



Memorandum

AGENDA ITEM 4

DATE: October 16, 2024
TO: Transportation Authority Board
FROM: Rachel Hiatt - Deputy Director for Planning
SUBJECT: 11/19/24 Board Meeting: Approve a Two Year Professional Services Contract with HNTB Corporation in an Amount Not to Exceed \$1,103,000 for Technical Services for the San Francisco Freeway Network Management Study

<p>RECOMMENDATION <input type="checkbox"/> Information <input checked="" type="checkbox"/> Action</p> <ul style="list-style-type: none"> • Approve a two-year professional services contract with HNTB Corporation (HNTB) in an amount not to exceed \$1,103,000 for technical services for the San Francisco Freeway Network Management Study. • Authorize the Executive Director to negotiate contract payment terms and non-material terms and conditions. <p>SUMMARY</p> <p>The San Francisco Freeway Network Management Study (Study) responds to the Board’s feedback to reconsider pricing as a tool to improve the overall efficiency of the city’s freeway network and reduce vehicle miles traveled within San Francisco. This Study will take a comprehensive look at San Francisco's Freeway Network (US-101, I-280, I-80, and Central Freeway) and use new travel data to understand where a managed lane program will best support transportation goals, including a reduction in vehicle miles traveled. The Study will result in designs and financial and operational analysis for a set of managed lane alternatives on freeway segments in San Francisco, as well as program alternatives to increase transportation options, reduce transportation barriers, and ensure affordability for travelers.</p> <p>We issued a Request for Proposals (RFP) on August 26, 2024</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Fund Allocation <input type="checkbox"/> Fund Programming <input type="checkbox"/> Policy/Legislation <input type="checkbox"/> Plan/Study <input type="checkbox"/> Capital Project Oversight/Delivery <input type="checkbox"/> Budget/Finance <input checked="" type="checkbox"/> Contract/Agreement <input type="checkbox"/> Other: _____
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seeking technical services for the Study. We received two proposals by the due date of September 27, 2024. Following evaluation of proposals and interviews, the selection panel, comprised of staff from Transportation Authority and Metropolitan Transportation Commission (MTC), recommends contract award to HNTB.	
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BACKGROUND

In July, 2024, the Board adopted the 2023 Prop L 5-Year Prioritization Program for Managed Lanes and Express Bus, and appropriated \$1,000,000 in Prop L funds for the SF Freeway Network Management Study (Project). With these actions, we redirected our efforts studying the Northbound I-280 Express Lanes and Bus Project, following community outreach in winter 2023, into the San Francisco Freeway Network Management Study.

The scope of the San Francisco Freeway Network Management study was shaped by findings from technical analysis and feedback from the community, our Community Advisory Committee (CAC), and MTC's Next Generation Freeway Study. The Study will take a comprehensive look at San Francisco's Freeway Network and use new travel data to understand where a managed lane program will best support transportation goals, including a reduction in vehicle miles traveled.

The Study will consider managed lane alternatives, including priced lane and priced facility options, for freeways within San Francisco (Central Freeway, I-80, U.S. 101, I-280) with the goals of reducing vehicle miles traveled, increasing person throughput, and improving transit reliability. The Study will consider a facility design that does not increase overall capacity, and programs to reduce transportation barriers, ensure equitable access along the corridor, and maintain affordability. It will recommend a managed lanes program, including priced lanes on priority freeway segments, consisting of facility design, operations plan, and complementary programs to reduce drive alone trips.

The Study will help advance regional transportation goals and San Francisco's freeway management strategies, while maintaining safety and access for all travelers, and fill a gap in the Bay Area carpool/Express Lane network.



DISCUSSION

We are seeking consultant services to support the Study, which will:

- Conduct a high-level screening to identify priority managed lane segments for future study;
- Complete existing conditions analysis of the freeway mainline, ramps, and adjacent corridors;
- Develop managed lane concepts combining physical design with program alternatives to increase transportation options, reduce transportation barriers, and ensure affordability along managed lane segments; and
- Identify up to two preferred managed lane segments and associated programmatic elements for future study.

