Malibu Creek Ecosystem Restoration Study

Los Angeles and Ventura Counties, California

Appendix N

Traffic

U.S. Army Corps of Engineers
Los Angeles District

January 2017

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LIST OF TABLES

LIST OF FIGURES

APPPENDIX

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1 Supplemental Traffic Analysis

1.1 Barge Disposal Route

The updated disposal route consists of trucking beach compatible material to Ventura Harbor, where it will be loaded on a barge for near shore placement in the vicinity of the previously identified beach placement areas. The disposal route consists of driving north on Malibu Canyon Road to US 101 north, exiting at S. Victoria Ave in the city of Ventura, and turning west on Olivas Park Rd. From Olivas Park Road, Harbor Blvd. would be taken to Schooner Drive until arriving at the loading site at Ventura Harbor (**Figure 1.1-1**). Similar to previous analyses, non-beach compatible material will still be hauled to Calabasas Landfill in the same quantity and via the same route previously described.

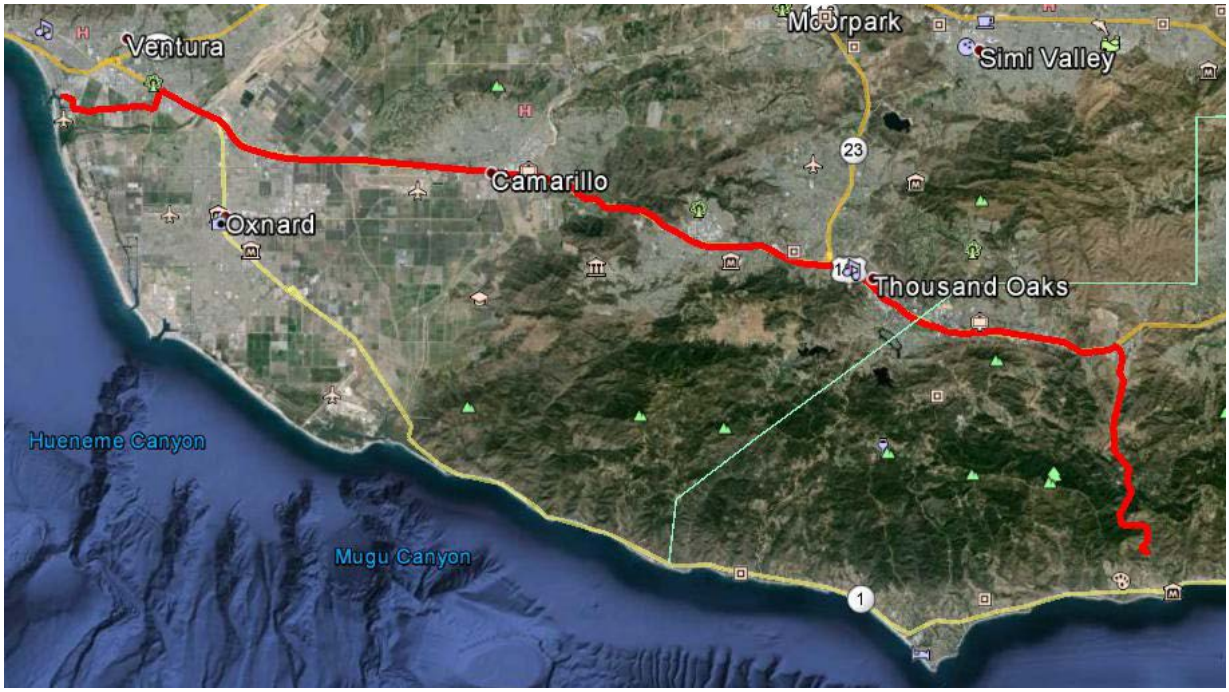

Figure 1.1-1 Truck route to from Malibu Dam to Ventura Harbor

1.2 Level of Service Criteria

Impacts to traffic in Ventura would be considered significant if the Project resulted in an increase of Level of Service (LOS) at an intersection, result in an unacceptable LOS at an intersection or road segment (LOS D or >), or an increase in the volume to capacity ration (V/C) exceeding those shown below in .

1.3 Baseline Level of Service and Impact Analysis

The existing LOS levels and LOS thresholds for US 101 were described in the original EIS/EIR. However, truck traffic was not originally proposed along this route. The truck to barge disposal option would result in a peak of 70 trucks (105 passenger car equivalents PCE) daily traveling along US 101. Spread over the six hour work day, any hour would have around 12 trucks. Based on the existing capacity of this highway (>10,000), the addition contribution of 12 trucks would not

result in a noticeable increase in the V/C ratio, nor would it contribute to increasing the LOS level of US 101.

The proposed truck route consists of exiting US 101 on S. Victoria Drive, and using Olivas Park Road, Harbor Boulevard, and Schooner Drive to deliver material to the placement barge. These road segments fall within the city of Ventura, and the baseline LOS were described in the 2005 Environmental Impact Report for the updated City of Ventura General Plan (**Table 1.4-4**). The LOS described are based on the peak AM and PM levels of traffic. Only one intersection along the proposed haul route is close to achieving the next higher LOS and therefore at risk of exceeding significance criteria due to increased traffic. This is the intersection of Victoria Ave. at Olivas Park Road. However, the traffic associated with the Project will not occur during the AM or PM peak, due to traffic restrictions placed on the Project along its haul route. In addition, the maximum number of hourly trucks at any point during construction is anticipated to be 12 (or 18 PCE). It would take at least 32 vehicles per hour to increase peak hour traffic to the next higher threshold.

Traffic Analysis – Victoria Ave. at Olivas Park Rd.
The traffic capacity is 3200 based on City of Ventura General Plan EIR (Saturation Flow 1600 vehicles per hour per lane).
ICU 0.79 * 3200 = 2528 current volume (LOS C)
ICU 0.80 * 3200 = 2560 volume for LOS D
32 trucks per hour during peak required in increase intersection from LOS C to LOS D.
Maximum traffic proposed is 18 PCE.

1.4 Conclusion

The updated truck route from the Project area to Ventura Harbor will not result in significant impacts to traffic.

Table 1.4-1 Average Daily Traffic Thresholds for County Roads and Conventional State Highways. Information from the Ventura County CA from the Ventura County General Plan Traffic Appendix.

LOS	Class I			Class II	Class III
	2 Lanes	4 Lanes	6 Lanes	2 Lanes	2 Lanes
A	2400	19000	29000	1500	350
B	5600	28000	42000	3900	2000
C	10000	38000	57000	7000	3300
D	16000	47000	70000	11000	5900
E	27000	58000	87000	21000	16000

Table 1.4-2 Thresholds for significance for Level of Service (LOS) changes

Existing LOS	Increase in V/C or Trips >
A	0.20
B	0.15
C	0.10
D	10 PHTs
E	5 PHTs
F	1 PHT
PHT = peak hour turning; highest combination of left and opposing through/right turns.	

Table 1.4-3 Peak Intersection Capacity Utilization (ICU) and Level of Service (LOS) (AM or PM) for the proposed truck route through Ventura (City of Ventura, 2005).

Segment / Intersection	ICU & (LOS)
US 101 at Victoria Ave.	0.66 AM (B) / 0.60 PM (A)
Victoria Ave. at Olivas Park	0.77 AM (C) / 0.79 PM (C)
Victoria Ave. at Valentine Rd.	0.43 AM (A) / 0.61 PM (B)
Olivas Park at Telephone Rd.	0.53 AM (A) / 0.66 PM (B)
Olivas Park at Harbor Blvd.	0.39 AM (A) / 0.54 PM (A)

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Malibu Creek Ecosystem Restoration Study

Los Angeles and Ventura Counties, California

Appendix N1

Traffic Analysis

U.S. Army Corps of Engineers
Los Angeles District

January 2017

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Most Recent Traffic Count Sheets

Run Date: *03/04/2013*
Run Time *7:23 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1980V
Page: 1

Count Date: 11/05/2012 12:00 a Monday Condition: : Location: MALIBU CANYON ROAD N/O POTTER DRIVE
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	25	84	10	36	35	120
12:15 am	32	75	11	34	43	109
12:30 am	17	52	7	30	24	82
12:45 am	10	45	8	27	18	72
1:00 am	16	53	8	28	24	81
1:15 am	9	46	7	24	16	70
1:30 am	10	43	4	21	14	64
1:45 am	18	39	9	20	27	59
2:00 am	9	24	4	14	13	38
2:15 am	6	24	4	10	10	34
2:30 am	6	18	3	8	9	26
2:45 am	3	14	3	6	6	20
3:00 am	9	12	0	8	9	20
3:15 am	0	5	2	10	2	15
3:30 am	2	7	1	9	3	16
3:45 am	1	7	5	9	6	16
4:00 am	2	8	2	6	4	14
4:15 am	2	10	1	8	3	18
4:30 am	2	9	1	12	3	21
4:45 am	2	10	2	24	4	34
5:00 am	4	15	4	35	8	50
5:15 am	1	24	5	62	6	86
5:30 am	3	27	13	96	16	123
5:45 am	7	39	13	133	20	172
6:00 am	13	47	31	214	44	261
6:15 am	4	58	39	344	43	402
6:30 am	15	90	50	554	65	644
6:45 am	15	115	94	833	109	948
7:00 am	24	143	161	1136	185	1279
7:15 am	36	197	249	1327	285	1524
7:30 am	40	244	329	1410	369	1654
7:45 am	43	293	397	1430	440	1723
8:00 am	78	324	352	1389	430	1713
8:15 am	83	350	332	1405	415	1755
8:30 am	89	375	349	1439	438	1814
8:45 am	74	393	356	1436	430	1829
9:00 am	104	428	368	1423	472	1851
9:15 am	108	409	366	1358	474	1767
9:30 am	107	417	346	1249	453	1666
9:45 am	109	413	343	1147	452	1560
10:00 am	85	405	303	1016	388	1421
10:15 am	116	409	257	918	373	1327
10:30 am	103	378	244	807	347	1185
10:45 am	101	345	212	716	313	1061
11:00 am	89	328	205	661	294	989
11:15 am	85	323	146	585	231	908
11:30 am	70	338	153	561	223	899
11:45 am	84	358	157	555	241	913
12:00 pm	84	371	129	530	213	901
12:15 pm	100	401	122	523	222	924
12:30 pm	90	419	147	509	237	928
12:45 pm	97	441	132	502	229	943
1:00 pm	114	477	122	463	236	940
1:15 pm	118	464	108	445	226	909
1:30 pm	112	477	140	437	252	914
1:45 pm	133	485	93	430	226	915
2:00 pm	101	481	104	427	205	908
2:15 pm	131	511	100	425	231	936
2:30 pm	120	520	133	434	253	954
2:45 pm	129	552	90	424	219	976
3:00 pm	131	636	102	444	233	1080
3:15 pm	140	707	109	453	249	1160
3:30 pm	152	830	123	446	275	1276
3:45 pm	213	973	110	443	323	1416
4:00 pm	202	1002	111	440	313	1442
4:15 pm	263	1070	102	418	365	1488
4:30 pm	295	1097	120	426	415	1523
4:45 pm	242	1098	107	414	349	1512
5:00 pm	270	1145	89	410	359	1555
5:15 pm	290	1213	110	426	400	1639
5:30 pm	296	1277	108	433	404	1710
5:45 pm	289	1314	103	442	392	1756
6:00 pm	338	1329	105	429	443	1758
6:15 pm	354	1321	117	473	471	1794
6:30 pm	333	1286	117	450	450	1736
6:45 pm	304	1249	90	438	394	1687
7:00 pm	330	1193	149	428	479	1621
7:15 pm	319	1067	94	328	413	1395
7:30 pm	296	904	105	290	401	1194
7:45 pm	248	767	80	243	328	1010
8:00 pm	204	660	49	214	253	874
8:15 pm	156	576	56	206	212	782
8:30 pm	159	523	58	183	217	706
8:45 pm	141	460	51	155	192	615
9:00 pm	120	407	41	145	161	552
9:15 pm	103	363	33	134	136	497
9:30 pm	96	331	30	122	126	453
9:45 pm	88	299	41	108	129	407
10:00 pm	76	270	30	84	106	354
10:15 pm	71	255	21	82	92	337
10:30 pm	64	228	16	79	80	307
10:45 pm	59	200	17	82	76	282
11:00 pm	61	163	28	77	89	240
11:15 pm	44		18		62	
11:30 pm	36		19		55	
11:45 pm	22		12		34	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	20062	9:00 am	1851	6:15 pm	1794
N/B	10005	9:00 am	428	6:00 pm	1329
S/B	10057	8:30 am	1439	12:00 pm	530

Run Date: *03/04/2013*
Run Time *7:23 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1978V
Page: 1

