2023 Prop L 5-Year Prioritization Program

Muni Rail Core Capacity

Draft Report: February 2024

San Francisco
County Transportation
Authority

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This report was prepared by the San Francisco County Transportation Authority in coordination with the San Francisco Municipal Transportation Agency.

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1. Introduction

In November 2022, San Francisco voters approved Proposition L (Prop L), extending the ½-cent sales tax to fund transportation improvements and approving a new 30-year Expenditure Plan, which superseded the prior Proposition K Expenditure Plan. The Prop L Expenditure Plan determines eligibility for sales tax funds through a list of 28 programs. It also sets caps for the maximum amount of Prop L funds that will be available for specific programs over the 30-year Expenditure Plan period, totaling up to an estimated $2.6 billion (2020 $'s). In order to fully fund the programs, the Expenditure Plan assumes that the Prop L dollars will leverage (or match) another $23.7 billion (2020 $'s) in other federal, state, regional, and local funds for a total program cost of $26.3 billion (2020 $'s). Some of those leveraged funds will be distributed to San Francisco through funding formulas. In other cases, San Francisco project sponsors will have to aggressively compete for discretionary funds in order to fully fund the Expenditure Plan programs.

The Expenditure Plan includes a number of requirements, including the development of 5-Year Prioritization Programs (5YPPs) as a condition for receiving allocations in each program in the Expenditure Plan. The 5YPPs are intended to provide a stronger link between project selection and expected project performance, to support on time, on-budget project delivery, and optimize use of federal, state and regional matching funds. Other major benefits of the 5YPPs include:

- Provide transparency about how Prop L projects are prioritized,
- Enable public input early and throughout the planning process, and
- Improve agency coordination within and across projects at the earlier stages of the planning process.

The desired outcome of the 5YPPs is the establishment of a strong pipeline of grant-ready transportation projects that can be advanced as soon as funds (including Prop L, federal, state, and other funds) are available. The 5YPPs are critically important to help achieve the leveraging needed to fully fund the Expenditure Plan programs.

As its centerpiece, each 5YPP contains a 5-year Program of Projects (or project list), ideally including project descriptions, schedule milestones, cost estimates, and full funding plans showing Prop L funds by fiscal year and other matching funds. The Program of Projects (project list) for Muni Rail Core Capacity is contained in Section 7 of this document.

2. Eligibility and Expected Fund Leveraging

2.1 | ELIGIBILITY

Eligibility for Muni Rail Core Capacity as identified in the voter approved Prop L Expenditure Plan is as follows, with amounts shown in millions of 2020 dollars:

"Programmatic improvements that increase the reliability and capacity of Muni's rail system by supporting longer and more frequent trains. High priority shall be given to installation of a next generation communications-based train control system for the Muni surface and subway rail network. Engineering improvements include but are not limited to lengthening existing platforms to accommodate 3- and 4-car light rail trains in the Muni Metro Tunnel between West Portal and Embarcadero stations, and 3-car trains on the N Judah line. Upgrades to switches, crossovers, and other components to increase subway reliability and throughput, and modifications to subway portals to minimize conflicts. Purchase of additional light rail vehicles to increase the fleet's overall capacity and new/upgraded maintenance and/or storage facilities to house additional vehicles. Includes project development and capital costs. Sponsor Agency: SFMTA. The first $50M is Priority 1 and the remainder is Priority 2. Total Funding: $720M; EP: $57M."

SFMTA stands for San Francisco Municipal Transportation Agency. Priority 1 funds correspond to the conservative sales tax revenue forecast and Priority 2 to the optimistic forecast.

2.2 | EXPECTED FUND LEVERAGING

Leveraging Prop L funds against non-Prop L fund sources is necessary to fully fund the Expenditure Plan programs. Prop L sales tax funds will be used as seed funding for planning and project development to make projects competitive for discretionary fund sources, and to serve as local match needed to secure federal, state, regional, and other grant funding.

Based on Priority 1 (conservative forecast) funding levels, for Muni Rail Core Capacity, the Prop L Expenditure Plan assumes that for every $1 of sales tax revenue spent, on average it would be leveraged by about $13.26 in non-Prop L funds. The Transportation Authority reviews leveraging at the project and project phase (e.g. planning, design, construction) levels as well as for each Expenditure Plan program as a whole.

3. Public Engagement

Transportation Authority staff conducted public engagement to inform the development of the 5YPPs. This section summarizes feedback heard from that engagement, as well as information provided by project sponsors regarding public engagement and community support.

During the Prop L Expenditure Plan development, the Transportation Authority conducted a robust outreach process from Spring 2021 – Winter 2022. The New Expenditure Plan for San Francisco's Half-Cent Sales Tax for Transportation: Outreach Findings report can be found on the Transportation Authority website. Key themes emerged from this process including the critical need to improve transit and add additional Muni service.

As part of development of the 2023 5YPPs, the Transportation Authority conducted outreach and hosted public meetings to gather input about which specific projects and project types should be funded through Prop L in the next five years and to seek input on how to select projects for each Expenditure Plan program. The meetings included a virtual meeting for interested members of the former Expenditure Plan Advisory Committee who helped develop Prop L and representatives of equity-focused community-based organizations; a virtual town hall; and presentations at community group meetings, as requested. There was also an online multi-lingual survey and opportunities for public input through the Transportation Authority's website and at multiple Transportation Authority Community Advisory Committee and Transportation Authority Board meetings. The Transportation Authority website also includes a list of staff contacts to facilitate public engagement directly with project sponsors.

Key themes emerged from this process including the reiteration of the need to invest in transit, improve transit reliability, and focus on network expansion. To learn more about our engagement process and findings, visit sfcta.org/ExpenditurePlan

4. Performance Measures

Prop L requires the establishment of performance measures for each program in the Expenditure Plan. The intent is to demonstrate the system performance benefits of sales tax projects (e.g. reduced transit travel time), to ensure funds are being used cost effectively, and to inform programming of future Prop L funds, as well as programming and prioritization of other funds by the Transportation Authority (e.g. Transportation Fund for Clean Air, Prop AA Vehicle Registration Fee funds).

After reviewing San Francisco's Congestion Management Program and consulting with eligible sponsoring agencies, the Transportation Authority recommends that the following performance measures be applied to projects included in the Muni Rail Core Capacity 5YPP:

- Increased (peak hour) capacity (per the Federal Transit Administration's calculations)
- Improved reliability (headway adherence, travel time variability)
- Improved state of good repair

5. Project Delivery Snapshot

Since this is the inaugural Prop L 5YPP, we are looking to the prior Prop K sales tax program to assess project delivery trends for similar types of projects. Project delivery for previously-funded projects is one important consideration when we evaluate project sponsors' proposed requests for Prop L funding, particularly with respect to project readiness.

