

MEMORANDUM

Date: February 6, 2012

To: Hillary Gitelman, County of Napa

From: Chris Mitchell, Steve Crosley & Matt Goyne

Subject: Napa Pipe Impact Comparison – New County Alternative / Proposed Project
SF06-0290

The purpose of this memorandum is to compare the impacts generated by the New County Alternative to those generated by the Proposed Project, identify those intersections that would have an incremental increase in traffic under the New County Alternative compared to the Proposed Project, and the resulting fair share contributions under cumulative conditions for both project alternatives.

The New County Alternative was designed in such a way that it would not result in any new, previously unidentified significant impacts when compared to the Proposed Project. The land use mix for the New County Alternative and the Proposed Project are shown in Table 1.

Table 1. New County Alternative and the Proposed Project Land Use Mix

New County Alternative		Proposed Project
Western Parcel	Eastern Parcel	
100 ksf office 950 DU 150 CRCC 25 ksf retail 7.5 ksf restaurant (high turnover) 7.5 ksf restaurant (quality) 150 suite hotel	550 ksf light industrial/R&D	50 ksf office 2,580 DU 150 DU CRCC 25 ksf retail 7.5 ksf restaurant (high turnover) 7.5 ksf restaurant (quality) 150 suite hotel 140 ksf light industrial/R&D

While the New County Alternative does not result in any new, previously unidentified significant impacts when compared to the Proposed Project, there would be an incremental increase in traffic at six impacted intersections, and a proportionate increase in the fair-share contribution, but the resulting impacts would not be substantially more severe. Table 2 identifies those intersections impacted under both project alternatives, but with the New County Alternative contributing an incremental increase in traffic when compared to the Proposed Project.

Table 2. Impacted Intersections with Traffic Greater Under New County Alternative

Intersection	Existing Conditions	Cumulative Conditions with Fully-Funded Network	Cumulative Conditions with Planned Network
5. Third St/Silverado Tr. (SR 121)/East Ave/Coombsville Rd	X	X	X
6. Silverado Trail (SR 121)/Soscol Ave		X	X
8. SR 29 Newbound Ramps/Imola Ave	X		
9. Imola Ave (SR 121)/Jefferson St	X	X	X
10. Imola Ave (SR 121)/Coombs St		X	X
12. Imola Ave (SR 121)/Soscol Ave	X	X	X

At all other study area intersections impacted by the Proposed Project, traffic volumes generated by the New County Alternative would be less when compared to Proposed Project traffic volumes:

- 2. First St/ Soscol Ave
- 4. Third St/ Soscol Ave
- 13. SR 221 (Napa-Vallejo Highway)/Streblow Dr
- 16. Kaiser Rd/Enterprise Way
- 17. SR 221 (Napa-Vallejo Highway)/Kaiser Rd
- 20. Napa Valley Corp. Way/SR 221 (Napa-Vallejo Hwy.)
- 22. Napa Valley Corporate Dr/Anselmo Ct
- 23. SR 12-SR 121/SR 29
- 25. Soscol Ferry Rd/Devlin Rd
- 26. SR 12-SR 29/SR 221 (Napa-Vallejo Highway)
- 27. Airport Blvd/SR 29-SR 12
- 28. SR 29/South Kelly Road
- 29. SR 29/Napa Junction Road
- 30. SR 29/Donaldson Way
- 31. SR 29/American Canyon Rd

- 33. American Canyon Road/Newell Road
- 34. SR 29/SR 37 Westbound Off-Ramp

Table 3 compares the fair share contribution of the New County Alternative to the Proposed Project at those intersections impacted under both project alternatives (in the cumulative scenario), but with the New County Alternative contributing an incremental increase in traffic when compared to the Proposed Project. As shown in the table, the increase in the fair-share contribution of the New County Alternative as compared to the Proposed Project demonstrates that the resulting impacts would not be substantially more severe.

