
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	123	0	0	36	36	123
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	73	36	159			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	73	36	159			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	100	100			
cM capacity (veh/h)	924	1028	1402			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	123	36	36	123
Volume Left	123	0	0	0
Volume Right	0	0	0	123
cSH	924	1402	1700	1700
Volume to Capacity	0.13	0.00	0.02	0.07
Queue Length 95th (ft)	11	0	0	0
Control Delay (s)	9.5	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.5	0.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay		3.7	
Intersection Capacity Utilization	16.7%		ICU Level of Service A
Analysis Period (min)	15		

300: Access # 3 & Drako Way

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	4	
Volume (veh/h)	29	0	0	4	4	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	33	0	0	5	5	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	26	21	38			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26	21	38			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	982	1048	1554			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	5	38
Volume Left	33	0	0
Volume Right	0	0	33
cSH	982	1554	1700
Volume to Capacity	0.03	0.00	0.02
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.8	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.9		
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↕	↷	↶	↕
Volume (veh/h)	147	45	2067	137	42	0
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	167	51	2349	156	48	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			TWLT		TWLT	
Median storage (veh)			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2444	1174			2505	
vC1, stage 1 conf vol	2349					
vC2, stage 2 conf vol	95					
vCu, unblocked vol	2444	1174			2505	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	72			72	
cM capacity (veh/h)	56	185			170	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	218	1174	1174	156	48	0	0
Volume Left	167	0	0	0	48	0	0
Volume Right	51	0	0	156	0	0	0
cSH	68	1700	1700	1700	170	1700	1700
Volume to Capacity	3.21	0.69	0.69	0.09	0.28	0.00	0.00
Queue Length 95th (ft)	Err	0	0	0	27	0	0
Control Delay (s)	Err	0.0	0.0	0.0	34.1	0.0	0.0
Lane LOS	F				D		
Approach Delay (s)	9999.0	0.0			34.1		
Approach LOS	F						

Intersection Summary			
Average Delay		788.0	
Intersection Capacity Utilization		71.9%	ICU Level of Service C
Analysis Period (min)		15	

2: Drako Way & US-50

HCM Unsignalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↑↑	↗	↙	↑↑
Volume (veh/h)	134	41	2092	125	37	1006
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	152	47	2377	142	42	1143
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		6				
Median type			TWLTTL		TWLTTL	
Median storage veh			2		2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3033	1189			2519	
vC1, stage 1 conf vol	2377					
vC2, stage 2 conf vol	656					
vCu, unblocked vol	3033	1189			2519	
tC, single (s)	6.8	6.9			4.2	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	74			75	
cM capacity (veh/h)	54	181			168	

Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	199	1189	1189	142	42	572	572
Volume Left	152	0	0	0	42	0	0
Volume Right	47	0	0	142	0	0	0
cSH	65	1700	1700	1700	168	1700	1700
Volume to Capacity	3.06	0.70	0.70	0.08	0.25	0.34	0.34
Queue Length 95th (ft)	Err	0	0	0	24	0	0
Control Delay (s)	Err	0.0	0.0	0.0	33.4	0.0	0.0
Lane LOS	F				D		
Approach Delay (s)	Err	0.0			1.2		
Approach LOS	F						

Intersection Summary			
Average Delay		509.8	
Intersection Capacity Utilization		71.9%	ICU Level of Service C
Analysis Period (min)		15	

10: Flint Dr & Access # 1

HCM Unsignalized Intersection Capacity Analysis



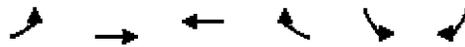
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (veh/h)	101	51	53	0	0	101
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	115	58	60	0	0	115
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60				348	60
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60				348	60
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				100	88
cM capacity (veh/h)	1524				595	997

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	115	58	60	115
Volume Left	115	0	0	0
Volume Right	0	0	0	115
cSH	1524	1700	1700	997
Volume to Capacity	0.08	0.03	0.04	0.12
Queue Length 95th (ft)	6	0	0	10
Control Delay (s)	7.6	0.0	0.0	9.1
Lane LOS	A			A
Approach Delay (s)	5.0		0.0	9.1
Approach LOS				A

Intersection Summary			
Average Delay		5.5	
Intersection Capacity Utilization		25.2%	ICU Level of Service A
Analysis Period (min)		15	

20: Flint Dr & Access # 2

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Volume (veh/h)	43	7	10	0	0	43
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	49	8	11	0	0	49
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	11				117	11
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	11				117	11
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				100	95
cM capacity (veh/h)	1588				845	1061

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	57	11	49
Volume Left	49	0	0
Volume Right	0	0	49
cSH	1588	1700	1061
Volume to Capacity	0.03	0.01	0.05
Queue Length 95th (ft)	2	0	4
Control Delay (s)	6.3	0.0	8.6
Lane LOS	A		A
Approach Delay (s)	6.3	0.0	8.6
Approach LOS			A

Intersection Summary			
Average Delay		6.7	
Intersection Capacity Utilization		19.4%	ICU Level of Service A
Analysis Period (min)		15	

100: Access # 1 & Drako Way

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (veh/h)	7	0	0	0	0	10	0	147	0	5	142	7
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	8	0	0	0	0	11	0	167	0	6	161	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	355	344	165	344	348	167	169			167		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	355	344	165	344	348	167	169			167		
tC, single (s)	7.2	6.6	6.2	7.2	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	99	100			100		
cM capacity (veh/h)	585	572	871	603	569	869	1390			1393		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	8	11	167	175
Volume Left	8	0	0	6
Volume Right	0	11	0	8
cSH	585	869	1390	1393
Volume to Capacity	0.01	0.01	0.00	0.00
Queue Length 95th (ft)	1	1	0	0
Control Delay (s)	11.2	9.2	0.0	0.3
Lane LOS	B	A		A
Approach Delay (s)	11.2	9.2	0.0	0.3
Approach LOS	B	A		

Intersection Summary			
Average Delay		0.7	
Intersection Capacity Utilization		24.4%	ICU Level of Service A
Analysis Period (min)		15	

200: Access # 2 & Drako Way

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	↑
Volume (veh/h)	108	0	0	39	34	108
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	123	0	0	44	39	123
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	83	39	161			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	83	39	161			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	87	100	100			
cM capacity (veh/h)	911	1025	1399			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	123	44	39	123
Volume Left	123	0	0	0
Volume Right	0	0	0	123
cSH	911	1399	1700	1700
Volume to Capacity	0.13	0.00	0.02	0.07
Queue Length 95th (ft)	12	0	0	0
Control Delay (s)	9.6	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	9.6	0.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay		3.6	
Intersection Capacity Utilization		16.7%	ICU Level of Service A
Analysis Period (min)		15	

300: Access # 3 & Drako Way

HCM Unsignalized Intersection Capacity Analysis



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Volume (veh/h)	29	0	0	10	5	29
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	33	0	0	11	6	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	34	22	39			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	34	22	39			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	972	1046	1552			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	33	11	39
Volume Left	33	0	0
Volume Right	0	0	33
cSH	972	1552	1700
Volume to Capacity	0.03	0.00	0.02
Queue Length 95th (ft)	3	0	0
Control Delay (s)	8.8	0.0	0.0
Lane LOS	A		
Approach Delay (s)	8.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		3.5	
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	148	41	660	145	47	1946
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	3438	1538	1719	3438
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	168	47	750	165	53	2211
RTOR Reduction (vph)	0	40	0	60	0	0
Lane Group Flow (vph)	168	7	750	105	53	2211
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Turn Type		Perm		Perm	Prot	
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	12.1	12.1	48.8	48.8	3.7	56.5
Effective Green, g (s)	12.1	12.1	48.8	48.8	3.7	56.5
Actuated g/C Ratio	0.16	0.16	0.64	0.64	0.05	0.74
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	280	250	2190	980	83	2536
v/s Ratio Prot	c0.09		0.22		0.03	c0.64
v/s Ratio Perm		0.00		0.07		
v/c Ratio	0.60	0.03	0.34	0.11	0.64	0.87
Uniform Delay, d1	30.0	27.3	6.5	5.4	35.8	7.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.6	0.0	0.4	0.2	15.0	4.5
Delay (s)	33.6	27.3	6.9	5.6	50.8	11.9
Level of Service	C	C	A	A	D	B
Approach Delay (s)	32.2		6.7			12.8
Approach LOS	C		A			B

