



Memorandum

Date: April 22, 2014

To: Transportation Authority Board: Commissioners Avalos (Chair), Wiener (Vice Chair), Breed, Campos, Chiu, Cohen, Farrell, Kim, Mar, Tang and Yee

From: Lee Saage – Deputy Director for Capital Projects *LS*

Through: Tilly Chang – Executive Director *TC*

Subject: April 2014 Monthly Progress Report for Van Ness Avenue Bus Rapid Transit Project

Summary

Van Ness Avenue Bus Rapid Transit Project comprises a package of transit improvements along a 2-mile corridor of Van Ness Avenue between Mission and Lombard Streets, including dedicated bus lanes, consolidated transit stops, and pedestrian safety enhancements. The core Van Ness Avenue BRT project is being developed in conjunction with several parallel, separately-funded projects for design, management, and eventual construction as a unified Van Ness Corridor Transit Improvements Project. Following completion of the environmental review process for the project in December 2013, the SFMTA plans to release a final Conceptual Engineering Report (CER) by May 2014, after circulating a draft to project stakeholder for comment earlier in the year. The SFMTA/DPW engineering team is now focusing on incorporating scope, schedule and design comments received on the draft CER. In particular, SFMTA is working with its on-call consultant HNTB to provide project delivery, construction sequencing, and scheduling recommendations following an analysis that showed potential schedule impacts resulting from increased utility work and more restrictive work hours than anticipated in the environmental planning stage. The team is also preparing an updated cost estimate which includes the parallel projects that have been combined in the CER. The SFMTA held cost workshops with several engineering disciplines, the FTA and Transportation Authority staff, resulting in a more limited increase on the core BRT project to approximately \$34 million (a 26% increase), whereas initial inputs had showed a potential cost increase of up to \$60 million (a nearly 50% increase). The final CER will include an updated cost and funding plan that includes specific sources to cover the anticipated cost increase. Two policy-level design issues are currently escalated to Director-level discussions. The first relates to platform architectural features including shelters and the second issue relates to platform height and the potential for level passenger boarding. SFMTA will hold a Director-level meeting to discuss the policy implications and provide guidance to the design team on these two issues. SFMTA is currently reviewing applications for a new Citizens Advisory Committee for design and construction.

BACKGROUND

Van Ness Avenue Bus Rapid Transit (BRT) Project comprises a package of transit improvements along a 2-mile corridor of Van Ness Avenue between Mission and Lombard Streets. Key features include: dedicated bus lanes, level or near level boarding, consolidated transit stops, high quality stations, transit signal priority, elimination of most left turn opportunities for mixed traffic, and pedestrian safety enhancements. Van Ness Avenue BRT is a signature project in the Prop K Expenditure Plan, a regional priority through the Metropolitan Transportation Commission's Resolution 3434, and a Federal Transit Administration (FTA) Small Starts program project. The project is a partnership between the Transportation Authority, which led the environmental review, and the San Francisco Municipal Transportation Agency (SFMTA), which is leading the preliminary and detailed design phases and will be responsible for construction and operation of the facilities. SFMTA's preliminary engineering team includes internal SFMTA engineers with design support from the Department of Public Works

(SFDPW), Public Utilities Commission (SFPUC), and Planning Department. SFMTA is also using its on-call consultant HNTB for some specialized tasks.

As part of preliminary engineering, the core Van Ness Avenue BRT project has been combined with several parallel projects for design, management, and eventual construction. These projects overlap the geography and will result in lower overall cost and construction duration when combined, compared to if they were built separately, but may increase the construction duration when added to the core Van Ness Avenue BRT project. The projects include Overhead Contact System and Poles replacement; SFgo traffic signal replacement; sewer line replacement; water line replacement; and stormwater “green infrastructure” installation. Meanwhile, pavement resurfacing, curb ramp upgrades, and sidewalk bulb outs have always been considered part of the core BRT project. The parallel projects have largely independent funding, but many scope items will be cost-shared with the BRT project. The Conceptual Engineering Report (CER) will include all these projects as part of a single Van Ness Corridor Transit Improvements Project.

STATUS AND KEY ACTIVITIES

The SFMTA plans to release a final Conceptual Engineering Report (CER) by May 2014, after circulating a draft to project stakeholder for comment earlier in the year. Transportation Authority staff submitted formal comments on the draft on February 7, and are working with SFMTA to resolve those comments in the final report.

