SF All-Night Transportation Study

Working Group Meeting #3
October 29, 2014
Today’s Agenda

► Recap of last meeting

► Presentation by BART on upcoming pilot project

► Needs and potential solutions

► Next steps
Last Meeting: What We Heard, What We Did

► Screen-friendly and print-friendly slides
► Extended survey deadline
► Break out weekend vs. weekday nighttime transit ridership
► Break out entertainment and work trip survey respondents
► Break out late night personal security concerns for male vs. female survey respondents
► Collision and DUI analysis
► Reached out to invite Golden Gate Transit to invite to future Working Group meetings
BART/AC Transit
Late Night Bus Pilot

BART/AC TRANSIT
LATE NIGHT BUS PILOT

Mariana R. Parreiras, Customer Access

October 29, 2014
Hope for late-night transit dawns; BART to roll out test project

By Michael Cabanatuan Updated 8:03 am, Tuesday, September 30, 2014
Service Provision

1. Late Fri/Sat + 8 Holidays for 1 year
2. Enhanced Route 800
3. Enhanced Route 801
4. New Route 822
5. Transbay routes will start at 24th St./Mission St.
# BART/AC Transit Late Night Bus Pilot

## Route 822

<table>
<thead>
<tr>
<th>San Francisco</th>
<th>Oakland</th>
<th>East Contra Costa County</th>
</tr>
</thead>
<tbody>
<tr>
<td>24th Street/Mission Street BART</td>
<td>14th Street/Broadway</td>
<td>Walnut Creek BART</td>
</tr>
<tr>
<td>16th Street/Mission Street BART</td>
<td>Rockridge BART</td>
<td>Pleasant Hill BART</td>
</tr>
<tr>
<td>Market Street/Van Ness Avenue</td>
<td></td>
<td>Pittsburg/Bay Point BART</td>
</tr>
<tr>
<td>Civic Center BART</td>
<td></td>
<td></td>
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<tr>
<td>Powell Street BART</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Montgomery Street BART</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Howard Street/Beale Street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Transbay Terminal)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Marketing Needs

- Your contacts?
- Survey respondents?
- How to best reach potential bus riders?
PLEASE VISIT
www.futurebart.org
before Nov. 7th

...and tell us how you think BART should spend $$ over the next 40 years.

Board Meeting on Dec. 4th
Needs and Potential Solutions – Where it Fits In Terms of Study Process/Methodology

- Existing Conditions Data
- Public and Stakeholder Input (Survey, Stakeholder Interviews)

Top Needs and Potential Solutions

Evaluation Criteria:
• Feasibility
• Order-of-magnitude cost
• Implementation timeframe
• Effectiveness / performance
• Institutional and policy support

Screened and Further Defined Potential Solutions

Recommendations and Next Steps
Needs and Potential Solutions – Methodology/Approach

**Existing Conditions Data**
- California Household Travel Survey
- Transit operator data on service, ridership, fares, Muni on-board
- customer satisfaction survey
- Taxi Customer Survey
- Lyft/Uber data
- Collision/DUI data

**Public and Stakeholder Input** (Survey, Stakeholder Interviews)
- **Survey**: 2805 responses; English/Chinese/Spanish; Online/paper
- **Stakeholder Interviews**: GGRA, SPUR, Produce Market, Fisherman’s Wharf CBD, others

**Documents/Source Materials** (WMATA report, RHI Sociable City, other online research)

**Top Needs and Potential Solutions**
Need Area #1: Spatial and Temporal Availability of Travel Choices

Credit: BART station by Jeremy Brooks (by-nc)
Spatial Availability of All Night Transit

Muni OWL

Regional Transit / All Nighter

Transit Service Provider
- BART
- Caltrain
- AC Transit
- SamTrans
- Golden Gate Transit
## Temporal Availability of Late Night Transit

<table>
<thead>
<tr>
<th>Source</th>
<th>Regular service ends</th>
<th>Minimum Headway, Weekday</th>
<th>Minimum Headway, Weekend</th>
<th>Regular service begins (weekday)</th>
<th>Regular service begins (weekend)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muni</td>
<td>~1am</td>
<td>Every 30 mins</td>
<td>Every 30 mins</td>
<td>~5am</td>
<td>~6am</td>
</tr>
<tr>
<td>AC Transit</td>
<td>~1am</td>
<td>Every 60 mins</td>
<td>Every 30 mins (20 with pilot)</td>
<td>~6am</td>
<td>~6am</td>
</tr>
<tr>
<td>SamTrans</td>
<td>~12/12:30am</td>
<td>Every 60 mins</td>
<td>Every 60 mins</td>
<td>~4:30am</td>
<td>~5am</td>
</tr>
<tr>
<td>BART</td>
<td>~12/12:30am</td>
<td></td>
<td></td>
<td>~4:30am</td>
<td>~6am</td>
</tr>
<tr>
<td>Caltrain</td>
<td>~12am</td>
<td>-</td>
<td>-</td>
<td>~5am</td>
<td>~8:30am</td>
</tr>
<tr>
<td>Golden Gate</td>
<td>~1am</td>
<td>-</td>
<td>-</td>
<td>~5:45am</td>
<td>~5:45am</td>
</tr>
<tr>
<td>Ferry</td>
<td>~8pm</td>
<td>-</td>
<td>-</td>
<td>~6:30am</td>
<td>~9:30am</td>
</tr>
</tbody>
</table>