Intersection Summary			
HCM Average Control Delay		12.4	HCM Level of Service B
HCM Volume to Capacity ratio		0.82	
Actuated Cycle Length (s)		76.6	Sum of lost time (s) 8.0
Intersection Capacity Utilization		68.7%	ICU Level of Service C
Analysis Period (min)		15	

c Critical Lane Group

2: Drako Way & US-50

HCM Signalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↑↑	↗	↙	↑↑
Volume (vph)	119	37	701	115	40	1987
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	3438	1538	1719	3438
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	135	42	797	131	45	2258
RTOR Reduction (vph)	0	37	0	43	0	0
Lane Group Flow (vph)	135	5	797	88	45	2258
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Turn Type		Perm		Perm	Prot	
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	9.1	9.1	51.0	51.0	3.4	58.4
Effective Green, g (s)	9.1	9.1	51.0	51.0	3.4	58.4
Actuated g/C Ratio	0.12	0.12	0.68	0.68	0.05	0.77
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	213	191	2322	1039	77	2659
v/s Ratio Prot	c0.08		0.23		0.03	c0.66
v/s Ratio Perm		0.00		0.06		
v/c Ratio	0.63	0.03	0.34	0.09	0.58	0.85
Uniform Delay, d1	31.6	29.3	5.2	4.2	35.4	5.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	0.1	0.1	0.0	10.8	2.7
Delay (s)	37.7	29.3	5.3	4.3	46.2	8.4
Level of Service	D	C	A	A	D	A
Approach Delay (s)	35.7		5.1			9.1
Approach LOS	D		A			A

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	75.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↷	↕	↷	↶	↕
Volume (vph)	147	45	2067	137	42	965
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	3438	1538	1719	3438
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	167	51	2349	156	48	1097
RTOR Reduction (vph)	0	44	0	46	0	0
Lane Group Flow (vph)	167	7	2349	110	48	1097
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Turn Type		Perm		Perm	Prot	
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	13.2	13.2	63.8	63.8	3.7	71.5
Effective Green, g (s)	13.2	13.2	63.8	63.8	3.7	71.5
Actuated g/C Ratio	0.14	0.14	0.69	0.69	0.04	0.77
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	252	225	2366	1059	69	2652
v/s Ratio Prot	c0.09		c0.68		c0.03	0.32
v/s Ratio Perm		0.00		0.07		
v/c Ratio	0.66	0.03	0.99	0.10	0.70	0.41
Uniform Delay, d1	37.6	34.2	14.2	4.9	43.9	3.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.4	0.1	16.9	0.2	26.2	0.5
Delay (s)	44.1	34.3	31.1	5.0	70.2	4.0
Level of Service	D	C	C	A	E	A
Approach Delay (s)	41.8		29.5			6.8
Approach LOS	D		C			A

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	92.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

2: Drako Way & US-50

HCM Signalized Intersection Capacity Analysis



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↵	↗	↑↑	↗	↵	↑↑
Volume (vph)	134	41	2092	125	37	1006
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	1583	3438	1538	1719	3438
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	1583	3438	1538	1719	3438
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	152	47	2377	142	42	1143
RTOR Reduction (vph)	0	41	0	37	0	0
Lane Group Flow (vph)	152	6	2377	105	42	1143
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Turn Type		Perm		Perm	Prot	
Protected Phases	8		2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	13.3	13.3	74.1	74.1	3.7	81.8
Effective Green, g (s)	13.3	13.3	74.1	74.1	3.7	81.8
Actuated g/C Ratio	0.13	0.13	0.72	0.72	0.04	0.79
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	228	204	2471	1105	62	2728
v/s Ratio Prot	c0.09		c0.69		c0.02	0.33
v/s Ratio Perm		0.00		0.07		
v/c Ratio	0.67	0.03	0.96	0.09	0.68	0.42
Uniform Delay, d1	42.8	39.3	13.2	4.4	49.1	3.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.2	0.1	11.2	0.2	25.5	0.5
Delay (s)	50.0	39.3	24.4	4.5	74.6	3.8
Level of Service	D	D	C	A	E	A
Approach Delay (s)	47.4		23.3			6.3
Approach LOS	D		C			A

**Intersection Summary**

HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	103.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

## APPENDIX D

# PROGRAMMATIC AGREEMENT

**PROGRAMMATIC AGREEMENT AMONG  
THE FEDERAL HIGHWAY ADMINISTRATION,  
BUREAU OF LAND MANAGEMENT,  
AND NEVADA STATE HISTORIC PRESERVATION OFFICE,  
REGARDING RECONSTRUCTION OF THE V&T RAILWAY**

WHEREAS, the U. S. Department of Transportation, Federal Highway Administration (FHWA) proposes to provide financial assistance to the Nevada Department of Transportation (NDOT) for implementation of the Virginia and Truckee (V&T) Railway Reconstruction Project (the Undertaking), between Carson City and Gold Hill, Nevada; and,

WHEREAS, portions of the Undertaking will occur within a right of way issued by the Bureau of Land Management, Carson Field Office (BLM), or on public lands administered by the BLM; and,

WHEREAS, the FHWA and the BLM, federal agencies responsible for compliance with Section 106 of the National Historic Preservation Act (NHPA), as amended [16 U.S.C. Section 470 (f)], have determined that the Undertaking may have an effect on properties included in or eligible for inclusion in the National Register of Historic Places (NRHP), and have consulted with the Nevada SHPO pursuant to 36 CFR 800 regulations implementing Section 106 of the National Historic Preservation Act; and,

WHEREAS, this Agreement covers planning and construction of the Undertaking including, but not limited to, the railroad grade, depot sites, access roads, crossings, staging areas, lay down areas, and any and all ancillary facilities; and,

WHEREAS, the Advisory Council on Historic Preservation (ACHP), the NDOT, the certified local governments of Carson City and Storey County, and the Nevada Commission for the Reconstruction of the V&T Railway (the Applicant) have been invited to participate in this consultation and to concur in this Programmatic Agreement; and,

WHEREAS, the ACHP, Carson City, and Storey County have declined participation as concurring parties;

NOW, THEREFORE, the Consulting parties agree that the Undertaking shall be administered in accordance with the following stipulations to ensure that historic properties are treated so as to avoid or mitigate effects to the extent practicable, regardless of surface ownership, and to satisfy the FHWA, the BLM, and the SHPO that all aspects of the Undertaking shall be administered in accordance with stipulations that satisfy Section 106 responsibilities.

## **STIPULATIONS**

### **A. DESCRIPTION OF THE UNDERTAKING**

The Virginia & Truckee (V&T) Railroad was constructed in 1869 to serve the booming Comstock mining region and its towns of Virginia City, Gold Hill, and Silver City. Materials were shipped into the area via the railroad, and it was also used to ship ore to mills located along the Carson River. With a decline in mining activities, the V&T Railroad declined and the portion between Carson City and Virginia City eventually stopped running in the late 1930s. Track was removed during World War II.

The overall scope of the Virginia & Truckee Railway Reconstruction Project involves the phased rebuilding of approximately 17-miles of track and infrastructure from Gold Hill to eastern Carson City, Nevada (see Attachment A). When completed and linked to the existing 2-mile long railroad

running from Virginia City to Gold Hill (see Attachment B), the railroad will provide a 19-mile long tourist attraction to be enjoyed by visitors and Nevada residents alike.

## **B. AREA OF POTENTIAL EFFECT**

1. An initial Area of Potential Effect (APE) shall be defined as a 200-foot wide corridor centered on the existing railroad grade. This is coincident with the area inventoried by NDOT in 2000 and documented in a report entitled "An Archaeological Survey of the Virginia and Truckee Railroad Grade from Empire to Gold Hill, Nevada" (NDOT Survey).
2. A phase-specific APE shall be defined that includes all potential direct and indirect effects to cultural resources from any activities associated with that phase of the Undertaking. When defining the phase-specific APE, the following matters shall be taken into consideration:
  - a. A 100-foot wide corridor centered on construction-related access roads leading to the railroad grade corridor shall be included in the APE.
  - b. Staging areas, equipment storage areas, material lay down areas, depot areas, and maintenance areas shall be included in the APE. These APE elements shall incorporate the area itself plus a buffer at least 100 feet wide around the perimeter of the area.
  - c. Should a project-related drainage improvement extend outside limits of the railroad grade corridor, then that extension shall be included in the APE. A 100-foot wide corridor centered on the drainage improvement extension will be so included.
  - d. The APE shall be extended outward in areas where new or substantially modified cut slopes, fill slopes, surface clearings, and/or other improvements would be clearly visible from nearby properties potentially eligible for listing on the National Register of Historic Places based on significance criteria A, B, or C. The extent of any such "bulges" will depend on the magnitude and visibility of the proposed improvement. Such bulges shall extend no further than one mile from the limit of the proposed improvement.
  - e. All areas where surface disturbance is proposed in association with the Undertaking will be included in the APE, regardless of surface ownership.
3. The FHWA and the BLM shall consult with the SHPO regarding the definition of a phase-specific APE.
4. At the discretion of the FHWA and the BLM, a phase-specific APE may be amended. Areas included by amendment will be addressed in a manner consistent with terms of this Agreement.