Count Date: 11/05/2012 12:00 a Monday Condition: : Location: MALIBU CANYON ROAD S/O PIUMA ROAD
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	15	52	8	29	23	81
12:15 am	11	48	10	25	21	73
12:30 am	11	44	3	19	14	63
12:45 am	15	40	8	20	23	60
1:00 am	11	28	4	13	15	41
1:15 am	7	23	4	9	11	32
1:30 am	7	19	4	7	11	26
1:45 am	3	13	1	6	4	19
2:00 am	6	11	0	9	6	20
2:15 am	3	8	2	10	5	18
2:30 am	1	7	3	10	4	17
2:45 am	1	8	4	7	5	15
3:00 am	3	9	1	6	4	15
3:15 am	2	8	2	9	4	17
3:30 am	2	9	0	14	2	23
3:45 am	2	9	3	28	5	37
4:00 am	2	13	4	39	6	52
4:15 am	3	24	7	68	10	92
4:30 am	2	26	14	107	16	133
4:45 am	6	37	14	152	20	189
5:00 am	13	42	33	249	46	291
5:15 am	5	48	46	408	51	456
5:30 am	13	76	59	630	72	706
5:45 am	11	97	111	932	122	1029
6:00 am	19	126	192	1182	211	1308
6:15 am	33	161	268	1346	301	1507
6:30 am	34	203	361	1431	395	1634
6:45 am	40	250	361	1395	401	1645
7:00 am	54	273	356	1395	410	1668
7:15 am	75	274	353	1362	428	1636
7:30 am	81	293	325	1336	406	1629
7:45 am	63	314	361	1349	424	1663
8:00 am	55	330	323	1318	378	1648
8:15 am	94	368	327	1255	421	1623
8:30 am	102	376	338	1201	440	1577
8:45 am	79	367	330	1097	409	1464
9:00 am	93	393	260	985	353	1378
9:15 am	102	391	273	888	375	1279
9:30 am	93	358	234	766	327	1124
9:45 am	105	348	218	705	323	1053
10:00 am	91	314	163	628	254	942
10:15 am	69	312	151	584	220	896
10:30 am	83	341	173	565	256	906
10:45 am	71	332	141	529	212	861
11:00 am	89	379	119	497	208	876
11:15 am	98	408	132	496	230	904
11:30 am	74	427	137	479	211	906
11:45 am	118	475	109	478	227	953
12:00 pm	118	476	118	462	236	938
12:15 pm	117	471	115	439	232	910
12:30 pm	122	461	136	449	258	910
12:45 pm	119	459	93	424	212	883
1:00 pm	113	469	95	427	208	896
1:15 pm	107	502	125	441	232	943
1:30 pm	120	527	111	432	231	959
1:45 pm	129	557	96	447	225	1004
2:00 pm	146	618	109	457	255	1075
2:15 pm	132	678	116	447	248	1125
2:30 pm	150	807	126	453	276	1260
2:45 pm	190	880	106	407	296	1287
3:00 pm	206	976	99	414	305	1390
3:15 pm	261	1039	122	399	383	1438
3:30 pm	223	1035	80	409	303	1444
3:45 pm	286	1104	113	437	399	1541
4:00 pm	269	1089	84	388	353	1477
4:15 pm	257	1123	132	418	389	1541
4:30 pm	292	1172	108	382	400	1554
4:45 pm	271	1153	64	327	335	1480
5:00 pm	303	1197	114	377	417	1574
5:15 pm	306	1182	96	376	402	1558
5:30 pm	273	1198	53	371	326	1569
5:45 pm	315	1201	114	422	429	1623
6:00 pm	288	1154	113	391	401	1545
6:15 pm	322	1062	91	324	413	1386
6:30 pm	276	927	104	291	380	1218
6:45 pm	268	812	83	245	351	1057
7:00 pm	196	694	46	206	242	900
7:15 pm	187	617	58	192	245	809
7:30 pm	161	551	58	174	219	725
7:45 pm	150	471	44	152	194	623
8:00 pm	119	424	32	138	151	562
8:15 pm	121	371	40	135	161	506
8:30 pm	81	327	36	114	117	441
8:45 pm	103	311	30	98	133	409
9:00 pm	66	268	29	90	95	358
9:15 pm	77	261	19	87	96	348
9:30 pm	65	235	20	84	85	319
9:45 pm	60	208	22	83	82	291
10:00 pm	59	173	26	71	85	244
10:15 pm	51	132	16	55	67	187
10:30 pm	38	113	19	49	57	162
10:45 pm	25	101	10	37	35	138
11:00 pm	18	86	10	34	28	120
11:15 pm	32		10		42	
11:30 pm	26		7		33	
11:45 pm	10		7		17	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	19399	7:00 am	1668	5:45 pm	1623
N/B	9594	11:45 am	475	5:45 pm	1201
S/B	9805	6:30 am	1431	12:00 pm	462

Run Date: *03/04/2013*
Run Time *7:24 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 414V
Page: 1

Count Date: 04/26/2011 12:00 a Tuesday Condition: : Location: LAS VIRGENES ROAD S/O MULHOLLAND HIGHWAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	14	35	30	91	44	126
12:15 am	12	24	22	70	34	94
12:30 am	4	15	22	57	26	72
12:45 am	5	12	17	40	22	52
1:00 am	3	10	9	32	12	42
1:15 am	3	8	9	35	12	43
1:30 am	1	6	5	36	6	42
1:45 am	3	8	9	37	12	45
2:00 am	1	6	12	32	13	38
2:15 am	1	9	10	26	11	35
2:30 am	3	12	6	23	9	35
2:45 am	1	11	4	21	5	32
3:00 am	4	14	6	23	10	37
3:15 am	4	18	7	23	11	41
3:30 am	2	17	4	18	6	35
3:45 am	4	28	6	28	10	56
4:00 am	8	37	6	42	14	79
4:15 am	3	51	2	68	5	119
4:30 am	13	92	14	114	27	206
4:45 am	13	151	20	176	33	327
5:00 am	22	223	32	244	54	467
5:15 am	44	321	48	354	92	675
5:30 am	72	514	76	516	148	1030
5:45 am	85	730	88	629	173	1359
6:00 am	120	1006	142	767	262	1773
6:15 am	237	1220	210	884	447	2104
6:30 am	288	1336	189	876	477	2212
6:45 am	361	1416	226	854	587	2270
7:00 am	334	1391	259	848	593	2239
7:15 am	353	1377	202	820	555	2197
7:30 am	368	1366	167	850	535	2216
7:45 am	336	1308	220	909	556	2217
8:00 am	320	1304	231	927	551	2231
8:15 am	342	1216	232	925	574	2141
8:30 am	310	1099	226	957	536	2056
8:45 am	332	1038	238	925	570	1963
9:00 am	232	937	229	907	461	1844
9:15 am	225	893	264	866	489	1759
9:30 am	249	836	194	784	443	1620
9:45 am	231	773	220	790	451	1563
10:00 am	188	693	188	732	376	1425
10:15 am	168	656	182	730	350	1386
10:30 am	186	603	200	718	386	1321
10:45 am	151	570	162	698	313	1268
11:00 am	151	560	186	732	337	1292
11:15 am	115	543	170	708	285	1251
11:30 am	153	558	180	754	333	1312
11:45 am	141	532	196	778	337	1310
12:00 pm	134	522	162	786	296	1308
12:15 pm	130	544	216	828	346	1372
12:30 pm	127	532	204	805	331	1337
12:45 pm	131	513	204	819	335	1332
1:00 pm	156	516	204	821	360	1337
1:15 pm	118	484	193	832	311	1316
1:30 pm	108	492	218	847	326	1339
1:45 pm	134	506	206	881	340	1387
2:00 pm	124	478	215	923	339	1401
2:15 pm	126	460	208	977	334	1437
2:30 pm	122	454	252	1088	374	1542
2:45 pm	106	473	248	1198	354	1671
3:00 pm	106	487	269	1344	375	1831
3:15 pm	120	478	319	1425	439	1903
3:30 pm	141	474	362	1470	503	1944
3:45 pm	120	452	394	1503	514	1955
4:00 pm	97	453	350	1489	447	1942
4:15 pm	116	482	364	1507	480	1989
4:30 pm	119	515	395	1589	514	2104
4:45 pm	121	579	380	1606	501	2185
5:00 pm	126	627	368	1622	494	2249
5:15 pm	149	661	446	1620	595	2281
5:30 pm	183	652	412	1558	595	2210
5:45 pm	169	590	396	1510	565	2100
6:00 pm	160	529	366	1446	526	1975
6:15 pm	140	471	384	1389	524	1860
6:30 pm	121	416	364	1289	485	1705
6:45 pm	108	365	332	1134	440	1499
7:00 pm	102	332	309	1006	411	1338
7:15 pm	85	285	284	881	369	1166
7:30 pm	70	259	209	745	279	1004
7:45 pm	75	236	204	663	279	899
8:00 pm	55	210	184	571	239	781
8:15 pm	59	198	148	499	207	697
8:30 pm	47	176	127	446	174	622
8:45 pm	49	181	112	431	161	612
9:00 pm	43	162	112	403	155	565
9:15 pm	37	149	95	369	132	518
9:30 pm	52	140	112	358	164	498
9:45 pm	30	107	84	306	114	413
10:00 pm	30	99	78	272	108	371
10:15 pm	28	89	84	248	112	337
10:30 pm	19	78	60	208	79	286
10:45 pm	22	72	50	180	72	252
11:00 pm	20	61	54	160	74	221
11:15 pm	17		44		61	
11:30 pm	13		32		45	
11:45 pm	11		30		41	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	26912	6:45 am	2270	5:15 pm	2281
N/B	10692	6:45 am	1416	5:15 pm	661
S/B	16220	8:30 am	957	5:00 pm	1622

Run Date: *03/04/2013*
Run Time *7:24 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1V7-1V8
Page: 1

Count Date: 09/28/2009 12:00 a Monday Condition: : Location: LAS VIRGENES ROAD N/O MULHOLLAND HIGHWAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	19	52	13	23	32	75
12:15 am	13	38	6	14	19	52
12:30 am	11	33	2	10	13	43
12:45 am	9	27	2	9	11	36
1:00 am	5	22	4	10	9	32
1:15 am	8	22	2	11	10	33
1:30 am	5	15	1	10	6	25
1:45 am	4	13	3	14	7	27
2:00 am	5	10	5	13	10	23
2:15 am	1	9	1	10	2	19
2:30 am	3	11	5	10	8	21
2:45 am	1	8	2	5	3	13
3:00 am	4	9	2	6	6	15
3:15 am	3	6	1	10	4	16
3:30 am	0	9	0	15	0	24
3:45 am	2	11	3	24	5	35
4:00 am	1	12	6	39	7	51
4:15 am	6	16	6	59	12	75
4:30 am	2	21	9	83	11	104
4:45 am	3	27	18	152	21	179
5:00 am	5	45	26	210	31	255
5:15 am	11	58	30	308	41	366
5:30 am	8	71	78	494	86	565
5:45 am	21	110	76	736	97	846
6:00 am	18	135	124	998	142	1133
6:15 am	24	181	216	1234	240	1415
6:30 am	47	256	320	1438	367	1694
6:45 am	46	452	338	1494	384	1946
7:00 am	64	614	360	1524	424	2138
7:15 am	99	842	420	1526	519	2368
7:30 am	243	929	376	1488	619	2417
7:45 am	208	847	368	1506	576	2353
8:00 am	292	759	362	1490	654	2249
8:15 am	186	567	382	1329	568	1896
8:30 am	161	477	394	1169	555	1646
8:45 am	120	412	352	1033	472	1445
9:00 am	100	392	201	903	301	1295
9:15 am	96	394	222	848	318	1242
9:30 am	96	401	258	788	354	1189
9:45 am	100	415	222	688	322	1103
10:00 am	102	405	146	622	248	1027
10:15 am	103	397	162	640	265	1037
10:30 am	110	416	158	611	268	1027
10:45 am	90	417	156	630	246	1047
11:00 am	94	453	164	656	258	1109
11:15 am	122	511	133	642	255	1153
11:30 am	111	521	177	637	288	1158
11:45 am	126	543	182	614	308	1157
12:00 pm	152	557	150	578	302	1135
12:15 pm	132	516	128	576	260	1092
12:30 pm	133	524	154	592	287	1116
12:45 pm	140	537	146	580	286	1117
1:00 pm	111	563	148	565	259	1128
1:15 pm	140	636	144	536	284	1172
1:30 pm	146	662	142	515	288	1177
1:45 pm	166	704	131	487	297	1191
2:00 pm	184	734	119	482	303	1216
2:15 pm	166	794	123	480	289	1274
2:30 pm	188	898	114	499	302	1397
2:45 pm	196	962	126	502	322	1464
3:00 pm	244	1032	117	508	361	1540
3:15 pm	270	1086	142	520	412	1606
3:30 pm	252	1099	117	492	369	1591
3:45 pm	266	1147	132	491	398	1638
4:00 pm	298	1173	129	485	427	1658
4:15 pm	283	1159	114	487	397	1646
4:30 pm	300	1218	116	507	416	1725
4:45 pm	292	1188	126	537	418	1725
5:00 pm	284	1192	131	553	415	1745
5:15 pm	342	1188	134	553	476	1741
5:30 pm	270	1168	146	517	416	1685
5:45 pm	296	1138	142	471	438	1609
6:00 pm	280	1034	131	441	411	1475
6:15 pm	322	980	98	393	420	1373
6:30 pm	240	884	100	371	340	1255
6:45 pm	192	798	112	349	304	1147
7:00 pm	226	728	83	310	309	1038
7:15 pm	226	628	76	278	302	906
7:30 pm	154	506	78	255	232	761
7:45 pm	122	412	73	226	195	638
8:00 pm	126	349	51	203	177	552
8:15 pm	104	283	53	191	157	474
8:30 pm	60	259	49	184	109	443
8:45 pm	59	261	50	177	109	438
9:00 pm	60	266	39	169	99	435
9:15 pm	80	254	46	156	126	410
9:30 pm	62	212	42	142	104	354
9:45 pm	64	177	42	124	106	301
10:00 pm	48	149	26	95	74	244
10:15 pm	38	119	32	84	70	203
10:30 pm	27	102	24	60	51	162
10:45 pm	36	96	13	52	49	148
11:00 pm	18	72	15	50	33	122
11:15 pm	21		8		29	
11:30 pm	21		16		37	
11:45 pm	12		11		23	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	21690	7:30 am	2417	5:00 pm	1745
N/B	10757	7:30 am	929	4:30 pm	1218
S/B	10933	7:15 am	1526	12:30 pm	592

