



# Memorandum

**Date:** 12.04.14 **RE:** Finance Committee  
December 9, 2014

**To:** Finance Committee: Commissioners Cohen (Chair), Wiener (Vice Chair), Farrell, Tang and Avalos (Ex Officio)

**From:** David Uniman – Deputy Director for Planning *DUE*

**Through:** Tilly Chang – Executive Director *TC*

**Subject:** **ACTION** – Recommend Authorizing the Executive Director to Execute a Funding Agreement with the Metropolitan Transportation Commission, in an Amount Not to Exceed \$300,000, for the San Francisco Bay Area Core Capacity Transit Study, and Authorizing the Executive Director to Negotiate Agreement Payment Terms and Non-Material Agreement Terms and Conditions

## Summary

The Transportation Authority is partnering with multiple agencies on the San Francisco Bay Area Transit Core Capacity Study (Study) led by the Metropolitan Transportation Commission (MTC). The Study will identify short-, medium-, and long-term solutions to increase transit capacity in the Transbay and Muni Metro corridors. The Study budget includes \$1 million in a federal Transportation Investment Generating Economic Recovery (TIGER) Planning grant and \$1 million in local match provided by the partner agencies of which the Transportation Authority's contribution is \$300,000. The source of this funding was anticipated as part of a \$450,000 Prop K appropriation that was approved through Resolution 15-09 in September 2014, which covered the Study's scope, schedule and budget. **We are seeking a recommendation to authorize the Executive Director to execute a funding agreement with the MTC, in an amount not to exceed \$300,000, for the San Francisco Bay Area Core Capacity Transit Study, and to authorize the Executive Director to negotiate agreement payment terms and non-material agreement terms and conditions.**

## BACKGROUND

The Transportation Authority is partnering with multiple agencies on the San Francisco Bay Area Transit Core Capacity Study (Study) led by the Metropolitan Transportation Commission (MTC). The Study will identify short-, medium-, and long-term solutions to increase transit capacity in the Transbay and Muni Metro corridors. The Study budget includes \$1 million in a federal Transportation Investment Generating Economic Recovery (TIGER) Planning grant and \$1 million in local match provided by the partner agencies of which the Transportation Authority's contribution is \$300,000. The source of the Transportation Authority's contribution was anticipated as part of a \$450,000 Prop K appropriation that was approved through Resolution 15-09 in September 2014 (and also included \$150,000 to cover staff time in support of the effort).

The Study was identified as a critical need through analysis conducted as part of Plan Bay Area and the San Francisco Transportation Plan. Currently, there is no comprehensive, multi-stakeholder evaluation of need or agreement on a plan about how to enhance the current transit system capacity to handle growing demand in the two subject corridors – and how to phase projects across partnering agencies and operators. This effort is a high priority for each of the partner agencies as the transit capacity improvements are needed to accommodate land use changes already underway, as well as ones in the

pipeline. The timing of the study is set up to allow the core capacity needs to be defined and prioritized in order to be ready for the next Regional Transportation Plan update.

The purpose of this memorandum is to seek a recommendation to authorize the Executive Director to execute a funding agreement between MTC and the Transportation Authority to commit our contribution to the effort.

**DISCUSSION**

The participation of the MTC is critical to the Study’s success. MTC is the lead agency, the recipient of the federal TIGER Planning grant, and the lead for consultant procurement and contracting. MTC intends to use the results of the Study to inform investment prioritization that will happen through the 2017 update to Plan Bay Area (the Regional Transportation Plan). The Transportation Authority’s contribution to MTC will cover some of the \$2 million in consultant budget set aside for the work. The expected funding contribution from each agency is shown below in Table 1. The Funding Agreement describes the scope, schedule, invoicing and reimbursement procedures and other terms of the agreement and is included as Attachment 1. MTC will execute separate funding agreements with each agency to commit their respective funding contributions.