As required by the Prop L Expenditure Plan, the next 5YPP update will be informed by a citywide geographic distribution of sales tax project allocations and the distribution of projects located in Equity Priority Communities and/or benefiting disadvantaged populations.

Prop K Project Delivery

Prop K funded the Muni Metro Core Capacity Study in 2022. Table 1 shows the Project Status of open projects related to Muni Rail Core Capacity grants under Prop K.

Table 1. Prop K Project Status- Open Grants

SPONSOR	PROJECT NAME	PHASE(S) FUNDED	FY OF ALLOCATION	ALLOCATED (AS OF JUNE 2023)	REMAINING BALANCE (AS OF 1/8/24)	OPEN FOR USE?
SFMTA	Muni Metro Core Capacity Study	Planning	2021/22	$1,000,000	$762,738	

In 2022, the Transportation Authority allocated $1,000,000 to SFMTA to leverage a Caltrans Planning Grant for the Muni Metro Core Capacity Study. This Study will identify a package of projects to provide much-needed capacity and reliability improvements for Muni Metro. Together, selected strategies will provide Muni rail customers with faster, longer trains, providing a faster, more reliable quality of service. The outcome of the Study will be a prioritized package of projects that would be eligible and competitive for a Federal Transit Administration (FTA) Core Capacity

grant from the Capital Investment Grant program, a highly competitive discretionary federal grant program.

The Transportation Authority has been providing an enhanced level of project support and technical oversight for the Study for the purpose of supporting strategic alignment and fundability/deliverability of the Muni Core Capacity program. This involvement and enhanced oversight on the Project will continue through the 5YPP period as additional planning and environmental phases progress with future Prop L allocations.

The SFMTA has nearly completed Task 1 of the Muni Metro Core Capacity Study scope of work, which includes a review and summary of prior studies, subject matter expert interviews internally and at peer agencies, white papers summarizing the core potential strategies for increasing capacity, forecasts of systemwide crowding on 2035 and 2050 time horizons, a preliminary potential constraints/risk matrix, a decision-making framework, and testing of initial programs of strategies to determine which ones would adequately increase capacity to meet future demand. Additionally, the SFMTA has convened a stakeholder working group (Community Working Group) to provide early input and consultation and has held two meetings with them so far. Community group briefings on the same content are also being given upon request. Meetings will be approximately quarterly for the remainder of the study.

Task 2 of the Muni Metro Core Capacity Study, to be completed by June 2025, will include further development and refinement of the potential programs of strategies, including early analysis of tradeoffs and costs. FTA Core Capacity program criteria will be used, alongside local metrics, to ensure that proposed programs are competitive for federal funding while still meeting SFMTA's needs. A funding and implementation strategy will also be prepared to divide the most promising program(s) into phases that dovetail with the SFMTA's rail state of good repair program. Ideally, the Muni Metro Modernization program will allow state of good repair and capacity to be improved through a single program that maximizes overall federal funding eligibility. Additional concept-level work will be done on the West Portal-SF State segment of the M Oceanview line, which is likely to require longer trains. The SFMTA will continue to convene the Community Working Group during Task 2, hold meetings with other community groups as needed, perform a rider survey and/or focus group, and convene a Technical Advisory Committee that includes Caltrans as a member. Task 2 will conclude with an endorsement by the SFMTA Board of Directors, along with guidance on tradeoffs and which proposed program of projects should move forward.

The initial findings from the Task 1 work are summarized at a high level in Appendix B, the Community Working Group slide decks from the two meetings held so far.

6. Project Prioritization

The intent of establishing and documenting a methodology to select proposed projects is to provide the Transportation Authority Board, the public, and project sponsors with a clear understanding of how projects are prioritized for funding within each Prop L program. Working in consultation with project sponsors and drawing upon the Transportation Authority's experience with prioritizing projects for grant funding, Transportation Authority staff developed a set of Prop L program-wide criteria to help select projects in each of the 28 Prop L programs. In addition, most programs also have program-specific criteria to inform priorities such as improving transit reliability and travel time or replacing assets at the end of their useful lives. The Prop L program-wide criteria include:

- Project readiness
- Relative level of need or urgency
- Benefit to disadvantaged populations
- Level and diversity of community support
- Leveraging

The above criteria, along with any program-specific criteria, are scored for each proposed project. In addition, the evaluation process also considers a fair geographic distribution and cost-effectiveness.

San Francisco's Equity Priority Communities are an important factor in assessing projects and benefits to disadvantaged populations. See the map on the Transportation Authority's website: https://epc-map.sfcta.org/

The Project Scoring Table in Section 7 shows the Prop L program-wide criteria, the program-specific criteria, criteria definitions, and maximum possible points for projects proposed for the Muni Rail Core Capacity 5YPP. For the proposed project, the project sponsors first scored the project and then Transportation Authority staff reviewed and refined the scoring, as needed, to ensure consistent application of the prioritization criteria.

7. Project List

This section shows how each project proposed for funding from the Muni Rail Core Capacity program ranked based on the prioritization methodology described in Section 6; the 5-Year Program of Projects or Project List recommended for Prop L funds; and Anticipated Leveraging. The Project Information Form with details on scope, schedule, cost, funding is included in Appendix A.

As shown in the project list, we are not recommending advancing funds beyond the pay-go amounts in the Strategic Plan Baseline for the Muni Rail Core Capacity program.

Prop L Project Submissions Evaluation - EP 02 Muni Rail Core Capacity

		Prop L-Wide Criteria					Program Specific Criteria			
District	**Projects**	**Project Readiness**	**Relative Level of Need or Urgency (time sensitive)**	**Benefits to Disadvantaged Populations**	**Level and Diversity of Community Support**	**Leveraging**	**Safety**	**Increases Capacity**	**Improves Reliability**	**Total**
Citywide	Muni Metro Modernization Core Capacity	3	0	5	1	2	2	4	4	21
	Total Possible Score	5	4	5	5	4	4	4	4	35

Project Scoring Key: Projects are assessed using Transportation Authority Board adopted Prop L-wide criteria and program specific prioritization criteria. In general, the better a project meets the criteria as defined, the more points the project is assigned.

Project Readiness: Highest possible score is 5. Project is likely to need funding in the fiscal year proposed. Factors to be considered include, but are not limited to adequacy of scope, schedule, budget and funding plan relative to current project status (e.g. expect more detail and certainty for a project about to enter construction than design); whether prior project phases are completed or expected to be completed before beginning the next phase; and whether litigation, community opposition or other factors pose a significant risk to project advancement, as proposed.