Table 3. Fair Share Contribution (Cumulative Conditions)

Intersection	New County Alternative	Proposed Project
5. Third St/Silverado Tr. (SR 121)/East Ave/Coombsville Rd	5.9%	5.5%
6. Silverado Trail (SR 121)/Soscol Ave	37.1%	37.0%
9. Imola Ave (SR 121)/Jefferson St	4.7%	4.2%
10. Imola Ave (SR 121)/Coombs St	4.0%	3.5%
12. Imola Ave (SR 121)/Soscol Ave	33.1%	32.8%

TABLE ES-3 SUMMARY OF SIGNIFICANT IMPACTS PRIOR TO MITIGATION	
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[illegible]

Note: **X** = Significant Impact Prior to Mitigation **✓** = Unacceptable operating conditions **Red** Highlights indicate intersections where the intensity of the impact is greater than the comparison scenario (i.e. Proposed Project).

1 Intersections with unacceptable operating conditions are reported. No project trips would exist under this scenario; therefore, the significance criteria is not applicable.

2 The Imola Avenue/Gasser Drive intersection is currently a minor intersection and is not functioning as it will under cumulative conditions. The nature of the operations at the intersection becomes critical under cumulative conditions and is studied under those scenarios.

Source: Fehr & Peers, 2011

TABLE 12A (ADAPTED FROM 2009 TIA)
EXISTING PEAK HOUR INTERSECTION LEVEL OF SERVICE ANALYSIS

Intersection	Traffic Control ¹	Existing Conditions				Proposed Project with standard ITE Trip Generation				New County-Proposed Alternative (C-PA)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
1. Lincoln Ave/Soscol Ave	Signal	34	C	53	D	34	C	50	D	33	C	50	D
2. First St/ Soscol Ave	Signal	23	C	56	E	29	C	56	E	28	C	55	D
3. First St/Silverado Trail	Signal	23	C	19	B	14	B	16	B	14	B	19	B
4. Third St/ Soscol Ave	Signal	30	C	49	D	40	D	43	D	38	D	43	D
5. Third St/Silverado Tr. (SR 121)/East Ave/Coombsville Rd	Signal	>80	F	>80	F	>80	F	>80	F	>80	F	>80	F
6. Silverado Trail (SR 121)/Soscol Ave	Signal	29	C	32	C	41	D	42	D	41	D	46	D
7. SR 29 Southbound Ramps/Imola Ave	AWS	>50 (EB)	F	>50 (EB)	F	>50 (EB)	F	>50 (EB)	F	>50 (EB)	F	>50 (EB)	F
8. SR 29 Northbound Ramps/Imola Ave	SSS	>50 (NB)	F	>50 (NB)	F	>50 (NB)	F	>50 (NB)	F	>50 (NB)	F	>50 (NB)	F