The tasks (also provided in Attachment 1, Scope of Services) and estimated milestone schedule are listed below:

Estimated Project Milestone Schedule

Task	Completion
Task 1: Project management	Ongoing (Fall 2024 - Fall 2026)
Task 2: Managed lane segment screening	Spring 2025
Task 3: Purpose statement and goals * Includes round 1 of outreach	Summer 2025
Task 4: Existing conditions analysis	Spring 2025
Task 5: Analysis *Includes rounds 2 and 3 of outreach	Winter 2025 - Winter 2026
Task 6: Community and stakeholder outreach	Ongoing (Spring 2025 - Spring 2026)
Task 7: Technical Advisory Committee	Ongoing (Spring 2025 - Fall 2026)
Task 8: Draft and Final Plan	Spring 2026 - Spring 2027

The Study is anticipated to be implemented in two parts.

Part 1 includes an overall scan of the freeway network, identification of up to five priority segments for further study, and development of a purpose statement and goals. This part is expected to take approximately 8 months. We will present the findings from Part 1 to the Board for review and direction before proceeding with the remaining tasks.



Part 2 will advance the priority segments identified in Part 1 into detailed planning and outreach to develop conceptual designs, operations, and complementary programs to improve transit, encourage carpooling, improve transportation options, and maintain affordability.

Procurement Process. We issued an RFP for technical services for the San Francisco Freeway Network Management Study on August 26, 2024. We hosted a pre-proposal conference on September 5, 2024, which provided opportunities for small businesses and larger firms to meet and form partnerships. Fifteen firms registered for the conference. We took steps to encourage participation from small and disadvantaged business enterprises, including advertising in five local newspapers; Nichi Bei, San Francisco Chronicle, San Francisco Examiner, Small Business Exchange, and Sing Tao. We also distributed the RFP to certified small, disadvantaged, and local businesses; Bay Area and cultural chambers of commerce, and small business councils.

By the due date of September 27, 2024, we received two proposals in response to the RFP. A selection panel comprised of Transportation Authority MTC staff evaluated the proposals based on qualifications and other criteria identified in the RFP, including the proposer's understanding of project objectives, technical and management approach, and capabilities and experience. We held interviews with both teams on October 10, 2024. Based on the competitive process defined in the RFP, the panel recommends that the Board award the contract to the highest-ranked firm: HNTB. The HNTB team distinguished itself based on having extensive, national experience in feasibility, design, governance; and ongoing oversight on similar managed lane programs; as well as strong experience in using creative design and emerging technologies to design and optimize freeway corridors. We established a Disadvantaged Business Enterprise (DBE) goal of 11% for this contract. Proposals from both teams exceeded the DBE goal. The HNTB team includes 14% DBE participation from Civic Edge Consulting, a women-owned firm.

FINANCIAL IMPACT

The contract amount will be funded with a Caltrans Planning Grant funds, with matching funds from Prop L sales tax funds, appropriated through Resolution 25-03. This contract is contingent upon execution of a funding agreement with MTC for the Caltrans Planning Grant funds, anticipated in November 2024. We will include this year's activities in the Fiscal Year 2024/25 mid-year budget amendment and



sufficient funds will be included in future year budgets to cover the remaining cost of the contract.

CAC POSITION

The CAC will consider this item at its October 23, 2024 meeting.

SUPPLEMENTAL MATERIALS

- Attachment 1 - Scope of Services

Attachment 1

Scope of Services

Task 1: Project management

A dedicated project manager from the consultant will be the single point of contact for the project and available to Transportation Authority for coordination.

The consultant will perform project management responsibilities throughout the project timeline, including leading project meetings, submitting monthly invoices and progress reports, and developing a revised work plan.

Task 1a: Project meetings

The consultant will prepare and conduct a project kick-off meeting and lead bi-weekly project team meetings. The consultant will be responsible for creating and distributing the agenda and sending out notes and action items after meetings.

Task 1b: On-going project management

The consultant will work with Transportation Authority staff to develop a revised work plan, including a refined scope, schedule, and budget. The consultant will maintain the work plan throughout the project as needed. The consultant is responsible for communicating any budgetary or scheduling issues to the project team as they are identified. Similarly, the consultant will communicate if a task request is outside of the original work plan scope.