Table 1: Funding Contributions to \$2 Million Consultant Budget for Study\*

Agency	Expected Funding Contribution
AC Transit	\$50,000
BART	\$100,000
Caltrain	TBD
MTC	\$325,000
SFCTA	\$300,000
SFMTA	\$200,000
WETA	\$25,000
U.S. DOT	\$1,000,000
Total	\$2,000,000

\*does not include agency staff time contributions

The MTC and Transportation Authority, along with the other partner agencies (the San Francisco Municipal Transportation Agency (SFMTA), the Bay Area Rapid Transit District (BART), the Alameda Contra Costa County Transit District (AC Transit), the Water Emergency Transportation Authority (WETA), and Caltrain) have developed a Project Charter to define roles, responsibilities and governance of the project. Generally, each agency’s role is reflective of expertise areas and overall agency roles. MTC and the Transportation Authority’s roles are to provide regional/countywide planning, evaluation, and analytical support for the effort, while the participating transit operators’ roles are to oversee consultant project development of ideas that affect their systems and provide mandatory design guidance standards to adhere to. All partners are expected to sign off on many interim milestones such as refined goals and objectives, concurrence that the evaluation process that is carried out is technically sound and transparent, and participate in stakeholder and community involvement activities. Each

agency will assign a staff lead to participate in a Project Management Team that will meet regularly to provide direction to the consultant team. A Technical Advisory Committee will also be established to seek input from a wide range of stakeholder agencies. In addition, the Project Management Team will provide regular updates to an Executive team that includes participation by the Executive Directors and General Managers of each of the Partners.

**We are seeking a recommendation to authorize the Executive Director to execute a funding agreement with the MTC, in an amount not to exceed \$300,000, for the San Francisco Bay Area Core Capacity Transit Study, and to authorize the Executive Director to negotiate agreement payment terms and non-material agreement terms and conditions.**

## **ALTERNATIVES**

1. Recommend authorizing the Executive Director to execute a funding agreement with the MTC, in an amount not to exceed \$300,000, for the San Francisco Bay Area Core Capacity Transit Study, and authorizing the Executive Director to negotiate agreement payment terms and non-material agreement terms and conditions, as requested.
2. Recommend authorizing the Executive Director to execute a funding agreement with the MTC, in an amount not to exceed \$300,000, for the San Francisco Bay Area Core Capacity Transit Study, and authorizing the Executive Director to negotiate agreement payment terms and non-material agreement terms and conditions, with modifications.
3. Defer action, pending additional information or further staff analysis.

## **CAC POSITION**

The CAC was briefed on the substance of the Study's purpose, scope, schedule, and budget at its September 3, 2014 meeting as a part of the Prop K appropriation request to fund the Study, but due to an oversight, this action to authorize execution of the funding agreement was not concurrently included. Delaying the approval would prevent the Study from initiating in December as planned.

## **FINANCIAL IMPACTS**

Budget for these activities will be funded from a \$450,000 appropriation in Prop K approved through Resolution 15-09. The first year's activities will be included in the Transportation Authority's mid-year budget amendment, and sufficient funds will be included in future fiscal year budgets to cover the cost of this funding agreement.

## **RECOMMENDATION**

Recommend authorizing the Executive Director to execute a funding agreement with the MTC, in an amount not to exceed \$300,000, for the San Francisco Bay Area Core Capacity Transit Study, and authorizing the Executive Director to negotiate agreement payment terms and non-material agreement terms and conditions.

Attachment:

1. Funding Agreement Between the Metropolitan Transportation Commission and San Francisco County Transportation Authority for San Francisco Bay Area Core Capacity Transit Study

## **FUNDING AGREEMENT**

**between METROPOLITAN TRANSPORTATION COMMISSION  
and SAN FRANCISCO COUNTY TRANSPORTATION AUTHORITY, for  
SAN FRANCISCO BAY AREA CORE CAPACITY CORE TRANSIT STUDY**

THIS AGREEMENT is made and entered into as of the 3rd day of December 2014, by and between the Metropolitan Transportation Commission (herein referred to as "MTC") and the San Francisco County Transportation Authority, (herein referred to as "Transportation Authority"). MTC and Transportation Authority are together referred to as the "PARTIES."