9. Imola Ave (SR 121)/Jefferson St	Signal	74	E	75	E	73	E	77	E	75	E	78	E
10. Imola Ave (SR 121)/Coombs St	Signal	43	D	44	D	45	D	45	D	46	D	47	D
12. Imola Ave (SR 121)/Soscol Ave	Signal	>80	F	>80	F	>80	F	>80	F	>80	F	>80	F
13. SR 221 (Napa-Vallejo Highway)/Streblow Dr	Signal	42	D	24	C	75	E	48	D	> 80	F	45	D
14. Kaiser Rd/Syar Industrial Way	SSS ³	10 (SB)	B	18 (SB)	C	9	A	11	B	9	A	11	B
15. Kaiser Rd/Napa Valley Corporate Dr	SSS ³	10 (NB)	B	9 (NB)	A	11	B	11	B	11	B	11	B
16. Kaiser Rd/Enterprise Way	SSS	14 (SB)	B	15 (SB)	B	19 (SB)	C	29 (SB)	D	22 (SB)	C	17 (SB)	C
17. SR 221 (Napa-Vallejo Highway)/Kaiser Rd	Signal	15	B	11	B	61	E	35	D	47	D	30	C
18. Napa Valley Corp. Dr/Latour Ct ²	SSS	N/A	N/A	N/A	N/A	12 (EB)	B	11 (EB)	B	12 (EB)	B	11 (EB)	B
19. Napa Valley Corp. Dr/Napa Valley Corp. Way ²	AWS	N/A	N/A	N/A	N/A	10	B	11	B	10	B	11	B
20. Napa Valley Corp. Way/SR 221 (Napa-Vallejo Hwy.)	Signal	37	D	22	C	25	C	27	C	26	C	29	C
21. Napa Valley Corporate Dr/Trefethen Way ²	SSS	N/A	N/A	N/A	N/A	14 (EB)	B	14 (WB)	B	15 (WB)	B	15 (EB)	B
22. Napa Valley Corporate Dr/Anselmo Ct ²	SSS	N/A	N/A	N/A	N/A	15 (EB)	C	37 (EB)	E	16 (EB)	C	28 (EB)	D
23. SR 12-SR 121/SR 29	Signal	53	D	52	D	43	D	36	D	42	D	35	C
24. Napa Valley Corporate Dr/Soscol Ferry Rd	SSS	9 (NB)	A	12 (NB)	B	12 (NB)	B	14 (NB)	B	11 (NB)	B	14 (NB)	B
25. Soscol Ferry Rd/Devlin Rd	SSS	9 (NB)	A	36 (NB)	E	>50 (NB)	F	>50 (NB)	F	>50 (NB)	F	>50 (NB)	F
26. SR 12-SR 29/SR 221 (Napa-Vallejo Highway)	Signal	>80	F	>80	F	>80	F	>80	F	>80	F	>80	F
27. Airport Blvd/SR 29-SR 12	Signal	>80	F	66	E	>80	F	>80	F	>80	F	>80	F
28. SR 29/ South Kelly Road	Signal	48	D	19	B	46	D	21	C	48	D	21	C
29. SR 29/ Napa Junction Road	Signal	> 80	F	54	D	> 80	F	53	D	> 80	F	51	D
30. SR 29/ Donaldson Way	Signal	>80	F	24	C	> 80	F	16	B	> 80	F	22	C
31. SR 29/American Canyon Rd	Signal	>80	F	54	D	>80	F	64	E	>80	F	61	E
32. American Canyon Rd/ Broadway St	Signal	7	A	8	A	7	A	8	A	7	A	7	A
33. American Canyon Rd/ Newell Rd	Signal	24	C	20	B	25	C	15	B	25	C	16	B
34. SR 29/SR 37 Westbound Off-Ramp	Signal	30	C	26	C	38	D	47	D	36	D	28	C
Total Intersections with Unacceptable Operations:		12				14				12			
Total Project-Significant Impacts:		-				13				11			