Relative Level of Need or Urgency (time sensitive): Highest possible score is 4. Project needs to proceed in the proposed timeframe to enable construction coordination with another project (e.g. minimize costs and construction impacts), to support another funded or proposed project (e.g. signal conduit installation coordination with a street resurfacing project) or to meet timely use of funds deadlines associated with matching funds.

Benefits to Disadvantaged Populations: Highest possible score is 5. Project provides direct benefits to disadvantaged populations, including communities historically harmed by displacement, transportation policies, and projects that utilized eminent domain. Project directly impacts the ability of disadvantaged populations to access transportation (e.g. new or enhanced infrastructure, new service or improved service, improved safety, etc.), whether or not the project is directly located in an Equity Priority Community. Points are based on the description of benefits presented in the Project Information Form.

Level and Diversity of Community Support: Highest possible score is 5. Project has clear and diverse community support, including from disadvantaged populations and/or was developed out of a community-based planning process.

Five points for a project that 1) is in an adopted community based plan or with evidence of diverse (neighborhood level and citywide) community support and 2) has documented support from disadvantaged populations.
Three points for a project not in an adopted community based plan, but with evidence of support from both neighborhood stakeholders and citywide groups. Project does not have documented support from disadvantaged populations.
One point for a project not in an adopted community based plan, but with evidence of support from either neighborhood stakeholders or citywide groups. Project does not have documented support from disadvantaged populations.
Zero points for a project that was neither developed out of a community-based planning process nor has other forms of demonstrated community support.

Leveraging: Highest possible score is 4. Project demonstrates actual or potential leveraging of Prop L funds, as indicated in the funding plan. Factors to consider include the status of other fund sources and the likely competitiveness for securing non-Prop L funds from discretionary sources.

Safety: Highest possible score is 4. Project addresses documented safety issue(s), reduces potential conflicts between modes, and/or increases security. Additional priority for projects benefiting users of multiple modes (e.g. transit passenger, pedestrian, cyclist, motorist, transit employee).

Increases Capacity: Highest possible score is 4. Project increases passenger capacity by supporting longer and more frequent trains. Projects that meet the FTA's Core Capacity minuum threshold of a 10% capacity increase will score higher.

Improves Reliability: Highest possible score is 4. Project results in improved rail service reliability, including less variable travel times and better headway adherence. Projects that install next generation communications-based train control systems will be given high priority.

2023 Prop L 5-Year Project List (FY 2023/24 - FY 2027/28)
02- Muni Rail Core Capacity
Programming Year
Pending February 27, 2024 Board Meeting

Agency	Project Name	Phase	Fiscal Year of Allocation					Total
			2023/24	2024/25	2025/26	2026/27	2027/28	
SFMTA	Muni Metro Modernization Core Capacity	Planning/ Conceptual Engineering		$2,300,000				$2,300,000
SFMTA	Muni Metro Modernization Core Capacity	Environmental Studies (PA&ED)			$2,430,000			$2,430,000
Funds Requested in 2023 5YPP			$0	$2,300,000	$2,430,000	$0	$0	$4,730,000
Cumulative Remaining Programming Capacity			$4,730,866	$2,430,866	$866	$866	$866	$866

2023 Prop L 5-Year Project List (FY 2023/24 - FY 2027/28)
02- Muni Rail Core Capacity
Cash Flow (Maximum Annual Reimbursement)
Pending February 27, 2024 Board Meeting

Project Name	Phase	Fiscal Year of Reimbursement										Total
		2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	
Muni Metro Modernization Core Capacity	Planning/ Conceptual Engineering		$800,000	$1,500,000								$2,300,000
Muni Metro Modernization Core Capacity	Environmental Studies (PA&ED)			$328,000	$1,051,000	$1,051,000						$2,430,000
Cash Flow Requested in 2023 5YPP		$0	$800,000	$1,828,000	$1,051,000	$1,051,000	$0	$0	$0	$0	$0	$4,730,000
Cash Flow in 2023 Draft Strategic Plan Baseline		$525,652	$1,051,304	$1,051,304	$1,051,304	$1,051,304	$0	$0	$0	$0	$0	$4,730,866
Cumulative Remaining Cash Flow Capacity		$525,652	$776,955	$259	$563	$866	$866	$866	$866	$866	$866	$866

Anticipated Leveraging

The table below compares Prop L Expenditure Plan assumptions with anticipated leveraging for the recommended projects based on the Project Information Form. At time of allocation, Transportation Authority staff will again compare the actual leveraging to the expected leveraging.

Table 2. Prop L Leveraging: Expected vs. Proposed for Fiscal Years 2023/24 – 2027/28

PROJECT	EXPECTED LEVERAGING IN EP (NON-PROP L FUNDS)	ANTICIPATED LEVERAGING (NON-PROP L FUNDS)
Muni Metro Modernization Core Capacity	93.0%	20.7%
Muni Rail Core Capacity Program Total	**93.0%**	**20.7%**

The Muni Metro Modernization program is being designed to leverage local, regional, and state funds to match a potential federal CIG grant that could cover up to 50% of the capital costs. While the 5-year outlook relies heavily on Prop L to fund planning and environmental review, Prop L is likely to be a relatively small portion of the project's overall funding when design and construction phases are taken into account. Leveraging is expected to increase significantly once the Muni Metro Modernization program qualifies for a CIG grant. We will reevaluate leveraging for each project phase, including planning and environmental, at the time of allocation requests.

Appendix A.