Run Date: *03/04/2013*
Run Time *7:24 AM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: Y50-Y55
Page: 1

Count Date: 07/28/2010 12:00 a Wednesday Condition: : Location: LAS VIRGENES ROAD N/O AGOURA ROAD
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	29	89	36	102	65	191
12:15 am	16	71	20	80	36	151
12:30 am	26	67	30	69	56	136
12:45 am	18	54	16	45	34	99
1:00 am	11	51	14	34	25	85
1:15 am	12	54	9	28	21	82
1:30 am	13	48	6	26	19	74
1:45 am	15	39	5	28	20	67
2:00 am	14	29	8	25	22	54
2:15 am	6	23	7	24	13	47
2:30 am	4	21	8	24	12	45
2:45 am	5	23	2	20	7	43
3:00 am	8	20	7	24	15	44
3:15 am	4	20	7	23	11	43
3:30 am	6	24	4	28	10	52
3:45 am	2	26	6	38	8	64
4:00 am	8	43	6	66	14	109
4:15 am	8	54	12	85	20	139
4:30 am	8	78	14	121	22	199
4:45 am	19	104	34	190	53	294
5:00 am	19	121	25	270	44	391
5:15 am	32	178	48	375	80	553
5:30 am	34	202	83	507	117	709
5:45 am	36	280	114	678	150	958
6:00 am	76	324	130	796	206	1120
6:15 am	56	338	180	935	236	1273
6:30 am	112	401	254	1037	366	1438
6:45 am	80	433	232	1074	312	1507
7:00 am	90	503	269	1122	359	1625
7:15 am	119	597	282	1175	401	1772
7:30 am	144	630	291	1210	435	1840
7:45 am	150	664	280	1234	430	1898
8:00 am	184	686	322	1220	506	1906
8:15 am	152	666	317	1145	469	1811
8:30 am	178	690	315	1078	493	1768
8:45 am	172	676	266	967	438	1643
9:00 am	164	694	247	926	411	1620
9:15 am	176	668	250	896	426	1564
9:30 am	164	660	204	846	368	1506
9:45 am	190	638	225	860	415	1498
10:00 am	138	630	217	849	355	1479
10:15 am	168	673	200	876	368	1549
10:30 am	142	689	218	901	360	1590
10:45 am	182	791	214	934	396	1725
11:00 am	181	807	244	954	425	1761
11:15 am	184	902	225	963	409	1865
11:30 am	244	952	251	980	495	1932
11:45 am	198	934	234	981	432	1915

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 pm	276	980	253	1051	529	2031
12:15 pm	234	935	242	1038	476	1973
12:30 pm	226	915	252	1054	478	1969
12:45 pm	244	906	304	1022	548	1928
1:00 pm	231	936	240	948	471	1884
1:15 pm	214	994	258	921	472	1915
1:30 pm	217	1048	220	857	437	1905
1:45 pm	274	1132	230	807	504	1939
2:00 pm	289	1138	213	767	502	1905
2:15 pm	268	1129	194	726	462	1855
2:30 pm	301	1147	170	706	471	1853
2:45 pm	280	1180	190	736	470	1916
3:00 pm	280	1228	172	753	452	1981
3:15 pm	286	1308	174	740	460	2048
3:30 pm	334	1308	200	798	534	2106
3:45 pm	328	1349	207	814	535	2163
4:00 pm	360	1391	159	831	519	2222
4:15 pm	286	1447	232	886	518	2333
4:30 pm	375	1557	216	855	591	2412
4:45 pm	370	1628	224	841	594	2469
5:00 pm	416	1640	214	829	630	2469
5:15 pm	396	1566	201	808	597	2374
5:30 pm	446	1481	202	805	648	2286
5:45 pm	382	1360	212	805	594	2165
6:00 pm	342	1258	193	763	535	2021
6:15 pm	311	1174	198	700	509	1874
6:30 pm	325	1129	202	655	527	1784
6:45 pm	280	1014	170	577	450	1591
7:00 pm	258	951	130	550	388	1501
7:15 pm	266	881	153	538	419	1419
7:30 pm	210	779	124	501	334	1280
7:45 pm	217	713	143	487	360	1200
8:00 pm	188	649	118	449	306	1098
8:15 pm	164	590	116	436	280	1026
8:30 pm	144	534	110	407	254	941
8:45 pm	153	494	105	383	258	877
9:00 pm	129	431	105	358	234	789
9:15 pm	108	410	87	317	195	727
9:30 pm	104	380	86	285	190	665
9:45 pm	90	364	80	245	170	609
10:00 pm	108	326	64	206	172	532
10:15 pm	78	268	55	193	133	461
10:30 pm	88	232	46	166	134	398
10:45 pm	52	186	41	140	93	326
11:00 pm	50	160	51	132	101	292
11:15 pm	42		28		70	
11:30 pm	42		20		62	
11:45 pm	26		33		59	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	29110	11:30 am	1932	4:45 pm	2469
N/B	15085	11:30 am	952	5:00 pm	1640
S/B	14025	7:45 am	1234	12:30 pm	1054

Lost Hills Road South of Agoura Road

		24 Hr Volume			AM Peak			PM Peak				2008 24 Hr Volume			2008 AM Peak			2008 PM Peak		
Count Date	Day	Total	North	South	Total	North	South	Total	North	South	G.F.	Total	North	South	Total	North	South	Total	North	South
06/24/08	Tue	15686	7203	8483	1416	537	879	1399	798	601	1.000	15686	7203	8483	1416	537	879	1399	798	601
06/25/08	Wed	16337	7421	8916	1430	527	903	1514	802	712	1.000	16337	7421	8916	1430	527	903	1514	802	712
06/26/08	Thu	15985	7369	8616	1378	523	855	1458	814	644	1.000	15985	7369	8616	1378	523	855	1458	814	644

2008 Averages

24 Hour Volume			AM Peak			PM Peak		
Total	North	South	Total	North	South	Total	North	South
16003	7331	8672	1408	529	879	1457	805	652

Weather :
Counted by:
Board # :
Other :

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TAS for Windows
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Site Code : 000000000000
Start Date: 06/23/2008
File I.D. : LOST HILLS RO
Page : 1

Begin	Mon. 06/23		Tues.		Wed.		Thur.		Fri.		Sat.		Sun.		Week Avg.	
Time	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
12:00 am	*	*	35	41	39	53	38	49	30	42	*	*	*	*	36	46
01:00	*	*	13	32	10	22	16	23	30	30	*	*	*	*	17	27
02:00	*	*	5	14	13	16	8	12	10	20	*	*	*	*	9	16
03:00	*	*	6	2	9	10	9	14	9	9	*	*	*	*	8	9
04:00	*	*	11	16	14	15	15	13	12	18	*	*	*	*	13	16
05:00	*	*	39	124	49	124	52	119	45	129	*	*	*	*	46	124
06:00	*	*	212	539	210	576	229	574	187	489	*	*	*	*	210	544
07:00	*	*	421	879	449	903	437	832	416	806	*	*	*	*	431	855
08:00	*	*	537	871	527	830	523	855	483	764	*	*	*	*	518	830
09:00	*	*	373	560	378	564	418	589	*	*	*	*	*	*	390	571
10:00	203	303	283	408	334	397	298	429	*	*	*	*	*	*	280	384
11:00	322	339	313	335	313	389	310	401	*	*	*	*	*	*	314	366
12:00 pm	359	433	377	400	407	466	392	439	*	*	*	*	*	*	384	434
01:00	361	422	380	437	402	451	401	452	*	*	*	*	*	*	386	440
02:00	358	373	401	380	434	393	465	401	*	*	*	*	*	*	414	387
03:00	464	393	477	388	467	410	436	412	*	*	*	*	*	*	461	401
04:00	573	454	588	478	635	542	636	484	*	*	*	*	*	*	608	490
05:00	765	589	798	601	802	712	814	644	*	*	*	*	*	*	795	636
06:00	701	500	726	542	734	680	669	491	*	*	*	*	*	*	708	553
07:00	487	445	479	482	521	495	500	485	*	*	*	*	*	*	497	477
08:00	278	353	306	363	299	333	297	369	*	*	*	*	*	*	295	354
09:00	165	233	221	309	154	249	203	266	*	*	*	*	*	*	186	264
10:00	110	163	127	184	145	188	132	175	*	*	*	*	*	*	128	178
11:00	65	81	75	98	76	98	71	88	*	*	*	*	*	*	72	91
Totals	5211	5081	7203	8483	7421	8916	7369	8616	1222	2307	0	0	0	0	7206	8493
	10292		15686		16337		15985		3529		0		0		15699	
Avg. Day	72.3%	59.8%	99.9%	99.8%	102.9%	104.9%	102.2%	101.4%	16.9%	27.1%	.0%	.0%	.0%	.0%		
AM Peaks	11:00	11:00	08:00	07:00	08:00	07:00	08:00	08:00	08:00	07:00					08:00	07:00
Volume	322	339	537	879	527	903	523	855	483	806					518	855
PM Peaks	05:00	05:00	05:00	05:00	05:00	05:00	05:00	05:00							05:00	05:00
Volume	765	589	798	601	802	712	814	644							795	636

ADTs

Notes:
1 - Northbound Traffic
2 - Southbound Traffic

To determine AADT, AM Peak & PM peak, only Tuesday, Wednesday & Thursday counts were used. Monday and Friday counts were omitted because they were not complete counts for the day.

Historic Traffic Count Sheets

Run Date: *03/04/2013*
Run Time *12:50 PM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: C66-C70
Page: 1

Count Date: 01/28/2010 12:00 a Thursday Condltion: : Location: MALIBU CANYON ROAD S/O PIUMA ROAD
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	33	94	8	28	41	122
12:15 am	18	80	8	28	26	108
12:30 am	26	75	10	22	36	97
12:45 am	17	66	2	17	19	83
1:00 am	19	56	8	19	27	75
1:15 am	13	44	2	16	15	60
1:30 am	17	34	5	16	22	50
1:45 am	7	23	4	15	11	38
2:00 am	7	18	5	14	12	32
2:15 am	3	12	2	13	5	25
2:30 am	6	11	4	15	10	26
2:45 am	2	10	3	17	5	27
3:00 am	1	10	4	17	5	27
3:15 am	2	14	4	19	6	33
3:30 am	5	15	6	23	11	38
3:45 am	2	12	3	36	5	48
4:00 am	5	13	6	49	11	62
4:15 am	3	15	8	67	11	82
4:30 am	2	15	19	80	21	95
4:45 am	3	21	16	99	19	120
5:00 am	7	34	24	143	31	177
5:15 am	3	44	21	190	24	234
5:30 am	8	63	38	299	46	362
5:45 am	16	79	60	480	76	559
6:00 am	17	92	71	679	88	771
6:15 am	22	142	130	892	152	1034
6:30 am	24	196	219	1075	243	1271
6:45 am	29	254	259	1192	288	1446
7:00 am	67	307	284	1292	351	1599
7:15 am	76	314	313	1334	389	1648
7:30 am	82	357	336	1373	418	1730
7:45 am	82	356	359	1389	441	1745
8:00 am	74	349	326	1343	400	1692
8:15 am	119	352	352	1247	471	1599
8:30 am	81	327	352	1123	433	1450
8:45 am	75	340	313	1069	388	1409
9:00 am	77	359	230	966	307	1325
9:15 am	94	391	228	918	322	1309
9:30 am	94	377	298	860	392	1237
9:45 am	94	393	210	710	304	1103
10:00 am	109	393	182	648	291	1041
10:15 am	80	401	170	583	250	984
10:30 am	110	411	148	575	258	986
10:45 am	94	397	148	585	242	982
11:00 am	117	407	117	581	234	988
11:15 am	90	412	162	576	252	988
11:30 am	96	433	158	518	254	951
11:45 am	104	457	144	496	248	953
12:00 pm	122	467	112	482	234	949
12:15 pm	111	471	104	477	215	948
12:30 pm	120	500	136	498	256	998
12:45 pm	114	504	130	494	244	998
1:00 pm	126	536	107	476	233	1012
1:15 pm	140	592	125	477	265	1069
1:30 pm	124	590	132	466	256	1056
1:45 pm	146	652	112	455	258	1107
2:00 pm	182	691	108	463	290	1154
2:15 pm	138	739	114	449	252	1188
2:30 pm	186	861	121	449	307	1310
2:45 pm	185	922	120	435	305	1357
3:00 pm	230	1063	94	433	324	1496
3:15 pm	260	1113	114	456	374	1569
3:30 pm	247	1167	107	455	354	1622
3:45 pm	326	1226	118	488	444	1714
4:00 pm	280	1224	117	478	397	1702
4:15 pm	314	1267	113	460	427	1727
4:30 pm	306	1325	140	475	446	1800
4:45 pm	324	1367	108	470	432	1837
5:00 pm	323	1368	99	503	422	1871
5:15 pm	372	1351	128	536	500	1887
5:30 pm	348	1335	135	565	483	1900
5:45 pm	325	1277	141	554	466	1831
6:00 pm	306	1198	132	517	438	1715
6:15 pm	356	1083	157	469	513	1552
6:30 pm	290	942	124	374	414	1316
6:45 pm	246	850	104	308	350	1158
7:00 pm	191	744	84	252	275	996
7:15 pm	215	688	62	211	277	899
7:30 pm	198	603	58	187	256	790
7:45 pm	140	524	48	167	188	691
8:00 pm	135	500	43	157	178	657
8:15 pm	130	486	38	148	168	634
8:30 pm	119	438	38	146	157	584
8:45 pm	116	389	38	152	154	541
9:00 pm	121	351	34	152	155	503
9:15 pm	82	294	36	146	118	440
9:30 pm	70	279	44	128	114	407
9:45 pm	78	268	38	116	116	384
10:00 pm	64	237	28	99	92	336
10:15 pm	67	218	18	81	85	299
10:30 pm	59	184	32	75	91	259
10:45 pm	47	155	21	53	68	208
11:00 pm	45	130	10	44	55	174
11:15 pm	33		12		45	
11:30 pm	30		10		40	
11:45 pm	22		12		34	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	20476	7:45 am	1745	5:30 pm	1900
N/B	10641	11:45 am	457	5:00 pm	1368
S/B	9835	7:45 am	1389	5:30 pm	565