The project engineering team is focusing on finalizing the CER with changes that address the scope and design comments received for the draft. Comments included key traffic, station, and landscaping features; associated utility work; overhead contact system (OCS) replacement; and other technical criteria. With Transportation Authority assistance, SFMTA has continued to refine its cost estimate backup and to clarify core BRT project costs vs. separate-but-related project costs. (See the Current Issues and Risks section of this memo for more information on comments and cost estimate work.)

SFMTA on-call consultant HNTB has been engaged to provide analysis and recommendations for construction sequencing, schedule, and project delivery method, and has conducted extensive discussions with stakeholders at SFMTA, Caltrans, and other organizations. In April, HNTB submitted draft versions of reports on these topics to SFMTA. The draft delivery method report recommends a design-bid-build delivery, but identifies opportunities for innovative procurement approaches that may incentivize timely delivery.

HNTB continues to develop construction sequencing plans and a construction schedule. The schedule will likely be increased due to a greater amount of utility (sewer and water lines) work than anticipated during the Environmental phase, as part of the separate-but-related sewer and water projects. HNTB has also found construction duration to be sensitive to assumed restrictions on allowable work hours and number of initial work headings. In order to maintain an aggressive schedule, variances will be sought from Caltrans and City permitting agencies that allow the greatest work productivity. HNTB and SFMTA Sustainable Streets are developing a traffic management plan (TMP) that will model traffic disruptions and should provide justification for easing the restrictions. This development will be ongoing into the next project phase; however, the final CER will include a range of potential durations based on different scenarios.

CURRENT ISSUES AND RISKS

Civic Design Review of Platform Features: As discussed in previous Board Updates, the team presented the project at the February 10 Arts Commission (SFAC) Civic Design Review Committee meeting. The draft

CER includes standard red “seismic wave” SFMTA shelters which received Civic Design approval in 2008, but adds significant features such as railings, street furniture, landscaping, and sidewalk amenities. The design does not yet have completely developed recommendations or outline a plan for elements like signage and branding. However there is a strong desire on the part of the SFMTA to use the “seismic wave” shelters as part of their branding so that the Van Ness BRT can share common design elements with the SFMTA’s Rapid Network. In addition, the project team estimates that the use of the “seismic wave” shelters could save the project several million dollars in capital costs. The team sought Phase I approval, the first of a three-step approval process; however, the Committee did not grant approval and requested more options for and some refinements to station and landscaping design. The project task force for station design and overall streetscape for the corridor, comprising SFMTA, Transportation Authority, SFDPW, SF Planning, and Arts Commission staff, will continue to develop the design and is pursuing various options to resolve interagency disagreements. SFMTA will also hold a Director-level meeting to discuss the policy implications and provide guidance to the design team. Meanwhile, the SFMTA will likely finalize the CER without gaining Phase I approval from the Commission, risking that later changes in the design could result in impacts to the cost estimate and schedule.

Platform Height and Level Boarding: Also discussed in previous updates, a bus docking field test found challenges to maintaining a consistent level boarding between the platform and the vehicle floor. Bus floors are on average 14” high (without kneeling), and use ramps to permit wheelchair access from lower-height boarding areas like sidewalks, which have approximately 6” curbs. If the platform heights were equal to the bus floor, the standard ramp would be blocked from deploying. This issue would be exacerbated if the bus floor sinks lower than the platform due to heavy passenger loads or suspension/tire pressure variances. Additionally, changes to the bus wheel design in newly procured vehicles have resulted in greater than expected horizontal gaps to the platform, making it necessary that a ramp or bridge would be required to meet ADA regulations and increasing the likelihood of damage to both the platform and vehicle should the bus get too close to the platform. In addition a platform of greater than 8” in height requires the addition of a 1.5’ wide tactile warning strip that reduces the ADA path of travel on the platform. Due to these challenges, the draft CER includes a 6” standard curb platform height. Deploying the ramp would be required whenever wheelchair access is needed, which will result in longer dwell times for passenger loading. Transportation Authority staff submitted comments on the recommendation, requesting stronger justification for 6” platforms over higher, near-level heights; and investigation of an additional option with middle-door bridge plates and a platform height of approximately 12”. Although bridge plates would be an additional piece of vehicle equipment, they are faster to deploy than standard wheelchair ramps, and could allow roll-board access on the corridor and also support faster boarding for other passengers. However SFMTA staff has stated that any time savings in boarding of passengers in wheelchairs would be lost as wheelchairs boarding from the middle door on Van Ness would be forced to maneuver half the length of the bus to reach the front door when off boarding anywhere outside the BRT corridor and vice versa. This alternative will also involve some additional maintenance costs, and staff is examining the tradeoffs. In addition, SFMTA will hold a Director-level meeting to discuss the policy implications for the Van Ness project, as well as for other rapid transit network projects such as Geary and Market Streets, and provide guidance to the design team.

