KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING/PLANNING
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December 19, 2005 Project #: 7118.0

Mr. Douglas R. Evans
Community Development Director
City of La Quinta
P.O. Box 1504
La Quinta, CA 92253

Re: Additional Information relating to the Costco/Komar Development Traffic Impact Analysis for the City of La Quinta, California. October, 2005

Dear Mr. Evans

The purpose of this letter is to provide additional information regarding the issue of the connection between the Costco/Komar site and Jefferson Street. The information relates to Planning Commissioner Kirk's question of November 22, 2005, regarding whether such a connection was studied. As outlined in Traffic Impact Analysis ("TIA"), no significant impact would occur in the opening year scenario with the Costco/Komar project. This is due in part to the already planned and programmed improvements on Highway 111. With those improvements, all intersections will operate acceptably. For the 2020 year analysis, it is understood that the future traffic volumes identified in the City of La Quinta 2020 General Plan "Full Build Out Preferred Option," as used in the TIA 2020 analysis, assumes build out of the Cities of La Quinta and Indio as outlined in conversations with the City of La Quinta staff. Under the 2020 year analysis, the TIA did project significant impacts and associated mitigation for the Highway 111 and Jefferson Street intersection.

The long-term projections by the City of La Quinta show a substantial increase in traffic throughout the roadway system for buildout of the surrounding area. The projections identified a background traffic growth of approximately 60% on Highway 111 at Jefferson Street, with substantial growth in the eastbound and southbound right-turn volumes. While we were recently reviewing the analysis and recommendations presented in the TIA, an error was identified with respect to the recommended mitigation at the Highway 111/Jefferson Street intersection for the "Full Buildout with Costco/Komar" scenario. The study recommended a westbound right-turn lane on the Indio side of the Jefferson Street/Highway 111 intersection when the recommendation should have been for a southbound right-turn overlap signal phase. Table 1 shows a summary of the revised analysis and recommendations for the future conditions:

Table 1 Full Build Out Traffic Conditions

Intersection	Measure	Build Out (1)	Build Out with Costco/Komar (1)	Increase in LOS & v/c	Mitigation Required	Mitigated Conditions (1)
Highway 111 & Jefferson	LOS	D	E	D-E	Yes	D (2)
	Critical	0.894	0.975	0.09		0.944

(1) An analysis summary sheet for the scenario is attached.
(2) With EB and SB Right-turn signal overlap phases.

Therefore, the only two improvements recommended to mitigate future conditions are the addition of an eastbound right-turn overlap phase and a southbound right-turn overlap signal phase, which are signal operations and timing and not geometric improvements to the intersection. This will require the restriction of the northbound and eastbound U-turn movements in the intersection and modification to some of the traffic signal equipment. Since overlap phasing can be accommodated through the signal modifications that will accompany the Highway 111 widening and are not physical roadway improvements, the Costco/Komar development does not have a significant unmitigable impact because LOS D can be maintained without physical roadway improvements at the Jefferson Street/Highway 111 intersection.

In addition, in a discussion with the City of Indio Interim City Traffic Engineer on September 22, 2005, it was learned that the City will likely develop intersection improvements as part of any roadway modernization beyond just the third through lane that is shown in the City of Indio General Plan 2020. These additional lanes would likely include right-turn lanes and dual left-turn lanes at key intersections. In the event that the City of Indio improves the Highway 111/Jefferson Street intersection to match the improvements within the City of La Quinta, this will result in additional operating capacity. The likely improvements to Highway 111 would include a second westbound to southbound left-turn lane and a separate westbound right-turn lane. If implemented, these improvements will result in an even better operating condition of the Level of Service D with a volume to capacity ratio of 0.944 as shown in Table 1 on the previous page.