Run Date: *03/04/2013*
Run Time *12:51 PM*

Los Angeles County Department of Public Works
900 S. Fremont Ave.
Machine Traffic Count

Report ID: 1V9-1W0
Page: 1

Count Date: 09/28/2009 12:00 a Monday Condition: : Location: LAS VIRGENES ROAD S/O MULHOLLAND HIGHWAY
Align Coord:

Time	N/B 15'	N/B Hour	S/B 15'	S/B Hour	Total 15'	Total Hour
12:00 am	16	52	8	20	24	72
12:15 am	16	40	8	16	24	56
12:30 am	9	29	3	11	12	40
12:45 am	11	26	1	9	12	35
1:00 am	4	21	4	10	8	31
1:15 am	5	22	3	9	8	31
1:30 am	6	19	1	8	7	27
1:45 am	6	14	2	10	8	24
2:00 am	5	10	3	10	8	20
2:15 am	2	10	2	13	4	23
2:30 am	1	9	3	11	4	20
2:45 am	2	9	2	9	4	18
3:00 am	5	8	6	10	11	18
3:15 am	1	4	0	9	1	13
3:30 am	1	9	1	15	2	24
3:45 am	1	8	3	23	4	31
4:00 am	1	11	5	39	6	50
4:15 am	6	14	6	52	12	66
4:30 am	0	19	9	80	9	99
4:45 am	4	31	19	120	23	151
5:00 am	4	47	18	183	22	230
5:15 am	11	63	34	265	45	328
5:30 am	12	68	49	409	61	477
5:45 am	20	87	82	651	102	738
6:00 am	20	102	100	913	120	1015
6:15 am	16	140	178	1149	194	1289
6:30 am	31	211	291	1329	322	1540
6:45 am	35	270	344	1445	379	1715
7:00 am	58	329	336	1480	394	1809
7:15 am	87	351	358	1538	445	1889
7:30 am	90	384	407	1582	497	1966
7:45 am	94	410	379	1581	473	1991
8:00 am	80	417	394	1578	474	1995
8:15 am	120	451	402	1488	522	1939
8:30 am	116	431	406	1348	522	1779
8:45 am	101	426	376	1204	477	1630
9:00 am	114	439	304	1056	418	1495
9:15 am	100	423	262	918	362	1341
9:30 am	111	419	262	824	373	1243
9:45 am	114	404	228	715	342	1119
10:00 am	98	387	166	639	264	1026
10:15 am	96	369	168	620	264	989
10:30 am	96	376	153	600	249	976
10:45 am	97	410	152	600	249	1010
11:00 am	80	435	147	616	227	1051
11:15 am	103	485	148	619	251	1104
11:30 am	130	518	153	603	283	1121
11:45 am	122	535	168	598	290	1133
12:00 pm	130	537	150	580	280	1117
12:15 pm	136	517	132	564	268	1081
12:30 pm	147	511	148	578	295	1089
12:45 pm	124	510	150	558	274	1068
1:00 pm	110	528	134	536	244	1064
1:15 pm	130	612	146	518	276	1130
1:30 pm	146	646	128	492	274	1138
1:45 pm	142	685	128	484	270	1169
2:00 pm	194	739	116	472	310	1211
2:15 pm	164	769	120	488	284	1257
2:30 pm	185	854	120	482	305	1336
2:45 pm	196	907	116	484	312	1391
3:00 pm	224	987	132	500	356	1487
3:15 pm	249	1027	114	508	363	1535
3:30 pm	238	1102	122	508	360	1610
3:45 pm	276	1139	132	502	408	1641
4:00 pm	264	1179	140	472	404	1651
4:15 pm	324	1179	114	451	438	1630
4:30 pm	275	1199	116	466	391	1665
4:45 pm	316	1214	102	493	418	1707
5:00 pm	264	1178	119	527	383	1705
5:15 pm	344	1198	129	534	473	1732
5:30 pm	290	1166	143	505	433	1671
5:45 pm	280	1122	136	461	416	1583
6:00 pm	284	1054	126	430	410	1484
6:15 pm	312	970	100	387	412	1357
6:30 pm	246	894	99	367	345	1261
6:45 pm	212	827	105	336	317	1163
7:00 pm	200	731	83	301	283	1032
7:15 pm	236	659	80	265	316	924
7:30 pm	179	541	68	235	247	776
7:45 pm	116	426	70	212	186	638
8:00 pm	128	379	47	193	175	572
8:15 pm	118	325	50	181	168	506
8:30 pm	64	278	45	169	109	447
8:45 pm	69	273	51	165	120	438
9:00 pm	74	261	35	156	109	417
9:15 pm	71	237	38	148	109	385
9:30 pm	59	207	41	134	100	341
9:45 pm	57	180	42	120	99	300
10:00 pm	50	161	27	92	77	253
10:15 pm	41	132	24	76	65	208
10:30 pm	32	115	27	63	59	178
10:45 pm	38	103	14	43	52	146
11:00 pm	21	77	11	41	32	118
11:15 pm	24		11		35	
11:30 pm	20		7		27	
11:45 pm	12		12		24	

24 Hour		AM Peak Hour		PM Peak Hour	
Direction	Volume	Time	Volume	Time	Volume
Total	20923	8:00 am	1995	5:15 pm	1732
N/B	10069	11:45 am	535	4:45 pm	1214
S/B	10854	7:30 am	1582	12:00 pm	580

Construction Traffic Trip Generation

Alternative 2a - Dam Removal with Mechanical Support

Year	Construction Phase	Time Period	Maximum Daily Construction Worker Trips		Maximum Daily Construction Truck Trips															
					Inbound								Outbound							
			Inbound[1]	Outbound[2]	Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]		Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]	
					Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]
1	Vegetation Clearing	Daily	49	49			8	12							8	12				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	49			1	2							1	2				
	Ramp Building	Daily	49	49	32	48							32	48						
		AM Peak Hour	0	0	4	6							4	6						
		PM Peak Hour	0	0	0	0							0	0						
	Dewatering	Daily	27	27	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
2	Vegetation Clearing	Daily	37	37			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	37			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	59	59			110	165							110	165				
		AM Peak Hour	0	0			14	21							14	21				
		PM Peak Hour	0	59			7	11							7	11				
	Hauling to Topanga and Surfrider Beaches	Daily	65	65							136	204							136	204
		AM Peak Hour	0	0							17	26							17	26
		PM Peak Hour	0	0							0	0							0	0
	Dewatering	Daily	37	37	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
3	Vegetation Clearing	Daily	39	39			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	39			1	2							1	2				
	Hauling to Topanga Beach	Daily	35	35							53	80							53	80
		AM Peak Hour	0	0							7	11							7	11
		PM Peak Hour	0	0							0	0							0	0
	Hauling to Zuma Beach	Daily	43	43					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	43	43			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	43			0	0							0	0				
	Dewatering	Daily	39	39	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
4	Vegetation Clearing	Daily	42	42			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			1	2							1	2				
	Hauling to Zuma Beach	Daily	33	33					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	37	37			61	92							61	92				
		AM Peak Hour	0	0			8	12							8	12				
		PM Peak Hour	0	37			4	6							4	6				
	Dewatering	Daily	42	42	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
5	Vegetation Clearing	Daily	39	39			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	39			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	53	53			137	206							137	206				
		AM Peak Hour	0	0			18	27							18	27				
		PM Peak Hour	0	53			9	14							9	14				
	Dewatering	Daily	39	39	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
Maximum Trips during 5-Year Construction Period		***Daily***	***65***	***65***	***32***	***48***	***137***	***206***	***53***	***80***	***136***	***204***	***32***	***48***	***137***	***206***	***53***	***80***	***136***	***204***
		AM Peak Hour	***0***	***0***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***
		PM Peak Hour	***0***	***59***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***

Notes:

[1]Since construction would begin by 7 AM, no inbound worker trips would occur during the AM peak hour (peak one hour between 7 AM and 9 AM).

[2]Since construction would end by 3:30 PM, no truck and outbound worker trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM), except when construction would extend till 4:30 PM to haul material to Calabasas Landfill.

[3]Passenger car equivalent (PCE) factor for trucks was assumed to be 1.5.

[4]Since hauling to Calabasas Landfill would end by 4:30 PM latest, a maximum of half of hourly truck trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM).

Construction Traffic Trip Generation

Alternative 2b - Dam Removal with Mechanical Support and Upstream Barriers Removal

Year	Construction Phase	Time Period	Maximum Daily Construction Worker Trips		Maximum Daily Construction Truck Trips													
					Inbound						Outbound							
			Inbound[1]	Outbound[2]	Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]		Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]	
					Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]
1	Vegetation Clearing	Daily	49	49			8	12							8	12				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	49			1	2							1	2				
	Ramp Building	Daily	49	49	32	48							32	48						
		AM Peak Hour	0	0	4	6							4	6						
		PM Peak Hour	0	0	0	0							0	0						
	Dewatering	Daily	27	27	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	96	96			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	96			1	2							1	2				
2	Vegetation Clearing	Daily	37	37			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	37			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	59	59			110	165							110	165				
		AM Peak Hour	0	0			14	21							14	21				
		PM Peak Hour	0	59			7	11							7	11				
	Hauling to Topanga and Surfrider Beaches	Daily	65	65							136	204							136	204
		AM Peak Hour	0	0							17	26							17	26
		PM Peak Hour	0	0							0	0							0	0
	Dewatering	Daily	37	37	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	84	84			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	84			1	2							1	2				
3	Vegetation Clearing	Daily	39	39			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	39			1	2							1	2				
	Hauling to Topanga Beach	Daily	35	35							53	80							53	80
		AM Peak Hour	0	0							7	11							7	11
		PM Peak Hour	0	0							0	0							0	0
	Hauling to Zuma Beach	Daily	43	43					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	43	43			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	43			0	0							0	0				
	Dewatering	Daily	39	39	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	72	72			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	72			1	2							1	2				
4	Vegetation Clearing	Daily	42	42			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			1	2							1	2				
	Hauling to Zuma Beach	Daily	33	33					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	37	37			61	92							61	92				
		AM Peak Hour	0	0			8	12							8	12				
		PM Peak Hour	0	37			4	6							4	6				
	Dewatering	Daily	42	42	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
5	Vegetation Clearing	Daily	39	39			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	39			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	53	53			137	206							137	206				
		AM Peak Hour	0	0			18	27							18	27				
		PM Peak Hour	0	53			9	14							9	14				
	Dewatering	Daily	39	39	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
Maximum Trips during 5-Year Construction Period		***Daily***	***96***	***96***	***32***	***48***	***137***	***206***	***53***	***80***	***136***	***204***	***32***	***48***	***137***	***206***	***53***	***80***	***136***	***204***
		AM Peak Hour	***0***	***0***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***
		PM Peak Hour	***0***	***96***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***

Notes:

[1]Since construction would begin by 7 AM, no inbound worker trips would occur during the AM peak hour (peak one hour between 7 AM and 9 AM).

[2]Since construction would end by 3:30 PM, no truck and outbound worker trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM), except when construction would extend till 4:30 PM to haul material to Calabasas Landfill.

[3]Passenger car equivalent (PCE) factor for trucks was assumed to be 1.5.

[4]Since hauling to Calabasas Landfill would end by 4:30 PM latest, a maximum of half of hourly truck trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM).

Construction Traffic Trip Generation

Alternative 3a - Dam Removal with Natural Transport

Year	Construction Phase	Time Period	Maximum Daily Construction Worker Trips		Maximum Daily Construction Truck Trips															
					Inbound								Outbound							
			Inbound[1]	Outbound[2]	Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]		Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]	
					Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]
1	Floodwall Construction	Daily	69	69	8	12							8	12						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Ramp Building	Daily	24	24	32	48							32	48						
		AM Peak Hour	0	0	4	6							4	6						
		PM Peak Hour	0	0	0	0							0	0						
	Vegetation Clearing	Daily	69	69			7	11							7	11				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	69			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	42	42			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			0	0							0	0				
	Dewatering	Daily	15	15	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
2	Vegetation Clearing	Daily	37	37			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	37			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	23	23			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	23			0	0							0	0				
	Site Maintenance	Daily	23	23																
		AM Peak Hour	0	0																
		PM Peak Hour	0	0																
	Dewatering	Daily	37	37	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
3-49 (as needed)	Vegetation Clearing	Daily	37	37			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	37			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	34	34			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	34			0	0							0	0				
	Site Maintenance	Daily	34	34																
		AM Peak Hour	0	0																
		PM Peak Hour	0	0																
	Dewatering	Daily	37	37	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
50	Vegetation Clearing	Daily	34	34			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	34			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	34	34			137	206							137	206				
		AM Peak Hour	0	0			18	27							18	27				
		PM Peak Hour	0	34			9	14							9	14				
	Dewatering	Daily	41	41	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
Maximum Trips during 50-Year Construction Period		***Daily***	***69***	***69***	***32***	***48***	***137***	***206***	***0***	***0***	***0***	***0***	***32***	***48***	***137***	***206***	***0***	***0***	***0***	***0***
		AM Peak Hour	***0***	***0***	***4***	***6***	***18***	***27***	***0***	***0***	***0***	***0***	***4***	***6***	***18***	***27***	***0***	***0***	***0***	***0***
		PM Peak Hour	***0***	***69***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***

Notes:

[1]Since construction would begin by 7 AM, no inbound worker trips would occur during the AM peak hour (peak one hour between 7 AM and 9 AM).

