Alameda-Contra Costa Transit District

STAFF REPORT

TO: Planning Committee
AC Transit Board of Directors

FROM: Kathleen Kelly, Interim General Manager

SUBJECT: Hearst Avenue Transit Boarding Islands

ACTION ITEM

RECOMMENDED ACTION(S):

Authorize the Interim General Manager to enter into an agreement with the City of Berkeley for a new capital program that will incorporate two transit boarding islands on Hearst Avenue as part of the Hearst Avenue Complete Street Project and authorize the transfer $141,274 from the current surplus in the Intra-Vehicle Text Message sign program to fund this project.

EXECUTIVE SUMMARY:

The City of Berkeley is developing a "Complete Street" plan for Hearst Avenue between Shattuck Avenue and Gayley Road which will incorporate bike lanes and crosswalk improvements. AC Transit requested inclusion of transit boarding islands at two intersections to improve transit operations and safety, especially between buses and bicycles. Boarding islands were not included in the scope of the $2.8 million grant received by the City. The City of Berkeley requests financial assistance to add two transit boarding islands. Staff recommends that the Board of Directors authorize the Interim General Manager to enter into an agreement to provide $141,274 for design and construction of two transit boarding islands.

BUDGETARY/FISCAL IMPACT:

If authorized, AC Transit will make a one-time commitment of $141,274 for construction of two transit boarding islands on Hearst Avenue. This will be funded from the surplus of the Intra-Vehicle Text Message Signs (IVTMS) project as a result of the final costs coming in below budget. There will be no impact to new capital outlay identified in the FY 2015-16 budget.

BACKGROUND/RATIONALE:

Hearst Avenue Transit Service

Hearst Avenue is the northern boundary of the UC Berkeley campus served by lines 52, 65, and F. The combined frequency of these lines is approximately 8 buses/hour. Each weekday, more than 1,300 riders board or alight on Hearst Avenue at the intersections of Arch and Euclid. Table 1 shows frequency, passenger activity, and typical vehicle type by route.
Table 1. AC Transit Service on Hearst Avenue between Oxford and Gayley

<table>
<thead>
<tr>
<th>Line</th>
<th>Buses/Hr</th>
<th>Avg Daily Passenger Activity*</th>
<th>Vehicle Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>4</td>
<td>295 382</td>
<td>Articulated bus (60’)</td>
</tr>
<tr>
<td>65</td>
<td>2</td>
<td>100 89</td>
<td>Shuttle Bus (30’)</td>
</tr>
<tr>
<td>F</td>
<td>2</td>
<td>166 270</td>
<td>Standard Bus (40’)</td>
</tr>
<tr>
<td>Total</td>
<td>8</td>
<td>561 741</td>
<td></td>
</tr>
</tbody>
</table>

*Data from AC Transit automatic passenger counters, Fall 2014. Average daily passenger activity on Hearst Avenue at the intersections of Arch/LeRoy and Euclid.

Hearst Avenue Complete Street Project

In 2013, the City of Berkeley received a $2.8 million grant from the Alameda County Transportation Commission to develop and implement a “Complete Street” plan for Hearst Ave between Shattuck Avenue and Gayley Road. The specific goals of the project are to:

- Improve pedestrian, bicycle, and transit access by all modes;
- Improve pedestrian and bicycle safety;
- Manage travel speeds and improve traffic safety;
- Rehabilitate the pavement; and
- Maintain adequate levels of service for motor vehicles.

The project currently includes new bicycle lanes, 900’ of new sidewalk on the south side of Hearst Avenue, improved pavement condition, upgrading and installing new traffic and crosswalk signals, and turn restrictions at some intersections.

Original project designs included bus pull-outs for transit vehicles. These pull-outs required buses to make wide lateral movements across bike lanes and general purpose travel lanes to enter and exit bus stops.

To improve transit operations and safety, AC Transit requested inclusion of transit boarding islands at two intersections, Arch and Euclid. Transit boarding islands were not included in the scope of the grant. In order to add two boarding islands, the City of Berkeley is requesting financial support in the amount of $141,274. Detailed cost estimates are provided in Attachment 1. Designs with and without boarding islands are provided in Attachment 2.

Boarding Islands

Transit boarding islands are concrete platforms separated from the sidewalk by a roadway or bike lane (see Attachment 3). Boarding islands offer the same benefits as bus bulbs, including reduced delay, improved access, and reduced risk of collision by eliminated serpentine movements across lanes. Boarding islands offer an additional benefit because they reduce
conflict by allowing bikes to pass buses on the right-side of the boarding island rather than on the left-side of the bus.