### **RECITALS**

WHEREAS, MTC is responsible for regularly updating the Regional Transportation Plan (RTP), a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle and pedestrian facilities; and

WHEREAS, the San Francisco Bay Area Core Capacity Transit Study (herein called the "STUDY"), will implement planning and technical analyses required to evaluate and prioritize short-, medium-, and long-term transit investments for capital, policy and operating strategies to address existing and forecasted capacity constraints into Core San Francisco (as designated on the map in Attachment B, Core San Francisco Map), for inclusion in the next update of the RTP; and

WHEREAS, the STUDY will be led by MTC, in consultation and partnership with Alameda-Contra Costa Transit District (AC Transit), San Francisco Bay Area Rapid Transit District (BART), Peninsula Corridor Joint Powers Board (Caltrain), Transportation Authority, San Francisco Municipal Transportation Agency (SFMTA) and San Francisco Bay Area Water Emergency Transportation Authority (WETA) ("STUDY Partners"). MTC and the STUDY Partners have outlined a strategy to perform the STUDY as part of a request for a regional planning grant from the United States Department of Transportation's (U.S. DOT) Transportation Investment Generating Economic Recovery ("TIGER") Discretionary Grant program; and

WHEREAS, Core San Francisco is served by two key corridors that will be the focus of this STUDY: the Transbay Corridor (including AC Transit, BART and WETA service) and the Muni Metro Corridor (as designated on Attachment B, Core San Francisco Map); and

WHEREAS, the STUDY will be undertaken in accordance with an Interagency Project

Charter (“CHARTER”), dated November 7, 2014, which contains, among other things, roles and responsibilities for the PARTIES; and

WHEREAS, MTC has committed funding of three hundred twenty five thousand dollars (\$325,000) to hire one or more consultants (“CONSULTANT”) to support the STUDY; and

WHEREAS, Transportation Authority has committed funding of three hundred thousand dollars (\$300,000) for such purpose; and

WHEREAS, other STUDY Partners have committed funding totaling of three hundred seventy-five thousand dollars (\$375,000), for a total initial CONSULTANT contract budget of one million dollars (\$1,000,000); and

WHEREAS, the U.S. DOT has awarded MTC a TIGER regional planning grant of one million dollars (\$1,000,000) to augment the initial CONSULTANT contract budget; and

WHEREAS, MTC, as lead agency for the STUDY, has received approval from its Administration Committee to enter into the initial CONSULTANT contract for the STUDY scope of work described in Attachment A, MTC Consultant Preliminary Scope of Work with Arup North America, Ltd., a CONSULTANT that was competitively procured by MTC (the “MTC CONSULTANT”); and

WHEREAS, tasks in Attachment A, MTC Consultant Preliminary Scope of Work that are designated “Optional” may be included as part of the contract with MTC CONSULTANT, or they may be implemented separately by one of the STUDY partners under separate consultant contracts;

NOW, THEREFORE, MTC and Transportation Authority, for good and valuable consideration, the receipt and sufficiency of which are acknowledged, agree as follows:

## **1. SCOPE OF WORK**

MTC agrees to engage MTC CONSULTANT to perform STUDY activities described in Attachment A, MTC Consultant Preliminary Scope of Work, attached hereto and incorporated herein by this reference. MTC CONSULTANT’s work will be performed under the direction of Carolyn Clevenger, the MTC Project Manager. MTC shall require MTC CONSULTANT to share proposed draft deliverables with all STUDY Partners for review and comment before finalizing such deliverables.

## **2. TERM OF AGREEMENT**

The MTC CONSULTANT services funded by this Agreement shall commence on or

after November 1, 2014, and the MTC CONSULTANT's work is expected to be completed by March 31, 2017. Therefore, this Agreement shall terminate on March 31, 2017.

### **3. FUNDING AND METHOD OF PAYMENT**

A. Compensation: Transportation Authority agrees to reimburse MTC with three hundred thousand dollars (\$300,000) for the purpose of funding MTC CONSULTANT services to undertake the STUDY, as described in Attachment A, MTC Consultant Preliminary Scope of Work.

B. Disbursement: Transportation Authority agrees to make payments to MTC for work done on a reimbursable basis. Payments shall be made upon satisfactory completion by MTC CONSULTANT of work specified in MTC Task Orders.

Transportation Authority shall reimburse MTC for work upon submission by MTC of an acceptable invoice. Each invoice shall specify: (i) the tasks and or deliverables completed for which reimbursement is requested; and (ii) the amount of reimbursement requested from all STUDY Partners, including the amount paid by MTC.