The consultant will develop and maintain a risk and mitigations matrix to serve as a living document to determine risk levels throughout the Project.

Deliverables:

1. *Kick-off meeting agenda, materials, and notes*
2. *Bi-weekly project meeting agenda, materials, and notes*
3. *Project reporting and invoices by task*
4. *Revised work plan, including refined scope, schedule, and budget*
5. *Risk and mitigation matrix*

Task 2: Managed Lane segment screening

In this task, the consultant will support the Transportation Authority in conducting an initial feasibility assessment of implementing managed lanes on the freeway network in San Francisco. This task includes identifying potential individual or combinations of managed lane segments (i.e., the four segments of 101 and 280 north and south of the Alemany

Interchange; I-80; and Central Freeway), defining segment alternatives that use a combination of occupancy and pricing freeway management strategies; documenting the design and operational feasibility of managed lanes on specific freeway segments and/or combinations of segments, developing evaluation criteria, and selecting up to five segments for further study in following tasks. We anticipate that managed lane segments considered will include HOV lanes; single-lane pricing alternatives; and all-lane pricing alternatives.

A working group will be established during this task composed of community representatives and Transportation Authority Community Advisory Committee members; the group will convene up to 3 times during this task to advise the project team on the analysis process, findings, and ultimate selection of segments for further study.

Subtask 2a: Feasibility screening for potential managed lane segments

The consultant will review existing striping and freeway design, available data, and prior phases of work to identify which freeway segments can support a physical design for managed lanes that does not require increasing capacity and/or the physical footprint of the freeway infrastructure. As part of this subtask, the consultant will obtain drawings, striping plans, and other relevant documents from Caltrans or other agencies to conduct the initial screening for freeway segments that can support managed lanes. The consultant will identify areas of the freeway network that present challenges to creating a continuous managed lane and that will need a detailed review to determine feasibility. For these locations, sketch-level drawings will be prepared to document the challenges and/or feasibility of creating continuous managed lanes. As needed, the consultant will also document infrastructure changes that would be required to implement single- or all-lane pricing designs.

In parallel, Transportation Authority staff will conduct travel modeling for the freeway network in San Francisco to evaluate impacts of different managed lane scenarios. The consultant will assist with finalizing scenarios to be considered in travel modeling, including identifying the opening and future years for analysis, providing geometric design and pricing structure alternatives, and assumptions for transit service on managed lane segments. The consultant will work with Transportation Authority staff to define travel model performance measure outputs.

The consultant will document the findings from this subtask in a memo detailing which segments can and cannot support managed lanes, reasons why managed lanes is/is not feasible, and changes required for feasible design/operation.

Subtask 2b: Priority segment selection

To select priority segments for further study, the consultant will develop evaluation criteria (e.g., vehicle miles traveled, travel time, etc.), based on the study goals (see Task 3) and San Francisco's transportation goals, to assess findings from feasibility design and operational screening. These evaluation criteria will also be used in later tasks. The technical work

outlined in Subtask 2a will be used to evaluate segments against these criteria and select up to five priority segments for further design and study.

The deliverable for this subtask is a Priority Segment Selection Memo documenting the design and operational feasibility findings, evaluation criteria, and segment selection process and findings.

Deliverables:

1. *Sketch-level drawings to demonstrate feasibility of managed lanes on freeway segments*
2. *Draft and final Priority Segment Selection memo*
3. *Attendance and support at up to three working group meetings*

Task 3: Purpose statement and goals

The consultant will develop a purpose statement, project goals, and objectives to guide the screening process, concept/program development, and evaluation, drawing on existing plans including ConnectSF, San Francisco Transportation Plan (SFTP) 2050, Streets and Freeways Study, the Climate Action Plan, and the 101 Mobility Action Plan, and any other relevant plans or past studies.

This task will be primarily developed as part of Phase 1 of the project. However, round 1 of outreach will confirm the goals with the public, and slight revisions may be required (see Task 5 for more detail on outreach tasks).

The consultant will refine the purpose statement, project goals, and objectives, considering input from the Technical Advisory Committee (TAC) and feedback from round 1 of outreach (see Task 5).

