



TECHNICAL ADVISORY COMMITTEE MEETING NOTICE & AGENDA

DATE & TIME: Thursday, March 10, 2022 • 9:00 AM – 11:00 AM

REMOTE ACCESS: <https://us02web.zoom.us/j/7321058840?pwd=c1dMVjJyd1-BoYk0yYWVlZWVlWHZ4Zz09>

MEETING ID#: 732 105 8840

PASSWORD (if requested): WCCTAC2020

Remote Participation Only

As a result of the COVID-19 public health emergency, including the County Health Officer and Governor’s directives, **there will be no physical location for the TAC Meeting.** TAC members will attend via teleconference and members of the public are invited to attend the meeting and **participate remotely.**

Pursuant to the Governor’s Executive Order N-29-20, TAC members: Yvetteh Ortiz, Mike Roberts, Sanjay Mishra, Denee Evans, Alan Panganiban, Rob Thompson, Nathan Landau, Jamar Stamps, and Celestine Do may be attending this meeting via teleconference, as may WCCTAC Alternate TAC Members. Any votes conducted during the teleconferencing session will be conducted by roll call.

The public may observe and address the WCCTAC TAC in the following ways:

Phone Participation

Dial one of the following numbers, enter the participant PIN followed by # to confirm:
+1 669 900 6833
Meeting ID: 732 105 8840
Password: 066620

Public Comment

Members of the public may address the TAC during the initial public comment portion of the meeting or during the comment period for agenda items.

Participants may use the chat function on Zoom or physically raise their hands to indicate if they wish to speak on a particular item.

Written Comment (accepted until the start of the meeting, unless otherwise noted on the meeting agenda). Public comments received by 5:00 p.m. on the evening before the TAC meeting date will be provided to the WCCTAC TAC and heard before TAC action. Comments may be submitted by email to creilly@wcctac.org

Comments may also be submitted via e-mail to creilly@wcctac.org at any time prior to closure of the public comment portion of the item(s) under consideration. All written comments will be included in the record.

Reading of Public Comments: WCCTAC staff will read aloud email comments received during the meeting that include the subject line "FOR THE RECORD" as well as the item number for comment, provided that the reading shall not exceed three (3) minutes, or such other time as the TAC may provide.

1. **CALL TO ORDER and MEMBER ROLL CALL**

Estimated Time: 9:00 AM, (2 minutes)*

2. **PUBLIC COMMENT**

Estimated Time: 9:02 AM, (3 minutes)*

The public is welcome to address the TAC on any item that is not listed on the agenda. Please fill out a speaker card and hand it to staff. Please limit your comments to 3 minutes. Pursuant to provisions of the Brown Act, no action may be taken on a matter unless it is listed on the agenda, or unless certain emergency or special circumstances exist. The WCCTAC TAC may direct staff to investigate and/or schedule certain matters for consideration at a future TAC meeting.

3. **CONSENT CALENDAR**

Estimated Time: 9:05 AM, (5 minutes)*

A. **Minutes from February 10, 2022**

Recommendation: Approve as presented

Attachment: Yes

B. **Minutes from February 28, 2022**

Recommendation: Approve as presented

Attachment: Yes

4. **REGULAR AGENDA ITEMS**

A. **Draft Updates to the CCTA's Growth Management Program Documents**

Description: For over two-years the CCTA has been updating its Growth Management Program to reflect changes in current law and best practices. They have now completed draft documents for their GMP Implementation Guide, VMT Methodology and Model Growth Management Element. The Implementation Guide includes information on what should be included in traffic studies for development applications. Comments on the draft documents are due to the CCTA by the end of the month.

Recommendation: Receive information, review documents, and submit comments individually to the CCTA.

Attachment: Yes (Given large document sizes, the VMT Methodology, Model Growth Management Element, and GMP Implementation Guide are available on the WCCTAC website in the meeting calendar).

Presenter/Lead Staff: Matt Kelly, CCTA Staff

Estimated Time: 9:10 AM, (10 minutes)*

B. CCTA’s Public Outreach for the Countywide Transportation Plan and Action Plan Update

Description: The CCTA is embarking on its public outreach component for the CTP and Action Plan Updates. This effort includes pop-up events, workshops, and an online survey. Further details can be found on the CCTA’s website: [Countywide Transportation Plan - Contra Costa Transportation Authority \(ccta.net\)](http://www.ccta.net)

Recommendation: Receive and share information with elected officials, agency staff and members of the public

Attachment: Yes

Presenter/Lead Staff: Matt Kelly, CCTA staff

Estimated Time:* **9:20 AM**, (5 minutes)

C. San Pablo Avenue Multimodal Corridor Study – Phase 2

Description: In West County, Phase 2 of this study consists mostly of technical analysis. Previously, the TAC gave input on options to study further. The consultant is now returning with their initial findings on Existing Transit Performance; Speed & Delay; Projected Future Transit Performance; Hybrid Stop Impacts; and Next Steps for the Evaluation Component and Outreach.

Recommendation: Receive information and comment as needed.

Attachment: Yes

Presenter/Lead Staff: Leah Greenblat, WCCTAC staff and Adam Dankberg, Kimley-Horn

Estimated Time:* **9:25 AM**, (60 minutes)

D. CCTA Smart Signals Program

Description: At the TAC’s February meeting, CCTA staff provided an overview of the proposed policy framework for the OBAG 3 grant program. Given the many questions from the TAC about the Smart Signal Program, CCTA staff proposed to return to provide more details and answer any additional questions.

Recommendation: Receive information and comment as needed.

Attachment: Yes

Presenter/Lead Staff: John Hoang, CCTA

Estimated Time:* **10:25 AM**, (30 minutes)

5. STANDING ITEMS

A. Technical Coordinating Committee (TCC) Report

Description: TCC representatives will report on the last TCC meeting.

Recommendation: None.

Attachment: No

Presenter/Lead Staff: WCCTAC’s TCC Representatives & WCCTAC Staff

Estimated Time:* **10:55 AM** (3 minutes)

B. Staff and TAC Member Announcements

Description: TAC members or WCCTAC staff can make general comments or announcements

Recommendation: Receive update.

Attachment: No

Presenter/Lead Staff: WCCTAC Staff and TAC Members

Estimated Time:* **10:58 AM** (2 minutes)

6. ADJOURNMENT

Description / Recommendation: Adjourn to the next regularly scheduled meeting of the TAC on Friday, April 8, 2022. (The next meeting of the WCCTAC Board is Friday, March 25, 2022.)

Estimated Time:* **11:00 AM**

- In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in the WCCTAC TAC meeting, or if you need a copy of the agenda and/or agenda packet materials in an alternative format, please contact Valerie Jenkins at 510.210.5930 prior to the meeting.
- If you have special transportation requirements and would like to attend the meeting, please call the phone number above at least 48 hours in advance to make arrangements.
- Handouts provided at the meeting are available upon request and may also be viewed at WCC-TAC's office.
- Please refrain from wearing scented products to the meeting, as there may be attendees susceptible to environmental illnesses. Please also put cellular phones on silent mode during the meeting.
- A meeting sign-in sheet will be circulated at the meeting. Sign-in is optional.

El Cerrito

WCCTAC TAC Meeting Action Minutes

Hercules

MEETING DATE: February 10, 2022

Pinole

MEMBERS PRESENT: Jamar Stamps, Contra Costa County; Yvetteh Ortiz, El Cerrito; Mike Roberts, Hercules; Celestine Do, BART; Denee Evans, Richmond; Allan Panganiban, San Pablo; Rob Thompson, WestCAT; Sanjay Mishra, Pinole; and Nathan Landau, AC Transit.