[2]Since construction would end by 3:30 PM, no truck and outbound worker trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM), except when construction would extend till 4:30 PM to haul material to Calabasas Landfill.

[3]Passenger car equivalent (PCE) factor for trucks was assumed to be 1.5.

[4]Since hauling to Calabasas Landfill would end by 4:30 PM latest, a maximum of half of hourly truck trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM).

Construction Traffic Trip Generation

Alternative 3b - Dam Removal with Natural Transport and Upstream Barrier Removal

Year	Construction Phase	Time Period	Maximum Daily Construction Worker Trips		Maximum Daily Construction Truck Trips															
					Inbound								Outbound							
			Inbound[1]	Outbound[2]	Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]		Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]	
					Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]
1	Floodwall Construction	Daily	69	69	8	12							8	12						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Ramp Building	Daily	24	24	32	48							32	48						
		AM Peak Hour	0	0	4	6							4	6						
		PM Peak Hour	0	0	0	0							0	0						
	Vegetation Clearing	Daily	69	69			7	11							7	11				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	69			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	42	42			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			0	0							0	0				
	Dewatering	Daily	15	15	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	100	100			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	100			1	2							1	2				
2	Vegetation Clearing	Daily	37	37			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	37			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	23	23			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	23			0	0							0	0				
	Site Maintenance	Daily	23	23																
		AM Peak Hour	0	0																
		PM Peak Hour	0	0																
	Dewatering	Daily	37	37	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	62	62			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	62			1	2							1	2				
3	Vegetation Clearing	Daily	37	37			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	37			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	34	34			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	34			0	0							0	0				
	Site Maintenance	Daily	34	34																
		AM Peak Hour	0	0																
		PM Peak Hour	0	0																
	Dewatering	Daily	37	37	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	63	63			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	63			1	2							1	2				
4-49 (as needed)	Vegetation Clearing	Daily	37	37			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	37			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	34	34			1	2							1	2				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	34			0	0							0	0				
	Site Maintenance	Daily	34	34																
		AM Peak Hour	0	0																
		PM Peak Hour	0	0																
	Dewatering	Daily	37	37	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
50	Vegetation Clearing	Daily	34	34			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	34			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	34	34			137	206							137	206				
		AM Peak Hour	0	0			18	27							18	27				
		PM Peak Hour	0	34			9	14							9	14				
	Dewatering	Daily	41	41	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
Maximum Trips during 50-Year Construction Period		***Daily***	***100***	***100***	***32***	***48***	***137***	***206***	***0***	***0***	***0***	***0***	***32***	***48***	***137***	***206***	***0***	***0***	***0***	***0***
		AM Peak Hour	***0***	***0***	***4***	***6***	***18***	***27***	***0***	***0***	***0***	***0***	***4***	***6***	***18***	***27***	***0***	***0***	***0***	***0***
		PM Peak Hour	***0***	***100***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***

Notes:

[1]Since construction would begin by 7 AM, no inbound worker trips would occur during the AM peak hour (peak one hour between 7 AM and 9 AM).

[2]Since construction would end by 3:30 PM, no truck and outbound worker trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM), except when construction would extend till 4:30 PM to haul material to Calabasas Landfill.

[3]Passenger car equivalent (PCE) factor for trucks was assumed to be 1.5.

[4]Since hauling to Calabasas Landfill would end by 4:30 PM latest, a maximum of half of hourly truck trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM).

Construction Traffic Trip Generation

Alternative 4a - Dam Removal with Hybrid Mechanical and Natural Transport

Year	Construction Phase	Time Period	Maximum Daily Construction Worker Trips		Maximum Daily Construction Truck Trips															
					Inbound								Outbound							
			Inbound[1]	Outbound[2]	Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]		Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]	
					Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]
1	Floodwall Construction	Daily	67	67	8	12							8	12						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Vegetation Clearing	Daily	67	67			8	12							8	12				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	67			1	2							1	2				
	Ramp Building	Daily	67	67	32	48							32	48						
		AM Peak Hour	0	0	4	6							4	6						
		PM Peak Hour	0	0	0	0							0	0						
	Dewatering	Daily	16	16	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
2	Vegetation Clearing	Daily	29	29			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	29			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	35	35			111	167							111	167				
		AM Peak Hour	0	0			14	21							14	21				
		PM Peak Hour	0	35			7	11							7	11				
	Hauling to Topanga and Surfrider Beaches	Daily	41	41							136	204							136	204
		AM Peak Hour	0	0							17	26							17	26
		PM Peak Hour	0	0							0	0							0	0
	Dewatering	Daily	29	29	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
3	Vegetation Clearing	Daily	39	39			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	39			1	2							1	2				
	Hauling to Topanga Beach	Daily	35	35							53	80							53	80
		AM Peak Hour	0	0							7	11							7	11
		PM Peak Hour	0	0							0	0							0	0
	Hauling to Zuma Beach	Daily	44	44					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	44	44			2	3							2	3				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	44			0	0							0	0				
	Dewatering	Daily	39	39	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
4	Vegetation Clearing	Daily	42	42			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			1	2							1	2				
	Hauling to Zuma Beach	Daily	33	33					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	37	37			62	93							62	93				
		AM Peak Hour	0	0			8	12							8	12				
		PM Peak Hour	0	37			4	6							4	6				
	Dewatering	Daily	42	42	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
5	Vegetation Clearing	Daily	42	42			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	48	48			138	207							138	207				
		AM Peak Hour	0	0			18	27							18	27				
		PM Peak Hour	0	48			9	14							9	14				
	Dewatering	Daily	42	42	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Maximum Trips during 5-Year Construction Period	***Daily***	***67***	***67***	***32***	***48***	***138***	***207***	***53***	***80***	***136***	***204***	***32***	***48***	***138***	***207***	***53***	***80***	***136***	***204***
		AM Peak Hour	***0***	***0***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***
		PM Peak Hour	***0***	***67***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***

Notes:

[1]Since construction would begin by 7 AM, no inbound worker trips would occur during the AM peak hour (peak one hour between 7 AM and 9 AM).

[2]Since construction would end by 3:30 PM, no truck and outbound worker trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM), except when construction would extend till 4:30 PM to haul material to Calabasas Landfill.

[3]Passenger car equivalent (PCE) factor for trucks was assumed to be 1.5.

[4]Since hauling to Calabasas Landfill would end by 4:30 PM latest, a maximum of half of hourly truck trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM).

Construction Traffic Trip Generation

Alternative 4b - Dam Removal with Hybrid Mechanical and Natural Transport and Upstream Barrier Removal

Year	Construction Phase	Time Period	Maximum Daily Construction Worker Trips		Maximum Daily Construction Truck Trips															
					Inbound								Outbound							
			Inbound[1]	Outbound[2]	Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]		Delivery Trucks[2]		Haul Trucks to Landfill[4]		Haul Trucks to Zuma Beach[2]		Haul Trucks to Other Beaches[2]	
					Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]	Trucks	PCEs[3]
1	Floodwall Construction	Daily	67	67	8	12							8	12						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Vegetation Clearing	Daily	67	67			8	12							8	12				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	67			1	2							1	2				
	Ramp Building	Daily	67	67	32	48							32	48						
		AM Peak Hour	0	0	4	6							4	6						
		PM Peak Hour	0	0	0	0							0	0						
	Dewatering	Daily	16	16	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	101	101			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	101			1	2							1	2				
2	Vegetation Clearing	Daily	29	29			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	29			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	35	35			111	167							111	167				
		AM Peak Hour	0	0			14	21							14	21				
		PM Peak Hour	0	35			7	11							7	11				
	Hauling to Topanga and Surfrider Beaches	Daily	41	41							136	204							136	204
		AM Peak Hour	0	0							17	26							17	26
		PM Peak Hour	0	0							0	0							0	0
	Dewatering	Daily	29	29	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	57	57			3	5							3	5				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	57			1	2							1	2				
3	Vegetation Clearing	Daily	39	39			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	39			1	2							1	2				
	Hauling to Topanga Beach	Daily	35	35							53	80							53	80
		AM Peak Hour	0	0							7	11							7	11
		PM Peak Hour	0	0							0	0							0	0
	Hauling to Zuma Beach	Daily	44	44					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	44	44			2	3							2	3				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	44			0	0							0	0				
	Dewatering	Daily	39	39	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
	Upstream Barrier Removal	Daily	64	64			4	6							4	6				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	64			1	2							1	2				
4	Vegetation Clearing	Daily	42	42			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			1	2							1	2				
	Hauling to Zuma Beach	Daily	33	33					53	80							53	80		
		AM Peak Hour	0	0					7	11							7	11		
		PM Peak Hour	0	0					0	0							0	0		
	Hauling to Calabasas Landfill	Daily	37	37			62	93							62	93				
		AM Peak Hour	0	0			8	12							8	12				
		PM Peak Hour	0	37			4	6							4	6				
	Dewatering	Daily	42	42	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
5	Vegetation Clearing	Daily	42	42			6	9							6	9				
		AM Peak Hour	0	0			1	2							1	2				
		PM Peak Hour	0	42			1	2							1	2				
	Hauling to Calabasas Landfill	Daily	48	48			138	207							138	207				
		AM Peak Hour	0	0			18	27							18	27				
		PM Peak Hour	0	48			9	14							9	14				
	Dewatering	Daily	42	42	1	2							1	2						
		AM Peak Hour	0	0	1	2							1	2						
		PM Peak Hour	0	0	0	0							0	0						
Maximum Trips during 5-Year Construction Period		***Daily***	***101***	***101***	***32***	***48***	***138***	***207***	***53***	***80***	***136***	***204***	***32***	***48***	***138***	***207***	***53***	***80***	***136***	***204***
		AM Peak Hour	***0***	***0***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***	***4***	***6***	***18***	***27***	***7***	***11***	***17***	***26***
		PM Peak Hour	***0***	***101***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***	***0***	***0***	***9***	***14***	***0***	***0***	***0***	***0***

Notes:

[1]Since construction would begin by 7 AM, no inbound worker trips would occur during the AM peak hour (peak one hour between 7 AM and 9 AM).

[2]Since construction would end by 3:30 PM, no truck and outbound worker trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM), except when construction would extend till 4:30 PM to haul material to Calabasas Landfill.

[3]Passenger car equivalent (PCE) factor for trucks was assumed to be 1.5.

[4]Since hauling to Calabasas Landfill would end by 4:30 PM latest, a maximum of half of hourly truck trips would occur during the PM peak hour (peak one hour between 4 PM and 6 PM).

Construction Traffic Trip Assignment (in PCEs)

Alternative 2a - Dam Removal with Mechanical Support						
Roadway Segment	**Trip Assignment of Construction Traffic (PCEs)**					
	Daily		**AM Peak Hour**		**PM Peak Hour**	
	Inbound	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Malibu Canyon Road (Project Site - SR 1)	261	261	29	29	0	30
Las Virgenes Road (Project Site - Lost Hills Road)	263	263	30	30	14	44
Las Virgenes Road (Lost Hills Road - US 101)	28	28	2	2	0	15
Lost Hill Road (Las Virgenes Road - US 101)	234	234	29	29	14	29
PCH (East of Malibu Canyon Road)	232	232	28	28	0	15
PCH (West of Malibu Canyon Road)	108	108	13	13	0	15
Northbound US 101 (West of Lost Hills Road)	0	28	0	2	0	15
Southbound US 101 (West of Lost Hills Road)	28	0	2	0	0	0
Northbound US 101 (East of Las Virgenes Road)	28	0	2	0	0	0
Southbound US 101 (East of Las Virgenes Road)	0	28	0	2	0	15

Construction Traffic Trip Assignment (in PCEs)

Alternative 2b - Dam Removal with Mechanical Support and Upstream Barriers Removal

Roadway Segment	Trip Assignment of Construction Traffic (PCEs)					
	Daily		AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
Malibu Canyon Road (Project Site - SR 1)	276	276	29	29	0	48
Las Virgenes Road (Project Site - Lost Hills Road)	278	278	30	30	14	62
Las Virgenes Road (Lost Hills Road - US 101)	36	36	2	2	0	24
Lost Hill Road (Las Virgenes Road - US 101)	242	242	29	29	14	38
PCH (East of Malibu Canyon Road)	240	240	28	28	0	24
PCH (West of Malibu Canyon Road)	116	116	13	13	0	24
Northbound US 101 (West of Lost Hills Road)	0	36	0	2	0	24
Southbound US 101 (West of Lost Hills Road)	36	0	2	0	0	0
Northbound US 101 (East of Las Virgenes Road)	36	0	2	0	0	0
Southbound US 101 (East of Las Virgenes Road)	0	36	0	2	0	24

Construction Traffic Trip Assignment (in PCEs)

Alternative 3a - Dam Removal with Natural Transport						
Roadway Segment	**Trip Assignment of Construction Traffic (PCEs)**					
	Daily		**AM Peak Hour**		**PM Peak Hour**	
	Inbound	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Malibu Canyon Road (Project Site - SR 1)	59	59	3	3	0	35
Las Virgenes Road (Project Site - Lost Hills Road)	265	265	30	30	14	49
Las Virgenes Road (Lost Hills Road - US 101)	29	29	2	2	0	17
Lost Hill Road (Las Virgenes Road - US 101)	235	235	29	29	14	31
PCH (East of Malibu Canyon Road)	29	29	2	2	0	17
PCH (West of Malibu Canyon Road)	29	29	2	2	0	17
Northbound US 101 (West of Lost Hills Road)	0	29	0	2	0	17
Southbound US 101 (West of Lost Hills Road)	29	0	2	0	0	0
Northbound US 101 (East of Las Virgenes Road)	29	0	2	0	0	0
Southbound US 101 (East of Las Virgenes Road)	0	29	0	2	0	17