Deliverable:

1. *Draft and final memo documenting purpose statement, project goals, and objectives*

Task 4: Existing conditions analysis

In this task, the consultant will finalize evaluation metrics and criteria and summarize existing conditions data collection and analysis in an existing conditions report.

Subtask 4a: Finalize evaluation metrics and criteria

The consultant will finalize evaluation metrics and criteria building off of criteria identified in Task 2b and the study purpose statement and goals in Task 3. Evaluation metrics and criteria may also build off of the 101/280 Managed Lane Project 1, Streets and Freeways Strategy Analysis, other studies, and projects (e.g., SFTP 2050) and input from the TAC.

Subtask 4b: Data analysis and existing conditions

Transportation Authority staff will use updated household travel survey diary data to create traveler profiles for all freeway segments in the San Francisco freeway network. The consultant will support analysis by collecting and analyzing traffic counts on ramps, freeway mainline, and freeway adjacent corridors for all freeway segments. INRIX-based visualizations of low-speed segments will be used to provide information on queueing at ramps. The consultant will summarize data for Transportation Authority staff to validate travel model outputs and INRIX data.

In this subtask, the consultant will also analyze and produce relevant graphics of crash data, greenhouse gas and other emissions/pollutant data, and other data on freeway mainline and adjacent corridors. To support the existing conditions analysis, the consultant may also analyze data from “big data” sources (e.g., Streetlight, Replica) to conduct origin-destination analysis and pre/post pandemic travel pattern analysis. In the proposal, the consultant should also note any relevant experience in calculating greenhouse gas and other emission and pollutant exposure and propose other recommended data to complete this task.

Subtask 4c: Draft existing conditions report

The consultant, with support from the Transportation Authority, will prepare an existing-conditions report to document findings from the analysis. The existing-conditions report will include traveler profiles, findings from data collection and analysis, and an appendix to document the data sources and analysis process. The existing conditions will also integrate the screening and priority segment selection findings from Task 2.

Deliverables:

- 1. Draft and final evaluation metrics and criteria*
- 2. Data collection and analysis*
- 3. Draft and final existing conditions report*

Task 5: Analysis

The analysis task will include the development and evaluation of concepts.

Subtask 5a: Geometric Design / 5% Engineering Drawings

The consultant will develop 5% designs for the up to 5 segments selected in Task 2. These drawings should be reader-friendly, as a version of drawings will be used during round 2 of public outreach. The consultant will also conduct a preliminary financial and operational analysis to provide system and operational elements to share the overall cost/revenue estimate for each alternative.

The consultant will prepare concept fact sheets summarizing key features, benefits, trade-offs, constraints, and risks of each design. The conceptual drawings, preliminary cost estimates, and fact sheets will be used to inform outreach materials for round 2 of outreach (see Task 6 for more details).

Deliverables:

1. *Reader-friendly conceptual drawings for up to 5 alternatives*
2. *Concept fact sheets for up to 5 alternatives*
3. *Planning-level cost and revenue estimates for up to 5 alternatives*
4. *Draft and final memo summarizing design alternatives*

Subtask 5b: Program Alternatives

In this subtask, the consultant will develop program alternatives to increase transportation options, reduce transportation barriers, and ensure affordability along managed lane segments. Program alternatives will be tied to managed lane segments and presented to the public during round 2 of outreach (see Task 6 for more details). Program alternatives should vary in cost and scope to align with changes in revenue projections and overall project costs, with a goal to have toll revenues cover costs of the recommended programs.

Subtask 5b.1: Develop program alternatives

The consultant will develop five sets of complementary programs that support goals such as mode shift, barrier reduction, and ensure affordability along managed lane corridors. These programs should include low- and high-cost options and include examples from TDM strategies and policies, equity and affordability programs, public transit improvements, and other appropriate programs. The consultant should prepare high-level planning, implementation, and operating costs for each program alternative.

Subtask 5b.2: Pair program alternatives with managed lane segments

Using the program alternatives developed in Subtask 5b.1, the consultant will identify which program alternatives will be most effective for each of the up to five managed lane segments selected in Task 2. The consultant will document reasons for pairing program alternatives with managed lane segments in a memo. This memo should also include an overview of each program alternative's features, costs, and considerations for implementation and operation. The consultant will also prepare a public-facing overview of program alternatives and managed lane segments, including key features, benefits, trade-offs, constraints, risks, and costs of both program alternatives and managed lanes, to be used in public outreach round 2 (see Task 6 for more information).

