

MEMORANDUM

TO: CITY COUNCIL

FROM: TERESA MCCLISH, DIRECTOR OF COMMUNITY DEVELOPMENT

BY: MATT HORN, CITY ENGINEER

SUBJECT: CONSIDERATION OF TEST CLOSURE TRAFFIC STUDY RESULTS FOR THE BRISCO ROAD AT US 101 NORTHBOUND ON AND OFF-RAMPS AND CONSIDERATION OF FURTHER EXTENSION OF THE CURRENT RAMP CLOSURE

DATE: FEBRUARY 23, 2016

RECOMMENDATION:

It is recommended the City Council:

- 1) Receive and file an update on the Test Closure Traffic Study Results for the Brisco Road at US 101 Northbound on and off-ramp closure; and
- 2) Direct staff to research the feasibility of an extended closure beyond the 6-month time frame and through construction.

IMPACT ON FINANCIAL AND PERSONNEL RESOURCES:

As of February 16, 2016, the project budget has an unencumbered balance of \$1,402,305.

Phase	Budget	Total Expended & Committed	Balance Remaining
Study	\$ 100,000	\$ 76,211	\$ 23,790
Design	\$ 303,900	\$ 265,785	\$ 38,115
Contract Administration	\$ -	\$ -	\$ -
Construction	\$ 1,340,400	\$ -	\$ 1,340,400
		Total	\$ 1,402,305

Test closure cost to date as follows:

Item	Estimated	To Date
Permitting	\$ 15,000	\$ 10,000
Analysis	\$ 40,000	\$ 52,000
Closure	\$ 45,000	\$ 14,211
Total	\$ 100,000	\$ 76,211

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BACKGROUND:

The Brisco Road-Halcyon Road/U.S. 101 Interchange project has been underway since the late 1990s. Currently the project is in the Project Approval and Environmental Determination (PAED) phase with three project alternatives under review: Alternative 1, Alternative 4C Roundabout (RAB), and no-build. Alternative 1 includes the following improvements:

- Closes the northbound on and off-ramps at Brisco Road and US 101
- Completes intersection improvements Camino Mercado and US 101
- Completes intersection improvements at Grand Ave and US 101
- Completes bridge widening on Grand Ave

Alternative 4C RAB includes the following improvements:

- Relocates the northbound ramps at Brisco to West Branch Street at Rodeo Drive
- Completes intersection improvements at Grace Lane and Rodeo Drive
- Complete intersection improvements at Grand Ave and US 101

On June 23, 2015, City Council directed staff to pursue a test closure of the US 101 northbound on and off-ramps at Brisco Road.

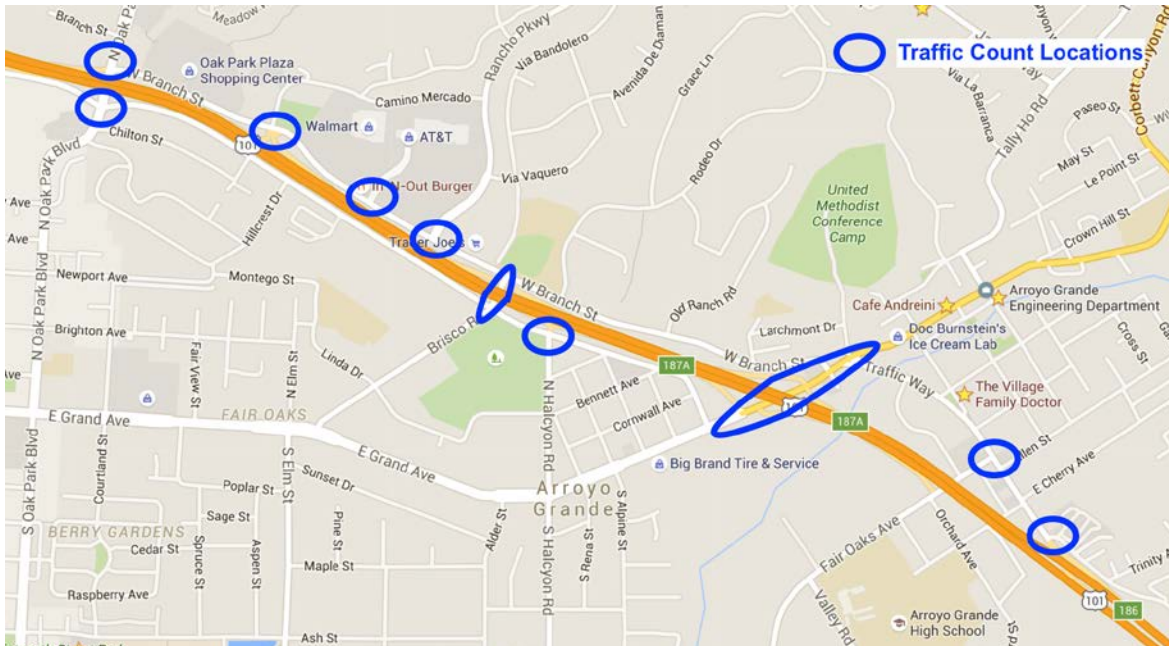
The purpose of the closure and study was to simulate the built condition of Alternative 1, the lowest cost build alternative, in order to verify the proposed improvements would address shifting traffic patterns. The timeline of activities related to the ramp closure is as follows:

Date	Activity
• September 8, 2015	City Council Approved Closure Plan. Closure beginning on September 21 and ending on November 30, 2015.
• September 29, 2015	US 101 northbound on and off-ramps at Brisco Road closed.
• October 27, 2015	City Council extends closure termination date from December 7, 2015 to January 11, 2016.
• December 17, 2015	City Council revised the test ramp termination date until July 11, 2016 to allow additional time for presentation of the ramp closure study data and discussion by the community.

Traffic Counts

Traffic counts were obtained prior to the closure of the US 101 northbound on and off-ramps at Brisco Road. The locations of traffic counts were the anticipated location of changing traffic patterns. Below is a display that shows the general location of the traffic counts.

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Pre-closure traffic counts were obtained starting on September 17 and ending on September 24, 2015. On September 29, 2015 the ramps were closed and the traffic was given time to normalize. Post ramp closure counts were obtained starting on November 15 and ending on November 21, 2015. Supplemental counts were required due to rain-fouled or damaged counter tubes for certain segments. Those supplemental counts were obtained from December 9 through December 15, 2015.

ANALYSIS OF ISSUES:

Volume of Traffic

By closing the US 101 northbound on and off-ramps at Brisco Road, those vehicles that used these ramps are assumed to use other on and off-ramps in the general vicinity. Table 1 below shows ramp volume for the morning, mid-day, and evening peak travel time before the ramp closure as well as during. These volumes only account for vehicles getting on or off of US 101.

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**TABLE 1
 NORTHBOUND US 101 RAMP VOLUME COMPARISONS**

Northbound Ramp Location	AM Peak Hour			Mid-Day Peak			PM Peak Hour		
	Existing	Closure	Diff.	Existing	Closure	Diff.	Existing	Closure	Diff.
	Ramp Volume	Ramp Volume		Ramp Volume	Ramp Volume		Ramp Volume	Ramp Volume	
Oak Park Blvd On-Ramp	615	713	98	518	566	48	465	545	80
Camino Mercado On-Ramp	109	305	196	182	350	168	218	340	122
Camino Mercado Off Ramp	339	457	118	392	397	5	295	440	145
Brisco Rd On-Ramp	466	0	-466	278	0	-278	310	0	-310
Brisco Rd Off-Ramp	293	0	-293	272	0	-272	288	0	-288
E Grand Ave On-Ramp	627	620	-7	537	566	29	494	586	92
E Grand Ave Off-Ramp	270	364	94	243	253	10	237	344	107
Traffic Way Off-Ramp	370	390	20	220	250	30	370	380	10
Total ramp volumes	3089	2849	-240	2642	2382	-260	2677	2635	-42
Total On-Ramp			-179			-33			-16
Total Off-Ramp			-61			-227			-26

Camino Mercado at US 101 showed the largest increase in traffic volumes. Less vehicle trips were counted in the study area during the closure than prior to the closure. This change was most apparent in mid-day. Explanations for these reduced volumes include:

- Seasonal traffic changes
- More Nipomo based commuters using Willow Road Interchange
- Commuters adjacent to US 1, using US 1 to Pismo Beach and finally to US 101
- Reduced need to travel to Five Cities Center, possibly due at least in part to, elimination of grocery store
- Reduced local traffic getting onto and immediately off of US 101 as a quicker alternative to using local roads

In addition to US 101 on and off ramp traffic counts, intersection traffic counts were also completed. Table 2 shows a comparison of the volume of traffic prior to and during the closure.