Payments shall be made within thirty (30) calendar days of MTC's receipt of an acceptable invoice from MTC CONSULTANT. MTC shall submit invoices to Transportation Authority within five (5) calendar days of MTC's receipt of an acceptable invoice from MTC CONSULTANT. Transportation Authority shall make payments within twenty-five (25) calendar days of Transportation Authority's receipt of an acceptable invoice from MTC. MTC shall deliver or mail invoices to Transportation Authority, as follows:

Accounting Department  
San Francisco County Transportation Authority  
1455 Market Street, 22<sup>nd</sup> Floor  
San Francisco, CA 94103  
Email: ap@sfcta.org

C. Maximum Payment: Subject only to duly executed amendments, it is expressly understood and agreed that in no event will the total compensation to be paid to MTC under this Agreement exceed the sum of three hundred thousand dollars (\$300,000) (the "Maximum Payment").

### **4. COMPLIANCE WITH LAWS**

The PARTIES shall comply with any and all laws, statutes, ordinances, rules, regulations or requirements of the federal, state, or local government, and any agency thereof, which relate

to or in any manner affect the performance of this Agreement.

**5. RESTRICTIONS ON USE OF FUNDS**

MTC agrees to use funds received pursuant to this Agreement only for MTC CONSULTANT's work on the STUDY.

**6. RETENTION OF RECORDS**

The PARTIES agree to keep all records pertaining to the STUDY being funded for audit purposes for a minimum of three (3) years following the fiscal year of the last expenditure under this Agreement, in accordance with generally accepted accounting principles.

**7. AUDITS**

Further, MTC agrees to grant Transportation Authority and its authorized representatives access to MTC's books and records for the purpose of verifying that funds are properly accounted for and proceeds are expended in accordance with the terms of this Agreement. All documents shall be available for inspection at any time, during normal business hours, while STUDY is underway and for the retention period specified in Article 6 above.

**8. DISPUTE RESOLUTION**

In the event there is a dispute concerning the interpretation of this Agreement or any aspect of the STUDY that MTC and Transportation Authority are unable to resolve, either MTC or Transportation Authority may request that the Executive Team resolve the dispute. The Executive Team shall consist of seven members, namely the Executive Director or General Manager, as applicable, of each of the following agencies: AC Transit, BART, Caltrain, MTC, Transportation Authority, SFMTA and WETA.

**9. AMENDMENTS**

Any changes to this Agreement shall be incorporated in written amendments. All amendments shall be executed by the MTC Executive Director or a designated representative and the Transportation Authority Executive Director or a designated representative.

**10. NOTICES**

All notices or other communications to either party by the other shall be deemed given

when made in writing and delivered, mailed, emailed, or faxed to such party at their respective addresses as follows:

To MTC:                      Attention: Carolyn Clevenger  
Metropolitan Transportation Commission  
101 - 8th Street  
Oakland, CA 94607-4700  
Phone: 510.817-5736  
Fax: 510.817-5848  
Email: [cclevenger@mtc.ca.gov](mailto:cclevenger@mtc.ca.gov)

To Transportation            Attention: Cynthia Fong  
Authority:                      San Francisco County Transportation Authority  
1455 Market Street, 22<sup>nd</sup> Floor  
San Francisco, CA 94103  
Phone: 415.522.4828  
Fax: 415.522.4829  
Email: [Cynthia@sfcta.org](mailto:Cynthia@sfcta.org)



IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto as of the day and year first written above.

METROPOLITAN TRANSPORTATION  
COMMISSION

SAN FRANCISCO COUNTY  
TRANSPORTATION AUTHORITY

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Steve Heminger, Executive Director

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Tilly Chang, Executive Director

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## **Attachment A**

### **MTC CONSULTANT PRELIMINARY SCOPE OF WORK**

MTC and the STUDY Partners (collectively referred to as “STUDY Team”) shall engage MTC CONSULTANT to perform the services, including but not limited to those specified in this Attachment A, MTC Consultant Preliminary Scope of Work.

#### **A. PUBLIC OUTREACH AND ENGAGEMENT**

##### **1. Public and Stakeholder Outreach**

###### **a) Public Outreach**

An outreach strategy will be produced during STUDY initiation that describes outreach goals and objectives as well as a work plan to notify and seek input from stakeholders and members of the public over the course of the STUDY. The outreach strategy will build on lessons learned from past outreach successes and utilize existing stakeholder forums to the greatest extent possible.