Deliverables:

1. *Draft and final memo describing up to five program alternatives and processes for pairing program alternatives and managed lane segments*

2. *Public-facing overview of managed lane concepts (i.e., program alternatives and managed lane segments)*

Subtask 5c: Alternatives Evaluation

In this task, the consultant will refine the definition of the priority managed lane alternatives and evaluate the managed lane alternatives against project goals, metrics, and evaluation criteria; and use input from public outreach and the TAC to select up to two segments for further study.

Subtask 5c.1: Develop evaluation framework

This task builds on the metrics used in Task 2, evaluation criteria identified in Task 4, and feedback from round 1 of public outreach. The consultant will refine evaluation criteria and develop an evaluation framework that can be used to compare managed lane alternatives against each other and against project goals and objectives defined in Task 3. The consultant will document the evaluation framework in a memo.

Subtask 5c.2: Select three segments

The consultant will use the evaluation framework to evaluate how each of the up to five managed lane alternative design concepts (managed lane segment plus associated program alternatives) performs in relation to the program goals and objectives defined in Task 3. Using feedback from round 2 of public outreach and feedback from the TAC, the consultant will work with Transportation Authority staff to refine the definition of the managed lane alternatives and select three segments to bring to round 3 of public outreach. The evaluation process and outcome will be summarized in a memo. The consultant will also prepare a summary of the evaluation process and outcome to support round 3 of public outreach.

Deliverables:

1. *Draft and final memo of evaluation framework, process, and outcomes*
2. *Selection of 3 managed lanes alternatives and programmatic elements*
3. *Summary of evaluation process and outcome for outreach round 3*

Task 6: Community and stakeholder outreach

In this task, the consultant will develop an outreach plan and lead stakeholder and community outreach.

Subtask 6a: Develop outreach plan

The consultant will work with Transportation Authority staff to develop an outreach plan that outlines how the project team will engage with the public to select the ultimate recommendation for a managed lane program. The outreach plan will define goals of each outreach round, key messaging, outreach methods, timeline of outreach activities, materials required to support outreach activities, and roles and responsibilities of Transportation Authority and consultant staff. The outreach plan will also identify community groups to engage in the outreach process.

Subtask 6b: Outreach activities and materials

This study includes three rounds of outreach. For each round of outreach, the consultant will coordinate and implement outreach activities and develop supporting materials per the outreach plan developed in Subtask 6a. The consultant will also be responsible for managing promotion via local newspapers and social media, providing translation, attending/staffing outreach events, and preparing outreach summaries. Outreach activities may include but are not limited to: listening sessions and meetings with community groups, public events (e.g., open houses, town halls, workshops, pop up events, etc.), surveys, focus groups, and online and social media engagement tools. All outreach will be conducted in multiple languages and will include in-person and online outreach events. The consultant will purchase and distribute up to 6 gift cards as incentives for participants who win a raffle for engaging with outreach.

At the conclusion of outreach events for each outreach round, the consultant will analyze data (e.g., survey data, community meeting notes, focus group notes, etc.) and summarize main findings in a memo.

The three outreach rounds are described in more detail below.

Round 1: goals, objectives, evaluation metrics, and travel needs

The first round of outreach will include surveys and in-person events to establish goals, evaluation metrics, and needs and challenges for travel on freeways within/through San Francisco. The consultant will develop materials based on Task 3 to support this round of outreach.

Round 2: feedback on initial priority managed lane segments

The second round of outreach will focus on the corridor design and pricing strategies. In this second round, travel model results showing congestion and affordability impacts of managed lanes as well as high-level costs for managed lanes and program alternatives will be shared with the public to have informed discussions about benefits, costs, and trade-offs of managed lanes concepts. The goals of round two would be to gain insights to determine preferred pricing, roadway design elements, and programmatic elements to guide revisions to concepts and initial planning for related transportation programs, which would be brought to the third round of outreach. The consultant will draw on materials and summaries developed from Task 4 (travel model findings including pricing options, congestion impacts, and revenue generation), Task 5a (conceptual drawings, preliminary cost estimates, and fact sheets summarizing benefits and trade-offs) and Task 5b (description of program alternatives and implementation and operating costs) to support this round of outreach.