### For All Night Service

- **Muni**: ~1am to ~6am, Every 30 mins.
- **AC Transit**: ~1am to ~6am, Every 60 mins.
- **SamTrans**: ~12/12:30am to ~5am, Every 60 mins.
- **BART**: ~12/12:30am to ~6am.
- **Caltrain**: ~12am to ~8:30am.
- **Golden Gate**: ~1am to ~5:45am.
- **Ferry**: ~8pm to ~9:30am.

*Sources: Transit Operators’ Websites and All-Nighter Map*
## Spatial and Temporal Availability of Other Options-Quantitative/Qualitative Assessment

<table>
<thead>
<tr>
<th>Geographic</th>
<th>Temporal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Taxis</strong></td>
<td>SFMTA Taxi Survey finds 42% of respondents give unfavorable rating of taxi availability at home; but only 17% unfavorable for availability from Downtown¹</td>
</tr>
<tr>
<td><strong>TNC</strong></td>
<td>Uber data shows more pick-ups in denser, NE parts of city²</td>
</tr>
<tr>
<td><strong>Drive</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Walk</strong></td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Bike</strong></td>
<td>No bike accommodation on Bay Bridge</td>
</tr>
</tbody>
</table>

¹ "Best Practices Studies of Taxi Regulation–Taxi User Surveys;" Hara Associates for San Francisco Municipal Transportation Agency (March 2013);

² Uber, 1% random sample of 9pm – 5am trips (August 2014)
Relevant Survey Responses Re: Geographic and Temporal Availability of Travel Choices

How much do these issues affect the choices you make regarding travel to, from or within San Francisco between midnight and 5 am?

<table>
<thead>
<tr>
<th>Issue</th>
<th>A lot</th>
<th>Somewhat</th>
<th>Not much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Work</td>
<td></td>
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<tr>
<td>Entertainment</td>
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<tr>
<td>Work</td>
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<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BART doesn't run all night</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus service is infrequent or unreliable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caltrain doesn't run all night</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Common Free Response Comment Themes**

- **Desire for more coverage and more frequent service** (East Bay, Peninsula, SF, particularly SF outer neighborhoods) and service to North Bay
  - **Limited room for bikes on buses and on the last train**

*Late Night Transportation Survey Results, October 2014*
Potential Solutions

► Longer/earlier hours, change/modify routes, and/or increase frequency on BART, Caltrain, Muni, ferries, SamTrans, Golden Gate Transit

► Supplement transit service span, coverage, and frequency with alternate transit-like services such as jitneys, shuttles, vanpools

► Explore ways to allow taxis, TNCs to better complement transit services

► Support car-share and carpool solutions

► Bike-share stations outside of downtown and in the East Bay
Need Area #2: Speed/Reliability/Quality of Travel Choices
## Speed/Reliability Comparison – Qualitative Assessment

<table>
<thead>
<tr>
<th></th>
<th>Speed</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transit</td>
<td>BART = relatively fast, competitive with driving; Other operators can take ~50-200% longer, depending on distance</td>
<td>BART = relatively high on-time performance Other operators = relatively less high on-time performance</td>
</tr>
<tr>
<td>Taxis</td>
<td>Relatively fast</td>
<td>35% of SF residents wait 10 minutes or less for taxi(^1); 3.5 minute avg. pickup time for riders using FlyWheel(^2)</td>
</tr>
<tr>
<td>TNCs</td>
<td>Relatively fast</td>
<td>90% wait 10 minutes or less for TNC(^1)</td>
</tr>
<tr>
<td>Drive</td>
<td>Relatively fast</td>
<td>Relatively reliable (unless congestion/roadway incident)</td>
</tr>
<tr>
<td>Walk</td>
<td>Slower except for relatively short trips</td>
<td>Relatively reliable</td>
</tr>
<tr>
<td>Bike</td>
<td>Relatively fast, especially for short distance trips</td>
<td>Relatively reliable</td>
</tr>
</tbody>
</table>

Sources: Late Night Study Team judgment, \(^1\)App-Based, On-Demand Ride Services: Comparing Taxi and Ridesourcing Trips and User Characteristics in San Francisco;" University of California Transportation Center (August 2014) \(^2\)SFMTA Taxi/Accessible Services 9/16/2014 Presentation to SFMTA Board.
Relevant Survey Responses Re: Speed/Reliability/Quality of Travel Choices

How much do these issues affect the choices you make regarding travel to, from or within San Francisco between midnight and 5 am?