Note: **Bold** = unacceptable LOS, not a significant impact; **Shaded** = Significant impact; Signal = Signalized intersection; AWS = All-Way Stop-Controlled intersection; SSS = Side-Street Stop-Controlled intersection (XX) = indicates worst case approach where WB = westbound, EB = eastbound, NB = northbound, and SB = southbound

- Signalized and AWS intersection LOS based on average control delay per vehicle, according to the HCM

TABLE 24A (FROM 2009 TIA)
CUMULATIVE (YEAR 2030) PEAK HOUR INTERSECTION LEVEL OF SERVICE WITH “PLANNED” ROADWAY NETWORK

Intersection	Traffic Control ¹	Alternative 1A Baseline (Existing Uses)				Proposed Project with standard ITE Trip Generation				New County-Proposed Alternative (C-PA)			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS	Delay (Sec)	LOS
1. Lincoln Ave/Soscol Ave	Signal	40	D	> 80	F	34	C	> 80	F	33	C	> 80	F
2. First St/ Soscol Ave	Signal	35	C	72	E	40	D	> 80	F	45	D	> 80	F
3. First St/Silverado Trail	Signal	24	C	62	E	24	C	64	E	24	C	62	E
4. Third St/ Soscol Ave	Signal	48	D	> 80	F	44	D	> 80	F	44	D	> 80	F
5. Third St/Silverado Tr. (SR 121)/East Ave/Coombsville Rd	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
6. Silverado Trail (SR 121)/Soscol Ave	Signal	66	E	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
7. SR 29 Southbound Ramps/Imola Ave	Signal	15	B	17	B	16	B	17	B	16	B	16	B
8. SR 29 Northbound Ramps/Imola Ave	Signal	24	C	23	C	24	C	23	C	25	C	22	C
9. Imola Ave (SR 121)/Jefferson St	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
10. Imola Ave (SR 121)/Coombs St	Signal	69	E	> 80	F	71	E	> 80	F	72	E	> 80	F
11. Imola Ave (SR 121)/Gasser Dr	Signal	45	D	> 80	F	46	D	> 80	F	46	D	> 80	F
12. Imola Ave (SR 121)/Soscol Ave	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
13. SR 221 (Napa-Vallejo Highway)/Streblow Dr	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
14. Kaiser Rd/Syar Industrial Way ²	SSS ³	9	A	10	B	11	B	14	B	11	B	14	B
15. Kaiser Rd/Napa Valley Corporate Dr ²	SSS ³	10	B	10	B	14	B	13	B	14	B	13	B
16. Kaiser Rd/Enterprise Way	SSS	27 (SB)	D	41 (SB)	E	>50 (SB)	F	>50 (SB)	F	>50 (SB)	F	>50 (SB)	F
17. SR 221 (Napa-Vallejo Highway)/Kaiser Rd	Signal	46	D	58	E	> 80	F	> 80	F	> 80	F	> 80	F
18. Napa Valley Corp. Dr/Latour Ct	SSS	12 (EB)	B	13 (EB)	B	13 (EB)	B	13 (EB)	B	13 (EB)	B	13 (EB)	B
19. Napa Valley Corp. Dr/Napa Valley Corp. Way	AWS	10	B	13	B	12	B	14	B	12	B	14	B
20. Napa Valley Corp. Way/SR 221 (Napa-Vallejo Hwy.)	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
21. Napa Valley Corporate Dr/Trefethen Way	SSS	13 (WB)	B	18 (WB)	C	16 (WB)	C	20 (WB)	C	17 (WB)	C	23 (WB)	C
22. Napa Valley Corporate Dr/Anselmo Ct	SSS	11 (EB)	B	18 (EB)	C	17 (EB)	C	>50 (EB)	F	22 (EB)	C	>50 (EB)	F
23. SR 12-SR 121/SR 29	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
24. Napa Valley Corporate Dr/Soscol Ferry Rd	SSS	10 (NB)	B	13 (NB)	B	11 (NB)	B	14 (NB)	B	10 (NB)	B	33 (NB)	D
25. Soscol Ferry Rd/Devlin Rd	SSS	14 (NB)	B	28 (NB)	D	17 (NB)	C	>50 (NB)	F	17 (NB)	C	41 (NB)	E
26. SR 12-SR 29/SR 221 (Napa-Vallejo Highway)	Signal	1	A	1	A	1	A	1	A	1	A	1	A
27. Airport Blvd/SR 29-SR 12	Signal	31 / 15	C / B	25 / 14	C / B	38 / 21	D / C	24 / 14	C / B	37 / 20	D / B	24 / 13	C / B
28. SR 29/ South Kelly Road	Signal	57	E	71	E	48	D	71	E	44	D	68	E
29. SR 29/ Napa Junction Road	Signal	49	D	50	D	53	D	57	E	53	D	55	D
30. SR 29/ Donaldson Way	Signal	28	D	51	D	30	C	54	D	29	C	54	D
31. SR 29/American Canyon Rd	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
32. American Canyon Rd/ Broadway St	Signal	22	C	26	C	20	C	14	B	20	C	14	B
33. American Canyon Rd/ Newell Rd	Signal	39	D	28	C	46	D	29	C	45	D	29	C
34. SR 29/SR 37 Westbound Off-Ramp	Signal	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F	> 80	F
Total Intersections with Unacceptable Operations:		18				21				20			

Note: **Bold** = unacceptable LOS, not a significant impact.; **Shaded** = Significant Impact; Signal = Signalized intersection; AWS = All-Way Stop-Controlled intersection; SSS = Side-Street Stop-Controlled intersection (XX) = indicates worst case approach where WB = westbound, EB = eastbound, NB = northbound, and SB = southbound

1. Signalized and AWS intersection LOS based on average control delay per vehicle, according to the HCM. Side-street stop-controlled intersection level of service based on worst approach control delay, according to the HCM-Special Report 209 (Transportation Research Board, 2000).
 2. Project proposes to install a roundabout as intersection treatment. Multi-lane roundabout analysis performed per the FHWA 2000 and NCHRP 572 methodology.
- Source: Fehr & Peers, 2011.