Richmond

GUESTS: Misha Kaur, Pinole Alternate; Rob Reber, Hercules Alternate; Luz Gomez, County Health Services; Shirley Qian, Capitol Corridor; David Early, Torina Wilson, Charlie Knox, and Raul Tovar PlaceWorks; Erin Vaca, DKS; Terence Zhao, Fehr and Peers; John Hoang, CCTA; and Dave Campbell, Bike East Bay

San Pablo

STAFF PRESENT: John Nemeth, Coire Reilly, Joanna Pallock, Leah Greenblat

Contra Costa
County

ACTIONS LISTED BY: WCCTAC Staff

AC Transit

ITEM	ITEM/DISCUSSION	ACTION/SUMMARY
1.	Call to Order	The meeting was called to order at 9:02 AM
2.	Public Comment	None.
	Consent Calendar: a. Action Minutes from January 13, 2022	Mishra moved, Do seconded, and the motion to approve the Consent Calendar was unanimously approved.
Regular Agenda Items		
4A.	One Bay Area Grant Cycle 3 (OBAG 3) Program – Policy Framework for Contra Costa County	John Hoang, from CCTA, presented the CCTA’s proposed policy framework for the county and local share of the OBAG 3 grant program. CCTA staff proposed that half of the funds go towards Active Transportation Projects and the other half to Countywide Smart Signals Projects. The TAC raised questions and made

BART

WestCAT

ITEM	ITEM/DISCUSSION	ACTION/SUMMARY
		<p>suggestions for changes which it decided to incorporate into a comment letter to the CCTA, to be prepared by WCCTAC staff.</p>
4B.	West County Action Plan Update	<p>John Hoang, of CCTA, introduced the item and David Early, of Placeworks, made a presentation. The TAC provided comments on the draft Regional Transportation Objectives for the West Contra Costa Action Plan. Due to the length of the prior agenda item, the TAC agreed to hold a special meeting to continue discussion of this item at a date to be determined.</p>
5A.	TCC Update	<p>Leah Greenblat reported that the TCC discussed the OBAG 3 Policy Framework as well as the CCTA's proposed PDA Strategy. She encouraged TAC members to double check that their projects were included in CCTA's PDA Strategy.</p>
5B.	Staff and TAC Member Announcements	<p>Sanjay Mishra announced that San Pablo was working on paving San Pablo Avenue and Allan Panganiban shared that construction is underway on Rumrill Blvd.</p>
6.	Adjournment	<p>The meeting adjourned at 10:58 AM.</p>

El Cerrito

WCCTAC TAC Special Meeting Action Minutes

Hercules

MEETING DATE: February 28, 2022

Pinole

MEMBERS PRESENT: Jamar Stamps, Contra Costa County; Melanie Mintz, El Cerrito; Mike Roberts, Hercules; Celestine Do, BART; Denee Evans, Richmond; Allan Panganiban, San Pablo; Rob Thompson, WestCAT; Sanjay Mishra, Pinole; Rob Thompson, WestCAT; and Nathan Landau, AC Transit.

Richmond

GUESTS: Misha Kaur, Pinole Alternate; Luz Gomez, County Health Services; Ryan Lau, AC Transit; David Early, Torina Wilson, Charlie Knox, and Raul Tovar, PlaceWorks; Erin Vaca, DKS; Terence Zhao, Fehr and Peers; Matt Kelly and John Hoang, CCTA; and Bill Pinkham, WCCTAC citizen representative to the CCTA

San Pablo

STAFF PRESENT: John Nemeth, Coire Reilly, Leah Greenblat

Contra Costa
County

ACTIONS LISTED BY: WCCTAC Staff

AC Transit

ITEM	ITEM/DISCUSSION	ACTION/SUMMARY
1.	Call to Order	The meeting was called to order at 3:01 PM
2.	Public Comment	None.

BART

Regular Agenda Items

WestCAT

3A.	West County Action Plan Update	David Early, of Placeworks, reviewed the agenda and explained that the discussion would be focused on draft Regional Transportation Objectives for transit, bicycles and pedestrians, safety, climate change, equity and technology. TAC members commented and provided guidance on which RTOs to consider advancing.
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ITEM	ITEM/DISCUSSION	ACTION/SUMMARY
4A.	Staff and TAC Member Announcements	Bill Pinkham announced that Bike to Work Day this year will be on May 20.
5.	Adjournment	The meeting adjourned at 4:36 PM.

From: [Countywide Transportation Plan - Contra Costa Transportation Authority \(ccta.net\)](https://ccta.net)

Transportation Plan?

Countywide Transportation Plan

The Countywide Transportation Plan (CTP) provides the overall direction for achieving and maintaining a balanced and functional transportation system within Contra Costa County while strengthening links between land use decisions and transportation. It outlines CCTA's vision for future transportation and establishes goals, strategies, projects, and actions for achieving that vision. The CTP is also the detailed plan which helps inform and direct transportation funding allocated throughout Contra Costa County.

To review the adopted 2017 CTP, visit the [2017 CTP page](#).

Action Plans

There are a total of five Action Plans, one for each subarea of the Contra Costa region, as mapped below. The Action Plans are intended to reduce the impact of new development on the county's transportation system as a requirement of the CCTA Measure J [Growth Management Program](#) (GMP) that ensures local jurisdictions participate in a cooperative, multi-jurisdictional planning process. The Action Plans outline quantitative service objectives that each local jurisdiction enforces, which can include requiring developers to complete certain improvements to the transportation system as a condition of project approval.

To view the existing Action Plans, visit the [2017 CTP page](#).

Get Involved

The first round of public outreach will be held in March and April 2022, and we want to hear from you! Come tell us how you get around, what barriers you face, and how our transportation system can be more connected, safe, equitable, and resilient to climate change.

Take our survey!

You are invited to share your ideas for the future of our transportation system using this [online survey platform](#)!

Attend an in-person event!

CCTA and consultants will host ten in-person pop-up events in March 2022. Each pop-up event will be held in heavily trafficked areas so we can engage with community members where they are. The information distributed, and questions asked, at each pop-up will mimic the public workshops. Attend any pop-up you are able and/or register for a public workshop below. You do not need to register for a pop-up event to attend and provide informal feedback.



LAMORINDA AREA

Orinda Farmers Market

Saturday, March 12th from 9:00 AM to 1:00 PM

Orinda Village at 14 Orinda Way, Orinda, CA 94563



LAMORINDA AREA

Lafayette BART

Wednesday, March 9th from 4:00 PM to 6:00 PM

3601 Deer Hill Road, Lafayette, CA 94549



EAST COUNTY

Brentwood Farmers Market

Saturday, March 19th, from 8:00 AM to 12:00 PM

Oak Street and 1st Street, Brentwood, CA 94513



EAST COUNTY

Pittsburg Center BART

Tuesday, March 29th, from 4:00 PM to 6:00 PM

1700 W Leland Road, Pittsburg, CA 94565



WEST COUNTY

Self Care Sunday

Sunday, March 13th from 10:00 AM to 2:00 PM

Richmond Greenway between 4th and 8th street and Marina Way South to 18th Street, Richmond, CA 94804



WEST COUNTY

El Cerrito Del Norte

Tuesday, March 22nd, from 4:00 PM to 6:00 PM

6400 Cutting Blvd, El Cerrito, CA 94530

Attend a virtual public workshop!

There will be one workshop held in each CCTA Subarea, listed below. All workshops will include the same presentation, survey, and small group questions. You may attend any workshop regardless of where you live or work in Contra Costa County. [Register for a public workshop on Eventbrite.](#)



TRI-VALLEY AREA

Thursday, March 17th from 6:00 to
7:30 PM



CENTRAL COUNTY AREA

Thursday, April 7th from 6:00 to 7:30
PM



LAMORINDA AREA

Thursday March 24th from 6:00 to
7:30 PM



EAST COUNTY AREA

Thursday, April 14th from 6:00 to
7:30 PM



WEST COUNTY AREA

Thursday, March 31st from 6:00 to
7:30 PM

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SAN PABLO AVENUE MULTIMODAL CORRIDOR STUDY PHASE 2

WCCTAC TAC MEETING
March 10, 2022



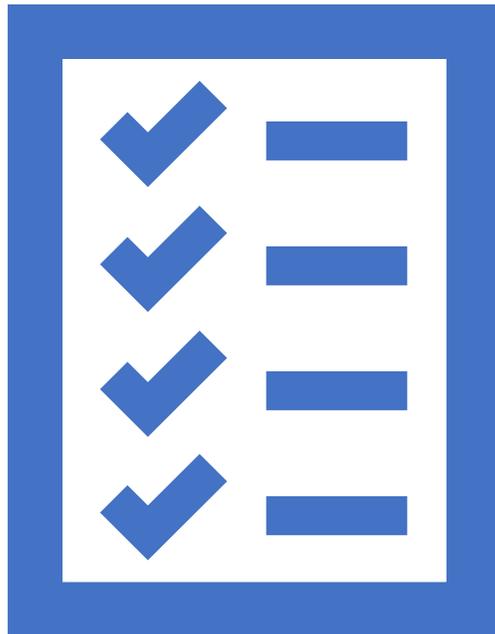
WCCTAC

Kimley»Horn





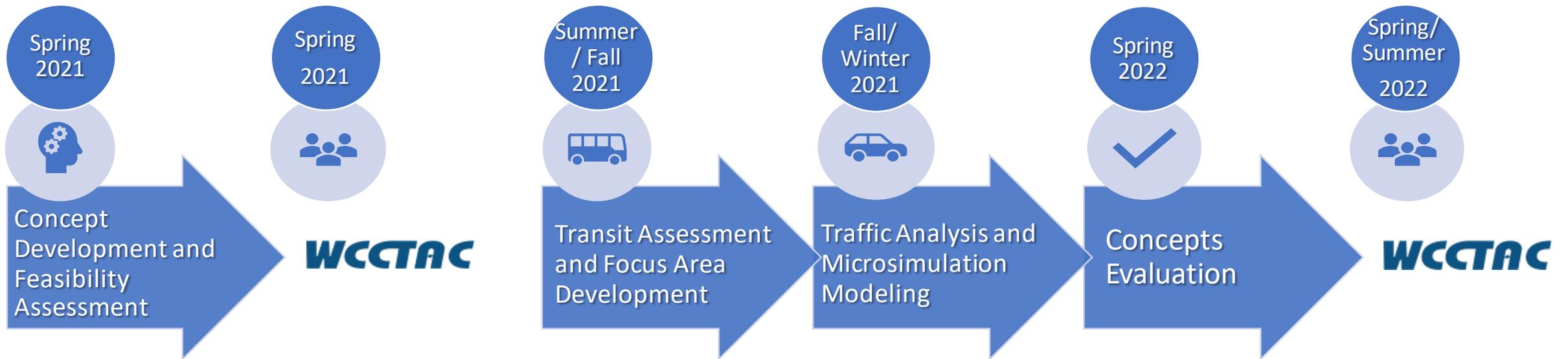
Agenda



- Project Status Update
- Existing Transit Performance and Project Need
- Speed and Delay Summary
- Projected No-Build Transit Performance
- Hybrid Stop Impacts Summary
- Next Steps