Common Free Response Comment Themes

► Unreliable bus schedules
► Undependable timed transfers, especially between operators
► Bus drivers sometimes do not stop to pick up passengers
► Taxis and TNCs sometimes hard to find, especially in the outer neighborhoods

Late Night Transportation Survey Results, October 2014

Bus service is infrequent or unreliable
Bus trips take too long or require a transfer
Taxis are often unavailable
Lyft / Uber / similar services are often unavailable

A lot Somewhat Not much
Potential Solutions

► Study sources of nighttime transit delay and low reliability and develop solutions based on major contributors
► Coordinate Muni with last BART and Caltrain runs
► Have buses make fewer stops but allow stops on request

Credit: 38-Geary by Johnny Grim (by-nc-nd)
Need Area #3: Security and Safety of Travel Choices
Relevant Survey Responses Re: Safety/Security of Travel Options

How much do these issues affect the choices you make regarding travel to, from or within San Francisco between midnight and 5 am?

Concerns about personal safety or security when walking or biking

Concerns about personal safety or security on transit

Late Night Transportation Survey Results, October 2014
How often do you choose *not* to travel at 12–5 am because it feels unsafe?

- Often: 26%
- Sometimes: 33%
- Rarely: 25%
- Never: 16%

Common Free Response Comment Themes

- Buses feel unsafe or unruly
- Waiting for and walking to transit feel unsafe, especially in poorly lit and more isolated areas
- On-street bike theft is a greater concern at night
- Concern about collisions as a result of intoxicated drivers

Late Night Transportation Survey Results, October 2014
Women are more likely to avoid traveling at night due to concerns about safety

How often do you choose not to travel to, from or within San Francisco between midnight and 5 am because it feels unsafe?

Late Night Transportation Survey Results, October 2014
### Fatalities and Severe Injuries in San Francisco 2003 - 2012

<table>
<thead>
<tr>
<th></th>
<th>Fatality</th>
<th>Severe Injury</th>
<th>Fatality</th>
<th>Severe Injury</th>
<th>Fatality</th>
<th>Severe Injury</th>
<th>Fatality</th>
<th>Severe Injury</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Daytime</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5am–9pm)</td>
<td>vehicle</td>
<td></td>
<td>ped</td>
<td></td>
<td>bike</td>
<td></td>
<td>vehicle</td>
<td></td>
</tr>
<tr>
<td><strong>Late Night</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(9pm–12am)</td>
<td>vehicle</td>
<td></td>
<td>ped</td>
<td></td>
<td>bike</td>
<td></td>
<td>vehicle</td>
<td></td>
</tr>
<tr>
<td><strong>Early AM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(12am–5am)</td>
<td>vehicle</td>
<td></td>
<td>ped</td>
<td></td>
<td>bike</td>
<td></td>
<td>vehicle</td>
<td></td>
</tr>
</tbody>
</table>

- **Vehicle only**
- **Ped**
- **Bike**

**Graph Notes:**
- SWITRS 2003-2012
- San Francisco Office of Economic and Workforce Development
Fatalities and Severe Injuries/1,000,000 Vehicle Trips

Late Night and Early AM trips are respectively five and seven times more likely to result in severe injury than Daytime trips.

*Assumes annualization factor of 300
2003 – 2013 Fatalities and Severe Injuries by Time of Day and Primary Collision Factor

Daytime (5am–9pm)

Late Night (9pm–12am)

Early AM (12am–5am)

Fatality

Severe Injury

Fatality

Severe Injury

Fatality

Severe Injury

Other

DUI

Traffic Signals and Signs

Driver Failure to Yield

Pedestrian Violation

Unsafe Speed

SWITRS 2003-2012
Potential Solutions – Security

► At stops/stations, along transit routes
  - Police officers or transit “ambassadors”
  - Security cameras
  - Clearly posted instructions for reporting trouble
  - Waiting areas designed with “Crime Prevention through Environmental Design” principles
  - Training for bus drivers on conflict management
  - Allow people in BART stations while they wait for the bus
  - Create app or expand use of Clipper for cash-less payment
  - On-request rides home by SFPD
  - Roving Lyft/Uber vehicles
  - Volunteer neighborhood patrols (along the lines of Castro Community on patrol http://www.castropatrol.org/)

► Bikes/walking
  - More street lights along bike/walk routes
  - Secure bike parking near common nighttime destinations
Potential Solutions – Traffic Safety

- Analyze corridor-level patterns of late night injuries and develop solutions based on primary collision factor that could include:
  - Unsafe speed: targeted enforcement
  - Alcohol involved: targeted enforcement, late night street closures in areas with high levels of pedestrians using alcohol, volunteer-run free rides home for impaired drivers, breathalyzers in bars and nightclubs, pre-paid overnight parking option at pay stations
  - Visibility: targeted lighting interventions

Credit: Eric Tuvel
Need Area #4: Awareness/comfort of travel choices
Are you aware of Muni and transbay buses that run all night?