## **C. AGENCY RESPONSIBILITIES**

1. The parties to this Agreement agree that the FHWA will be the Lead Federal Agency responsible for implementing the Agreement. In that capacity, the FHWA shall be responsible for ensuring that the consulting parties carry out their individual responsibilities; overseeing all cultural resources work; assembling all submissions to the SHPO, including reports, determinations of eligibility and effect, and treatment and data recovery plans; and for seeking SHPO concurrence in all compliance matters.
2. The FHWA, in consultation with the BLM, shall involve the public, identify other consulting parties and Tribes pursuant to 36 CFR 800.3(e) and (f), and involve them, as appropriate, in all activities associated with the Undertaking. FHWA, in consultation with BLM, shall consult with

Tribes to identify properties of religious and cultural importance located on lands that may be affected by the Undertaking. NDOT may assist FHWA in this activity.

3. The BLM shall make all decisions regarding activities that occur on BLM lands including, but not limited to, determining limits of the APE, inventory and resource recordation standards, determining the adequacy of inventories, developing National Register eligibility evaluations, assessing project effects, and determining the need for and nature of required treatment. The FHWA shall assume similar responsibilities for all non-BLM portions of the project area.
4. Federal funding provided by the FHWA will be administered through NDOT as a Stewardship Project. In such a project, the Applicant (a local governmental entity) assumes an increased role in the inception, coordination, and conduct of cultural resource activities. A Cultural Resource Consultant (CRC) often aids them in this effort. With regard to the Undertaking, the FHWA, the BLM, and the SHPO recognize that the applicant and their CRC will work closely with the FHWA and the BLM to determine phase-specific APE boundaries, determine the need for and extent of inventories, make determinations of eligibility, make determinations of effect, determine treatment needs, facilitate the coordination of cultural resource activities, distribute information and/or reports to reviewers, and other activities agreed upon by the signatories of this Agreement.
5. Any reference to ACHP regulation herein will be to 36 CFR 800 (effective August 5, 2004).

#### **D. IDENTIFICATION**

The NDOT prepared an inventory in 2000 entitled "An Archaeological Survey of the Virginia and Truckee Railroad Grade from Empire to Gold Hill, Nevada" (NDOT Survey). The NDOT Survey examined a 200-foot wide corridor centered on the existing railroad grade, a similar corridor along an alternate alignment in the Mound House area, and two alternate depot locations. The NDOT Survey also contained results of an archives search, a discussion of the environmental setting, and a historic context that addressed prehistoric, ethnographic, and historic periods.

1. The need for additional inventory level activities shall be assessed on a phase-specific basis. Factors taken into consideration when determining the need for additional inventory will include the following:
  - a. An archives search will be prepared for the phase-specific APE. This activity is intended to update the NDOT Survey. As necessary, the historic context contained in the NDOT Survey will be expanded to incorporate the types of resources encountered in a phase-specific inventory. Based on results of the archives search, the FHWA and BLM, in consultation with the SHPO, will determine phase-specific inventory needs.
  - b. All areas within a phase-specific APE that have not been inventoried previously will be the subject of an intensive pedestrian archaeological inventory conducted to current BLM and SHPO standards.
  - c. The need for an architectural inventory will be determined based on an examination of the APE, county assessor's data, and site reviews. The Applicant or their CRC will prepare documentation sufficient to determine the need for and extent of any such inventory. Based on review of that documentation, the FHWA and BLM, in consultation with the SHPO, will determine phase-specific inventory needs. If it is determined that such an inventory is needed, it will be conducted to current SHPO standards.
  - d. "Bulges" in the APE reflect areas in which historic property may experience visual impacts to integrity of setting. The phase-specific archives search will serve as the basis for determining whether any such properties are present within any given APE "bulge."

- e. Identification efforts will be completed regardless of ownership (public or private) of the lands involved and the Applicant shall be responsible for gaining access to privately held lands. The Applicant's failure to gain access to private lands will result in a determination of adverse effect for the Undertaking.
2. Documentation for previously recorded sites revisited during an inventory effort will be updated.
  3. Isolated artifacts and features will not be given site numbers. They will be assigned a sequential number, their location will be noted on a map, and they will be included in a table in the text of the report. Nevada short forms may be used to document non-diagnostic resources. A non-diagnostic resource may be a prehistoric or historic period resource that lacks depositional, temporal, or structural physical content such that its data content can be captured during initial recordation. All other resources will be recorded on IMACS long forms.
  4. Non-linear sites extending out of a prescribed survey area will be examined in their entirety with the exception of very large sites (greater than four acres in area) such as town sites, mining complexes, continuous stream terrace sites, or prehistoric quarries.
  5. Linear resources (i.e., road, trail, ditch, etc.) crossing and extending outside the APE will be divided into three groups:
    - a. Roads or linear features that are not mentioned in BLM Field Office records or included on General Land Office maps, that do not contain associated features or dateable artifacts, or that have lost all integrity through extensive blading. Linear features that fall into this category will not be recorded.
    - b. Roads, linear features or other resources mentioned on General Land Office maps but which are not associated with features or dateable artifacts and do not appear to be significant on the basis of known archival data will be treated as "isolated road segments." Linear features that fall into this category will be recorded in tabular form. Collected data will include at least two (2) GPS points, one at each end of the linear feature within the APE.
    - c. Roads or linear features mentioned on General Land Office maps (especially named roads) or known from other archival data to be potentially significant, or which have associated features or dateable artifacts will be recorded on short or long site forms depending on the complexity of the site.
  6. No artifact will be field collected during inventory unless it is an unusual artifact with individual intrinsic value. Collection from federal lands shall not occur without prior permission by the BLM. Any collected items will be cataloged and curated in an approved Nevada facility, in a manner consistent with Stipulation M(6) of this Agreement.

## **E. EVALUATION**

1. The FHWA and the BLM, in consultation with the SHPO, shall ensure that all cultural resources located within the phase-specific APE are evaluated for eligibility to the National Register of Historic Places prior to the initiation of activities that may affect those cultural properties.
2. Portions of the Undertaking are located within the Virginia City National Historic Landmark. The state recognized Comstock State Historic District includes the Landmark and some additional areas. Finally, some portions of the Undertaking lie outside the boundaries of the Landmark and the state's historic district. Some cultural resources fall discretely into one of these spatial units.

Others, especially linear resources, can extend across one, two, or all three spatial units. For purposes of this Agreement, the following conditions shall apply:

- a. When a historic period resource is located within the Virginia City National Historic Landmark, emphasis will be placed on determining whether that resource is a contributing element to the Landmark at large.
  - b. When a historic period resource is located outside the Virginia City National Historic Landmark, emphasis will be placed on determining whether the resource is eligible to the National Register of Historic Places, individually or as part of a district.
  - c. When a linear historic period resource is located, parts of which are within and outside of the Virginia City National Historic Landmark, a determination will be made as to whether the resource relates to activities centrally associated with the Landmark. If so, emphasis will be placed on determining whether that resource is a contributing element to the Landmark at large. If such a determination cannot be made, emphasis will be placed on determining whether the resource is individually eligible to the National Register of Historic Places.
  - d. Regardless of where a prehistoric period resource is located, emphasis will be placed on determining whether the resource is eligible to the National Register of Historic Places, individually or as part of a district.
3. To the extent practicable, eligibility determinations will be based on inventory information. When the determination of a site's National Register eligibility is dependent upon intact subsurface deposits and eligibility cannot be determined without testing, auger and shovel tests may be employed during the inventory.
  4. If the information gathered during inventory (including probe data) is inadequate to determine eligibility, the Applicant, through its CRC may conduct limited subsurface testing, or employ other evaluative techniques, to determine eligibility. Subject to approval by the FHWA (non-BLM lands) or the BLM (agency-administered lands), and in consultation with the SHPO, evaluative testing is intended to provide the minimum data necessary to make final evaluations of eligibility, and to devise treatment options responsive to the information potential of the property. Any such testing shall be limited to disturbing no more than 20% of the surface area of the resource.
  5. Any items collected during site probing or subsurface testing will be cataloged and curated in an approved Nevada facility, in a manner consistent with Stipulation M(6) of this Agreement.