The outreach strategy will include Title VI outreach and is expected to include in-person and online outreach techniques and opportunities provided in a number of languages to ensure a diverse range of opportunities for the public to participate in the project. Outreach will include engagement with key stakeholders such as business coalitions, advocacy groups, and business improvement districts, as well as general public meetings as appropriate.

While it will be further detailed as a part of outreach strategy development, generally, two outreach phases are envisioned:

- i) Phase 1 will happen after completion of Task B3, and be focused on:
  - Providing an overview of the purpose of the STUDY and the evaluation framework.
  - Sharing the results of the existing and future needs analysis (Task B3), including capacity goals by corridor by time horizon.
  - Summarizing projects/policies/operational strategies that have already been defined by corridor during predecessor planning efforts.
  - Understanding the public’s issues and comments around the various alternative investments to be evaluated.
  - Seeking input on additional ideas that should be considered for development and evaluation.
- ii) Phase 2 will happen after completion of Task B7 and be focused on:
  - Sharing what was heard in Phase 1 and how it was used.
  - Sharing the results of the evaluation and prioritization of high-performing concepts by time horizon.
  - Seeking feedback on stakeholder preferences among these concepts.

###### **b) Transit Agency Outreach**

In addition to the STUDY Team, additional relevant public agencies will also be consulted at key points throughout the course of the STUDY. MTC will facilitate regular meetings with a Technical Advisory Committee (TAC), expected to include participation from all STUDY Partners as well as other transit operators in the Core, County Congestion Management Agencies, City staff from local jurisdictions, local Federal Transit Administration staff, and the California Department of Transportation. This group will be consulted at key points throughout the course of the STUDY.

#### c) Local Government Outreach

At key points throughout the process, relevant staff from key local governments including in particular the Cities of Oakland and San Francisco will be engaged to ensure that potential modifications to service or new infrastructure investments generally align with their intended future land use visions. Elected officials from local governments will also be engaged through their participation in other Plan Bay Area activities; to ensure maximum efficiency, these efforts will be synchronized.

Deliverable(s): Public Outreach Plan, TAC meeting materials and summaries, Phase 1 and Phase 2 Outreach Materials and Summaries.

## **B. TRANSIT SYSTEMS AND OPERATIONS PLANNING**

### **1. Project Start-up and Ongoing Management**

Project start-up and ongoing management activities would include:

- Refining a work plan and budget by task.
- Regular coordination meetings among STUDY Team and MTC CONSULTANT.

Deliverable(s): Refined scope of work and budget.

### **2. Existing/Future Needs Synthesis and Identification**

Together, the Transbay corridor and Muni Metro spine comprise the backbone of the Bay Area's core transit system. Plan Bay Area will sustainably manage future regional growth, but its increased travel demand is expected to fall particularly heavily on several downtown San Francisco transit stations, along the Transbay and Muni Metro Corridors. The key challenge addressed in the STUDY will be developing concepts to expand capacity on the very successful Transbay and SF Muni Metro trunk transit services that are currently operating at, near or over-capacity levels due to increasing ridership.

The main goal of this task is to establish target peak hour capacity goals for each of the STUDY Corridors and identify key transportation challenges facing the STUDY Area and Corridors.

Sub-tasks include:

- a) Establish project goals and objectives. The STUDY Team will work with project stakeholders to define the project goals and objectives. The goals and objectives will then be used to frame the Evaluation Criteria developed in Task B4.

- b) Quantify existing and planned future capacity of those projects already in development by STUDY Corridor and Mode. Operators will be asked to confirm or update the latest assumptions. This effort will also include information about capacity provided by employer shuttles operating to/from/within the Core.
- c) Market Demand Analysis by STUDY Corridor. This task will utilize Plan Bay Area land use to forecast travel demand by corridor for short- medium- and long-term horizon years. The analysis would include:
  - Identify the major travel markets for each corridor. For example, in the Transbay corridor, identifying the most common origins in the region to destinations in San Francisco, could inform new AC Transit bus routes that could serve origins and destinations not near existing BART stations in the shorter-term. Similarly, identifying these same Transbay travel markets could inform the ideal route for a second BART Transbay tube in the longer term.
  - Forecasting future travel within the region.
  - Determine the total number of forecast trips and peak period trips by all modes by corridor.
  - Using the results of the forecasts, a capacity target by corridor by travel market will be established.
  - Identification and analyses of regional policies that can encourage and support transit in corridors (e.g., parking pricing and congestion tolling.)