Transit boarding islands are common in many other cities, including San Francisco. Platforms for the Hearst Avenue Complete Street Project will include a new transit shelter, railing, and ramps to/from sidewalk with truncated detection domes.

Additional Transit Benefits

The Hearst Avenue Complete Street Project also includes other benefits for transit, listed in Table 2.

Table 2. Other transit benefits in Hearst Avenue Complete Streets Project

<table>
<thead>
<tr>
<th>Line</th>
<th>Current Location</th>
<th>Proposed Location</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>65 (NB)</td>
<td>Eastbound Hearst before left-turn onto Euclid</td>
<td>Northbound Euclid after left-turn from Hearst</td>
<td>Eliminates 30’ lateral transition across bike lane and travel lane to enter left-turn pocket from bus stop.</td>
</tr>
<tr>
<td>65 (SB)</td>
<td>Southbound Euclid before right-turn onto Hearst</td>
<td>Westbound Hearst after right-turn from Euclid</td>
<td>Places bus stop after intersection and crosswalk to improve pedestrian safety and reduce signal delay to transit.</td>
</tr>
<tr>
<td>F (EB)</td>
<td>Eastbound Hearst between Shattuck and Walnut</td>
<td>Eastbound Hearst between Walnut and Oxford</td>
<td>Places layover after intersection and crosswalk to improve pedestrian safety. Better waiting environment for customers. Better access to restrooms for operators.</td>
</tr>
</tbody>
</table>

Timeline

The Hearst Avenue Complete Street Project is currently at 65% design. The City of Berkeley needs a firm commitment by July 14, 2015 to include boarding islands in the design that goes out to bid for construction. Construction is expected to begin Spring 2016 and be completed by the end of Fall 2016.

ADVANTAGES/DISADVANTAGES:

Authorizing this agreement has several advantages for AC Transit. Boarding islands have benefits for transit operations and safety, including reduced delay, improved passenger access, reduced risk of collision, and reduced conflict with cyclists.
Authorizing this agreement may have the disadvantage of setting a precedent that transit benefits and mitigations are funded by the District rather than included in project budgets. Staff believes it is important to fund this project because it will be the first transit boarding island project in the District. Successful construction and partnership may advance the idea as a transit amenity and mitigation for future streetscape designs to be included in project scopes.

**ALTERNATIVES ANALYSIS:**

Staff evaluated three alternative actions:

1. **Accept the Hearst Avenue Complete Street Plan without transit boarding islands.** Without transit boarding islands, buses will weave across bike and general purpose travel lanes. Given the frequency of service, fleet, ridership, and potential for conflict, staff finds the current proposal (without boarding islands) unacceptable.

2. **Request that the City of Berkeley partially or fully fund boarding islands with the $2.8 million grant.** District staff is unlikely to convince the City to cut costs or remove up to $141,274 worth of elements from the project to fund the transit boarding islands. This alternative is unlikely to lead to resolution before the July 14th deadline. If both boarding islands are not fully funded, the City of Berkeley may decide to remove critical features (i.e. shelters) or an entire island from the project.

3. **Seek funds from future grants.** District staff is unable to identify and receive alternative grant funds before the July 14th deadline. Without funding committed, the City will move forward with a design for bus pull-outs. Change-orders or a separate construction project would increase the cost of boarding islands and jeopardize stakeholder support.

These alternatives are not recommended because they jeopardize the likelihood that the District will receive transit benefits on Hearst Avenue in the foreseeable future.

**PRIOR RELEVANT BOARD ACTIONS/POLICIES:**

No relevant prior Board action or policy.

**ATTACHMENTS:**

1. Cost estimates for two boarding islands
2. Hearst Avenue Complete Street Designs for Arch and Euclid
3. Example of Transit Boarding Island

**Executive Staff Approval:** Aida R. Asuncion, Acting Chief Planning, Engineering and Construction Officer

**Reviewed by:** Robert del Rosario, Director of Service Development and Planning
James Pachan, Acting Chief Financial Officer
Denise C. Standridge, General Counsel