Project Status Update - Phase 2 Project Process





Project Need - Transit

Service on 72-series routes every 6.7 minutes south of Macdonald Ave

- 72 service to Hilltop Mall via Contra Costa College
- 72R service to Contra Costa College
- 72M service to Macdonald Ave

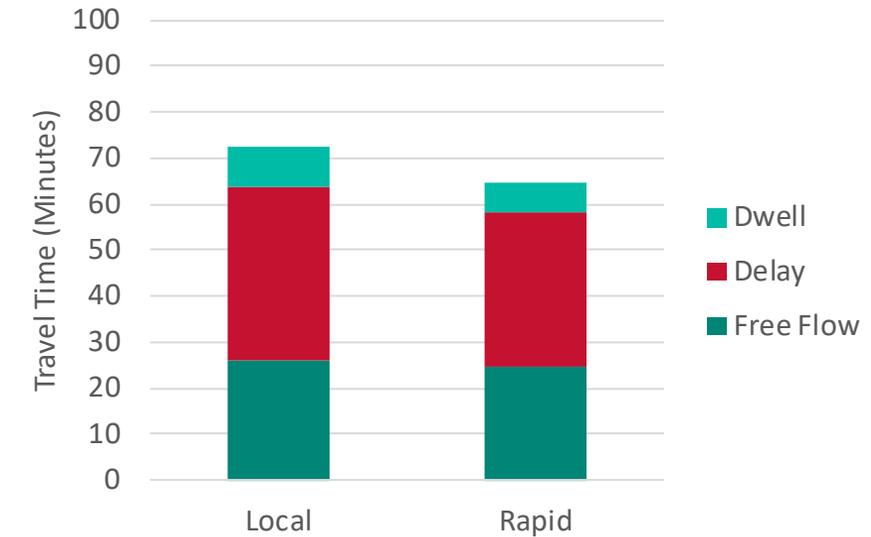
5 of top 10 ridership stops on Phase 1 corridor are in Contra Costa County, including the top 2 (El Cerrito del Norte, Contra Costa College)

- One of highest transit load points is just north of El Cerrito del Norte BART
- Approximately 12,500 riders per day on the Phase 1 corridor (2018)

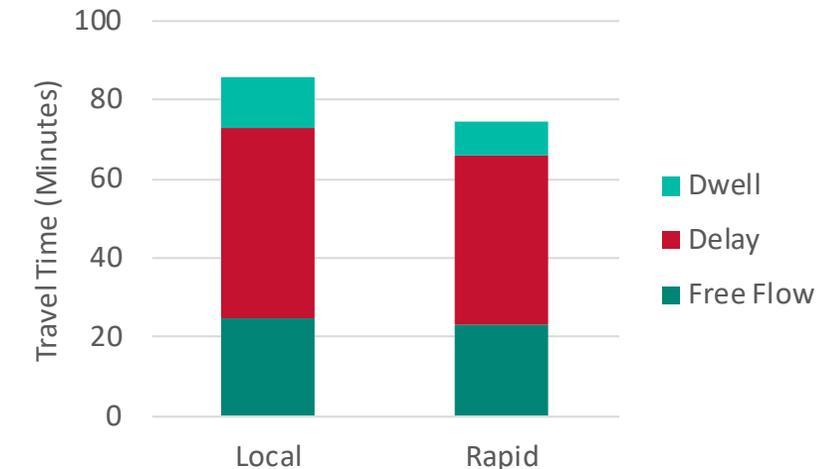
4 of the 7 slowest bus travel speed segments on Phase 1 corridor are in Contra Costa County

- Biggest bus bunching issue on corridor is just south of Contra Costa College
- In both peak periods, both local and Rapid buses spend more time delayed due to congestion than their free flow travel time and dwell combined (see figures at right)
- Bus is currently about 30% slower than auto and speeds have consistently been degrading

Components of Travel Time – AM Peak Southbound



Components of Travel Time – PM Peak Southbound



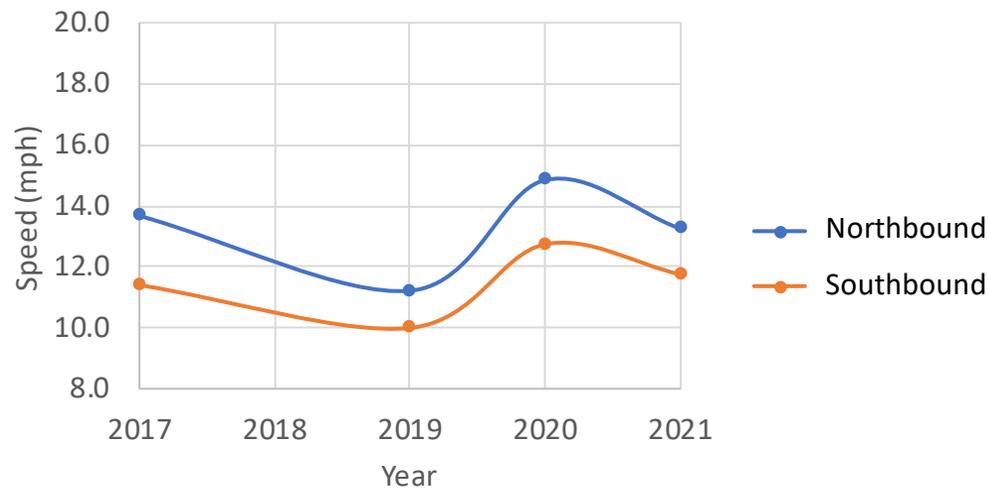
Findings from Phase 1 Corridor-Wide Speed and Delay Study
Source: Kimley-Horn



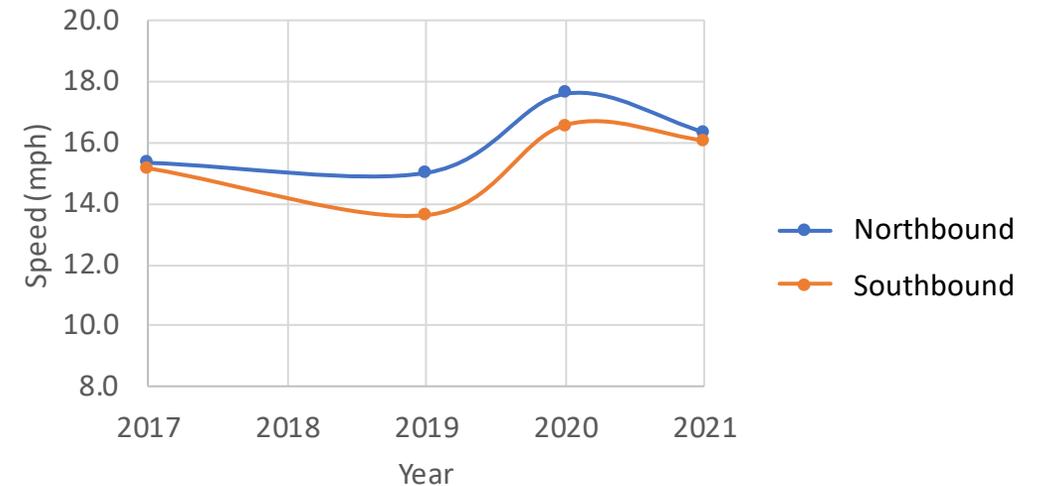
Existing Transit Performance

- Decrease in speed by 1.4 mph on Line 72 and 1.5 mph on Line 72R southbound between 2017 and 2019
- Large increase in speed between 2019 and 2020 likely due to reduced congestion during the COVID pandemic, but returning to 2019 conditions

Line 72 - Transit Speed no Dwell - All Day



Line 72R - Transit Speed no Dwell - All Day



Data represents Contra Costa County segments within study area
 Source: AC Transit APC Data for 2017 & 2020; Swifly Data for 2019