Construction Traffic Trip Assignment (in PCEs)

Alternative 3b - Dam Removal with Natural Transport and Upstream Barrier Removal						
Roadway Segment	**Trip Assignment of Construction Traffic (PCEs)**					
	Daily		**AM Peak Hour**		**PM Peak Hour**	
	Inbound	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Malibu Canyon Road (Project Site - SR 1)	74	74	3	3	0	50
Las Virgenes Road (Project Site - Lost Hills Road)	280	280	30	30	14	64
Las Virgenes Road (Lost Hills Road - US 101)	37	37	2	2	0	25
Lost Hill Road (Las Virgenes Road - US 101)	243	243	29	29	14	39
PCH (East of Malibu Canyon Road)	37	37	2	2	0	25
PCH (West of Malibu Canyon Road)	37	37	2	2	0	25
Northbound US 101 (West of Lost Hills Road)	0	37	0	2	0	25
Southbound US 101 (West of Lost Hills Road)	37	0	2	0	0	0
Northbound US 101 (East of Las Virgenes Road)	37	0	2	0	0	0
Southbound US 101 (East of Las Virgenes Road)	0	37	0	2	0	25

Construction Traffic Trip Assignment (in PCEs)

Alternative 4a - Dam Removal with Hybrid Mechanical and Natural Transport						
Roadway Segment	**Trip Assignment of Construction Traffic (PCEs)**					
	Daily		**AM Peak Hour**		**PM Peak Hour**	
	Inbound	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Malibu Canyon Road (Project Site - SR 1)	262	262	29	29	0	34
Las Virgenes Road (Project Site - Lost Hills Road)	265	265	30	30	14	48
Las Virgenes Road (Lost Hills Road - US 101)	29	29	2	2	0	17
Lost Hill Road (Las Virgenes Road - US 101)	236	236	29	29	14	31
PCH (East of Malibu Canyon Road)	233	233	28	28	0	17
PCH (West of Malibu Canyon Road)	109	109	13	13	0	17
Northbound US 101 (West of Lost Hills Road)	0	29	0	2	0	17
Southbound US 101 (West of Lost Hills Road)	29	0	2	0	0	0
Northbound US 101 (East of Las Virgenes Road)	29	0	2	0	0	0
Southbound US 101 (East of Las Virgenes Road)	0	29	0	2	0	17

Construction Traffic Trip Assignment (in PCEs)

Alternative 4b - Dam Removal with Hybrid Mechanical and Natural Transport and Upstream Barrier Removal						
Roadway Segment	**Trip Assignment of Construction Traffic (PCEs)**					
	Daily		**AM Peak Hour**		**PM Peak Hour**	
	Inbound	**Outbound**	**Inbound**	**Outbound**	**Inbound**	**Outbound**
Malibu Canyon Road (Project Site - SR 1)	279	279	29	29	0	51
Las Virgenes Road (Project Site - Lost Hills Road)	282	282	30	30	14	65
Las Virgenes Road (Lost Hills Road - US 101)	37	37	2	2	0	25
Lost Hill Road (Las Virgenes Road - US 101)	244	244	29	29	14	39
PCH (East of Malibu Canyon Road)	241	241	28	28	0	25
PCH (West of Malibu Canyon Road)	117	117	13	13	0	25
Northbound US 101 (West of Lost Hills Road)	0	37	0	2	0	25
Southbound US 101 (West of Lost Hills Road)	37	0	2	0	0	0
Northbound US 101 (East of Las Virgenes Road)	37	0	2	0	0	0
Southbound US 101 (East of Las Virgenes Road)	0	37	0	2	0	25

Traffic Growth Rate Calculations

LA County

Scenario	Year	Combined Auto + Truck VMT[1]	
		AM Peak	PM Peak
Base Year	2008	46,879	75,304
Future Year with RTP Plan	2035	48,592	77,796
Difference	27	1,713	2,492
Annual Growth Rate		0.13%	0.12%
Average Value		**0.127%**	

Notes:

Source: 2012-2035 Regional Transportation Plan, Southern California Association of Governments, December 2011 (Tables A12 and A16)

HCS Output Sheets

Year 2021 Baseline Conditions

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1743**	**veh/h**			
Directional split	70 / 30	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2009	pc/h
Highest directional split proportion (note-2)	1406	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	28.1	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1937	pc/h
Highest directional split proportion (note-2)	1356	
Base percent time-spent-following, BPTSF	81.8	%
Adj.for directional distribution and no-passing zones, fd/np	4.5	
Percent time-spent-following, PTSF	86.3	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.63**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2414**	**veh/h**			
Directional split	63 / 37	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2782	pc/h
Highest directional split proportion (note-2)	1753	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.9	mi/h
Average travel speed, ATS	27.3	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2682	pc/h
Highest directional split proportion (note-2)	1690	
Base percent time-spent-following, BPTSF	90.5	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	93.3	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.87**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**755**	**vph**	**1063**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	210		295	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	431	pcphpl	607	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	431	pcphpl	607	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**9.6**	**pc/mi/ln**	**13.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**654**	**vph**	**1088**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	182		302	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	373	pcphpl	621	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	373	pcphpl	621	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**8.3**	**pc/mi/ln**	**13.8**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2210**	**vph**	**1603**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	614		445	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1257	pcphpl	911	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1257	pcphpl	911	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**27.9**	**pc/mi/ln**	**20.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1815**	**vph**	**1317**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	504		366	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1032	pcphpl	749	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1032	pcphpl	749	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**22.9**	**pc/mi/ln**	**16.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7324	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2034	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1675	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1675	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.4	mi/h
Number of lanes, N	5	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	5913	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1643	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1352	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1352	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	21.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7877	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2188	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2252	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2252	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	4	
Density, D	42.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6360	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1767	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1818	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1818	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	4	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1573**	**veh/h**			
Directional split	62 / 38	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1813	pc/h
Highest directional split proportion (note-2)	1124	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.2	mi/h
Average travel speed, ATS	29.5	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1748	pc/h
Highest directional split proportion (note-2)	1084	
Base percent time-spent-following, BPTSF	78.5	%
Adj.for directional distribution and no-passing zones, fd/np	5.7	
Percent time-spent-following, PTSF	84.2	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.57**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2392**	**veh/h**			
Directional split	54 / 46	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2757	pc/h
Highest directional split proportion (note-2)	1489	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.9	mi/h
Average travel speed, ATS	27.5	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2658	pc/h
Highest directional split proportion (note-2)	1435	
Base percent time-spent-following, BPTSF	90.3	%
Adj.for directional distribution and no-passing zones, fd/np	2.2	
Percent time-spent-following, PTSF	92.5	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.86**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1587**	**vph**	**1175**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	441		326	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	907	pcphpl	671	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	907	pcphpl	671	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**20.2**	**pc/mi/ln**	**14.9**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**996**	**vph**	**806**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	277		224	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	569	pcphpl	460	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	569	pcphpl	460	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**A**	
Density, D	**12.6**	**pc/mi/ln**	**10.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1124**	**vph**	**2612**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	312		726	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	639	pcphpl	1485	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	639	pcphpl	1485	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.7	mph
Level of service, LOS	**B**		**D**	
Density, D	**14.2**	**pc/mi/ln**	**33.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**923**	**vph**	**2145**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	256		596	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	525	pcphpl	1220	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	525	pcphpl	1220	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**11.7**	**pc/mi/ln**	**27.1**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6339	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1761	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1450	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1450	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	23.2	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6600	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1833	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1509	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1509	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6818	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1894	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1949	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1949	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.3	mi/h
Number of lanes, N	4	
Density, D	32.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7099	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1972	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2029	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2029	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	58.2	mi/h
Number of lanes, N	4	
Density, D	34.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

Year 2066 Baseline Conditions

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2066 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1866**	**veh/h**			
Directional split	70 / 30	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2151	pc/h
Highest directional split proportion (note-2)	1506	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	27.0	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2073	pc/h
Highest directional split proportion (note-2)	1451	
Base percent time-spent-following, BPTSF	83.8	%
Adj.for directional distribution and no-passing zones, fd/np	4.1	
Percent time-spent-following, PTSF	87.9	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.67**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2066 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2585**	**veh/h**			
Directional split	63 / 37	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2980	pc/h
Highest directional split proportion (note-2)	1877	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	25.9	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2872	pc/h
Highest directional split proportion (note-2)	1809	
Base percent time-spent-following, BPTSF	92.0	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	94.7	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.93**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**808**	**vph**	**1139**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	224		316	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	461	pcphpl	651	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	461	pcphpl	651	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**10.2**	**pc/mi/ln**	**14.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**701**	**vph**	**1164**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	195		323	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	400	pcphpl	665	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	400	pcphpl	665	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**8.9**	**pc/mi/ln**	**14.8**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2340**	**vph**	**1697**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	650		471	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1331	pcphpl	965	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1331	pcphpl	965	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**29.6**	**pc/mi/ln**	**21.4**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2033**	**vph**	**1475**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	565		410	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1156	pcphpl	839	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1156	pcphpl	839	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**C**	
Density, D	**25.7**	**pc/mi/ln**	**18.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7754	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2154	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1773	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1773	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.0	mi/h
Number of lanes, N	5	
Density, D	28.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6260	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1739	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1431	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1431	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	22.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	8340	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2317	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2384	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2384	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	4	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6733	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1870	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1925	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1925	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	4	
Density, D	32.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2066 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1684**	**veh/h**			
Directional split	62 / 38	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1941	pc/h
Highest directional split proportion (note-2)	1203	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATS	28.6	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1871	pc/h
Highest directional split proportion (note-2)	1160	
Base percent time-spent-following, BPTSF	80.7	%
Adj.for directional distribution and no-passing zones, fd/np	4.9	
Percent time-spent-following, PTSF	85.6	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.61**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2066 No Project
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2561**		**veh/h**		
Directional split	54 / 46	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2952	pc/h
Highest directional split proportion (note-2)	1594	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	26.1	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2846	pc/h
Highest directional split proportion (note-2)	1537	
Base percent time-spent-following, BPTSF	91.8	%
Adj.for directional distribution and no-passing zones, fd/np	2.0	
Percent time-spent-following, PTSF	93.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.92**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1700**	**vph**	**1258**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	472		349	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	971	pcphpl	719	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	971	pcphpl	719	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**21.6**	**pc/mi/ln**	**16.0**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1066**	**vph**	**864**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	296		240	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	609	pcphpl	493	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	609	pcphpl	493	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**A**	
Density, D	**13.5**	**pc/mi/ln**	**11.0-**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1190**	**vph**	**2765**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	331		768	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	676	pcphpl	1572	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	676	pcphpl	1572	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.3	mph
Level of service, LOS	**B**		**E**	
Density, D	**15.0**	**pc/mi/ln**	**35.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2066 No Project
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1034**	**vph**	**2403**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	287		668	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	588	pcphpl	1367	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	588	pcphpl	1367	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**13.1**	**pc/mi/ln**	**30.4**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6711	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1864	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1535	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1535	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6988	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1941	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1598	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1598	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	25.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7218	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2005	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2063	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2063	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	57.6	mi/h
Number of lanes, N	4	
Density, D	35.8	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 No Project
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7516	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2088	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2148	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2148	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	55.9	mi/h
Number of lanes, N	4	
Density, D	38.4	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

Year 2021 Baseline plus Alternative 2a

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 2a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1801**		**veh/h**		
Directional split	70 / 30		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2076	pc/h
Highest directional split proportion (note-2)	1453	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	27.6	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2001	pc/h
Highest directional split proportion (note-2)	1401	
Base percent time-spent-following, BPTSF	82.8	%
Adj.for directional distribution and no-passing zones, fd/np	4.1	
Percent time-spent-following, PTSF	86.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.65**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 2a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2474**		**veh/h**		
Directional split	63 / 37		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2852	pc/h
Highest directional split proportion (note-2)	1797	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	26.8	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2749	pc/h
Highest directional split proportion (note-2)	1732	
Base percent time-spent-following, BPTSF	91.1	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	93.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.89**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**756**	**vph**	**1065**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	210		296	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	432	pcphpl	608	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	432	pcphpl	608	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**9.6**	**pc/mi/ln**	**13.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**676**	**vph**	**1123**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	188		312	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	386	pcphpl	641	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	386	pcphpl	641	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**8.6**	**pc/mi/ln**	**14.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2237**	**vph**	**1630**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	621		453	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1272	pcphpl	927	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1272	pcphpl	927	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**28.3**	**pc/mi/ln**	**20.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1828**	**vph**	**1329**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	508		369	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1039	pcphpl	756	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1039	pcphpl	756	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**23.1**	**pc/mi/ln**	**16.8**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7325	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2035	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1675	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1675	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.4	mi/h
Number of lanes, N	5	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	5914	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1643	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1352	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1352	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	21.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7879	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2189	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2252	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2252	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	4	
Density, D	42.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6361	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1767	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1818	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1818	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	4	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 2a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1603**	**veh/h**			
Directional split	62 / 38	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1848	pc/h
Highest directional split proportion (note-2)	1146	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.2	mi/h
Average travel speed, ATS	29.2	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1781	pc/h
Highest directional split proportion (note-2)	1104	
Base percent time-spent-following, BPTSF	79.1	%
Adj.for directional distribution and no-passing zones, fd/np	5.5	
Percent time-spent-following, PTSF	84.6	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.58**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 2a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2450**		**veh/h**		
Directional split	54 / 46		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2824	pc/h
Highest directional split proportion (note-2)	1525	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	27.0	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2722	pc/h
Highest directional split proportion (note-2)	1470	
Base percent time-spent-following, BPTSF	90.9	%
Adj.for directional distribution and no-passing zones, fd/np	2.1	
Percent time-spent-following, PTSF	93.0	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.88**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1595**	**vph**	**1181**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	443		328	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	911	pcphpl	675	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	911	pcphpl	675	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**20.2**	**pc/mi/ln**	**15.0**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1019**	**vph**	**826**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	283		229	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	582	pcphpl	472	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	582	pcphpl	472	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**A**	
Density, D	**12.9**	**pc/mi/ln**	**10.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1124**	**vph**	**2627**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	312		730	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	639	pcphpl	1494	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	639	pcphpl	1494	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.7	mph
Level of service, LOS	**B**		**D**	
Density, D	**14.2**	**pc/mi/ln**	**33.4**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 2a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**938**	**vph**	**2145**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	261		596	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	533	pcphpl	1220	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	533	pcphpl	1220	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**11.8**	**pc/mi/ln**	**27.1**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6354	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1765	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1453	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1453	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	23.2	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6600	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1833	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1509	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1509	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6818	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1894	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1949	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1949	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.3	mi/h
Number of lanes, N	4	
Density, D	32.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7114	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1976	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2033	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2033	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	4	
Density, D	35.0-	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