- Yes, and I generally know where they run: 51%
- Yes, but I don't know where they run: 33%
- No: 16%

Common Free Response Comment Themes:

- Information about services and options is difficult to find and interpret
- Unreliable NextBus arrival times, out-of-order displays, areas without displays
- Owl stops are not clearly marked
- Dirty vehicles and stations

Late Night Transportation Survey Results, October 2014
Potential Solutions

► Information
- Branded All-Nighter stops, shelters, and transfer points
- All-Nighter schedules posted outside all BART stations
- Enhanced marketing and promotion of existing late-night transit service
- Dedicated website and app for late-night services, including interactive map showing bus location
- GPS tracking/Nextbus improvements including tracking all-nighter lines, more and better working displays,

► Cleanliness
- More frequent cleaning of buses, trains and stations
- Public toilets at or outside BART/Muni Metro stations
- Clearer signage against smoking, littering in stations
Need Area #5: Cost/equity of travel choices

Credit: SFMTA
## Data and Survey Results re: Cost/Equity

<table>
<thead>
<tr>
<th>Mode</th>
<th>1-way fare (regular adult) for rides with one end in SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>BART</td>
<td>$3.30-$6.65</td>
</tr>
<tr>
<td>Muni</td>
<td>$2.25</td>
</tr>
<tr>
<td>AC Transit</td>
<td>$4.20</td>
</tr>
<tr>
<td>Caltrain</td>
<td>$3.25-$13.25</td>
</tr>
<tr>
<td>SamTrans</td>
<td>$2-$4</td>
</tr>
<tr>
<td>Golden Gate Transit</td>
<td>$5-$11.75</td>
</tr>
<tr>
<td>Ferries</td>
<td>$6.25-$10.75</td>
</tr>
<tr>
<td>Taxis (avg. excluding tip)</td>
<td>$17</td>
</tr>
<tr>
<td>TNCs</td>
<td>Not available</td>
</tr>
<tr>
<td>Drive</td>
<td>IRS 2014 mileage rate $0.56/mile</td>
</tr>
<tr>
<td>Walk/Bike</td>
<td>Free!</td>
</tr>
</tbody>
</table>

### Common Free Response Comment Themes

- **Taxis/TNCs relatively expensive options**
- **TNCs are not equipped to transport people in wheelchairs**

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*Late Night Transportation Survey Results, October 2014*
Nighttime work commuters are more likely to be low- and moderate-income.

Daytime = 5am-9pm
Nighttime = 9pm-5am

Source: CHTS, 2010
SFMTA Muni Systemwide On-Board Study

- Demographics
  - Muni Owl riders more likely to be male, Hispanic/Latino, African-American

Gender

Race/Ethnicity

SF MUNI On Board Survey 2014
Trip Purpose

Muni Owl riders much more likely to be commuting to work

“What is the primary purpose of your trip?”

- Commute
- Work Related Event
- Shopping/Recreation
- Errands
- School
- Medical/Dental

SF MUNI On Board Survey 2014
Potential Solutions

► Same transfer benefits on Clipper as on cash fares (evening transfers valid until end of service day)
► Taxi or TNC fare subsidy for low-income workers
► Policy/regulatory change to address TNC lack of accessibility
► Adopt regulations to enable flat rate shared taxi rides

Credit: taxi nighttime by Thomas Hawk (by-nc)
Upcoming Task

➤ **Nov–Dec: Preliminary recommendations**
  - Consult transit operators/TNCs/Taxis re: relevant solutions as part of screening, invite to present at next meeting

➤ **Criteria in formulating recommendations**
  - Feasibility
  - Order-of-magnitude cost
  - Implementation timeframe
  - Effectiveness / performance
  - Institutional and policy support

➤ **Next meeting on Dec. 10 to discuss and provide feedback on preliminary recommendations**
For Discussion

► Have we missed any key needs or concerns?

► Additional ideas or suggestions for potential solutions?

► Your thoughts on how to approach the next task, of screening/evaluating strategies and formulating recommendations?
Thank you!