Cost Estimate Update: The design team has prepared a new cost estimate as part of the CER process. SFMTA has conducted extensive review of the basis for these estimates with input from the Transportation Authority. Both agencies have worked to ensure proper assumptions, definitions of the core BRT project scope, cost-sharing arrangements, and allocations of resources to complete the project. Cost workshops were conducted with several engineering disciplines, along with FTA and Transportation Authority staff. This work has limited the increase on the core BRT project to

approximately \$34 million (a 26% increase), while initial inputs had showed a potential cost increase of up to \$60 million (a nearly 50% increase). The final CER will include an updated cost and funding plan that includes specific sources to cover the increase. The Transportation Authority will continue to closely monitor the cost estimates as the design develops further.

ONGOING ACTIVITIES

Agreements and Approvals: The project team is finalizing a maintenance agreement with Caltrans, the final item needed for approval of the Project Study Report/Project Report (PSR/PR). The maintenance agreement has been delayed by discussions between Caltrans and city legal counsel. The final PSR/PR, including the agreement, has been assembled for distribution and will be executed once the maintenance agreement is complete.

SFMTA has general agreement on scope with the sewer replacement and other parallel projects, including water service replacement, green stormwater infrastructure, overhead contact system and pole replacement, and SFgo signal work. These designs have been included in the draft CER and will be reviewed concurrently with the BRT project. The next priority will be to establish cost-sharing agreements with the various partners.

The SFMTA and SFPUC have a tentative agreement on cost sharing for sewer replacement work to be coordinated with the Van Ness Avenue BRT Project. A major outstanding issue is the cost of supplemental bus service during construction.

Funding: Appendix 1 shows the project funding plan. The project will use a mix of Prop K, FTA Small Starts, and other local funds. With approval of the 2014 Prop K 5-Year Prioritization Program update for the Bus Rapid Transit/Transit Preferential Streets/Muni Metro Network Expenditure Plan category anticipated in the next few months, additional Prop K funds will be programmed for the project. As part of the cost estimate updates in the CER, the project budget and funding plans are expected to be revised. These revisions will be detailed in the May Board memo.

Outreach: The environmental review phase Citizens Advisory Committee (CAC) held its final meeting in September 2013. The SFMTA is currently reviewing applications for a new CAC for design and construction.

Next Steps/Upcoming Key Milestones: The environmental documentation phase was completed with the publication of the Federal Record of Decision on January 2, 2014. The Final CER will be completed in May 2014. Budget, funding, and schedule updates will be issued along with the CER and detailed in the May Board memo.

The next application for Prop K funds will be to match FTA funds for the detailed design phase. SFMTA expects to bring this allocation request forward for the June Board cycle.

PROJECT SCHEDULE AND BUDGET

Figure 1 shows the project schedule. The current phase of work continues to be on schedule, with completion of 30% design anticipated by May 2014. Final Design would be completed by mid-2015 with Construction beginning in early 2016. Revenue service is anticipated to begin in early 2018. As part of the CER, the project schedule is expected to be revised. These revisions will be detailed in the May Board memo.

Table 1 shows the budget for the project by phase as well as expenditures to date. The cost for the current CER phase is \$7.6M, and the total cost for the project is \$125.6M. A cost estimate update is in

process as part of the CER, and a budget revision is anticipated to be reported in the May Board memo. See the “Current Issues and Risks” section of this memo for more detail.