Speed & Delay Evaluation

- Selected 8 block-by-block segments in Contra Costa County with the greatest amount of delay (2019)
 - 3 AM (southbound) and 5 PM (northbound) locations
- Performed field observations during peak periods to observe and document contributors to bus delay
- Segments collectively represent 7% (AM) and 10% (PM) of Route 72R's total non-dwell delay in Contra Costa County



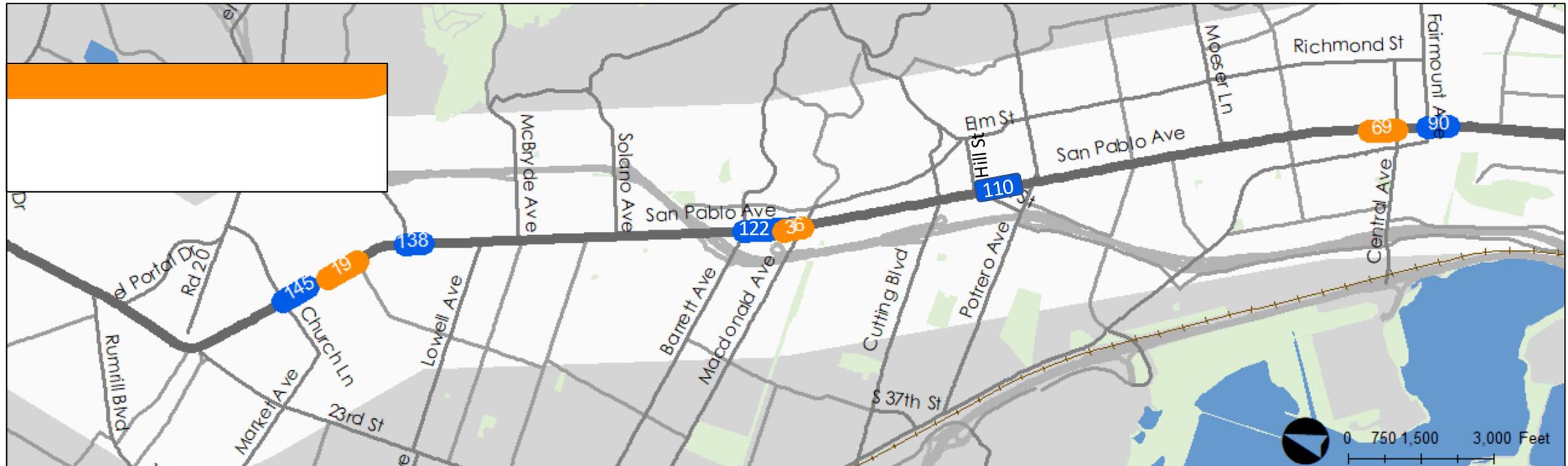
Performed field observations at the following 8 locations:

Southbound Service on Route 72R

AM Peak (SB)	SB Segment ID	Segment Location	City	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
	19	Approaching Vale Rd	San Pablo	8.1	46
	35/36	Approaching Macdonald	Richmond	3.4/5.6	48
	69	Approaching Central Ave	El Cerrito	6.9	43

Northbound Service on Route 72R

PM Peak (NB)	NB Segment ID	Segment Location	City	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
	90	Approaching Fairmount Ave	El Cerrito	6.0	40
	110	Approaching Hill St	El Cerrito	9.1	51
	122	Approaching Barrett Ave	Richmond	8.5	58
	137/138	Approaching San Pablo Dam Rd	San Pablo	3.2/5.3	48
	145/146/147	Approaching Church Ln	San Pablo	6.2/3.6/6.5	61



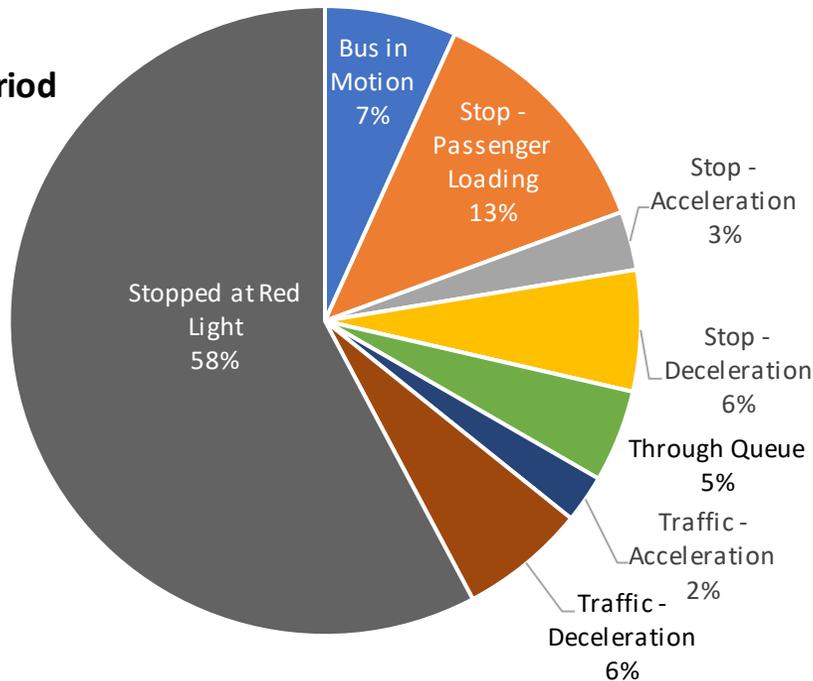
Data from 2019 AVL analysis



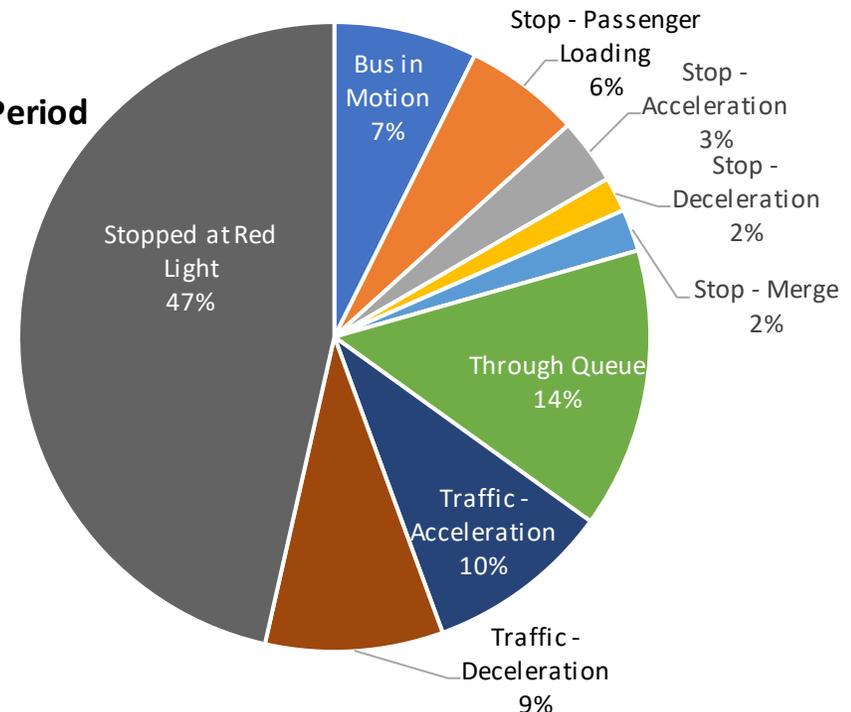
Speed & Delay Summary

- At the 8 locations identified, bus in motion time was less than 10% of total travel time
- Traffic delay and congestion was responsible for more than 70% (AM) and 80% (PM) of total travel time
 - Biggest contributor is signal delay (58% in AM, 47% in PM)

AM Peak Period



PM Peak Period





Projected Future 2035 Transit Performance

- Congestion and delay for transit will increase in future
 - Forecast 69% increase in network-wide PM traffic delay between 2017 and 2035
 - Forecast 51% increase in northbound travel time for Route 72R between 2017 and 2035
 - 12 additional minutes of travel time
 - Without transit priority improvements, will require more operating funds to operate the same service



Project Alternatives Development Process

Range of alternatives (cross-sections) by segment

Intersection and segment prototypes for each of three alternatives by segment

Two alternatives for quantitative evaluation in micro-simulation model





Concept Alternative Selections

San Pablo Avenue Alternatives for Micro-Simulation Modeling

Segment		Selection A	Selection B
1. El Cerrito	Fairmount Ave to Eureka Ave (81')	<p>Modified Red Alternative</p>	<p>Blue Alternative</p>
2. El Cerrito	Schmidt Ln to Potrero Ave (83')	<p>Modified Red Alternative</p>	<p>Blue Alternative</p>
3. El Cerrito/Richmond	Wall Ave to I-80 (80')	<p>Modified Red Alternative</p>	<p>Blue Alternative</p>
4. Richmond	Solano Ave to Rheem Ave (76')	<p>Modified Red Alternative</p>	<p>Blue Alternative</p>
5. San Pablo	Vale Rd to Road 20 (70')	<p>Green Alternative</p>	<p>Blue Alternative</p>
6. San Pablo	Lovegrove St to Rumrill Blvd (83')	<p>Green Alternative</p>	<p>Blue Alternative</p>
7. San Pablo/Richmond	Lake St to Rivers St (86')	<p>Red Alternative</p>	<p>Blue Alternative</p>