## **F. FHWA - SHPO CONSULTATION**

1. Consultation regarding project effects is most likely to occur on a phase-specific basis. The FHWA shall be responsible for the submission of phase-specific consultation packages to the SHPO. Items to be addressed in a phase-specific consultation submittal include the following:
  - a. Description of all work scheduled to be completed as part of the phase, including the identification of access roads, staging areas, material and equipment storage areas, and any other disturbance areas incidental to that phase of the project.
  - b. Phase-specific APE delineation, including justification.
  - c. A listing of inventory work that has been completed that relates to that phase of the project.

- d. Copies of inventory reports not previously reviewed by the SHPO must be included as a part of the submittal.
  - e. The BLM shall make determinations of eligibility for all cultural resources located on agency-administered lands within the APE, to the extent that those resources have not been evaluated previously. The FHWA shall make determinations of eligibility for all cultural resources located on non-BLM administered lands within the APE, to the extent that those resources have not been evaluated previously.
  - f. A summary of contacts with the public, consulting parties, and Tribes carried out by the FHWA and the BLM as part of the phase-specific work.
  - g. The BLM shall make a determination of effect for portions of the APE located on agency-administered lands. The FHWA shall make a determination of effect for portions of the APE located on non-BLM administered lands.
  - h. As necessary, the FHWA and the BLM shall include a treatment plan, the purpose of which is to address project related impacts to historic properties.
2. The FHWA, the BLM, and the SHPO shall provide a copy of all consultation related correspondence to the other signatories.

## **G. TREATMENT OF HISTORIC PROPERTIES**

1. To the extent practicable, the FHWA and the BLM, in consultation with the SHPO, will ensure that the Applicant avoids effects to historic properties through project design, redesign, relocation of facilities, or by other means.
2. When avoidance is not feasible, the FHWA and the BLM, in consultation with the SHPO, the Applicant, identified Tribes, and interested persons, shall ensure that the Applicant develops an appropriate treatment or data recovery plan designed to lessen or mitigate project-related effects to historic properties.
3. For properties eligible under Criteria (a) through (c) (36 CFR 60.4), mitigation other than data recovery may be considered in a treatment plan. That mitigation may include, but is not limited to, activities such as HABS/HAER recordation, oral histories, historic markers, exhibits, and/or interpretive brochures or publications.
4. When data recovery is proposed, the FHWA and the BLM, in consultation with the SHPO, shall ensure that a data recovery plan is developed and implemented that is consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 CFR 44716-37) and *Treatment of Historic Properties: A Handbook* (ACHP 1980).
5. If engineering related historic properties located within the Virginia City National Historic Landmark that contribute to the significance of the Landmark will be impacted, the FHWA and BLM shall ensure that the SHPO and the National Park Service are consulted to determine the nature and level of treatment required. Those requirements will be incorporated into the phase-specific treatment plan.
6. Historic properties within the APE but outside of disturbance areas that are potentially eligible under criteria A, B, and/or C will be identified based on a review of existing literature. Where possible, visual impacts to identified properties will be mitigated to BLM Visual Resource Management (VRM) Class II standards (substantially unnoticeable). If this standard is achieved,

the effect will not be considered adverse. Treatment measures will be identified in the phase-specific treatment plan.

7. Upon completion of the consultation process, the FHWA and the BLM shall ensure that the Applicant, through its CRC, implements fieldwork portions of the treatment plan prior to initiating any activities that may affect historic properties scheduled for treatment.

## **H. REPORTING**

1. The FHWA and the BLM shall ensure that the Applicant, through the CRC, produces all necessary reports. Several types of reports may be produced as a result of the Undertaking: cultural resource inventory reports, testing plans, discovery plans, and reports to document discovery situations, treatment plans, and reports that document results of treatment activities.
2. The Applicant shall prepare phase-specific treatment reports, and a summary report at the end of the Undertaking. A draft of each treatment report shall be provided to the FHWA, the BLM, and SHPO for their technical review. Reviewers shall have a 30-day period in which to provide comments on the draft report. FHWA may, at its discretion, provide a copy of the treatment plan to other agencies or consulting parties for their review. The FHWA and BLM will ensure that reviewer's comments are incorporated into the treatment report(s), as appropriate. The FHWA and BLM will determine the number of final treatment reports prepared for distribution.
3. The FHWA and BLM shall ensure that reports of mitigation efforts are completed in a timely manner and conform to the Department of Interior's Formal Standards for Final Reports of Data Recovery Program (42 CFR 5377-79).
4. The FHWA shall ensure that all final reports resulting from actions pursuant to this Agreement are provided to consulting parties, Tribes, and interested parties. All such reports shall be prepared consistent with contemporary professional standards, and the Secretary's Standards for Final Reports of Data Recovery Programs (48FR 44716-44740).

## **I. MONITORING**

1. The FHWA, the BLM, and the SHPO may monitor activities carried out pursuant to this Agreement. The FHWA, the BLM, and SHPO may coordinate their monitoring and review responsibilities.
2. The Applicant's contractor and the NDOT will provide construction management during each phase of the Undertaking. Prior to initiating any activities within a phase-specific APE, the Applicant shall provide the FHWA, the BLM, the NDOT, and the contractor with a list of persons empowered to halt construction activities in a discovery situation, and the name of those responsible for notifying the FHWA and the BLM of any such discovery. Persons empowered to halt construction will be advised by the FHWA and the BLM as to what conditions would constitute a discovery and what areas have the highest sensitivity for such discoveries. The FHWA and the BLM shall ensure that persons empowered to halt construction are provided sufficient training to recognize resources and conditions that would constitute a discovery. If a discovery situation is determined to exist, compliance with Stipulation K of this Agreement shall be necessary.
3. A phase-specific treatment plan may identify the need for location specific monitoring. Location specific monitoring may take the following forms.
  - a. The placement of physical barriers (using flagging tape, paint, barriers and other forms) intended to protect a resource. Any such barrier shall be routinely monitored and repaired as

necessary. The condition of the resource also shall be monitored. If it is determined that the physical barriers are not providing sufficient protection, The FHWA or the BLM, depending on land status, shall ensure that work within 100 feet of the resource is halted, and that an appropriate treatment plan is developed and implemented.

- b. The presence of a monitor at specific locations during specified construction activities. It is understood by all parties to this Agreement that the monitor is empowered to stop all work at the specified location. No construction activities shall occur at the specified location unless the monitor is present. The designated monitor will be advised by the FHWA or the BLM, depending on land status, as to what conditions would justify issuance of a stop work order. If such an order is issued to the contractor, the monitor shall contact the FHWA or the BLM immediately. The FHWA or the BLM, depending on land status, shall ensure that work within 100 feet of the resource is halted, and that an appropriate treatment plan is developed and implemented.
4. Details regarding the location and type of monitoring activities will be provided as part of the phase-specific treatment plan. Results of monitoring activities will be presented as part of the phase-specific treatment report.

## **J. NOTICES TO PROCEED**

1. Notices to Proceed (NTP) for activities on public lands will be issued by the BLM. NTPs for activities on non-BLM administered lands will be issued by the FHWA. An NTP will be issued to the Applicant for individual phases of the Undertaking under the following conditions:
  - a. The appropriate agency and the SHPO have determined that there are no cultural resources within the APE for the construction segment; or,
  - b. The appropriate agency and the SHPO have determined that there are no historic properties within the APE for the construction segment; or,
  - c. The appropriate agency, after consulting with the SHPO and interested persons, has implemented an adequate treatment plan for the construction segment; and,
    - 1) The fieldwork phase of the treatment plan has been completed;
    - 2) The appropriate agency has accepted a summary description of the fieldwork performed and a reporting schedule for that work; and,
    - 3) The Applicant has provided the appropriate agency with an assurance that sufficient funds have been allocated for post-fieldwork costs of the treatment plan.

## **K. DISCOVERY SITUATIONS**

1. When previously unknown cultural resources are discovered, or known historic properties are affected in an unanticipated manner, Undertaking related activities within 100 feet of the discovery will cease immediately and the Applicant shall notify the appropriate land-managing agency (BLM or FHWA).
2. The contacted agency shall notify the SHPO, and shall consider their comments regarding the discovery. Within two working days of the discovery, the contacted agency shall notify the Applicant, the SHPO, identified Tribes, and identified interested persons of its decision to either allow Undertaking related activities to proceed or to require mitigation.