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**TABLE 2
 INTERSECTION VOLUME COMPARISON**

#	Intersection	AM Peak Hour			MID Peak Hour			PM Peak Hour		
		Existing	Closure	Volume	Existing	Closure	Volume	Existing	Closure	Volume
		Volume	Volume	Change	Volume	Volume	Change	Volume	Volume	Change
1	El Camino Real & Oak Park Blvd	1,956	2095	139	2517	2628	111	2826	2862	36
2	W Branch/NB Ramp & Oak Park Blvd	2,195	2368	173	2672	2837	165	2832	2863	31
3	W Branch St/US 101 NB	925	1226	301	1455	1689	234	1511	1712	201
4	W Branch & Town Center Dr	472	721	249	925	1184	259	1063	1144	81
5	W Branch St & Rancho Parkway	651	882	231	1404	1502	98	1414	1472	58
6	El Camino Real & Brisco Rd	1,479	1247	-232	1682	1582	-100	1703	1557	-146
7	W Branch St & Brisco Rd	912	1036	124	1455	1514	59	1366	1387	21
8	US 101 NB Ramps & Brisco Rd	1,261		N/A	1413		N/A	1430		N/A
9	W Branch St & Rodeo Dr	615	597	-18	730	796	66	574	542	-32
10	US 101 SB Ramps & E Grand Ave	1,835	1912	77	2042	2079	37	1923	1972	49
11	US 101 NB Ramps & E Grand Ave	1,812	2147	335	2220	2264	44	1998	2136	138
12	E Grand Ave & W Branch St	1,899	1856	-43	2223	2162	-61	1931	1951	20
13	Traffic Way/Wesley St/W Branch St	1,990	1884	-106	2288	2206	-82	2031	2011	-20

The largest total intersection traffic increases were seen at:

- 3 - West Branch Street / US 101 / Camino Mercado
- 4 - West Branch Street and Town Center Drive - through movement to and from Camino Mercado / US 101
- 11 - US 101 Northbound Ramps at Grand Ave.

The largest decrease in traffic occurred at El Camino Real at Brisco Road.

Level of Service

While peak traffic volumes may have increased in some intersections, the capacity of those intersections must be calculated individually. Some intersections may have sufficient capacity to support a large increased demand and operate at an acceptable Level of Service (LOS) while some intersections may see a modest increase in demand and operate at an unacceptable Level of Service.

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**TABLE 3
INTERSECTION CAPACITY BEFORE AND DURING CLOSURE**

No.	Intersection	Target LOS	Before Closure			During Closure			Impact?
			AM	Mid-Day	PM	AM	Mid-Day	PM	
1	El Camino Real & Oak Park Blvd	C	B	C	C	B	C	C	No
2	West Branch St/101 NB Ramp & Oak Park Blvd	D	B	B	B	B	B	B	No
3	West Branch St & 101 NB Ramps/Camino Mercado	D	B	C	B	C	C	D	Yes
4	West Branch St & Town Center Drive	C	A	A	A	A	A	A	No
5	West Branch St & Rancho Parkway	C	A	A	B	A	B	B	No
6	El Camino Real & Brisco Rd	C	D	D	D	D	D	D	No
7	West Branch Street & Brisco Rd	C	B	B	B	B	B	B	No
8	101 NB Ramps & Brisco Rd	D	C	C	C	-	-	-	No
9	West Branch Street & Rodeo Drive	C	B	B	B	B	B	B	No
10	101 SB & East Grand Ave	D	B	B	B	B	C	B	No
11	101 NB & East Grand Ave	D	C	B	B	C	B	C	No
12	East Grand Ave & West Branch St	C	F	F	F	F	F	F	Yes
13	Traffic Way/Wesley St & West Branch St	C	C	C	C	C	C	C	No
14	Traffic Way & Fair Oaks Ave	C	D	C	D	D	C	D	No

The following intersections are impacted by the closure, but not below LOS policy levels:

- 5 - West Branch Street at Rancho Parkway
- 10 - 101 Southbound at East Grand Avenue
- 11 - 101 Northbound at East Grand Avenue

Intersection number 3, West Branch Street at Camino Mercado, US 101 Northbound Ramps is impacted in the PM Peak with an additional 30.6 seconds of delay. Intersection 12, East Grand Avenue at West Branch Street, is impacted due to the closure with an additional 3 minutes of delay for drivers. All other intersections are operating an acceptable LOS.

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Forecasted Level of Service

While the existing operation of each intersection is important, it is also important that these intersections operate well into the future. Modeling the improvements of Alternative 1, no build, and no build but maintaining the ramp closures at Brisco Road and US 101 forecasted into the year of 2035, the following results are achieved as shown in Table 4.