Deliverable(s): Technical memo(s) identifying (1) the STUDY goals and objectives, and (2) identifying and synthesizing future needs, quantification of existing and planned capacity by STUDY corridor and mode, and market demand analysis. Maps and extensive data shall support the technical memo(s.)

### **3. Identify Transportation Challenges Facing the STUDY Area and Corridors**

- a) Synthesize past studies/work to identify i) constraints/needs to maintaining/increasing capacity, and ii) capacity improvement concepts that have already been developed: Several past studies have been completed or are currently in progress that identify transit system needs and/or have developed capacity improvement concepts for some of the STUDY Corridors. With limited effort, this task would allow for a small level of effort to synthesize all relevant past work, including core maintenance/State of Good Repair needs that must be achieved to maintain existing capacity.
- b) Identify key transportation challenges in the STUDY Area and Corridors. The challenges will include both current and future challenges to providing a reliable, efficient transit system to meet the projected demand. It is anticipated that the challenges will include but not be limited to capacity constraints, operational challenges, track and right of way limitations and vehicle constraints.

Deliverable(s): Technical memo(s) identifying key transportation challenges constraining the transit system in the STUDY Area and Corridors.

### **4. Evaluation Framework**

An evaluation framework will be established to translate the STUDY's goals and objectives into qualitative and quantitative metrics that can be used to screen and prioritize strategies and identify appropriate methodologies for carrying out the evaluation. The evaluation framework will build off the robust project performance analysis, including project level benefit cost analysis, MTC conducts for the regional transportation plan, as well as project analysis frameworks used by the participating agencies in establishing their investment priorities. The evaluation criteria may include different metrics than the project evaluations done for Plan Bay Area given the more focused and localized nature of the STUDY. The STUDY Team is interested in innovative evaluation approaches that can inform prioritization of projects and policies based on their ability to provide additional transit capacity while advancing related goals, consistent with Plan Bay Area performance measures, and informed by implementation considerations such as timeframe and cost. The MTC CONSULTANT will be expected to develop final evaluation criteria used for project analysis and appropriate methodology that the MTC CONSULTANT is capable of carrying out for approval by the STUDY Team. Overall, the evaluation framework's primary goal should be the amount of peak transit capacity by corridor/mode and travel market.

Deliverable(s): Technical memo(s) detailing evaluation framework and methodology.

## **5. Develop Capacity Improvement Concepts**

In this task, the MTC CONSULTANT will add to the existing improvement concept list synthesized in Task 4 to develop additional ways to achieve the targeted capacity by STUDY corridor, mode and time horizon. In this task, the transit operators (AC Transit, BART, SFMTA and WETA) will provide direction to CONSULTANT for development of improvement concepts specific to their systems in consideration of their agency-wide policies and other system plans and needs.

For the near future, additional capacity must come through efficient use of existing infrastructure – a strategy that is consistent with Plan Bay Area's "Fix-it First" investment strategy. BART is proceeding with several projects designed to enhance capacity of the existing system, including a new train control system and new increased capacity vehicles. The options to expand capacity in this corridor are complicated by the geography of the San Francisco Bay, and the constrained nature of the transit and highway infrastructure that cross it. Fixed links through this corridor are limited to BART's Transbay Tube, and the San Francisco-Oakland Bay Bridge. While the primary focus is the flow through the corridor connecting San Francisco with the Inner East Bay, the Transbay Corridor is fed by major travel flows from many counties and travel markets to the north, east, and south. BART's ability to handle additional demand in the Transbay Corridor is contingent on major new investments and station modifications to the BART system, some of which are underway, and some of which are unfunded. Plan Bay Area also advances the BART Metro concept, which facilitates long-term land use changes primarily by providing a high-frequency, high capacity urban core rail trunk system, with the Transbay Corridor as the central linchpin of the core system.