Year 2021 Baseline plus Alternative 2b

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 2b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1801**		**veh/h**		
Directional split	70 / 30		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2076	pc/h
Highest directional split proportion (note-2)	1453	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	27.6	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2001	pc/h
Highest directional split proportion (note-2)	1401	
Base percent time-spent-following, BPTSF	82.8	%
Adj.for directional distribution and no-passing zones, fd/np	4.1	
Percent time-spent-following, PTSF	86.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.65**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 2b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2474**		**veh/h**		
Directional split	63 / 37		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2852	pc/h
Highest directional split proportion (note-2)	1797	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	26.8	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2749	pc/h
Highest directional split proportion (note-2)	1732	
Base percent time-spent-following, BPTSF	91.1	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	93.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.89**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**756**	**vph**	**1065**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	210		296	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	432	pcphpl	608	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	432	pcphpl	608	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**9.6**	**pc/mi/ln**	**13.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**676**	**vph**	**1123**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	188		312	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	386	pcphpl	641	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	386	pcphpl	641	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**8.6**	**pc/mi/ln**	**14.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2237**	**vph**	**1630**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	621		453	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1272	pcphpl	927	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1272	pcphpl	927	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**28.3**	**pc/mi/ln**	**20.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1828**	**vph**	**1329**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	508		369	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1039	pcphpl	756	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1039	pcphpl	756	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**23.1**	**pc/mi/ln**	**16.8**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7325	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2035	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1675	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1675	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.4	mi/h
Number of lanes, N	5	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	5914	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1643	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1352	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1352	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	21.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7879	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2189	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2252	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2252	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	4	
Density, D	42.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6361	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1767	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1818	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1818	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	4	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 2b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1621**	**veh/h**			
Directional split	62 / 38	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1868	pc/h
Highest directional split proportion (note-2)	1158	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATS	29.1	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1801	pc/h
Highest directional split proportion (note-2)	1117	
Base percent time-spent-following, BPTSF	79.5	%
Adj.for directional distribution and no-passing zones, fd/np	5.4	
Percent time-spent-following, PTSF	84.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.58**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 2b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2468**		**veh/h**		
Directional split	54 / 46		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2845	pc/h
Highest directional split proportion (note-2)	1536	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	26.8	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2742	pc/h
Highest directional split proportion (note-2)	1481	
Base percent time-spent-following, BPTSF	91.0	%
Adj.for directional distribution and no-passing zones, fd/np	2.1	
Percent time-spent-following, PTSF	93.1	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.89**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1601**	**vph**	**1185**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	445		329	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	915	pcphpl	677	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	915	pcphpl	677	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**20.3**	**pc/mi/ln**	**15.0**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1024**	**vph**	**830**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	284		231	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	585	pcphpl	474	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	585	pcphpl	474	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**A**	
Density, D	**13.0**	**pc/mi/ln**	**10.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1124**	**vph**	**2636**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	312		732	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	639	pcphpl	1499	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	639	pcphpl	1499	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.7	mph
Level of service, LOS	**B**		**D**	
Density, D	**14.2**	**pc/mi/ln**	**33.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 2b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**947**	**vph**	**2145**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	263		596	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	538	pcphpl	1220	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	538	pcphpl	1220	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**12.0**	**pc/mi/ln**	**27.1**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6363	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1768	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1455	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1455	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	23.3	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6600	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1833	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1509	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1509	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6818	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1894	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1949	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1949	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.3	mi/h
Number of lanes, N	4	
Density, D	32.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 2b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7123	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1979	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2036	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2036	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	4	
Density, D	35.0+	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

Year 2066 Baseline plus Alternative 3a

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2066 Alternative 3a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1872**		**veh/h**		
Directional split	70 / 30		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2158	pc/h
Highest directional split proportion (note-2)	1511	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	27.0	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2080	pc/h
Highest directional split proportion (note-2)	1456	
Base percent time-spent-following, BPTSF	83.9	%
Adj.for directional distribution and no-passing zones, fd/np	4.1	
Percent time-spent-following, PTSF	88.0	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.67**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2066 Alternative 3a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2645**	**veh/h**			
Directional split	63 / 37	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	3049	pc/h
Highest directional split proportion (note-2)	1921	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.7	mi/h
Average travel speed, ATS	25.4	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2939	pc/h
Highest directional split proportion (note-2)	1852	
Base percent time-spent-following, BPTSF	92.4	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	95.2	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.95**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**809**	**vph**	**1141**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	225		317	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	462	pcphpl	652	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	462	pcphpl	652	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**10.3**	**pc/mi/ln**	**14.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**722**	**vph**	**1200**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	201		333	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	412	pcphpl	686	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	412	pcphpl	686	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**9.2**	**pc/mi/ln**	**15.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2341**	**vph**	**1699**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	650		472	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1331	pcphpl	966	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1331	pcphpl	966	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**29.6**	**pc/mi/ln**	**21.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2035**	**vph**	**1476**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	565		410	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1157	pcphpl	839	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1157	pcphpl	839	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**C**	
Density, D	**25.7**	**pc/mi/ln**	**18.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7755	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2154	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1773	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1773	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.0	mi/h
Number of lanes, N	5	
Density, D	28.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6261	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1739	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1432	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1432	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	22.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	8341	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2317	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2384	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2384	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	4	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6735	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1871	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1925	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1925	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	4	
Density, D	32.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2066 Alternative 3a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1719**		**veh/h**		
Directional split	62 / 38		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1981	pc/h
Highest directional split proportion (note-2)	1228	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATS	28.3	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1910	pc/h
Highest directional split proportion (note-2)	1184	
Base percent time-spent-following, BPTSF	81.3	%
Adj.for directional distribution and no-passing zones, fd/np	4.7	
Percent time-spent-following, PTSF	86.0	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.62**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2066 Alternative 3a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2624**	**veh/h**			
Directional split	54 / 46	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	3025	pc/h
Highest directional split proportion (note-2)	1634	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.7	mi/h
Average travel speed, ATS	25.5	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2916	pc/h
Highest directional split proportion (note-2)	1575	
Base percent time-spent-following, BPTSF	92.3	%
Adj.for directional distribution and no-passing zones, fd/np	1.9	
Percent time-spent-following, PTSF	94.2	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.95**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1710**	**vph**	**1266**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	475		352	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	977	pcphpl	723	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	977	pcphpl	723	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**21.7**	**pc/mi/ln**	**16.1**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1091**	**vph**	**884**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	303		246	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	623	pcphpl	505	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	623	pcphpl	505	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**B**	
Density, D	**13.8**	**pc/mi/ln**	**11.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1190**	**vph**	**2782**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	331		773	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	676	pcphpl	1582	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	676	pcphpl	1582	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.3	mph
Level of service, LOS	**B**		**E**	
Density, D	**15.0**	**pc/mi/ln**	**35.7**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2066 Alternative 3a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1052**	**vph**	**2403**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	292		668	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	598	pcphpl	1367	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	598	pcphpl	1367	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**13.3**	**pc/mi/ln**	**30.4**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6728	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1869	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1538	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1538	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6988	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1941	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1598	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1598	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	25.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7218	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2005	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2063	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2063	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	57.6	mi/h
Number of lanes, N	4	
Density, D	35.8	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7533	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2093	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2153	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2153	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	55.8	mi/h
Number of lanes, N	4	
Density, D	38.6	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

Year 2066 Baseline plus Alternative 3b

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2066 Alternative 3b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1872**		**veh/h**		
Directional split	70 / 30		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2158	pc/h
Highest directional split proportion (note-2)	1511	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	27.0	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2080	pc/h
Highest directional split proportion (note-2)	1456	
Base percent time-spent-following, BPTSF	83.9	%
Adj.for directional distribution and no-passing zones, fd/np	4.1	
Percent time-spent-following, PTSF	88.0	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.67**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2066 Alternative 3b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2645**		**veh/h**		
Directional split	63 / 37		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	3049	pc/h
Highest directional split proportion (note-2)	1921	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.7	mi/h
Average travel speed, ATS	25.4	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2939	pc/h
Highest directional split proportion (note-2)	1852	
Base percent time-spent-following, BPTSF	92.4	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	95.2	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.95**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**809**	**vph**	**1141**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	225		317	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	462	pcphpl	652	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	462	pcphpl	652	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**10.3**	**pc/mi/ln**	**14.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**722**	**vph**	**1200**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	201		333	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	412	pcphpl	686	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	412	pcphpl	686	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**9.2**	**pc/mi/ln**	**15.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2341**	**vph**	**1699**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	650		472	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1331	pcphpl	966	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1331	pcphpl	966	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**29.6**	**pc/mi/ln**	**21.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2035**	**vph**	**1476**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	565		410	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1157	pcphpl	839	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1157	pcphpl	839	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**C**	
Density, D	**25.7**	**pc/mi/ln**	**18.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7755	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2154	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1773	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1773	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.0	mi/h
Number of lanes, N	5	
Density, D	28.6	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6261	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1739	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1432	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1432	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	22.9	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	8341	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2317	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2384	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2384	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S		mi/h
Number of lanes, N	4	
Density, D		pc/mi/ln
Level of service, LOS	F	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6735	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1871	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1925	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1925	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.6	mi/h
Number of lanes, N	4	
Density, D	32.3	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2066 Alternative 3b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1734**		**veh/h**		
Directional split	62 / 38		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1999	pc/h
Highest directional split proportion (note-2)	1239	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATS	28.2	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1927	pc/h
Highest directional split proportion (note-2)	1195	
Base percent time-spent-following, BPTSF	81.6	%
Adj.for directional distribution and no-passing zones, fd/np	4.6	
Percent time-spent-following, PTSF	86.2	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.62**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2066 Alternative 3b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2639**	**veh/h**			
Directional split	54 / 46	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	3042	pc/h
Highest directional split proportion (note-2)	1643	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.7	mi/h
Average travel speed, ATS	25.4	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2932	pc/h
Highest directional split proportion (note-2)	1583	
Base percent time-spent-following, BPTSF	92.4	%
Adj.for directional distribution and no-passing zones, fd/np	1.9	
Percent time-spent-following, PTSF	94.3	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.95**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1714**	**vph**	**1269**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	476		353	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	979	pcphpl	725	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	979	pcphpl	725	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**21.8**	**pc/mi/ln**	**16.1**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1096**	**vph**	**887**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	304		246	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	626	pcphpl	507	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	626	pcphpl	507	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**B**	
Density, D	**13.9**	**pc/mi/ln**	**11.3**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1190**	**vph**	**2790**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	331		775	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	676	pcphpl	1587	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	676	pcphpl	1587	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.2	mph
Level of service, LOS	**B**		**E**	
Density, D	**15.0**	**pc/mi/ln**	**35.9**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2066 Alternative 3b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1059**	**vph**	**2403**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	294		668	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	602	pcphpl	1367	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	602	pcphpl	1367	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**13.4**	**pc/mi/ln**	**30.4**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6735	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1871	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1540	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1540	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6988	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1941	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1598	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1598	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	25.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7218	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2005	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2063	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2063	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	57.6	mi/h
Number of lanes, N	4	
Density, D	35.8	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2066 Alternative 3b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7541	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2095	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2155	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2155	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	55.8	mi/h
Number of lanes, N	4	
Density, D	38.7	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