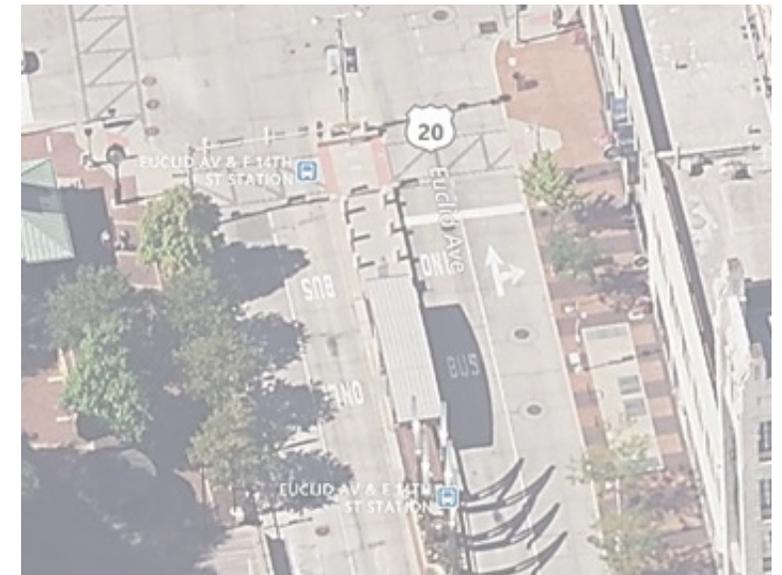
Alternatives Development

- Transit Service Assumptions
 - Line 72R and Line 72 are consolidated into a single BRT route between Oakland and Contra Costa College
 - Allows for additional frequency on the BRT
 - Assumed to be approximately 7-minute headways, maintaining 9 buses per hour on corridor for 72 series
 - Additional frequency may be provided without additional operating cost if travel time savings are achieved
 - Terminate Line 72M at one of the El Cerrito BART stations and shift resources to provide optimal headways
 - Local service routing changes between CC College and Hilltop Mall



Service and Station Assumptions – Center-Running Busway

- BRT stations are placed in the median and accessed via crosswalks at existing or new signals
- No mixing of buses and bikes required at stations
- Station configuration options
 - Left-hand boarding stations, with both directions at same stop.
 - Results in a wider station for users and more intuitive wayfinding
 - Allows for left-turns in one direction
 - Only can be used by BRT vehicles; local bus stops remain on the curb
 - Right-hand boarding stations, with each direction at a stop on the opposite side of the intersection
 - Eliminates left-turns in both directions
 - Requires a significant shift in bus alignment through the intersection, lowering speeds
 - Can be used by any bus on the corridor that can access the median lanes
 - Contra-flow bus service, with both directions at the same stop, allowing for right-hand boarding stations
 - Results in a wider station for users and more intuitive wayfinding
 - Can be used by any bus on the corridor that can access the median lanes





Service and Station Assumptions - Side-Running Busway

- BRT stations are placed on bus islands or bus bulbs depending on presence of a bike lane
- Curbside BRT stations can be used by other local routes on the corridor
- Additional bus stops may be required for local or school routes
 - These stations may require mixing of bikes (where present) and buses to allow BRT to bypass a dwelling bus



Image Source: Google



Center-Running Alternative



Note: Only routes operating on San Pablo Ave within the study area are shown. Route 800 does not deviate to El Cerrito Plaza BART. Not shown is Route 684, which operates on San Pablo Ave between McRae Ave and Green Ave.

LEGEND

- City Boundary
- San Pablo Ave Corridor
- BART Line and Station

AC Transit Services

- Proposed BRT Routing
- Lines 72M/800
- Lines 667/669/675

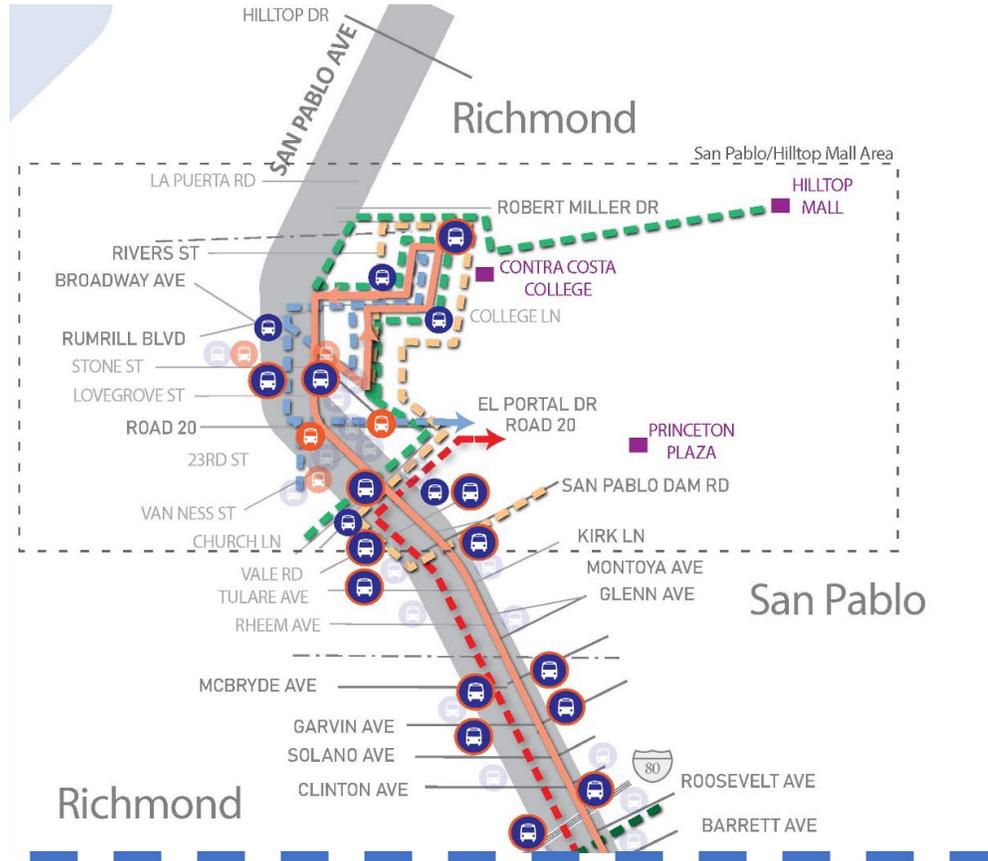
- Line 74
- Line 76
- Line L
- Line 7

- Local/Transbay Bus Stop to Remain/Added
- Local/Transbay Bus Stop to Remove
- BRT Stations
- Rapid Stops to be Removed





Side-Running Alternative



Note: Only routes operating on San Pablo Avenue within the study area are shown. Line 800 does not deviate to El Cerrito Plaza BART. Not shown is Route 684, which operates on San Pablo Ave between McBryde Ave and Garvin Ave



LEGEND

- City Boundary
- San Pablo Ave Corridor
- BART Line and Station

AC Transit Services

- Proposed BRT Routing
- Lines 72M/800
- Lines 667/669/675

- Line 74
- Line 76
- Line L
- Line 7

- Local/Transbay Bus Stop to Remain/Added
- Local/Transbay Bus Stop to Remove
- BRT Stations
- Rapid Stops to be Removed



Bus Stop Spacing Assumptions

- BRT Stations ideally spaced every 1/3 mile (1,760 ft)
 - Stations provided at key transfer points, near major activity centers, and at existing high ridership stops
- Local stops spaced every 700-1,300 ft where local routes present
 - Center-Running: Local stops at the curb
 - Side-Running: Local buses stop at BRT stations and additional local stops added



Bus Stop Spacing Summary

	Existing	Center-Running	Side-Running
Number of Rapid/BRT Stops	11 NB/11 SB	19 NB/19 SB	19 NB/19 SB
Number of Stops with Local Service	35 NB/35 SB	20 NB/18 SB	23 NB/24 SB
Average Rapid/BRT Spacing	3,100'	1,900'	1,800'
Maximum Rapid/BRT Stop Spacing	5,000'	2,800'	3,200'
Average Local Stop Spacing	1,000'	N/A*	N/A*
Maximum Local Stop Spacing	1,900'	N/A*	N/A*