Prop L Sales Tax Program
Project Information Form (PIF) Template

San Francisco County Transportation Authority

Project Name and Sponsor			
Project Name:	Muni Metro Modernization Core Capacity		
Implementing Agency:	SFMTA		
Prop L Expenditure Plan Information			
Prop L Program:	02- Muni Rail Core Capacity		
Prop L Sub-Program (if applicable):			
Other Prop L Programs (if applicable):			
Project Information			
Brief Project Description for MyStreetSF (80 words max):	The Muni Metro Core Capacity Program will define/identify and implement a package of projects to provide capacity and reliability improvements for Muni Metro. Together, selected projects will provide Muni rail customers a faster, more reliable quality of service. The goal is for the package of projects to be eligible and competitive for a Federal Transit Administration (FTA) Core Capacity grant from the Capital Investment Grant program.		
Project Location and Limits:	Existing Muni Metro light rail system		
Supervisorial District(s):	Citywide		
Is the project located on the 2022 Vision Zero High Injury Network ?	Yes	**Is the project located in an Equity Priority Community (EPC)?**	Yes
Which EPC(s) is the project located in?	Visitacion Valley, Bayview, Oceanview, Ingleside, Chinatown, SOMA, Tenderloin/Civic Center, Park Merced		
Detailed Scope (may attach Word document): Please describe in detail the project scope, any planned community engagement, benefits, considerations for climate adaptation and resilience (if relevant), and coordination with other projects in the area (e.g. paving, Vision Zero).	See Attachment 1 Detailed Scope.		
Attachments: Please attach maps, drawings, photos of current conditions, etc. to support understanding of the project.	Attachment 1: Detailed Scope Attachment 2: Concept map from the ConnectSF Transit Strategy Attachment 3: Muni Metro Modernization Program Graphic		
Type of Environmental Clearance Required:	TBD		
Coordinating Agencies: Please list partner agencies and identify a staff contact at each agency.	Caltrans (current contact: Becky Frank), CPUC (contact to be determined during Planning Study), SFCTA (Jesse Koehler), and other agencies as needed		

Project Delivery Milestones	Status	Work	Start Date		End Date	
Phase	**% Complete**	**In-house - Contracted - Both**	**Quarter**	**Fiscal Year (starts July 1)**	**Quarter**	**Fiscal Year (starts July 1)**
Planning/Conceptual Engineering	10%	In-house and Contracted	Q3-Jan-Feb-Mar	2021/22	Q4-Apr-May-Jun	2024/25
Environmental Studies (PA&ED)	0%	In-house and Contracted	Q1-Jul-Aug-Sep	2025/26	Q4-Apr-May-Jun	2027/28
Right of Way						
Design Engineering (PS&E)						
Advertise Construction						
Start Construction (e.g. Award Contract)						
Operations (i.e. paratransit)						
Open for Use						
Project Completion (means last eligible expenditure)						

Notes

Prop L Sales Tax Program
Project Information Form (PIF) Template

San Francisco County Transportation Authority

Project Name:	Muni Metro Modernization Core Capacity

Project Cost Estimate		**Funding Source**		
Phase	**Cost**	**Prop L**	**Other**	**Source of Cost Estimate**
Planning/Conceptual Engineering	$ 4,800,000	$ 2,300,000	$ 2,500,000	Prior work
Environmental Studies (PA&ED)	$ 2,430,000	$ 2,430,000		Prior work
Right of Way	$ -			
Design Engineering (PS&E)	$ -			
Construction	$ -			
Operations (i.e. paratransit)	$ -			
Total Project Cost	$ 7,230,000	$ 4,730,000	$ 2,500,000	
Percent of Total		**65%**	**35%**	

Funding Plan - All Phases - All Sources

Cash Flow for Prop L Only (i.e. Fiscal Year of Reimbursement)

Fund Source	**Prop L Program**	**Phase**	**Fund Source Status**	**Fiscal Year of Allocation (Programming Year)**	**Total Funding**	**2023/24**	**2024/25**	**2025/26**	**2026/27**	**2027/28**
Prop K		Planning/Conceptual Engineering	Allocated	2021/22	$ 1,000,000					
Caltrans Planning Grant		Planning/Conceptual Engineering	Allocated	2022/23	$ 500,000					
TIRCP		Planning/Conceptual Engineering	Allocated	2023/24	$ 1,000,000					
Prop L	02- Muni Rail Core Capacity	Planning/Conceptual Engineering	Planned	2024/25	$ 2,300,000		$ 800,000	$ 1,500,000		
Prop L	02- Muni Rail Core Capacity	Environmental Studies (PA&ED)	Planned	2025/26	$ 2,430,000			$ 328,000	$ 1,051,000	$ 1,051,000
				Total By Fiscal Year	**$ 7,230,000**	**$ -**	**$ 800,000**	**$ 1,828,000**	**$ 1,051,000**	**$ 1,051,000**

Notes

The SFCTA will continue to have an enhanced level of project support and technical oversight for the Project, which will inform the next generation of major rail core capacity transit projects for the SFMTA and will position projects to apply for the Federal Transit Administration Capital Investment Grant Core Capacity program, a highly-competitive discretionary federal grant program. SFCTA's involvement and enhanced oversight, to be funded by Prop L appropriations, is for the purpose of supporting strategic alignment and fundability/deliverability of the Core Capacity program. SFCTA's oversight will be consistent with requirements for SFCTA Enhanced Oversight of the Prop K-funded Muni Metro Core Capacity Study; SFCTA's oversight approach may be updated at time of Prop L allocation, as necessary, to reflect the Project's phase of development and/or delivery.

Prop L Supplemental Information Please fill out each question listed below (rows 2-8) for all projects.	
Project Name	***Muni Metro Modernization Core Capacity***
Relative Level of Need or Urgency (time sensitive)	The ConnectSF Transit Strategy projected that San Francisco's growth patterns will result in ridership demand on Muni Metro that reaches and exceeds 2019 levels over the next three decades. The Muni Metro system struggled to carry ridership demand in 2019 due to capacity limitations and state of good repair issues. These problems will return if the Core Capacity program is not implemented on a quick timeline. Additionally, some of the capacity expansion work that would be done as part of the program would also address state of good repair issues. Without timely correction of the state of good repair issues, service reliability will suffer. Project delivery times can be upward of 15 years, meaning that the planning will need to proceed in the near term in order for the corridor to be equipped to serve the anticipated demand in future years. The recently-adopted Housing Element anticipates that the areas served by Muni Metro will grow quickly, as much of San Francisco's planned growth will occur in corridors served by the system. Federal funding programs and funding availability change over time, and it is strategically preferable to advance projects to a shovel-ready stage as early as possible so that they are well-positioned when funding opportunities arise. Construction industry costs have been trending upward quicker than in previous years, so there is potential savings in advancing the project to construction earlier rather than later.
Prior Community Engagement/Level and Diversity of Community Support (may attach Word document):	Community outreach was conducted as part of the ConnectSF Transit Strategy, which included virtual workshops, stipends to community groups to help gather input from constituents (in the absence of in-person outreach due to COVID restrictions), virtual community group presentations, and online surveys. Additional community outreach is being conducted as part of the Muni Metro Modernization Core Capacity Planning Study. Outreach is being conducted earlier than usual in the planning process as part of the ongoing Planning Study. The early outreach as part of that study includes a community working group, a rider survey, a virtual open house, and individual community group meetings. The subsequent phases of work proposed for funding under Prop L would have a more robust outreach effort that is customary for the Planning phase, such as community open houses, virtual presentations, individual community group meetings, surveys, and other events.
Benefits to Disadvantaged Populations and Equity Priority Communities	The program would ensure that Muni Metro is able to provide adequate capacity and more reliable service to Equity Priority Communities throghout San Francisco. Since the system serves many regional destinations within San Francisco, residents of Equity Priority Communities throughout the Bay Area would also benefit from these connections. Many Equity Priority Community members have cited crowding and reliability issues on Muni Metro as a key concern for many years, and this work would holistically correct the root causes of those concerns by modernizing the system and expanding its capacity.
Compatability with Land Use, Design Standards, and Planned Growth	Yes