From a practical matter, a Jefferson Street crossing would also be problematic. The parcel to the east of the Costco/Komar site is currently vacant, and the nature of the intended use of the site is unknown. Also, it is a separate legal parcel which is not under the jurisdiction of the City. While we have assumed the site will ultimately be developed in the buildout analysis, the nature, intensity, and layout of the development is currently not known. A connection to Jefferson Street would also require approval by the City of Indio. Further, connecting the Costco/Komar site to Jefferson Street would require the crossing of the Evacuation Channel. Bridge construction is extremely expensive. The project engineers have estimated that the costs of a bridge would be $2.16 million for the hard construction costs for a bridge with a span of 120 feet. Numerous studies and governmental approvals would be needed for such a project. These could include: Hydrology studies, habitat impact studies, CVWD permits, Bureau of Reclamation permits, Regional Water Quality Control Board permits, a Corps of Engineer permit (i.e., 404 permit), and a Department of Fish & Game Permit (Section 1602). Because of these considerations, Steve Speer, the City's former City Assistant City Engineer directed Kittelson and Associates, Inc. not to study the crossing and connection to Jefferson as part of the traffic impact analysis. This evaluation would have been highly speculative, was not needed to mitigate

a potentially significant impact, and would be more appropriately evaluated by the City of Indio at the time the parcels with its jurisdiction are proposed for development.

In conclusion, no physical improvements are required at the Highway 111/Jefferson Street intersection in order to meet the City LOS criteria under either near-term or buildout traffic conditions. Therefore, the development does not have a significant unmitigable impact in either the year 2006 short term and or the future year 2020 analysis at the intersection of Highway 111 and Jefferson Street and does not require physical mitigation, much less an additional connection from the Costco/Komar site to Jefferson Street. I hope this additional information will help the City of La Quinta resolve the question raised at the Planning Commission meeting on November 22nd, 2005.

Sincerely,

Del Huntington
Project Manager

Cc: Wendy Worthey, HDR
John F. Ringert, P.E. Principal Engineer

Attachments

Kittelson & Associates, Inc. - Project 7118
La Quinta Costco
Future Build Out Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 State Hwy 111/Jefferson St

Cycle (sec):	120	Critical Vol./Cap. (X):	0.894
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	46.8
Optimal Cycle:	126	Level Of Service:	D

Street Name:	Jefferson St						State Hwy 111					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	3 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	600	526	195	328	750	239	267	1607	509	224	1532	136
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	600	526	195	328	750	239	267	1607	509	224	1532	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	612	537	199	335	765	244	272	1640	519	229	1563	139
Reduct Vol:(RTOR)	0	0	50	0	0	80	0	0	200	0	0	0
Reduced Vol:	612	537	149	335	765	164	272	1640	319	229	1563	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	612	537	149	335	765	164	272	1640	319	229	1563	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.83	0.91	0.90	0.84	0.91	0.90	0.84	0.94	0.89	0.89
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.76	0.24
Final Sat.:	3432	5083	1583	3467	5135	1599	3467	5135	1599	1787	4660	414
Capacity Analysis Module:												
Vol/Sat:	0.18	0.11	0.09	0.10	0.15	0.10	0.08	0.32	0.20	0.13	0.34	0.34
Crit Moves:	****				****			****		****		
Green/Cycle:	0.20	0.19	0.19	0.17	0.17	0.17	0.09	0.36	0.36	0.14	0.41	0.41
Volume/Cap:	0.89	0.55	0.49	0.55	0.89	0.61	0.83	0.89	0.56	0.89	0.83	0.83
Delay/Veh:	61.0	44.6	44.6	46.3	60.7	50.7	69.1	42.5	32.2	80.7	34.9	34.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.0	44.6	44.6	46.3	60.7	50.7	69.1	42.5	32.2	80.7	34.9	34.9
HCM2kAvg:	15	7	5	7	12	7	7	22	10	12	21	21

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Kittelson & Associates, Inc. - Project 7118
La Quinta Costco
Future Build Out Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 State Hwy 111/Jefferson St