3. Communication regarding discovery situations can be facilitated through alternative means (fax transmittals, e-mail, telephone, and hand delivery of correspondence). Copies of original written documentation shall be included in the final report documenting the discovery situation.
4. If, in consultation with the SHPO, the contacted agency determines that mitigation is appropriate, that agency shall solicit comments from the SHPO regarding appropriate mitigating measures. The SHPO and other interested persons, as appropriate, will be allowed two working days to provide the contacted agency with comments to be considered when the agency makes a decision on the extent of mitigative efforts. The agency will determine the mitigation required within seven working days of notifying the Applicant of the need for mitigation. The agency shall notify the SHPO, identified Tribes, and interested persons of its decision and shall ensure that the mitigative actions are implemented.
5. The FHWA and the BLM shall ensure that reports of mitigation efforts for discovery situations are completed in a timely manner and conform to the Department of Interior's Formal Standards for Final Reports of Data Recovery Program (42 CFR 5377-79). Drafts of such reports shall be submitted to the SHPO for a 30-day review period. Final reports shall be submitted to the SHPO, land managing entities, and interested persons for informational purposes.
6. Applicant activities in the area of the discovery shall not resume until the Applicant is notified by the FHWA or the BLM that activities can resume.

#### **L. HUMAN REMAINS**

1. Human remains and associated artifacts may be discovered during construction or during controlled archaeological excavations. All parties to this Agreement shall ensure that any human remains, grave goods, items of cultural patrimony, and sacred objects encountered during the Undertaking are treated with the respect due such material.
2. If a contractor or a CRC encounters what appears to be human remains during construction or other project related activities, the contractor's designated representative shall halt all activity in the immediate vicinity of the discovery, and direct project related activities at least 200 feet away in all directions of the discovery.
  - a. The contractor's designated representative shall immediately notify the FHWA and the BLM of the find if the suspected burial is found on public land. If the find is on private land, the contractor's designated representative shall notify the FHWA and the SHPO.
  - b. The BLM and/or the FHWA shall inform and work with the county coroner (or another officer acting in that capacity) for the county in which the discovery was made.
  - c. Once the coroner has determined that the discovery is not a crime scene, the FHWA and/or the BLM shall comply with provisions of 43 CFR 10 if the remains are located on public land, and NRS 383 if the remains are on private or state administered land.
  - d. The human remains will be secured and protected until such time as the contacted agency has approved their planned disposition in accordance with applicable local, state, and Federal statutes. It may be necessary for the Applicant to provide 24-hour onsite security of such discoveries, as directed by the land managing entity.

#### **M. OTHER CONSIDERATIONS**

1. The FHWA and the BLM shall ensure that the Applicant and all of its personnel and contractors carry out all stipulations of this Agreement.

2. The FHWA and the BLM shall ensure that historic, architectural, and archaeological work conducted pursuant to this Agreement is carried out by, or under the direct supervision of persons meeting qualifications set forth in the Secretary of the Interior's Professional Qualification Standards (36 CFR 61) and who have been permitted to conduct such work. The CRC will secure necessary state permits for cultural resources work on state and private lands, and a permit from the BLM for any work on agency administered lands.
3. Stipulations I, K, and L of this Agreement dealing with monitoring, discoveries, and human remains will be included or referenced in any construction plan developed by the Applicant for the Undertaking. Project Managers will brief field personnel on stipulation requirements. All personnel involved in construction activities associated with the Undertaking will be instructed on site avoidance and protection measures, including information on statutes protecting cultural resources and how to identify cultural resources that would constitute a discovery.
4. The Applicant, in cooperation with the FHWA, the BLM, and the SHPO, shall ensure that all its personnel, and all the personnel of its contractors, are directed not to engage in the illegal collection of historic and prehistoric materials. The Applicant shall cooperate with the FHWA and the BLM to ensure compliance with the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470) on public lands and with applicable state law for state and private lands (NRS 381).
5. The Applicant shall bear the expense of identification, evaluation, and treatment of all cultural resource properties directly or indirectly affected by an Applicant-related activity. Such costs shall include, but not be limited to, pre-field planning, fieldwork, post-fieldwork analysis, research and report preparation, interim and summary report preparation, and the costs associated with the curation of project documentation and artifact collections.
6. All records, photographs, maps, field notes, artifacts, and other materials collected or developed during any identification, evaluation, or treatment activities conducted on land administered by a state or federal agency will be curated in a Nevada facility approved by the FHWA and the BLM at the time of the final report associated with that activity is accepted by the agency and are curated in accordance with 36 CFR 79. An exception to this stipulation would include collections (i.e., human remains, associated and unassociated funerary objects, sacred objects, and objects of cultural patrimony) that may be repatriated in accordance with provisions of the NAGPRA and applicable state laws. The Applicants' CRC will provide a written agreement with an approved curation facility for the curation of collections and associated records prior to treatment of historic properties. The CRC will provide copies of the original field documentation and recordation documents for curated materials. All costs of curation will be borne by the Applicant.
7. Records, photographs, maps, field notes, artifacts, and other materials collected or developed during any identification, evaluation, or treatment activities conducted on private land will, at private land owner's request, be returned to the private land owner. Until its return, the collection will be maintained in accordance with 36 CFR 79. At their discretion, the private land owner may transfer ownership of the records, photographs, maps, field notes, artifacts, and other materials collected or developed during any identification, evaluation, or treatment activities to an approved Nevada curation facility. In such cases, the material will be curated in accordance to conditions outlined in Stipulation M(6) of this Agreement.

## **N. TIME FRAMES**

1. Unless stated otherwise elsewhere in this Agreement, the FHWA and the BLM shall review and comment on any draft report submitted by the Applicant within 30 calendar days of receipt.

2. Unless stated otherwise elsewhere in this Agreement, the FHWA shall submit the final consultation material to the SHPO within 30 calendar days of receipt from the Applicant.
3. Unless stated otherwise elsewhere in this Agreement, the SHPO shall respond to the FHWA within 30 calendar days of receipt from the FHWA.
4. Concurrent with SHPO review, the FHWA shall submit the results of identification and evaluation efforts, including discovery situations and treatment plans, to Tribes and interested parties for a 30 calendar-day review and comment period.
5. If a consulting party, Tribe, or interested party fails to respond to the FHWA within the 30 calendar day review period, the FHWA may presume concurrence with the findings and recommendations as detailed in the submission and shall proceed accordingly.

## **O. DISPUTE RESOLUTION**

1. If any party to this Agreement, a Tribe, or an interested party disagrees regarding the National Register eligibility of a resource, the FHWA shall notify all parties of the dispute and shall seek to resolve the dispute among the parties. If the dispute cannot be resolved, the FHWA shall seek a formal determination of eligibility from the Keeper of the National Register in accordance with 36 CFR 800.4(c)(2). The Keeper's determination shall be considered final. If a Tribe that attaches religious and cultural significance to a property does not agree with an eligibility determination, it may ask the ACHP to request the agency to obtain a formal determination of eligibility.
2. If any party to this Agreement, a Tribe, or an interested party disagrees regarding the extent or nature of discovery situation activities, the FHWA shall notify all parties of the dispute and shall seek to resolve the dispute among the parties. If the dispute cannot be resolved, the FHWA, in consultation with the BLM and the SHPO, will request assistance from the ACHP in resolving the issue.
3. If any party to this Agreement, a Tribe, or an interested party disagrees regarding the extent or nature of activities associated with a Native American burial on federally administered land, the FHWA shall notify all parties of the dispute and shall seek to resolve the dispute among the parties. If the dispute cannot be resolved, the FHWA, in consultation with the BLM and the SHPO, will request assistance from the NAGPRA Review Committee in resolving the issue.
4. If any party to this Agreement objects to any other activity carried out under this Agreement, that party shall notify FHWA of their objection in writing. The FHWA will consult with the objecting party and other parties to the Agreement in an attempt to resolve the issue. If the issue cannot be resolved, the FHWA will request assistance of the ACHP in resolving the issue.
5. All signatories acknowledge that time is of the essence when resolving disputes. The following stipulations shall apply during the resolution of all disputes.
  - a. The Applicant may continue all approved actions under this Agreement, including those subject to dispute, unless directed otherwise by the FHWA or the BLM.
  - b. Consultation between the objecting and other parties shall be by the most expeditious means available, including telephone, e-mail, or fax.
  - c. If the consulted party(s) fails to respond within 10 calendar days of the receipt of a request, the FHWA may presume concurrence with the FHWA's findings and recommendations and proceed accordingly.

- d. Any comment provided by a consulted party will be taken into account by the FHWA, and the FHWA will notify the consulted party, the BLM, the SHPO, and objecting party of its resolution of the issue.

**P. AMENDMENT**

- 1. Any party to this Agreement may request that it be amended, whereupon the parties will consult to consider such amendment.

**Q. TERMINATION**

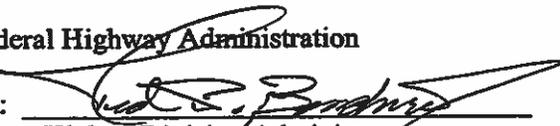
- 1. Any party to this Agreement may terminate the Agreement by providing thirty days notice to the other parties, provided that the parties will consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.