San Francisco Transportation Plan Alignment (SFTP)	Environmental Sustainability, Equity, Accountability and Engagement, Economic Vitality, Safety and Livability
	The project is included in the SFTP 2050, having been identified in the ConnectSF Transit Strategy, which uses the same goals as the SFTP. The project would encourage greater use of transit to reach growing areas of San Francisco, including the westside, where the Housing Element anticipates substantial growth in coming years; would be based on robust community engagement and partnerships with community organizations; would support economic activity, sustainable land use growth, and enhanced job access; and would provide more transportation alternatives to driving. The project would also address long-standing requests from community members to resolve crowding and reliability issues on Muni Metro. Muni Metro capacity expansion was one of two key recommendations of the MTC Core Capacity study.

The next section includes criteria that are specific to each Expenditure Plan program. The questions that are required to be filled out for each program will auto-populate once the Prop L program is selected on the Scope & Schedule tab.	
02- Muni Rail Core Capacity	
Safety	The project would provide opportunities to improve safety along segments of the High Injury Network in conjunction with street improvements to enhance rail capacity and reliability. Many of the capacity improvements being considered in the Muni Metro Modernization (MMM) Core Capacity study will also improve safety, particularly on older parts of the system. Additionally, urgent parts of SFMTA's state of good repair program will be included in the MMM Core Capacity program, since some elements of the system that will need to be replaced or upgraded for capacity reasons are also old and need of replacement due to age. This work will help ensure that aging infrastructure is repaired or replaced before safety concerns develop.
Increases Capacity	Yes, the project would potentially increase capacity beyond 10% by increasing train lengths on the N Judah and Embarcadero-SFSU segments of the system to 3 cars, and possibly 4 cars on some segments, among other strategies to be studied. Current train lengths along these segments range from 1 to 2 cars. The project would also help increase reliability to the point where more frequent trains can be operated in the Market Street subway. Implementation of the Train Control Upgrade Project would be key to enabling increased frequency and reliability. While that project is already moving forward ahead of the Muni Metro Modernization Core Capacity Planning Study, it is possible that an eventual FTA Core Capacity grant application for Muni Metro Modernization could include some of the later phases of the Train Control Upgrade Project.
Improves Reliability	The project would improve reliability and travel time variability through extensive transit priority improvements on the West Portal-SFSU segment of the system, which would act as a trunk line into the Market Street Subway. The Core Capacity federal grant application could also support portions of other projects that would similarly improve reliability systemwide, such as the Train Control Upgrade Project and Subway Renewal.
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Attachment 1. Muni Metro Modernization Core Capacity Detailed Scope

Muni Metro Core Capacity is a capital program that will simultaneously: 1) expand the capacity of the existing Muni Metro rail system to accommodate future projected growth in ridership, and 2) replace and modernize aging rail infrastructure. Addressing these two needs together in a single capital program allows the work to be completed more cost effectively.

The ongoing Muni Metro Core Capacity Planning Study, which is funded by a Prop K and a Caltrans planning grant, will identify projects to provide much-needed capacity and reliability improvements for Muni Metro and state of good repair projects that are eligible to be funded as capacity expansion work. When implemented, the selected strategies will provide Muni rail customers with a faster, more reliable quality of service. The outcome of the Study will be a prioritized package of projects that would be eligible and competitive for a Federal Transit Administration (FTA) Core Capacity grant from the Capital Investment Grant program. The new Prop L funding would be used to complete the Planning Phase work subsequent to the ongoing Core Capacity Planning Study, as well as the initial portions of the Environmental Phase.

The Muni Metro Core Capacity program is focused on capital needs that are 10+ years in the future. The ongoing Muni Metro Core Capacity Study will develop a package of capital projects to increase capacity and reliability and serve future ridership demand. The selection of projects will be based on an evaluation that will consider the ability to accommodate a range of potential long-term future service scenarios to meet anticipated demand. The Muni Metro Core Capacity Study will not make recommendations about nearer-term system improvements or service. Nearer-term rail improvements and potential service changes, including community outreach associated with that work, would be handled through SFMTA's existing Service Planning and Muni Forward programs.

The Muni Metro Core Capacity program would increase capacity beyond 10% (which is a FTA requirement for the Core Capacity Capital Investment Grant program) potentially by increasing train lengths on the N Judah and Embarcadero-SFSU segments of the system to 3 cars, and possibly 4 cars on some segments, among other strategies to be studied. Current train lengths along these segments range from 1 to 2 cars. The Muni Metro Core Capacity program would also help increase reliability to the point where more frequent trains can be operated in the Market Street subway. Implementation of the Train Control Upgrade Project would be key to enabling increased frequency and reliability. While that project is already moving forward ahead of the Muni Metro Modernization Core Capacity Planning Study, it is possible that an eventual FTA Core Capacity grant application for Muni Metro Modernization could include some of the later phases of the Train Control Upgrade Project.

The evaluation framework for the program, which will be used to select projects to include in the program, is being developed as part of the ongoing Core Capacity Planning Study. The evaluation will include factors such as cost effectiveness, the degree to which the projects improve capacity and state of good repair, the degree to which the projects advance other goals such as accessibility and customer experience, eligibility for the FTA Core Capacity grant program, and community feedback. Outreach will play an important role in the evaluation framework. The most promising combinations of projects will be evaluated and screened for further study before final decisions about whether to implement them are made.

Outreach is being conducted earlier than usual in the planning process as part of the ongoing Planning Study. The early outreach as part of that study includes a community working group, a rider survey, a virtual open house, and individual community group meetings. The subsequent phases of work proposed for funding under Prop L would have a more robust outreach effort that is customary for the Planning phase, such as community open houses, virtual presentations, individual community group meetings, surveys, and other events.