**Prepared by:** Stephen Newhouse, Transportation Planner
## BUS ISLAND (AT ARCH ST/LE CONTE AVE AND EUCLID AVE)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th></th>
<th>TON/HOT MIX ASPHALT (TYPE A)</th>
<th></th>
<th>100.00</th>
<th>$7,200.00</th>
</tr>
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<tbody>
<tr>
<td>2</td>
<td>94</td>
<td>LF</td>
<td>CURB (TYPE A2)</td>
<td></td>
<td>35.00</td>
<td>$3,290.00</td>
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<tr>
<td>3</td>
<td>439</td>
<td>LF</td>
<td>CURB (10' HIGH)</td>
<td></td>
<td>45.00</td>
<td>$19,755.00</td>
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<tr>
<td>4</td>
<td>2,386</td>
<td>SF</td>
<td>SIDEWALK</td>
<td></td>
<td>10.00</td>
<td>$23,860.00</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>EA</td>
<td>TRUNCATED DOME (CAST IN PLACE)</td>
<td></td>
<td>800.00</td>
<td>$3,200.00</td>
</tr>
<tr>
<td>6</td>
<td>201</td>
<td>LF</td>
<td>RAILING</td>
<td></td>
<td>100.00</td>
<td>$20,100.00</td>
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<tr>
<td>7</td>
<td>2</td>
<td>EA</td>
<td>BUS SHELTER</td>
<td></td>
<td>10,000.00</td>
<td>$20,000.00</td>
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<tr>
<td>8</td>
<td>2</td>
<td>EA</td>
<td>REPLACE CATCH BASIN TOP WITH SDMH TOB SLAB</td>
<td></td>
<td>3,500.00</td>
<td>$7,000.00</td>
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<tr>
<td>9</td>
<td>2</td>
<td>EA</td>
<td>CATCH BASIN WITH CURB INLET</td>
<td></td>
<td>3,000.00</td>
<td>$6,000.00</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>LF</td>
<td>12-INCH HDPE STROM DRAIN</td>
<td></td>
<td>185.00</td>
<td>$3,700.00</td>
</tr>
<tr>
<td>11</td>
<td>413</td>
<td>LF</td>
<td>ADDITIONAL TRAFFIC STRIPPING - DETAIL 39 (THERMOPLASTIC)</td>
<td></td>
<td>2.00</td>
<td>$826.00</td>
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<tr>
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<td>298</td>
<td>LF</td>
<td>ADDITIONAL TRAFFIC STRIPPING - DETAIL 39A (THERMOPLASTIC)</td>
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<td>2.00</td>
<td>$596.00</td>
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<tr>
<td>13</td>
<td>2,375</td>
<td>SF</td>
<td>ADDITIONAL PAVEMENT MARKINGS (GREEN THERMOPLASTIC)</td>
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<td>6.00</td>
<td>$14,250.00</td>
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<tr>
<td>14</td>
<td>415</td>
<td>SF</td>
<td>DEDUCT: SIDEWALK</td>
<td></td>
<td>(10.00)</td>
<td>-$4,150.00</td>
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<tr>
<td>15</td>
<td>74</td>
<td>SF</td>
<td>DEDUCT: BENCH RETAINING WALL</td>
<td></td>
<td>(100.00)</td>
<td>-$7,400.00</td>
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<tr>
<td>16</td>
<td>48</td>
<td>LF</td>
<td>DEDUCT: CURB (TYPE A1)</td>
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<td>(21.00)</td>
<td>-$1,008.00</td>
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<tr>
<td>17</td>
<td>146</td>
<td>SF</td>
<td>DEDUCT: MEDIAN TREATMENT</td>
<td></td>
<td>(20.00)</td>
<td>-$2,920.00</td>
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**Bus Island Subtotal** $114,299.00

**Contingency (20%)** $22,860.00

**Inflation (1 Year at 3%)** $4,115.00

**Bus Island Total** $141,274.00

**Project Total** $2,888,879.00

**Grand Total (Project Total + Bus Island Total)** $3,030,153.00
Eastbound Hearst @ Arch – Original Option

Bus stop = 8’ x 40’

Issues

- Requires 16’ lateral movement across bike lane and parking lane to enter and exit stop.
- On-street parking limits space available to maneuver into and out of stop.
Eastbound Hearst @ Arch – Boarding Island Option
Bus stop = 10’ x 105’
Benefits
- Eliminates lateral movement across bike lane.
- Simplifies entry and exit from bus stop
- Long bus island to accommodate arrival of two buses at once, including 60’ articulated buses on Line 52
Eastbound Hearst @ Euclid – Original Option
Bus stop = 8’ x 40’

Issues
• Requires 19’ lateral movement across bike lane to enter stop for Lines 52 and F.
• Requires 30’ lateral movement across bike lane and general purpose travel lane to exit stop and get into left-turn pocket for Line 67.
**Eastbound Hearst @ Euclid – Boarding Island Option**

Bus stop = 10' x 88'

**Benefits**
- Eliminates lateral movement across bike lane.
- Simplifies entry and exit from bus stop
- Long bus island to accommodate arrival of two buses at once, including 60' articulated buses on Line 52
- Relocate Line 65 stop to Northbound Euclid after left turn

**Transit Boarding Island**
Example of Boarding Island