The Muni Metro Corridor has been incrementally upgraded over the last 30-40 years. Entry and exit points to the Muni Metro Corridor suffer from poor reliability due to the merging/diverging of multiple rail lines and the transition from manual to automatic train control. Topographic barriers provide few options for direct routes heading into or out of the financial district on a mode other than light rail. The Muni Metro Corridor provides a high-frequency local rail system, which is the core of the transit system in San Francisco, but which is also in need of capacity and operational modifications.

Concepts are expected to include the following categories:

a) Rail Strategies

- Interventions to increase line capacity on existing lines (upgrades to train control system, increase/enhancement to rolling stock/facilities, junction modifications, station modifications, service design.)
- Interventions to increase speed/reliability of existing lines and operate different service patterns (e.g. tail tracks, crossovers, turn-backs, and portal improvements.)
- New lines (e.g. second Transbay Tube variations, new BART line in San Francisco extending from second Tube, Central Subway extension to Fisherman's Wharf.)
- Any rail capacity improvement strategies will consider all relevant aspects of capacity including line capacity, station capacity, station access considerations, rolling stock/facilities requirements and relevant operating plans changes.

b) Bus strategies

- New route structure to better serve demand in East Bay as well as potential expanded employment destinations beyond downtown San Francisco such as Mission Bay and San Francisco Civic Center.
- More frequent service in more high-density TOD corridors along with new vehicle fleet to increase per-trip capacity. Establishment of a transit network using Park & Rides to efficiently carry more riders, reduce travel time through neighborhoods, and consequently improve service frequencies.
- Priority treatments to provide speed and reliability including Bay Bridge contra-flow lane, transit-only lanes and transit priority on East Bay arterials and intersection treatments (signal priority and queue jumps.)
- Improved coordination and implementation with private shuttles.

c) Ferry strategies

- More frequent ferry service/additional ferry terminals.
- Improved multi-modal connectivity.

d) Policy/Operational

- Regional pick-up/drop-off within San Francisco.
- Coordinated marketing.
- Peak hour fare premiums.
- Fare coordination.
- Station-specific congestion pricing.
- Interagency fare coordination.
- Employer Transportation Demand Management engagement and coordination.

Deliverable(s): Capacity improvement concept descriptions and visuals for each corridor, mode, and time horizon.

## **6. Screen Capacity Improvement Concepts**

Using the evaluation criteria identified in Task B4, the MTC CONSULTANT will screen the concepts developed in Task B5 and if applicable, refined in Task C1. Screening criteria will likely include: supports regional goals, potential implementation schedule, rough order of magnitude capital cost and change in operating cost, constructability and basic engineering feasibility. The goal is to reduce the conceptual alternatives to a more limited number for further project development. Preliminarily, five to ten concepts would advance to further project development.

Deliverable(s): Technical memo(s) detailing the results of the screening and recommending concepts for further analysis.

## **7. Evaluation, Prioritization, and Phasing of Capacity Improvements Concepts**

Using the evaluation criteria identified in Task B4, the MTC CONSULTANT will conduct an evaluation of the concepts as refined in Task C2 (if completed). The goal is to prioritize the alternatives to a limited number for future project development and implementation work, and develop a preliminary recommendation for phasing by time horizon, and for inclusion in future updates of Plan Bay Area and agency planning efforts.

Projects or policies that can provide for short-term benefits may be advanced more quickly to develop interim improvement recommendations.

Potential alternatives include:

### **a) Transbay Corridor**

The STUDY will take the next step toward defining what is needed for BART and for the other modal operators to serve additional demand in the Transbay Corridor, both through enhancements to the existing infrastructure, and major construction of new infrastructure. It is important for the region to identify and evaluate investment trade-offs by identifying the point at which current and proposed infrastructure enhancements would not be sufficient to handle future demand.

Alternatives may include:

- No project.
- Bus service and infrastructure improvements:
  - Contraflow lane for AM Peak (The contraflow lane alternative will need to build on the 2010 STUDY. Each alternative should be defined to a higher level of engineering - assumed to be approximately 5%);
  - Bus fleet with higher capacity;
  - Shift model of service to high density areas; and
  - Integrate Park and Ride service.
- BART capacity improvements to the existing system using the current tube.
- Expanded ferry system.