Following the ongoing Planning Study, additional conceptual engineering work would be performed to develop alternatives to the level of detail needed to commence environmental review. The additional conceptual work would include preliminary design of program components recommended by the Planning Study, more detailed cost estimates, confirmation of project phasing, development of the FTA Core Capacity entry into Project Development package, community engagement, and coordination with partner and permitting agencies. The agency would also develop and maintain a risk assessment register for the program. The planning phase work would be coordinated with the San Francisco Transportation Plan 2050 + (SFTP 2050+).

The SFMTA would, with anticipated consultant assistance, conduct environmental review under CEQA and NEPA as required. The scope and type of environmental review will be determined during the proposed Planning phase work. It is possible that the program may be handled as separate discrete projects during environmental review, depending on guidance from potential funders and agencies with jurisdiction. Depending on the type of environmental review required, tasks may include: analysis of potential impacts, identification of mitigation measures or project modifications, additional conceptual engineering to address questions raised in the environmental analysis, additional community and agency engagement throughout, and readying the project for advancement into a full design phase. The Prop L amount potentially would cover a portion, but not all, of the required funds for the environmental phase, depending on the level of environmental review determined to be necessary.

Modern Muni Metro

Expand capacity, improve performance, and bring major components into a state of good repair.

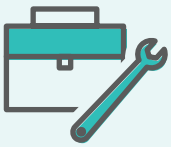
HOW IS THIS PROGRAM EQUITABLE?

Equitable investment:

Who lives within a short distance of Muni Metro?

People with low incomes	People in Equity Priority Communities
73,000	**110,000**

Within a half-mile of the project, 2019. Source: ACS



Equitable outcomes:

How many total jobs can be reached by transit, in under 45 minutes?

740,000	**790,000**

Future Bay Area jobs, by San Francisco residents with low incomes or in Equity Priority Communities. Source: SF-CHAMP

WHY IS THIS PROGRAM IMPORTANT?

- Muni Metro is a core part of the transit network and carried nearly a quarter of Muni riders in 2019.[23] About 40% of low-income residents and people in Equity Priority Communities live within a 1/2 mile of Muni Metro stations.[24]
- In 2019, less than half of all Muni Metro trips were on time.[25] Passengers experience delays due to an outdated train control system, trains stuck in traffic on the surface, and backups from all surface lines converging in the subway.
- To improve the speed and reliability of your ride, we plan to enhance and expand critical components, increase transit priority, and optimize service patterns. Creating predictable, evenly spaced trains that arrive at regular intervals helps avoid overcrowding and long waits.
- A modern rail system would relieve crowding in places like the Market Street subway and provide a comfortable ride that you can depend on.

WHAT ARE THE NEXT STEPS?

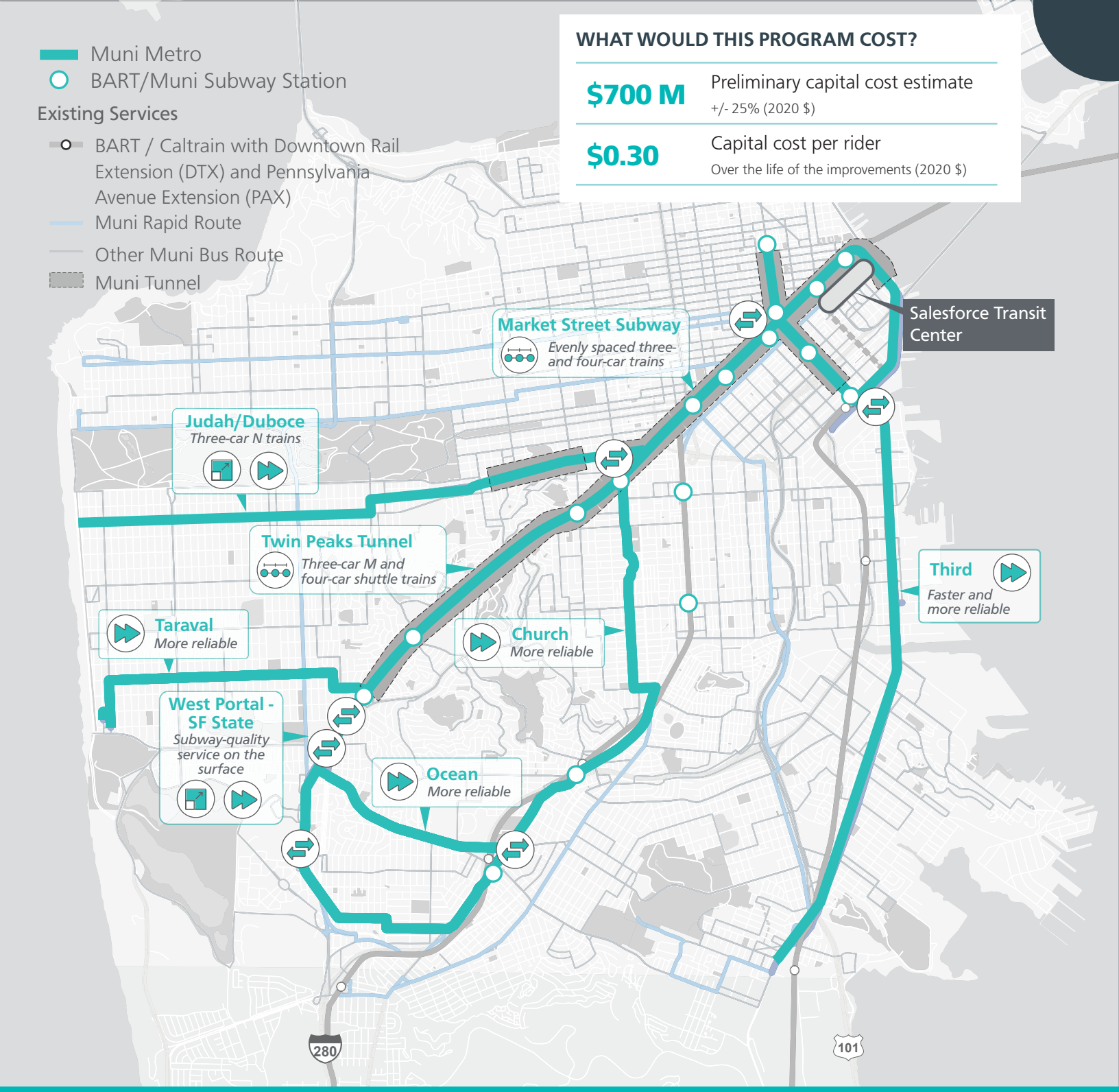
- Install a next-generation communications-based train control system to keep trains evenly spaced and prevent a long wait for your train.
- Reconfigure the system so that longer trains run in the subway, including four-car shuttles. The subway could carry 30% more people, depending on service configuration, so that there is space for you when your train arrives.[26]
- Improve surface lines through Muni Forward, so that your train moves efficiently through places like West Portal; there are more wheelchair-accessible stops on all lines; and three-car N Judah trains relieve crowding.
- Complete the Subway Renewal Program to make subway stations modern, comfortable, and accessible.