**R. EXECUTION**

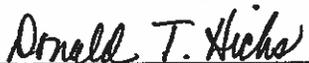
- 1. Execution and implementation of this Agreement evidences that the parties have satisfied their Section 106 responsibilities for all actions associated with the Undertaking.
- 2. In the event that the Parties do not carry out requirements of this Agreement, or it is terminated, the FHWA and the BLM will comply with provisions of 36 CFR 800 with regard to individual actions associated with the Undertaking.
- 3. Other concurring parties may become a party to this Agreement. Any party wanting to do so must contact the FHWA. The FHWA, in consultation with the BLM and the SHPO, shall review and, as appropriate, act on the party's request.
- 4. This Agreement shall become effective on the date of the last signature below, and shall remain in effect until terminated as provided in Stipulation Q, until the Undertaking is completed, or until ten years from the date of the last signature below, whichever occurs first.

**SIGNATORIES:**

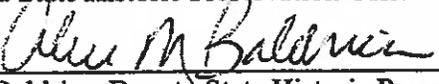
Federal Highway Administration

By:  Date: 1-18-2006  
*Foe* Susan Klekar, Division Administrator

Bureau of Land Management, Carson City Field Office

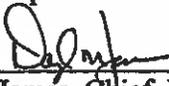
By:  Date: 1-18-2006  
 Don Hicks, Field Manager

Nevada State Historic Preservation Office

By:  Date: 1-24-2006  
 Alice Baldrica, Deputy State Historic Preservation Officer

**CONCURRENCE:**

Nevada Department of Transportation

By:  Date: 1/18/06  
Daryl N. James, Chief, Environmental Services Division

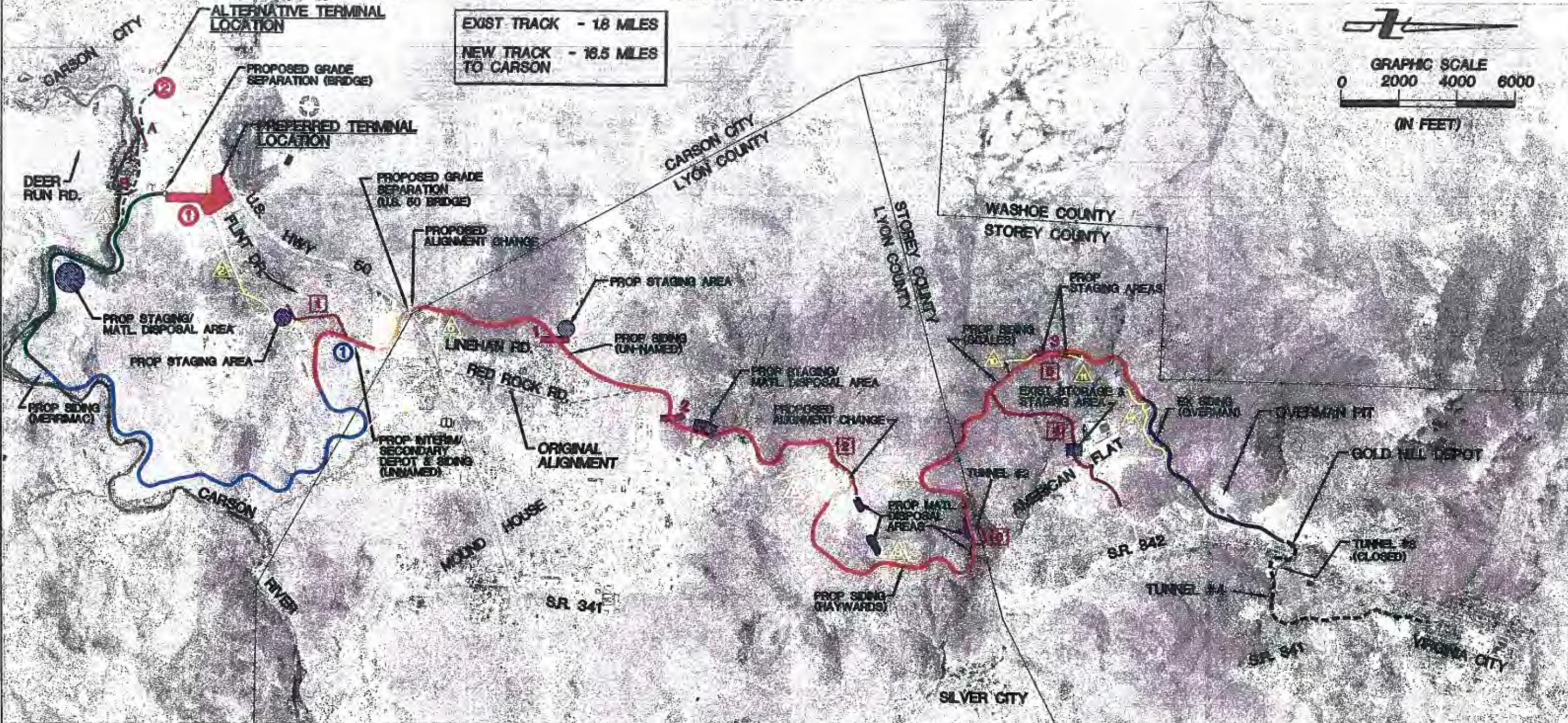
Nevada Commission for the Reconstruction of the V&T Railway

By:  Date: 1/25/06  
Bob Hadfield, Chairman  
"Bob"

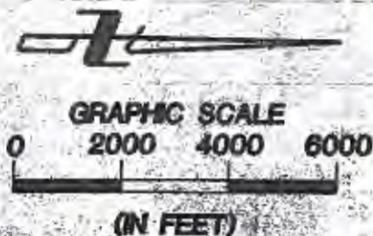
**ATTACHMENT A**  
**PROJECT AREA MAP**

# V & T RAILWAY RECONSTRUCTION - PROJECT PHASING and SCOPE

JANUARY, 2006



EXIST TRACK - 18 MILES  
 NEW TRACK - 16.5 MILES TO CARSON



### PHASE LEGEND

- PHASE 1 CONSTRUCTION (NDOT) OVERMAN PROJECT (14 MILES)
- PHASE 2 CONSTRUCTION OVERMAN TO U.S. 50 / POSSIBLE DEPOT (9.3 MILES)
- PHASE 3 CONSTRUCTION U.S. 50 TO CARSON RIVER (3.7 MILES)
- PHASE 4 CONSTRUCTION CARSON RIVER TO U.S. 50 / POSSIBLE DEPOT (2.1 MILES)

### IMPROVEMENT LEGEND

- 2 PROPOSED PUBLIC ROAD / AT GRADE CROSSING
- 3 PROPOSED PERMANENT ACCESS ROUTE

- EXISTING VTRR (18 MILES)
- PROPOSED ALIGNMENT CHANGE (DIFFERING FROM ORIGINAL EA)
- 1 PROPOSED INTERIM / SECONDARY DEPOT SITE
- 2 POSSIBLE PERMANENT / PRIMARY DEPOT SITE
- PROPOSED STAGING AREA OR MATERIAL DISPOSAL SITE

**CAPITAL ENGINEERING**  
 P.O. Box 5750  
 Carson City, NV 89702  
 (775) 682-6636

**ATTACHMENT B**  
**PROJECT COMPONENTS AND PROPOSED PROJECT SCHEDULE**

## PROJECT COMPONENTS

Railroad Grade Reconstruction – To the extent possible, the railway will be reconstructed atop the original grade. Reconstruction will occur in such a manner as to minimize new surface disturbance. It should be possible to reconstruct the remainder of the grade using a narrower cross section than was required during Phase 1.

Frehner Pit Alignment Change - An alignment change will be required in the vicinity of the Frehner Pit in Lyon County. This change is needed to avoid conflicts between the railroad and ongoing aggregate extraction/processing operations.

Hill Top Pit Alignment Change - An alignment change is also expected to be required in the location of the Hill Top Pit near the Carson City/Lyon County boundary.

Bridge Construction – Reestablishment of the V&T Railroad will require construction of a bridge over US 50 near the Carson City and Lyon County boundary.

Alternative Carson City Primary Depot Site Evaluation – Two possible depot locations have been identified that the Commission feels should be evaluated in detail. Each location will be studied in detail, including needed grade realignments, access roads, intersection improvements, parking areas, and depot related uses. The goal of those studies will be to identify the terminal location that best meets the project's purpose and need.