- BART West Oakland transfer station concept with SF shuttle trains (no through service).
- Second Transbay Tube variations (2-track and/or 4-track)

b) Muni Metro Corridor

The SFMTA and SFCTA are currently developing a strategy to increase the person carrying capacity of the current Metro rail system through removal of key bottlenecks and infrastructure expansion, called the San Francisco Rail Capacity Strategy (Rail Strategy). This strategy will produce project descriptions and conceptual engineering for near term projects (0-5 years) to provide additional capacity using existing infrastructure and concepts for medium and long term projects (5+ years) that would expand the SFMTA rail system to meet projected future demand. This STUDY will take the projects developed in the Rail Strategy and move them forward with additional planning and engineering work.

Alternatives may include:

- No project.
- Supplemental bus service.
- Station platform extensions.
- Portal area traffic control, transit only lanes, and Transit Signal Priority.
- Wayside and Automatic Train Control System upgrades.
- Three and four car trains with optimized interior configuration.
- Additional pocket and crossover tracks.
- Operating short lines and shuttles.

Deliverable(s): Technical memo(s) documenting evaluation methodology, recommended priorities, and recommendations for potentially phasing capacity improvements over time.

## 8. Implementation Strategy

In this task, the MTC CONSULTAN will communicate the results of the effort to develop regional consensus on prioritized alternatives for short, mid, and long-term improvements. An implementation strategy will be developed that references the relationship between/amongst alternatives. Prioritized alternatives will be used to aid as an advocacy platform for future funding programs, and to leverage existing funding sources.

Projects or policies that can provide for short-term benefits may be advanced more quickly to develop interim improvement recommendations.

- Identify partnerships amongst agencies necessary for implementation.
- Identify major roadblocks for implementation.
- Develop project development and implementation plan, design and environmental phases, and project delivery methods.
- Develop funding plan and strategy.

Deliverable(s): Technical memo(s) detailing an implementation strategy.

## **9. Draft and Final Report**

The technical work completed will be summarized in a Draft Final Report. The report will be circulated for review and refined based on comments. This task also includes preparation of presentation materials and making presentations on the findings and recommendations to governing bodies of project team. A Final Report will be approved by the Agency Team.

Deliverable(s): Draft and Final Report, Summary Presentation.

## **C. TRANSIT SYSTEMS ENGINEERING AND DESIGN**

Transit systems engineering and design tasks are optional tasks. These tasks may be incorporated into the overall work scope, or they may be implemented separately by the STUDY Partners as separate contracts or tasks under separate contracts.

### **1. Refine Capacity Improvement Concepts (\*Optional - Operator-led)**

Engineering and operations planning support for initial development of capacity improvement concepts. AC Transit, BART, SFMTA and WETA will manage CONSULTANT to develop initial capacity improvement concepts, in support of the conceptual planning work in Task B5.

Deliverable(s): Conceptual engineering drawings to a level appropriate for initial concept development (less than 1% design for most concepts.)

### **2. Project Development (\*Optional - Operator-led)**

For the subset of concepts identified in Task B6 for further project development, AC Transit, BART, SFMTA and WETA will manage CONSULTANT to conduct additional project development. Conceptual Engineering drawings to a level appropriate for evaluation and prioritization (up to 5% design for most concepts) will be developed.

Deliverable(s): 5% engineering drawings including horizontal and vertical alignments, typical cross-sections, service and operating parameters.

### **3. Refine Project Development (\*Optional - Operator-led)**

In this task, operators will guide CONSULTANT in additional scoping and project development of the highest prioritized projects identified in Task B7, including:

- a) Advance project conceptual design.
- b) Refine ridership estimates.
- c) Develop initial environmental assessment. Prepare an initial checklist assessment of environmental issues likely to be raised in future CEQA and NEPA processes, at both the Program-level and the Project-level.

- d) Develop an initial Title VI evaluation of the preferred alternatives. Analysis will comply with FTA Title VI Circular 4702.1B Service and Fare Equity, released on October 12, 2012.
- e) Phasing plan for construction and fleet expansion. Develop a phasing plan for construction of any rail alternatives that proceeds in logical segment order and allows interim operability of project phases as they are completed.
- f) Refine cost estimates. Cost estimates should be completed using a format and level of detail appropriate for application for entry into the FTA New Starts or Core Capacity process.

Deliverable(s): Technical memo(s) and visuals summarizing refined project concepts and evaluation work.

**Attachment B**  
**CORE SAN FRANCISCO MAP**