HOW MANY DAILY TRANSIT TRIPS WOULD BE TAKEN ON MUNI METRO?

300,000

(+/- 20%)

Future daily (weekday) transit trips on the project. Source: SF-CHAMP
There were approximately 170,000 daily weekday trips on Muni Metro in 2019.



HOW WOULD THIS PROGRAM IMPROVE YOUR EXPERIENCE AS A TRANSIT RIDER?

Less waiting for the train

A modern train control system and a new service pattern mean predictable arrivals in the subway and on the surface

More capacity

Track improvements and longer platforms enable three-car trains and less crowding

Faster, reliable service

Expanding transit priority makes trains faster and more reliable

Convenient connections

High-quality transfer facilities let you connect seamlessly between lines

Attachment 3.

Muni Metro Modernization

Subway Renewal
(one-time state of good repair capital investment and ongoing lifecycle management)

Muni Forward Surface Rail
(enhancement and expansion capital investment)

Light Rail Vehicle (LRV) Fleet Management and Facility Upgrades
(LRV lifecycle management and future facilities needs)

Train Control Upgrade Project

Muni Metro Core Capacity Planning Study
(system capacity analysis)

Appendix B.

Muni Metro Capacity Study

Community Working Group Kick-off

November 2

Meeting agenda items

1. Project team introductions
2. Community Working Group member introductions and ice breaker
3. Muni Metro Capacity Study overview
4. Adjourn

Project team introductions

Team Member	Role(s)
Kansai Uchida	Project Manager
Liz Brisson	Planning support
David Sindel	Planning support
Cassie Halls	Planning support
Mariana Maguire	Outreach lead
Erin McMillan	Outreach support
Chuck Morganson	Consultant Project Manager
Chester Fung	Consultant Deputy Project Manager
Krute Singa	Funding Partner (MTC)
Tyler Brown	Funding Partner (Caltrans)

Introductions and ice breaker

- Where do you live/work?
- What's your connection to Muni Metro? (e.g. live/work near one of the lines, regular rider, etc.)
- What perspectives do you bring? Stakeholders you represent?
- Favorite thing about San Francisco

Muni Metro today

- San Francisco's light rail system is the 2nd busiest in the nation
- Serves major destinations throughout the city including downtown, SFSU, UCSF, Chase Center, Oracle Park, and many neighborhoods
- Most congested transit corridor in the Bay Area, after the Transbay Tube
- Ridership anticipated to grow by 80% to 300,000 by 2050

Muni Metro system challenges

- Aging system with original equipment beyond useful life
- Crowding leads to train congestion and unreliable service
- More growth anticipated on the west side of San Francisco
- Subway stations sized for longer trains, but surface stations limit trains to 1-2 cars

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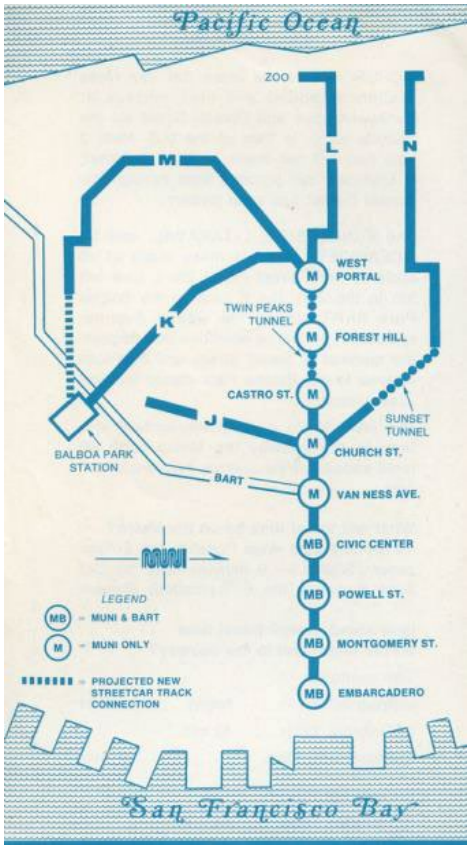
How did we get here? Late 1800s to mid-1900s

Streetcar Era, including Twin Peaks and Sunset Tunnels

How did we get here? 1970s to 1980s

BART construction, including construction of Market Street subway for Muni and transition from streetcar to light-rail vehicles



What is the Muni Metro?
That portion of the new Municipal Railway which will operate in the upper level of the Market Street subway and in Twin Peaks Tunnel out to West Portal will be the Muni Metro.

The Muni Metro is a subway-surface system. In the subway the Metro cars are rapid transit; on the surface they are streetcars.