Year 2021 Baseline plus Alternative 4a

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 4a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1801**		**veh/h**		
Directional split	70 / 30		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2076	pc/h
Highest directional split proportion (note-2)	1453	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	27.6	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2001	pc/h
Highest directional split proportion (note-2)	1401	
Base percent time-spent-following, BPTSF	82.8	%
Adj.for directional distribution and no-passing zones, fd/np	4.1	
Percent time-spent-following, PTSF	86.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.65**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 4a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2474**		**veh/h**		
Directional split	63 / 37		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2852	pc/h
Highest directional split proportion (note-2)	1797	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	26.8	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2749	pc/h
Highest directional split proportion (note-2)	1732	
Base percent time-spent-following, BPTSF	91.1	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	93.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.89**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**756**	**vph**	**1065**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	210		296	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	432	pcphpl	608	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	432	pcphpl	608	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**9.6**	**pc/mi/ln**	**13.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**676**	**vph**	**1123**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	188		312	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	386	pcphpl	641	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	386	pcphpl	641	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**8.6**	**pc/mi/ln**	**14.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2237**	**vph**	**1630**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	621		453	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1272	pcphpl	927	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1272	pcphpl	927	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**28.3**	**pc/mi/ln**	**20.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1828**	**vph**	**1329**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	508		369	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1039	pcphpl	756	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1039	pcphpl	756	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**23.1**	**pc/mi/ln**	**16.8**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7325	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2035	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1675	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1675	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.4	mi/h
Number of lanes, N	5	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	5914	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1643	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1352	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1352	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	21.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7879	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2189	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2252	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2252	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	4	
Density, D	42.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6361	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1767	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1818	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1818	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	4	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 4a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1607**	**veh/h**			
Directional split	62 / 38	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1852	pc/h
Highest directional split proportion (note-2)	1148	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.2	mi/h
Average travel speed, ATS	29.2	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1786	pc/h
Highest directional split proportion (note-2)	1107	
Base percent time-spent-following, BPTSF	79.2	%
Adj.for directional distribution and no-passing zones, fd/np	5.5	
Percent time-spent-following, PTSF	84.7	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.58**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 4a
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2454**		**veh/h**		
Directional split	54 / 46	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2829	pc/h
Highest directional split proportion (note-2)	1528	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	27.0	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2727	pc/h
Highest directional split proportion (note-2)	1473	
Base percent time-spent-following, BPTSF	90.9	%
Adj.for directional distribution and no-passing zones, fd/np	2.1	
Percent time-spent-following, PTSF	93.0	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.88**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1597**	**vph**	**1182**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	444		328	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	912	pcphpl	675	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	912	pcphpl	675	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**20.3**	**pc/mi/ln**	**15.0**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1020**	**vph**	**826**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	283		229	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	583	pcphpl	472	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	583	pcphpl	472	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**A**	
Density, D	**13.0**	**pc/mi/ln**	**10.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1124**	**vph**	**2629**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	312		730	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	639	pcphpl	1495	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	639	pcphpl	1495	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.7	mph
Level of service, LOS	**B**		**D**	
Density, D	**14.2**	**pc/mi/ln**	**33.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 4a
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**940**	**vph**	**2145**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	261		596	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	534	pcphpl	1220	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	534	pcphpl	1220	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**11.9**	**pc/mi/ln**	**27.1**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6356	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1766	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1453	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1453	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	23.2	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6600	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1833	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1509	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1509	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6818	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1894	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1949	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1949	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.3	mi/h
Number of lanes, N	4	
Density, D	32.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4a
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7116	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1977	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2034	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2034	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	4	
Density, D	35.0-	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

Year 2021 Baseline plus Alternative 4b

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 4b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1801**	**veh/h**			
Directional split	70 / 30	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2076	pc/h
Highest directional split proportion (note-2)	1453	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.0	mi/h
Average travel speed, ATS	27.6	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2001	pc/h
Highest directional split proportion (note-2)	1401	
Base percent time-spent-following, BPTSF	82.8	%
Adj.for directional distribution and no-passing zones, fd/np	4.1	
Percent time-spent-following, PTSF	86.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.65**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	AM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 4b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2474**		**veh/h**		
Directional split	63 / 37		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2852	pc/h
Highest directional split proportion (note-2)	1797	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	26.8	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2749	pc/h
Highest directional split proportion (note-2)	1732	
Base percent time-spent-following, BPTSF	91.1	%
Adj.for directional distribution and no-passing zones, fd/np	2.7	
Percent time-spent-following, PTSF	93.8	%

Level of Service and Other Performance Measures

Level of service, LOS	**F**
Volume to capacity ratio, v/c	**0.89**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**756**	**vph**	**1065**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	210		296	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	432	pcphpl	608	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	432	pcphpl	608	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**9.6**	**pc/mi/ln**	**13.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**676**	**vph**	**1123**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	188		312	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	386	pcphpl	641	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	386	pcphpl	641	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**A**		**B**	
Density, D	**8.6**	**pc/mi/ln**	**14.2**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**2237**	**vph**	**1630**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	621		453	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1272	pcphpl	927	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1272	pcphpl	927	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**D**		**C**	
Density, D	**28.3**	**pc/mi/ln**	**20.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	AM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1828**	**vph**	**1329**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	508		369	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	1039	pcphpl	756	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	1039	pcphpl	756	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**23.1**	**pc/mi/ln**	**16.8**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7325	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2035	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1675	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1675	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.4	mi/h
Number of lanes, N	5	
Density, D	26.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	5914	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1643	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1352	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1352	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	21.6	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7879	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	2189	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2252	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2252	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	53.2	mi/h
Number of lanes, N	4	
Density, D	42.3	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	AM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6361	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1767	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1818	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1818	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	60.4	mi/h
Number of lanes, N	4	
Density, D	30.1	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Malibu Canyon Road
From/To	North of Potter Drive
Analysis Year	2021 Alternative 4b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**1624**		**veh/h**		
Directional split	62 / 38		%		

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	1872	pc/h
Highest directional split proportion (note-2)	1161	pc/h
Base free-flow speed, BFFS	45.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	44.8	mi/h
Adjustment for no-passing zones, fnp	1.1	mi/h
Average travel speed, ATS	29.1	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0*	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	1804	pc/h
Highest directional split proportion (note-2)	1118	
Base percent time-spent-following, BPTSF	79.5	%
Adj.for directional distribution and no-passing zones, fd/np	5.4	
Percent time-spent-following, PTSF	84.9	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.58**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Two-Lane Highways Release 5.3

Two-Way Two-Lane Highway Segment Analysis

Analyst	TCH
Agency/Co.	CDM Smith
Date Performed	4/19/2013
Analysis Time Period	PM Peak
Highway	Las Virgenes Road
From/To	North of Mulholland Highway
Analysis Year	2021 Alternative 4b
Description	Malibu Creek EIS

Input Data

Highway class	Class 1				
Shoulder width	6.0	ft	Peak-hour factor, PHF	0.90	
Lane width	12.0	ft	% Trucks and buses	5	%
Segment length	0.0	mi	% Recreational vehicles	2	%
Terrain type	Rolling		% No-passing zones	90	%
Grade: Length		mi	Access points/mi	1	/mi
Two-way hourly volume, V	**2471**	**veh/h**			
Directional split	54 / 46	%			

Average Travel Speed

Grade adjustment factor, fG	0.99	
PCE for trucks, ET	1.5*	
PCE for RVs, ER	1.1	
Heavy-vehicle adjustment factor,	0.974	
Two-way flow rate,(note-1) vp	2848	pc/h
Highest directional split proportion (note-2)	1538	pc/h
Base free-flow speed, BFFS	50.0	mi/h
Adj. for lane and shoulder width, fLS	0.0	mi/h
Adj. for access points, fA	0.3	mi/h
Free-flow speed, FFS	49.8	mi/h
Adjustment for no-passing zones, fnp	0.8	mi/h
Average travel speed, ATS	26.8	mi/h

Percent Time-Spent-Following

Grade adjustment factor, fG	1.00	
PCE for trucks, ET	1.0	
PCE for RVs, ER	1.0	
Heavy-vehicle adjustment factor, fHV	1.000	
Two-way flow rate,(note-1) vp	2746	pc/h
Highest directional split proportion (note-2)	1483	
Base percent time-spent-following, BPTSF	91.1	%
Adj.for directional distribution and no-passing zones, fd/np	2.1	
Percent time-spent-following, PTSF	93.2	%

Level of Service and Other Performance Measures

Level of service, LOS	**E**
Volume to capacity ratio, v/c	**0.89**

Notes:
1. If vp >= 3200 pc/h, terminate analysis-the LOS is F.
2. If highest directional split vp >= 1700 pc/h, terminate analysis-the LOS is F.

* These items have been entered or edited to override calculated value

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Las Virgenes Road
From/To:	North of Agoura Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	4.0	ft	4.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	10.0	ft	10.0	ft
Access points per mile	12		12	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	50.0	mph	50.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.4	mph	0.4	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1602**	**vph**	**1186**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	445		329	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	915	pcphpl	677	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	915	pcphpl	677	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**C**		**B**	
Density, D	**20.3**	**pc/mi/ln**	**15.0**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	Lost Hills Road
From/To:	South of Agoura Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	12		12	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	48.0	mph	48.0	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	3.0	mph	3.0	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1025**	**vph**	**830**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	285		231	
Trucks and buses	5	%	5	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.972		0.972	
Flow rate, vp	585	pcphpl	474	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	585	pcphpl	474	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**A**	
Density, D	**13.0**	**pc/mi/ln**	**10.5**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/17/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	East of Cross Creek Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Undivided		Undivided	
Free-flow speed:	Base		Base	
FFS or BFFS	49.1	mph	49.1	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	1.6	mph	1.6	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**1124**	**vph**	**2637**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	312		733	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	639	pcphpl	1500	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	639	pcphpl	1500	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	44.7	mph
Level of service, LOS	**B**		**D**	
Density, D	**14.2**	**pc/mi/ln**	**33.6**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Multilane Highways Release 5.3

OPERATIONAL ANALYSIS

Analyst:	TCH
Agency/Co:	CDM Smith
Date:	4/19/2013
Analysis Period:	PM Peak
Highway:	State Route 1
From/To:	West of Malibu Canyon Road
Analysis Year:	2021 Alternative 4b
Project ID:	Malibu Creek EIS

FREE-FLOW SPEED

Direction	1		2	
Lane width	12.0	ft	12.0	ft
Lateral clearance:				
Right edge	6.0	ft	6.0	ft
Left edge	6.0	ft	6.0	ft
Total lateral clearance	12.0	ft	12.0	ft
Access points per mile	10		10	
Median type	Divided		Divided	
Free-flow speed:	Base		Base	
FFS or BFFS	47.5	mph	47.5	mph
Lane width adjustment, FLW	0.0	mph	0.0	mph
Lateral clearance adjustment, FLC	0.0	mph	0.0	mph
Median type adjustment, FM	0.0	mph	0.0	mph
Access points adjustment, FA	2.5	mph	2.5	mph
Free-flow speed	45.0	mph	45.0	mph

VOLUME

Direction	1		2	
Volume, V	**949**	**vph**	**2145**	**vph**
Peak-hour factor, PHF	0.90		0.90	
Peak 15-minute volume, v15	264		596	
Trucks and buses	4	%	4	%
Recreational vehicles	2	%	2	%
Terrain type	Level		Level	
Number of lanes	2		2	
Driver population adjustment, fP	1.00		1.00	
Trucks and buses PCE, ET	1.5		1.5	
Recreational vehicles PCE, ER	1.2		1.2	
Heavy vehicle adjustment, fHV	0.977		0.977	
Flow rate, vp	539	pcphpl	1220	pcphpl

RESULTS

Direction	1		2	
Flow rate, vp	539	pcphpl	1220	pcphpl
Free-flow speed, FFS	45.0	mph	45.0	mph
Avg. passenger-car travel speed, S	45.0	mph	45.0	mph
Level of service, LOS	**B**		**D**	
Density, D	**12.0**	**pc/mi/ln**	**27.1**	**pc/mi/ln**

Overall results are not computed when free-flow speed is less than 45 mph

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6364	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1768	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1455	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1455	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	23.3	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**West of Lost Hills Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6600	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1833	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1509	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	5	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	0.0	mi/h
Free-flow speed, FFS	62.5	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1509	pc/h/ln
Free-flow speed, FFS	62.5	mi/h
Average passenger-car speed, S	62.5	mi/h
Number of lanes, N	5	
Density, D	24.1	pc/mi/ln
Level of service, LOS	C	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Northbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	6818	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1894	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	1949	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	1949	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	59.3	mi/h
Number of lanes, N	4	
Density, D	32.9	pc/mi/ln
Level of service, LOS	D	

Overall results are not computed when free-flow speed is less than 55 mph.

HCS+: Basic Freeway Segments Release 5.3

Operational Analysis

Analyst:	TCH
Agency or Company:	CDM Smith
Date Performed:	4/19/2013
Analysis Time Period:	PM Peak
Freeway/Direction:	**Southbound US 101**
From/To:	**East of Las Virgenes Road**
Jurisdiction:	
Analysis Year:	2021 Alternative 4b
Description:	Malibu Creek EIS

Flow Inputs and Adjustments

Volume, V	7125	veh/h
Peak-hour factor, PHF	0.90	
Peak 15-min volume, v15	1979	v
Trucks and buses	5	%
Recreational vehicles	2	%
Terrain type:	Level	
Grade	0.00	%
Segment length	0.00	mi
Trucks and buses PCE, ET	1.5	
Recreational vehicle PCE, ER	1.2	
Heavy vehicle adjustment, fHV	0.972	
Driver population factor, fp	1.00	
Flow rate, vp	2037	pc/h/ln

Speed Inputs and Adjustments

Lane width	12.0	ft
Right-shoulder lateral clearance	6.0	ft
Interchange density	1.00	interchange/mi
Number of lanes, N	4	
Free-flow speed:	Base	
FFS or BFFS	65.0	mi/h
Lane width adjustment, fLW	0.0	mi/h
Lateral clearance adjustment, fLC	0.0	mi/h
Interchange density adjustment, fID	2.5	mi/h
Number of lanes adjustment, fN	1.5	mi/h
Free-flow speed, FFS	61.0	mi/h
	Urban Freeway	

LOS and Performance Measures

Flow rate, vp	2037	pc/h/ln
Free-flow speed, FFS	61.0	mi/h
Average passenger-car speed, S	58.1	mi/h
Number of lanes, N	4	
Density, D	35.1	pc/mi/ln
Level of service, LOS	E	

Overall results are not computed when free-flow speed is less than 55 mph.