Interim and possible Secondary Depot Site Evaluation - With the anticipated project phasing, the Commission believes that a temporary depot may be required in the vicinity of the U.S. 50 crossing near the Carson City/Lyon County boundary. While this depot is expected to be temporary and of limited size, its function could be transformed to serve as a secondary or "Whistle Stop" depot when the full railroad is reconstructed.

Access Roads & Staging Areas - Temporary and permanent access roads and construction staging areas will be required. Access and staging areas will be identified on a phase-specific basis.

Sidings - Sidings will be constructed adjacent to the mainline. Sidings are expected to be about 600-feet in length and will be constructed adjacent to the railroad mainline within a common roadbed. The sidings will be constructed with a nominal 15-foot separation between centerlines of the siding and mainline. Anticipated siding locations include the "Scales" area in American Flat, near Linehan Road, and near the Carson City/Lyon County Line. In addition, "run-around" tracks will be provided near the end of each construction phase to allow locomotives to switch ends of the train.

## PROPOSED PROJECT SCHEDULE

The project will be constructed over several phases. Phase 1, or the Overman Pit Project, provided for the 1.4-mile extension of the grade from Gold Hill towards Carson City. This phase is currently under construction and will be complete in September 2005. The remaining 15.6-mile reconstruction will be constructed in at least 3 phases. A summary of the individual reconstruction phases is provided below, along with proposed completion dates:

Phase 1 - Overman Pit extension	(1.4-miles):	September 2005
Phase 2 – U.S. 50 extension	(9.3-miles):	late 2006-2007
Phase 3 - Carson River extension	(3.7-miles):	late 2007-2008
Phase 4a - Carson City depot extension	(2.6-miles):	late 2008-2009
Phase 4b - Carson City depot construction	(2.6-miles):	late 2008-2009

# Zeier & Associates, LLC

Archaeological, Historical, and Genealogical Research

1741 Reed Circle, Minden, Nevada 89423

775-267-3522

January 26, 2006

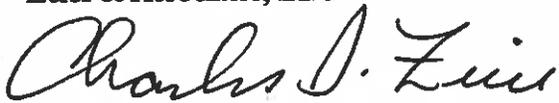
Mr. Ted Bendure  
Federal Highways Administration  
Nevada Division  
705 North Plaza Street, Suite 220  
Carson City, Nevada 89701

Subject: Executed V&T Project Programmatic Agreement

Dear Mr. Bendure:

Attached, please find the completely executed programmatic agreement for the V&T Reconstruction Project. This copy contains all of the "wet" signatures. By this transmittal, I am also providing copies of the signed agreement to all of the signatories and other interested parties.

Sincerely,  
Zeier & Associates, LLC



Charles D. Zeier  
Principal Researcher

cc: Charles Pope, BLM, Carson City  
Pat Barker, BLM, NSO  
Alice Baldrice, NV SHPO  
Rebecca Palmer, NV SHPO  
Daryl James, NDOT  
Hal Turner, NDOT  
Bob Hadfield, V&T Railway Commission

APPENDIX E

MARCH 31, 2010 CONCURRENCE LETTER  
FROM SHPO TO FHWA



JIM GIBBONS  
Governor

MICHAEL E. FISCHER  
Department Director

STATE OF NEVADA  
DEPARTMENT OF CULTURAL AFFAIRS

State Historic Preservation Office  
100 N. Stewart Street  
Carson City, Nevada 89701  
(775) 684-3448 • Fax (775) 684-3442  
www.nvshpo.org

RONALD M. JAMES  
State Historic Preservation Officer

March 31, 2010

Abdelmoez Abdalla  
Environmental Program Manager  
Federal Highway Administration  
705 North Plaza Street Suite 220  
Carson City NV 89701

RE: Reconstruction of the Virginia and Truckee Railway, H1 Line, Drako Way Depot, Balloon Track, Interim Station, Carson City (Project STP-0029(004) EA: 72048) (Undertaking #2010-318).

Dear Mr. Abdalla:

The Nevada State Historic Preservation Office (SHPO) reviewed the subject portions of the undertaking. The SHPO concurs with the Federal Highway Administration's determination that following sites are not eligible for the National Register of Historic Places under any of the Secretary's criteria or are non-contributing elements:

26Or306 CRNV-03-1458	CrNV-03-1411	CrNV-03-1412
CrNV-03-6985	CrNV-03-6986	CrNV-03-6987
CrNV-03-7432	Modified house in H1 line	721

The SHPO concurs with the Federal Highway Administration's determination that the following historic property is eligible for the National Register of Historic Places under criterion c and the elements of the Virginia and Truckee Railroad contribute to the property's National Register eligibility:

CrNV-03-6984	CrNV-03-4412	CrNV-03-4412 Feature 206
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The SHPO concurs with the Federal Highway Administration's determination that the effect of the project for the segments (H1 Line, Drako Way Depot, Balloon Track, Interim Station) is adequately described on pages 5 and 6 of your letter of February 26, 2010 (received on March 1, 2010). The SHPO concurs with the Federal Highway Administration's determination that the treatment plans described in your letter (pages 6-7) are consistent with the existing Programmatic Agreement for the subject undertaking.

Abdelmoez Abdalla  
March 31, 2010  
Page 2 of 2

If you have any questions concerning this correspondence, please feel free to call Rebecca Palmer at (775) 684-3443 or by e-mail at [Rebecca.Palmer@nevadaculture.org](mailto:Rebecca.Palmer@nevadaculture.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Alice M. Baldrice". The signature is fluid and cursive, with a long horizontal stroke at the end.

Alice M. Baldrice, Deputy  
State Historic Preservation Officer

APPENDIX F

AGENCY COORDINATION  
AND  
PUBLIC INVOLVEMENT

FEDERAL, STATE, AND LOCAL AGENCY  
DISTRIBUTION LIST

SUSAN KLEKAR DIVISION ADMINISTRATOR  
FEDERAL HIGHWAY ADMINISTRATION  
705 NORTH PLAZA STREET STE 220  
CARSON CITY NV 89701

US DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
1201 TERMINAL WAY #222  
RENO NV 89502

US DEPARTMENT OF AGRICULTURE  
REGIONAL FORESTER  
FOREST SERVICE REGION 4  
324 25TH STREET  
OGDEN UT 84401

UNITED STATES FOREST SERVICE  
1200 FRANKLIN WAY  
SPARKS NV 89431

BUREAU OF LAND MANAGEMENT  
PO BOX 12000  
RENO NV 89520

BUREAU OF LAND MANAGEMENT  
CARSON CITY DISTRICT  
5665 MORGAN MILL ROAD  
CARSON CITY NV 89701

US ARMY CORPS OF ENGINEERS  
SECTION CHIEF  
1325 J STREET ROOM 1480  
SACRAMENTO CA 95814

REGULATORY PROJECT MANAGER  
US ARMY CORPS OF ENGINEERS  
300 BOOTH ST ROOM 2103  
RENO NV 89509

FISH AND WILDLIFE SERVICE  
1340 FINANCIAL BLVD #234  
RENO NV 89502

US DEPARTMENT OF TRANSPORTATION  
CHIEF AIRPORT DISTRICT OFFICE SSO-600  
FEDERAL AVIATION ADMINISTRATION  
831 MITTEN ROAD  
BURLINGAME CA 94010

REGIONAL DIRECTOR  
FEDERAL EMERGENCY MANAGEMENT AGENCY  
1111 BROADWAY STE 1200  
OAKLAND CA 94607-4052

US DEPARTMENT OF THE INTERIOR  
REGIONAL ENVIRONMENTAL OFFICER  
PACIFIC SOUTHWEST REGION  
1111 JACKSON ST STE 735  
OAKLAND CA 94607-4807

US DEPARTMENT OF THE INTERIOR  
REGIONAL DIRECTOR REGION 1  
FISH AND WILDLIFE SERVICE  
911 NE 11TH AVENUE  
PORTLAND OR 97232-4181

US GEOLOGICAL SURVEY  
WATER RESOURCES DIVISION  
2730 N DEER RUN ROAD  
CARSON CITY NV 89701

US DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
1111 JACKSON ST STE 700  
OAKLAND CA 94607-4807

BUREAU OF INDIAN AFFAIRS  
WESTERN NEVADA AGENCY  
311 EAST WASHINGTON ST  
CARSON CITY NV 89701-4065

BUREAU OF RECLAMATION  
705 NORTH PLAZA  
CARSON CITY NV 89701

DEPARTMENT OF ENERGY  
PO BOX 98518  
LAS VEGAS NV 89193

DEPT OF HOUSING AND URBAN DEVELOPMENT  
RENO FIELD OFFICE  
745 WEST MOANA LANE SUITE 360  
RENO NV 89509

ROBERT W HALL  
NEVADA ENVIRONMENTAL COALITION INC  
10720 BUTTON WILLOW DR  
LAS VEGAS NV 89134

D BRADFORD HARDENBROOK  
REGIONAL SUPERVISORY BIOLOGIST - HABITAT  
NEVADA DEPARTMENT OF WILDLIFE  
1100 VALLEY ROAD  
RENO NV 89512