Round 3: selection of priority segments for further design

The third round of outreach would bring forward revised design and pricing concepts for up to 3 managed lane segments and associated programmatic elements that reflect findings from the previous round of outreach and program scenarios to complement scenarios. The outreach round would focus on defining various programs, including relative level of importance between programmatic elements (e.g., Transportation Demand Management, transit service, etc.). The consultant and Transportation Authority staff will use findings from this round of outreach to select up to 2 priority managed lane segments for final recommendation and further design. The consultant will use materials/summaries from Task 5c to support this round of outreach.

The outreach process may also include a statistically significant survey effort to understand preferences, concerns, and level of support for a managed lanes program, representing all supervisorial districts in San Francisco.

Note that the Transportation Authority will finalize all outreach materials according to Transportation Authority design guidelines and will print all large format outreach materials.

Deliverables:

- 1. Draft and final outreach plan*
- 2. Materials to support each outreach round*
- 3. Draft and final memos summarizing findings from each outreach round*

Task 7: Technical Advisory Committee (TAC)

Transportation Authority staff will convene a TAC to collect feedback on the outreach process, technical analysis, design alternatives, and programmatic elements. The TAC will also provide lessons learned from other Bay Area managed lane projects. The TAC will be made up of representatives from San Francisco Municipal Transportation Agency, San

Francisco Planning Department, Department of Public Works, Metropolitan Transportation Commission, San Mateo (City/County Association of Governments and San Mateo County Transportation Authority), and Caltrans (District 4 and HQ). The TAC is estimated to meet up to six times throughout the project.

The consultant will assist Transportation Authority staff to identify and contact members of the TAC, plan, and schedule TAC meetings, develop meeting agendas and meeting materials, lead TAC meetings with support from Transportation Authority staff, and send out meeting notes and action items after the meeting.

Deliverables:

1. *Materials to support each outreach TAC meeting*

Task 8: Draft and Final Plan - Detailed financial analysis and toll system operation analysis

In this task, the consultant will further refine analysis and design from Task 5 to support the evaluation and next phases of design for up to 2 managed lane segments selected after round 3 of public outreach.

Subtask 8a: Financial and toll system operational analysis

The consultant will refine the financial and operational analysis conducted in Task 5 for the two leading managed lane concepts based on feedback from round 2 and round 3 of public outreach on pricing concepts, feedback from the TAC, and considerations for regional context and potential future conditions. This analysis will identify operational costs and potential for net revenue and cost recovery and outline recommendations for managed lanes pricing structure, equity/affordability programs, and transportation alternative improvements. These recommendations should include considerations for adjustments in future phases of more detailed planning and implementation and considerations for potential future conditions (e.g., transit funding, etc.). The analysis will outline the operations of the corridor including, but not limited to, payment collection, enforcement, and planning level cost estimates to build and operate the program. The cost analysis will also consider how revenues from managed lanes segments will be used to fund the associated programmatic elements of each managed lanes concept.

The consultant will also outline leading options for payment collection and enforcement based on regional context including the benefits and tradeoffs, risks, and policy requirements for each option.

Subtask 8b: Funding and implementation plan

Building off of the implementation and operational costs and revenue assumptions for the preferred managed lanes concept(s), the consultant will work with Transportation Authority staff to identify potential funding sources and define next steps for implementation, including

lead agencies, potential risks, and coordinating agencies. The implementation plan will also include an institutional analysis of governance options for any recommended designs.

The consultant will document the options and recommendations from the financial and operational analysis and funding and implementation plan in a memo.

(Optional) Subtask 8c: Detailed design

In this optional subtask, up to 2 preferred design(s) identified from Task 5 and round 3 of public outreach will be advanced to 10% design.

Deliverables:

1. *Draft and final financial and operational analysis and funding and implementation plan memo*
2. *(Optional) 10% design of leading managed lane concept(s)*