Existing local stops north of Macdonald have two Line 72 trips per hour

Existing local stops south of Macdonald have four Line 72/72M trips per hour

Existing Rapid/local stops have nine Line 72/72M/72R trips per hour

**Local stops would only be placed in segments with existing local bus service (Lines 7, 74, 76, and school routes)*



Station Access Impacts Summary

	Center-Running	Side-Running
Percentage of Passengers with No Change to Stop	58%	54%
Percentage of Passengers More Service at Existing Local Stop	1%	7%
Percentage of Passengers with Relocated Stop	<1%	1%
<i>Average Distance of Relocated Stop</i>	<i>50'</i>	<i>70'</i>
Percentage of Passengers whose Existing Stop is Removed	41%	38%
<i>Average Distance from Removed Stop to Nearest Remaining/New Stop</i>	<i>600'</i>	<i>430'</i>



Next Steps

- VISSIM Micro-simulation Analysis of Build Alternatives
 - Transit travel time and reliability
 - Auto travel time and delay
 - Auto diversion



Next Steps

- Evaluation Summary
 - Summarize project need
 - Identify trade-offs between alternatives by segment
 - Transit – travel time, reliability, bus stop access, ridership potential, and other BRT benefits
 - Bicycle and pedestrian – safety and connectivity
 - Autos – diversion, delays, safety, and effects on parking
 - Magnitude of improvement costs
 - Construction impacts
 - Implementation considerations



Upcoming Meetings

Agency	Meeting Date
WCCTAC TAC (tentative)	Thurs. April 14
WCCTAC TAC	Thurs. May 12
WCCTAC Board	Fri. May 27
San Pablo Council	Mon. June 6
El Cerrito Council	Tues. June 7
Richmond Council	Tues. June 21
AC Transit Board	Wed. June 22

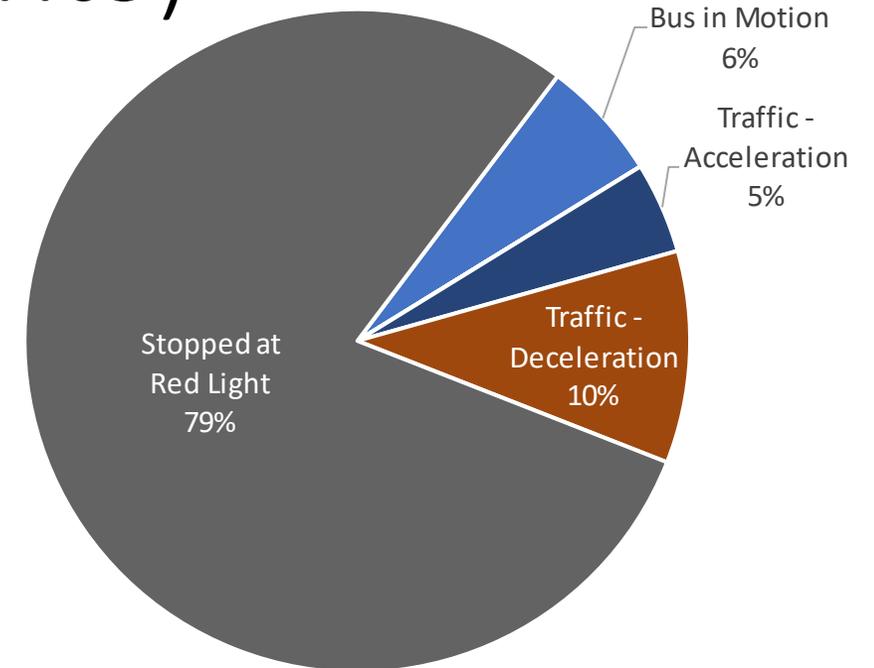


Additional Information: Speed and Delay Location-Specific Data



AM – Approaching Central (El Cerrito)

- Observed 72, 72R, and 72M buses approaching Central
- Southbound bus stop located on Central Ave after signal on San Pablo Ave
- Significant non-dwell delay that can be attributed to making a left-turn at signal
- 72R buses continue through on San Pablo Avenue and do not make a southbound left onto Central Ave



Average Observed Delay Types – Approaching Central	
Total Delay	0:47
Total Non-Dwell Delay	0:47

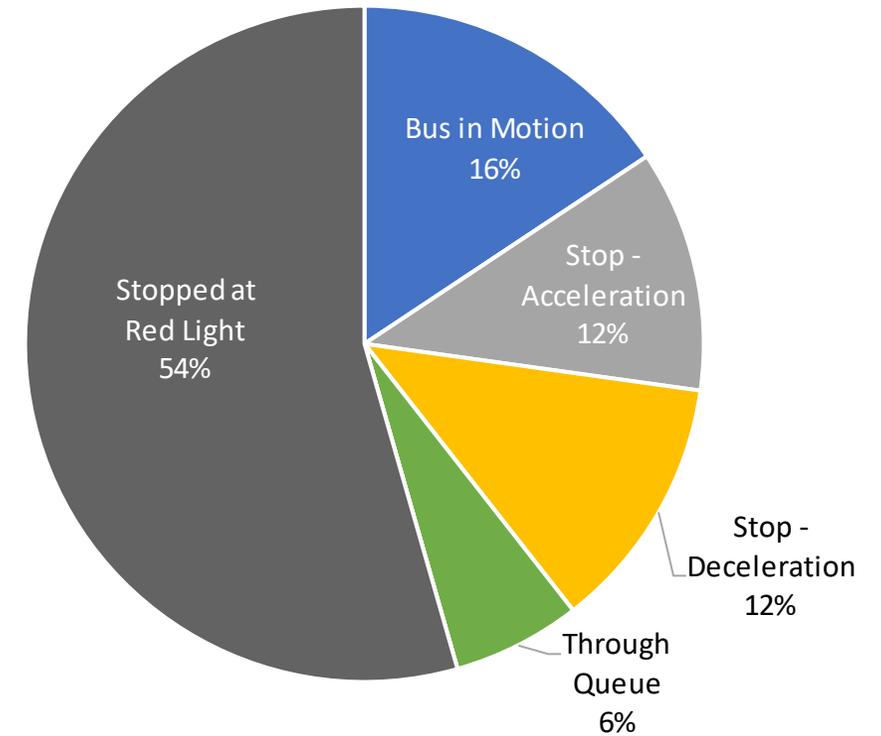
Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching Central Ave	6.9	43

*From 2019 AVL data



AM – Approaching MacDonald (Richmond)

- Observed 7, 72, and 72R buses approaching MacDonald
- Southbound bus stop located near-side before MacDonald Rd signal on San Pablo Ave
- Significant non-dwell delay that can be attributed to the signal



Average Observed Delay Types – Approaching MacDonald	
Total Delay	0:31
Total Non-Dwell Delay	0:22

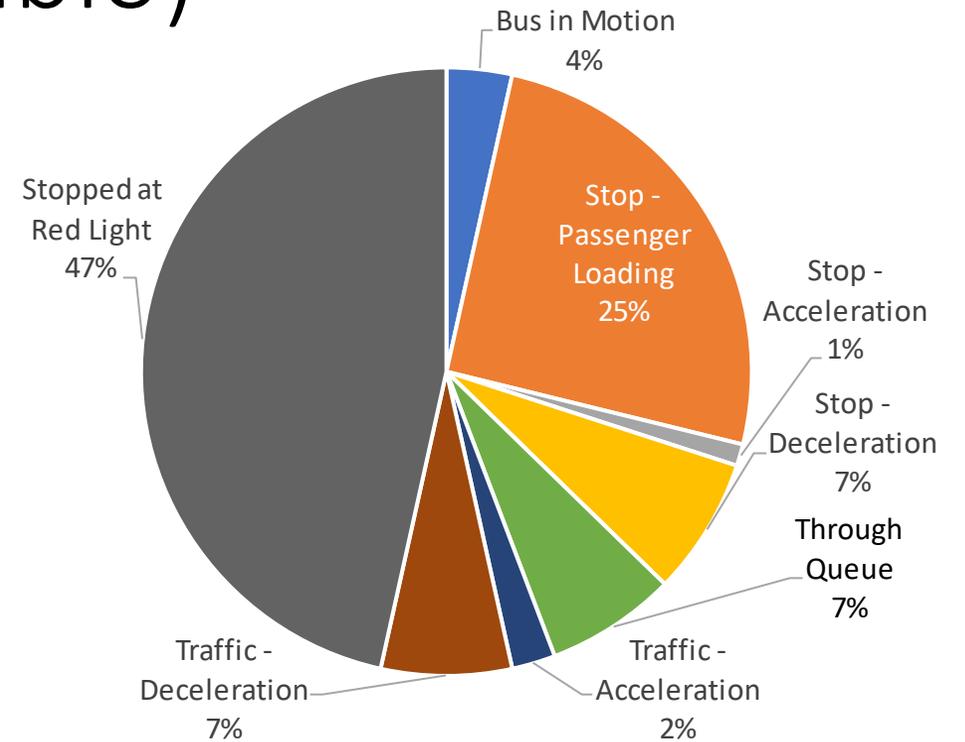
Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching Macdonald	3.4/5.6	48