**TABLE 4
FORECASTED INTERSECTION CAPACITY**

No.	Intersection	Target LOS	No Build			Alt 1. Build			With Closure		
			AM	Mid-Day	PM	AM	Mid-Day	PM	AM	Mid-Day	PM
1	El Camino Real & Oak Park Blvd	C	C	C	D	C	C	C	C	C	C
2	West Branch St/101 NB Ramp & Oak Park Blvd	D	B	B	C	C	C	C	C	C	C
3	West Branch St & 101 NB Ramps/Camino Mercado	D	C	C	C	C	C	C	D	C	D
4	West Branch St & Town Center Drive	C	A	A	A	A	A	A	A	A	A
5	West Branch St & Rancho Parkway	C	A	B	B	A	B	B	A	B	B
6	El Camino Real & Brisco Rd	C	D	E	F	C	C	C	D	F	E
7	West Branch Street & Brisco Rd	C	B	B	B	B	B	B	B	B	B
8	101 NB Ramps & Brisco Rd	D	C	C	D	-	-	-	-	-	-
9	West Branch Street & Rodeo Drive	C	B	C	B	B	C	B	B	C	B
10	101 SB & East Grand Ave	D	B	B	C	B	C	B	B	C	B
11	101 NB & East Grand Ave	D	C	B	B	B	B	B	D	C	C
12	East Grand Ave & West Branch St	C	F	F	F	F	F	F	F	F	F
13	Traffic Way/Wesley St & West Branch St	C	C	D	C	C	D	D	C	D	D
14	Traffic Way & Fair Oaks Ave	C	E	D	F	E	E	F	E	E	F

The improvements associated with Alternate 1's construction eliminate the following intersections from performing below policy LOS:

- 1- El Camino Real at Oak Park Boulevard
- 6 - El Camino Real at Brisco Road

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Regardless of build or no build alternatives, the following intersections are forecasted to operate at a reduced LOS than policy objectives:

- 12 - East Grand Avenue at West Branch Street
- 13 - Traffic Way at West Branch Street
- 14 - Traffic Way at Fair Oaks Avenue

Feedback

The City has established an email address for the users of the Brisco Road area to provide feedback: brisco@arroyogrande.org.



Photo of Feedback Signage at Brisco Road / West Branch Street

Additionally, the City has established a web page in order to provide information about the Brisco Interchange project and information on the Test Closure. The web page may found on the City website:

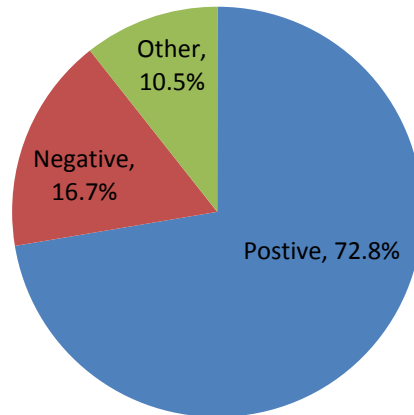
<http://www.arroyogrande.org/561/Temporary-Ramp-Closure-at-Brisco-Road>

To date, the City has received 257 contacts either by phone or email:

- 187 or 72.8% of contacts have been positive towards the closure;
- 43 or 16.7% of contacts have not been in favor of the closure; and
- 27 or 10.5% of contacts have requested operational changes or recommended other project alternatives.

Police and Fire Service input has been requested and received concerning the closure. Generally, emergency services support the closure of the Brisco on and off-ramps.

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Conclusion

Based on available data, the closure of the US 101 at Brisco Road on and off-ramps is successful. Communications received indicate majority support for this change. The traffic counts, forecasted volumes, and anticipated improvements with Alternative 1 indicate that planned improvements in the work area will improve traffic flows for twenty plus years. Three identified intersection outside the work area of Alternative 1 perform below policy levels. Those intersections are as follows:

1. West Branch Street at Traffic Way
2. West Branch Street at East Grand Avenue
3. Traffic Way at Fair Oaks Avenue

Staff recommends moving forward to complete the Project Approval and Environmental Document (PAED) phase of the project. If after the PAED phase is complete, it is recommended that other Level of Service improvements for the Brisco Interchange Project be considered by the Council, selected improvements may be included in a Supplement Project Report.

Additionally, Staff also recommends continuing discussions with Caltrans regarding a further extension of the temporary closure beyond July 11, 2016.

ALTERNATIVES:

The following alternatives are provided for the Council's consideration:

- Receive and file report.
- Provide direction to staff.

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ADVANTAGES:

The Test Closure Traffic Study results provide valuable data to assist the City in evaluating the project alternatives.

DISADVANTAGES:

None known at this time.

ENVIRONMENTAL REVIEW:

This project is subject to both the California Environmental Review Act (CEQA) and National Environmental Policy Act (NEPA). The City is the lead agency for CEQA and an Initial Study Mitigated Negative Declaration has been prepared. Caltrans is the lead agency for NEPA and Caltrans and has determined the project's environmental document should be a Environmental Assessment with Findings of No Significant Impact.

PUBLIC NOTIFICATION AND COMMENTS:

The Agenda was posted in front of City Hall on Thursday, February 18, 2016. The Agenda and staff report were posted on the City's website on Friday, February 19, 2016. Email notifications were sent to all that provided comments to brisco@arroyogrande.org, and a Press Release was issued on Friday, February 19, 2016. A static construction sign was placed at the intersection of West Branch Street at Brisco Road.

Attachments:

1. Technical Memo
2. brisco@arroyogrande.org email