Cycle (sec):	120	Critical Vol./Cap. (X):	0.975
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	59.2
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Jefferson St						State Hwy 111					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	3 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	600	526	195	328	750	239	267	1607	509	224	1532	136
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	600	526	195	328	750	239	267	1607	509	224	1532	136
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
In-Process:	130	-45	0	0	-50	99	114	74	159	0	61	0
Initial Fut:	730	481	195	328	700	338	381	1681	668	224	1593	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	745	491	199	335	714	345	389	1715	682	229	1626	139
Reduct Vol: (prot)	0	0	50	0	0	80	0	0	200	0	0	0
Reduced Vol:	745	491	149	335	714	265	389	1715	482	229	1626	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	745	491	149	335	714	265	389	1715	482	229	1626	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.83	0.91	0.90	0.84	0.91	0.90	0.84	0.94	0.89	0.89
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.76	0.24
Final Sat.:	3432	5083	1583	3467	5135	1599	3467	5135	1599	1787	4674	399
Capacity Analysis Module:												
Vol/Sat:	0.22	0.10	0.09	0.10	0.14	0.17	0.11	0.33	0.30	0.13	0.35	0.35
Crit Moves:	****					****		****		****		
Green/Cycle:	0.22	0.20	0.20	0.20	0.17	0.17	0.12	0.34	0.34	0.13	0.36	0.36
Volume/Cap:	0.97	0.49	0.48	0.49	0.82	0.97	0.97	0.97	0.88	0.97	0.97	0.97
Delay/Veh:	72.6	43.3	43.9	43.5	54.1	96.9	89.9	54.7	52.2	103.3	52.6	52.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	72.6	43.3	43.9	43.5	54.1	96.9	89.9	54.7	52.2	103.3	52.6	52.6
HCM2kAvg:	19	6	5	6	11	14	11	26	20	13	27	27

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Kittelson & Associates, Inc. - Project 7118
La Quinta Costco
Future Build Out Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 State Hwy 111/Jefferson St

Cycle (sec):	120	Critical Vol./Cap. (X):	0.944
Loss Time (sec):	16 (Y+R = 4 sec)	Average Delay (sec/veh):	51.9
Optimal Cycle:	156	Level Of Service:	D

Street Name:	Jefferson St						State Hwy 111					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Ovl			Ovl			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	2 0	3 0	1	2 0	3 0	1	2 0	3 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	600	526	195	328	750	239	267	1607	509	224	1532	136
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	600	526	195	328	750	239	267	1607	509	224	1532	136
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
In-Process:	130	-45	0	0	-50	99	114	74	159	0	61	0
Initial Fut:	730	481	195	328	700	338	381	1681	668	224	1593	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	745	491	199	335	714	345	389	1715	682	229	1626	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	745	491	199	335	714	345	389	1715	682	229	1626	139
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Vol.:	745	491	199	335	714	345	389	1715	682	229	1626	139
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	0.89	0.83	0.91	0.90	0.84	0.91	0.90	0.84	0.94	0.89	0.89
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.76	0.24
Final Sat.:	3432	5083	1583	3467	5135	1599	3467	5135	1599	1787	4674	399
Capacity Analysis Module:												
Vol/Sat:	0.22	0.10	0.13	0.10	0.14	0.22	0.11	0.33	0.43	0.13	0.35	0.35
Crit Moves:	****				****			****		****		
Green/Cycle:	0.23	0.21	0.21	0.16	0.15	0.27	0.12	0.35	0.58	0.14	0.37	0.37
Volume/Cap:	0.94	0.45	0.59	0.59	0.94	0.81	0.94	0.94	0.73	0.94	0.94	0.94
Delay/Veh:	65.1	41.4	45.2	48.1	70.9	52.1	81.8	48.3	21.1	93.9	46.4	46.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.1	41.4	45.2	48.1	70.9	52.1	81.8	48.3	21.1	93.9	46.4	46.4
HCM2kAvg:	19	6	7	7	13	14	11	25	19	13	25	25

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