*From 2019 AVL data



AM – Approaching Vale (San Pablo)

- Observed 72 and 72R buses approaching Vale
- Southbound bus stop located far-side after Vale Rd signal on San Pablo Ave
- Significant non-dwell delay that can be attributed to the signal



Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching Vale Rd	8.1	46

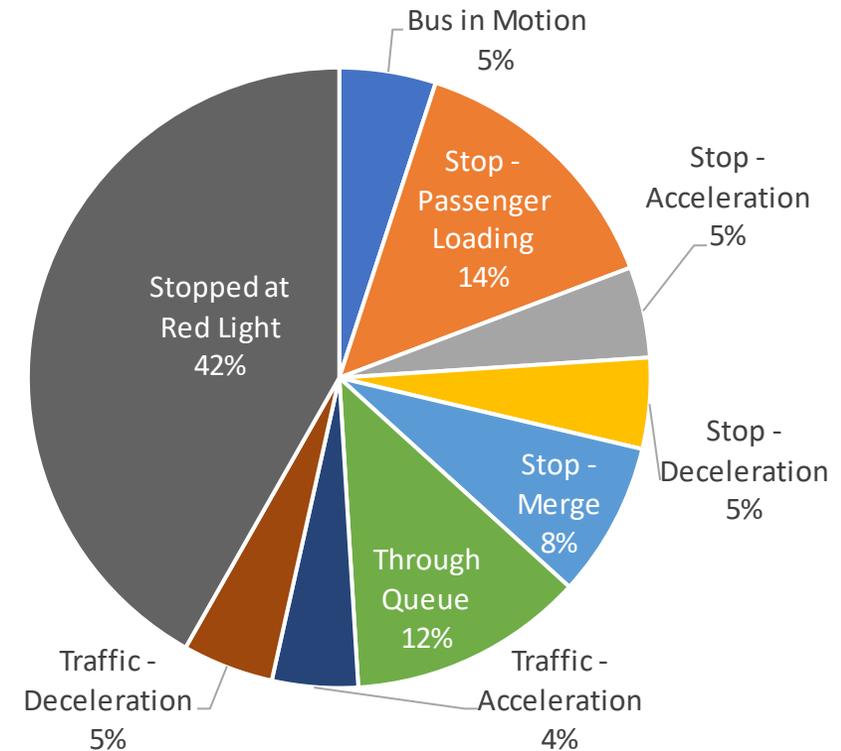
*From 2019 AVL data

Average Observed Delay Types – Approaching Vale	
Total Delay	1:23
Total Non-Dwell Delay	0:54



PM – Approaching Fairmount (El Cerrito)

- Observed 72R and 72M buses approaching Fairmount
- Northbound bus stop located near-side before Fairmount Ave on San Pablo Ave
- Significant non-dwell delay that can be attributed to the signal and through queues



Average Observed Delay Types – Approaching Fairmount	
Total Delay	1:53
Total Non-Dwell Delay	1:25

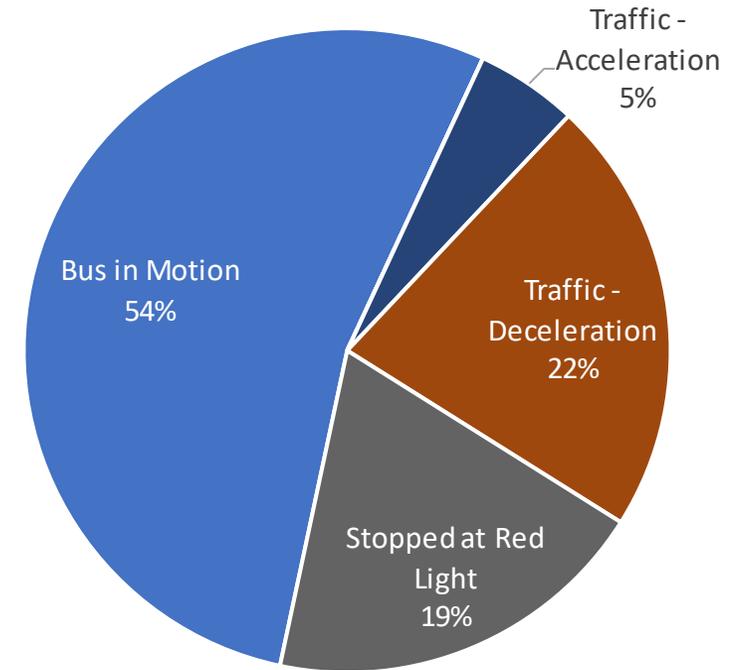
Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching Fairmount Ave	6.0	40

*From 2019 AVL data



PM – Approaching Hill (El Cerrito)

- Observed 72 and 72R buses approaching Hill Street
- Right-turn only lane reduced time stopped at a red light



Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching Hill St	9.1	51

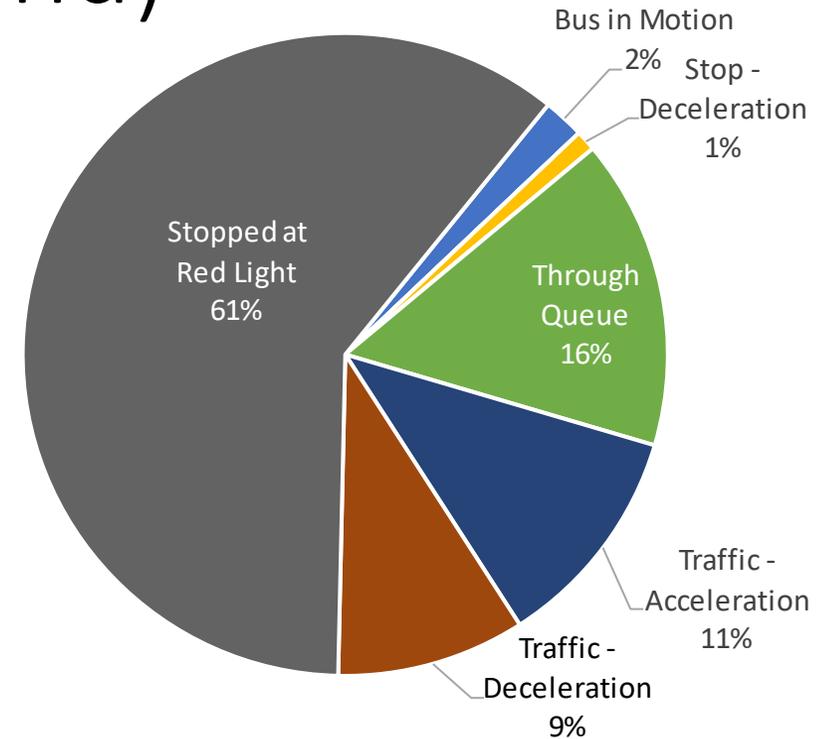
*From 2019 AVL data

Average Observed Delay Types – Approaching Hill	
Total Delay	0:18
Total Non-Dwell Delay	0:18



PM – Approaching Barrett (Richmond)

- Observed 7 and 72R buses approaching Barrett
- Northbound bus stop located near-side before Barrett Ave on San Pablo Ave
- Significant non-dwell delay that can be attributed to the signal and congestion at signal



Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching Barrett Ave	8.5	58

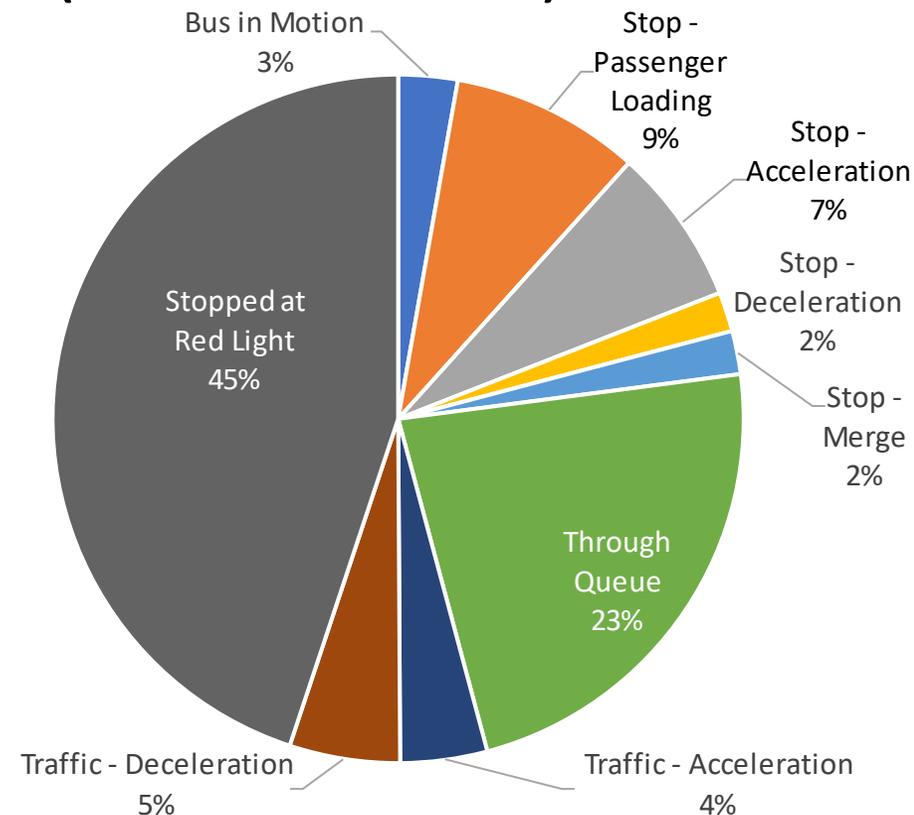
*From 2019 AVL data

Average Observed Delay Types – Approaching Barrett	
Total Delay	2:22
Total Non-Dwell Delay	2:21