Figure 1: Van Ness Avenue BRT Project Schedule

Activities	2013				2014				2015				2016				2017				2018	
	Q1	Q2	Q3	Q4	Q1	Q2																
1. Conceptual Engineering + Environmental Studies ¹	■	■	■	■																		
2. Preliminary Engineering (CER)		■	■	■	■	■	■	■														
3. Final Design							■	■	■	■	■	■										
4. Advertise + Award Contract											■	■										
5. Construction													■	■	■	■	■	■	■	■		
6. Testing/Startup																				■	■	
7. Revenue Operations Begin																					■	■

1. Conceptual Engineering and Environmental Studies began in 2007

Table 1: Van Ness Avenue Bus Rapid Transit Budget and Expenditures to Date

Project Name(in \$ millions)	Budget (\$ millions)	Estimate at Completion (\$ millions)	Expended to Date (\$ millions) ¹	% Complete
Conceptual Engineering + Environmental Studies	\$7.6	\$7.4	\$7.2	98%
Preliminary Engineering (CER)	\$7.6	\$7.6	\$3.9	51%
Final Design (PS+E)	\$8.0	\$8.0	\$0	0%
Construction (Including Testing/Startup)	\$102.4	\$102.6	\$0	0%
Total	\$125.6	\$125.6	\$10.8	8.6%

¹As of February 28, 2014. Budget update anticipated with May Board Memo.

Attachments (1)

1. Funding Plan

cc: E. Reiskin, T. Papandreou, V. Harris, J. Haley, P. Gabancho, D. Auyoung, R. Boomer – SFMTA
 TC, MEL, CF, AL, ES, STR, MS, RAM – Chron, File: Van Ness BRT

Attachment 1: Van Ness Bus Rapid Transit Funding Plan
Updated: April 2014

Source	Type	Status	Project Phases ¹			Total by Status	TOTAL
			ENV, CER/PE	PS&E	CON		
5309 Small Starts ²	Federal	Allocated	\$7,818,310	\$6,371,063	\$810,627	\$15,000,000	\$75,000,000
		Programmed			\$30,000,000	\$30,000,000	
		Planned			\$30,000,000	\$30,000,000	
SHOPP ³	State	Allocated				\$0	\$7,304,867
		Programmed				\$0	
		Planned			\$7,304,867	\$7,304,867	
PPM Funds ⁴	Local	Allocated	\$197,907			\$197,907	\$197,907
		Programmed				\$0	
		Planned				\$0	
AB 664 Funds ⁵	Local	Allocated	\$196,777			\$196,777	\$196,777
		Programmed				\$0	
		Planned				\$0	
Prop K ⁶	Local	Allocated	\$6,977,180			\$6,977,180	\$36,302,454
		Programmed		\$1,594,280	\$12,367,440	\$13,961,720	
		Planned			\$15,363,554	\$15,363,554	
California Pacific Medical Center Contribution ⁷	Local	Allocated				\$0	\$5,000,000
		Programmed			\$5,000,000	\$5,000,000	
		Planned				\$0	
Central Freeway Parcel Revenues ⁸	Local	Allocated				\$0	\$4,130,995
		Programmed				\$0	
		Planned			\$4,130,995	\$4,130,995	
Totals		Allocated	\$15,190,174	\$6,371,063	\$810,627	\$22,371,864	\$128,133,000
		Programmed	\$0	\$1,594,280	\$47,367,440	\$48,961,720	
		Planned	\$0	\$0	\$56,799,416	\$56,799,416	
			\$15,190,174	\$7,965,343	\$104,977,483	\$128,133,000	

¹ Acronyms used for project phases include: ENV - Environmental Documentation, CER/PE - Conceptual Engineering Report/Preliminary Engineering (30% Design), PS&E - Plans, Specifications & Estimates or Final Design, CON - Construction. The construction phase includes the incremental cost for procuring new BRT vehicles for the project.

² \$15 million appropriated in the FY 2010/11 federal budget and \$30 million appropriated in FY 2011/12 federal budget.

³ State Highway Operation and Protection Program (SHOPP) funding amount based on Caltrans Project Initiation Document, completed in fall 2013.

⁴ PPM: Planning, Programming and Monitoring funds

⁵ AB 664: Bridge tolls collected on the San Francisco-Oakland Bay, Dumbarton, and San Mateo-Hayward Bridges to further the development of public transportation near these toll bridges.

⁶ Prop K amount includes \$420,900 in Authority operating funds in Fiscal Years 2009/10 and 2010/11.

Attachment 1: Van Ness Bus Rapid Transit Funding Plan
Updated: April 2014

⁷The development agreement with the California Pacific Medical Center was approved by the San Francisco Board of Supervisors through Ordinance 138-13 on July 11, 2013.

⁸The amount of funding from Central Freeway Parcel Revenues for the core BRT project will be determined upon completion of the Conceptual Engineering Report scheduled to be completed in May 2014. \$12.7 million in Central Freeway Parcel Revenues is dedicated for Van Ness Avenue State of Good Repair improvements.