JAMES D MOREFIELD  
NEVADA STATE HERITAGE  
DEPT OF CONSERVATION & NAT RESOURCES  
901 S STEWART ST STE 5001  
CARSON CITY NV 89701-5244

Prefer to receive notices, etc. via email  
NEVADA STATE CLEARINGHOUSE  
CAPITOL COMPLEX  
CARSON CITY NV 89710  
clearinghouse@budget.state.nv.us

DAVE AIAZZI CHAIR  
REGIONAL TRANSPORTATION COMMISSION OF  
WASHOE COUNTY  
2050 VILLANOVA DRIVE  
RENO NV 89502

NV ENERGY  
C/O LAND DEPARTMENT  
PO BOX 10100  
RENO NV 89510

NEVADA BELL  
PO BOX 11010  
RENO NV 89520

## **CARSON CITY**

BOB CROWELL  
CARSON CITY MAYOR  
201 N CARSON STREET SUITE 2  
CARSON CITY NV 89701

SHELLY ALDEAN  
CARSON CITY SUPERVISOR  
201 N CARSON STREET SUITE 2  
CARSON CITY NV 89701

MOLLY WALT  
CARSON CITY SUPERVISOR  
201 N CARSON STREET SUITE 2  
CARSON CITY NV 89701

STATE NFIP COORDINATOR  
NEVADA DIVISION OF WATER RESOURCES  
901 S STEWART ST STE 2002  
CARSON CITY NV 89701-5250

BRUCE MACKEY  
DEPARTMENT OF MOTOR VEHICLES  
OFFICE OF TRAFFIC SAFETY  
555 WRIGHT WAY  
CARSON CITY NV 89711-0999

LEE GIBSON EXECUTIVE DIRECTOR  
REGIONAL TRANSPORTATION COMMISSION OF  
WASHOE COUNTY  
2050 VILLANOVA DRIVE  
RENO NV 89502

SOUTHWEST GAS  
ENGINEERING DEPARTMENT  
PO BOX 1190  
CARSON CITY NV 89702

SIERRA CLUB  
PO BOX 8096  
RENO NV 89507

NEWTON DEBARDELEBEN  
ENVIRONMENTAL SERVICES  
NV ENERGY  
P.O. BOX 10100  
RENO, NV 89520-0024

ROBIN WILLIAMSON  
CARSON CITY SUPERVISOR  
201 N CARSON STREET SUITE 2  
CARSON CITY NV 89701

PETE LIVERMORE  
CARSON CITY SUPERVISOR  
201 N CARSON STREET SUITE 2  
CARSON CITY NV 89701

LARRY WERNER  
CARSON CITY MANAGER  
201 N CARSON STREET SUITE 2  
CARSON CITY NV 89701

ANDREW BURNHAM  
DIRECTOR  
CARSON CITY PUBLIC WORKS  
3505 BUTTI WAY  
CARSON CITY NV 89701

CARSON CITY PLANNING DIVISION  
2621 NORTHGATE LANE  
CARSON CITY NV 89706

## **LYON COUNTY**

CHUCK ROBERTS  
LYON COUNTY COMMISSIONER  
P.O. BOX 498  
CARSON CITY, NEVADA 89702

LARRY MCPHERSON  
LYON COUNTY COMMISSIONER  
2001 APACHE DRIVE  
STAGECOACH, NEVADA 89429

DON TIBBALS  
LYON COUNTY COMMISSIONER  
56 HIGHWAY 339  
YERINGTON, NV 89447

JOE MORTENSEN  
LYON COUNTY COMMISSIONER  
680 MILLER LANE  
FERNLEY, NV 89408

PHYLLIS HUNEWILL  
LYON COUNTY COMMISSIONER  
30 DESERT CREEK  
WELLINGTON, NEVADA 89444

ROB LOVEBERG  
LYON COUNTY PLANNING DIRECTOR  
801 OVERLAND LOOP, SUITE 201  
DAYTON, NV 89403

GARY W. FRIED  
LYON COUNTY ROAD MANAGER  
3590 GRAHAM AVENUE  
SILVER SPRINGS, NV 89429

## **FEDERALLY ELECTED**

HARRY REID  
US SENATOR  
400 SOUTH VIRGINIA STREET SUITE 902  
LAS VEGAS NV 89501

JOHN ENSIGN  
US SENATOR  
400 SOUTH VIRGINIA STREET SUITE 738  
LAS VEGAS NV 89501

DEAN HELLER  
US REPRESENTATIVE  
400 SOUTH VIRGINIA STREET SUITE 502  
RENO NV 89501

## **STATE ELECTED**

**ADDITIONAL NOTIFICATIONS**

VERN KRAHN  
CARSON CITY PARKS AND RECREATION  
3303 BUTTI WAY BDLG #9  
CARSON CITY, NV 89701

ROGER MOELLENDORF  
CARSON CITY PARKS AND RECREATION  
3303 BUTTI WAY BDLG #9  
CARSON CITY, NV 89701

PAT WHITTEN, COUNTY MANAGER  
STOREY COUNTY  
PO BOX 176  
VIRGINIA CITY, NV 89440

JOHN SERPA  
PO BOX 1724  
CARSON CITY, NV 89702

TE BERTAGNOLLI  
PO BOX 2577  
CARSON CITY, NV 89702

PRIVATE LAND HOLDERS  
DESIGN LOCATION HEARING  
DISTRIBUTION LIST

## Design Location Hearing Distribution List- Private Land Holders

Land Owners Contacted			Adjacent Project Feature				
Parcel Number (s)	Owner Name	Owner Address	9,000 Ft. Align.	Drako Terminal	Utility Corridor	Interim Station	Balloon Track
008-531-44, 45	TE Bertagnolli & Assoc.	PO Box 2577, CC, NV 89702	X				
008-531-59,60	JC Serpa	PO Box 1724, CC, NV 89702	X	X	X		
008-531-39	JC Serpa	PO Box 1724, CC, NV 89702	X				
008-541-59,91,92	JC Serpa	PO Box 1724, CC, NV 89702	X				
008-521-89	JC Serpa	PO Box 1724, CC, NV 89702		X	X		
008-521-54,55	JC Serpa	PO Box 1724, CC, NV 89702			X		
008-522-18	JC Serpa	PO Box 1724, CC, NV 89702	X	X	X		
008-522-16,17	JC Serpa	PO Box 1724, CC, NV 89702		X	X		
008-611-31	JC Serpa	PO Box 1724, CC, NV 89702				X	
008-011-26,27	JC Serpa	PO Box 1724, CC, NV 89702					X
008-522-07	NV Energy	PO Box 11010 Reno, NV, 89520	X	X	X		
008-531-42,57	Taiyo America	2675 Antler Dr., Carson City, NV 89701	X	X	X		
008-531-58	Triangle Labs, Inc.	1601 Morgan Mill Road, Carson City, NV 89701	X	X	X		
008-531-27,28	B Maddox	5990 Morgan Mill Road, Carson City, NV 89701	X	X			
008-531-34	Sierra Clouds, Inc.	1673 Wellington West, Carson City, NV 89703	X	X	X		
008-522-12,13	Precise Recycling Services	2400 San Juan Rd. Hollister, CA 95203		X	X		
008-522-14	Cometco Resources	15232 Linden St Leawood, Kansas 66224		X	X		
008-522-10	Western Inspirational Broadcasting	6363 Hwy 50 E, Carson City, NV 89701		X	X		

Parcel Number (s)	Owner Name	Owner Address	9,000 Ft. Align.	Drako Terminal	Utility Corridor	Interim Station	Balloon Track
008-522-11	BEA Investments	312 W Fourth St. Carson City, NV 89703		X	X		
008-521-78	Shirley Oliver	6441 Hwy 50 E, Carson City, NV 89701		X	X		
008--521-45	RIDL	1250 Santa Barbara Minden, NV 89423		X	X		
008--521-46,47,48,23,24	RIDL	1250 Santa Barbara Minden, NV 89423			X		
008-011-88,90,91	Eagletech Industrial Park, LLC	7201 Hwy 5 E., Carson City, NV 89701				X	
008-611-20	Pic-In-Pull Auto Dismantlers	1345 Airmotive Way, Reno, NV 89502				X	