PM – Approaching San Pablo Dam (San Pablo)

- Observed 72 and 72R buses approaching San Pablo Dam
- Northbound bus stop located near-side before San Pablo Dam Road on San Pablo Ave
- Queue spillback extends past FoodMaxx signalized intersection
- Significant non-dwell delay that can be attributed to the congestion at signal and queues associated with signal



Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching San Pablo Dam Rd	3.2/5.3	48

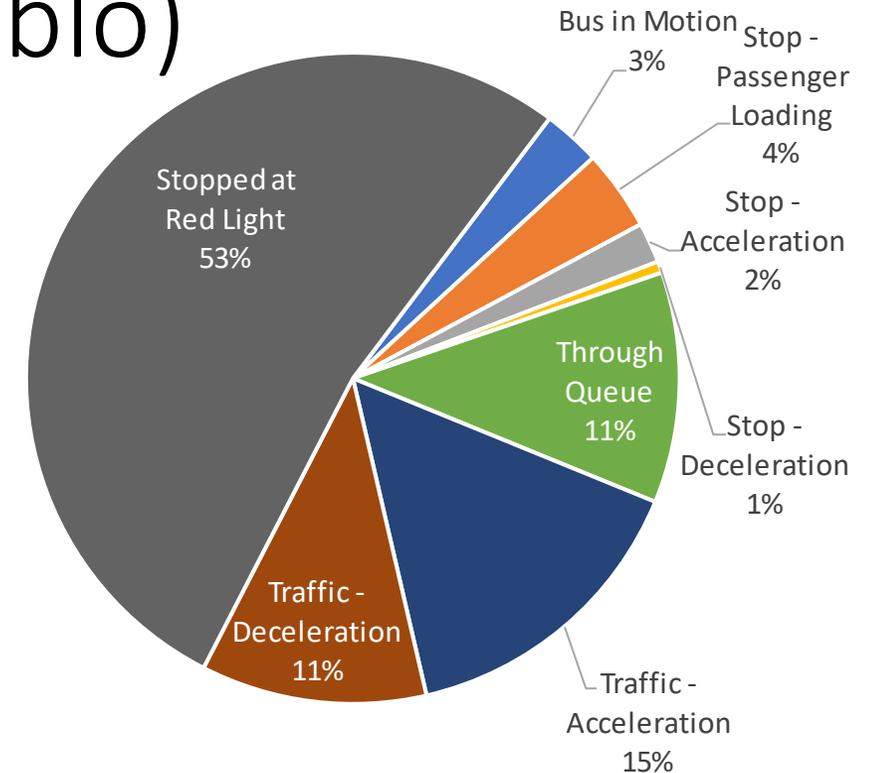
Average Observed Delay Types – Approaching San Pablo Dam	
Total Delay	2:55
Total Non-Dwell Delay	2:22

*From 2019 AVL data



PM – Approaching Church (San Pablo)

- Observed 72 and 72R buses approaching Church
- Northbound bus stop located near-side before Church Lane on San Pablo Ave
- Non-dwell delay that can be attributed to the congestion at signal



Segment Location	Average Moving Speed (mph)	Average Non-Dwell Delay (sec)
Approaching Church Ln	6.2/3.6/6.5	61

*From 2019 AVL data

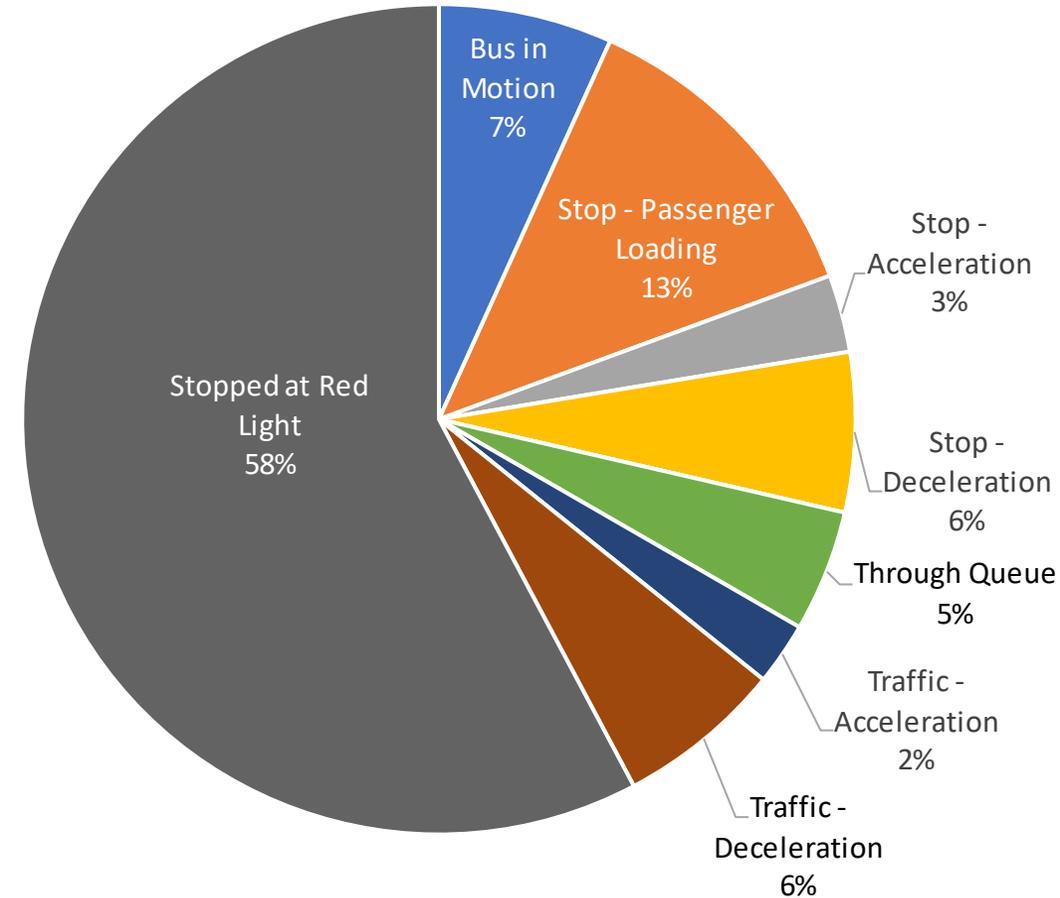
Average Observed Delay Types – Approaching San Pablo Dam	
Total Delay	1:24
Total Non-Dwell Delay	1:19



AM Summary

Aggregated Observed Delay Types – AM Period		
Bus in Motion	0:11	7%
Stop - Passenger Loading	0:22	13%
Stop - Acceleration	0:05	3%
Stop - Deceleration	0:10	6%
Stop - Merge	0:00	0%
Through Queue	0:08	5%
Traffic - Acceleration	0:04	2%
Traffic - Deceleration	0:11	6%
Stopped at Red Light	1:40	58%
Total	2:54	-

Aggregated Average Observed Delay Types	
Total Delay	2:42
Total Non-Dwell Delay	2:04





PM Summary

Aggregated Observed Delay Types – PM Period		
Bus in Motion	0:45	7%
Stop - Passenger Loading	0:36	6%
Stop - Acceleration	0:20	3%
Stop - Deceleration	0:11	2%
Stop - Merge	0:13	2%
Through Queue	1:28	14%
Traffic - Acceleration	0:58	9%
Traffic - Deceleration	0:56	9%
Stopped at Red Light	4:46	46%
Total	10:16	-

Aggregated Average Observed Delay Types	
Total Delay	9:31
Total Non-Dwell Delay	8:23