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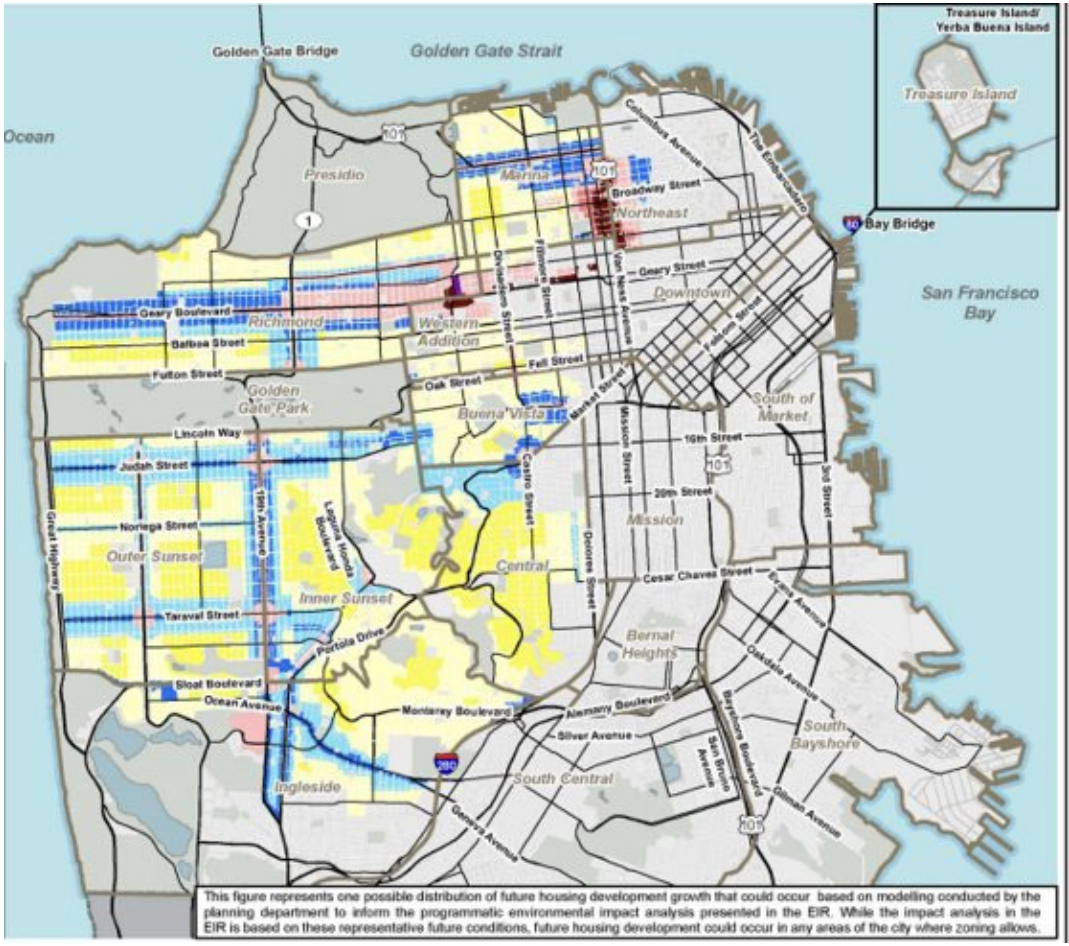
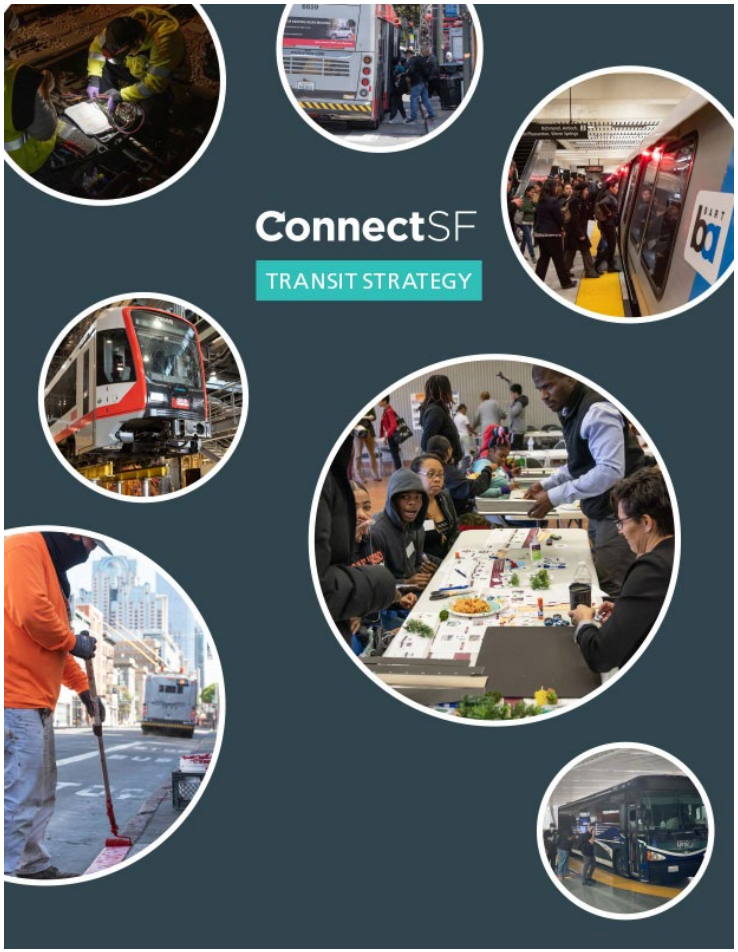
2023 SF Housing Element

- Housing Element adopted by Board of Supervisors, Mayor, and State in early 2023
- More housing is coming to western San Francisco
- Much of the 82,000 expected new units citywide will be in areas served by Muni Metro
- Muni Metro capacity will need to expand to carry the additional riders



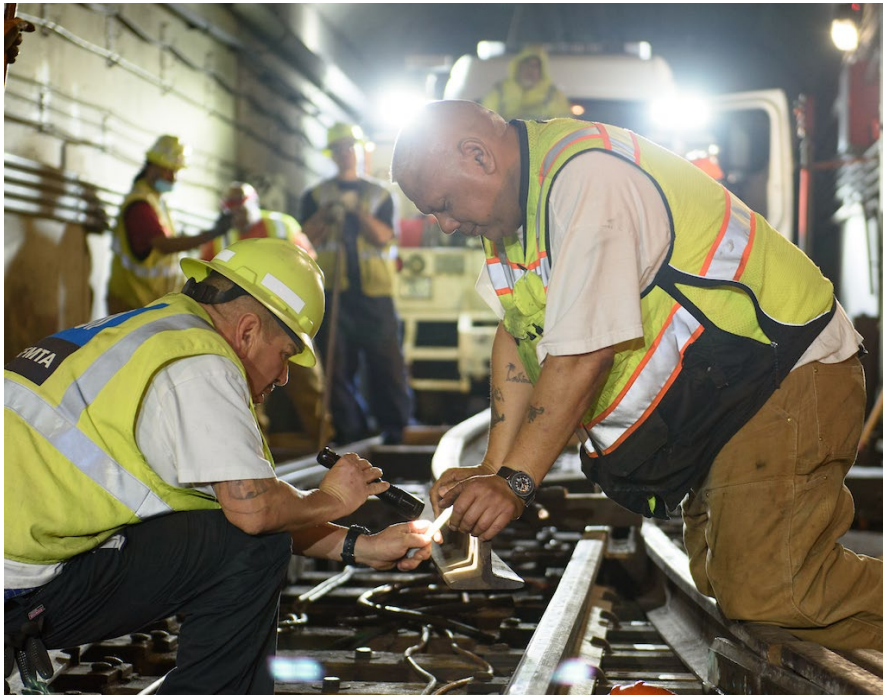
Foundation for Muni Metro Capacity Study: ConnectSF Transit Strategy



- 50-year Transit Strategy for San Francisco
- One of four major investment areas prioritized is to renew and modernize Muni Metro
- Muni Metro Capacity Study will identify the package of improvements needed to accomplish this
- Built on a prior Metropolitan Transportation Commission studies identifying Muni Metro as one of the most congested corridors in the Bay Area

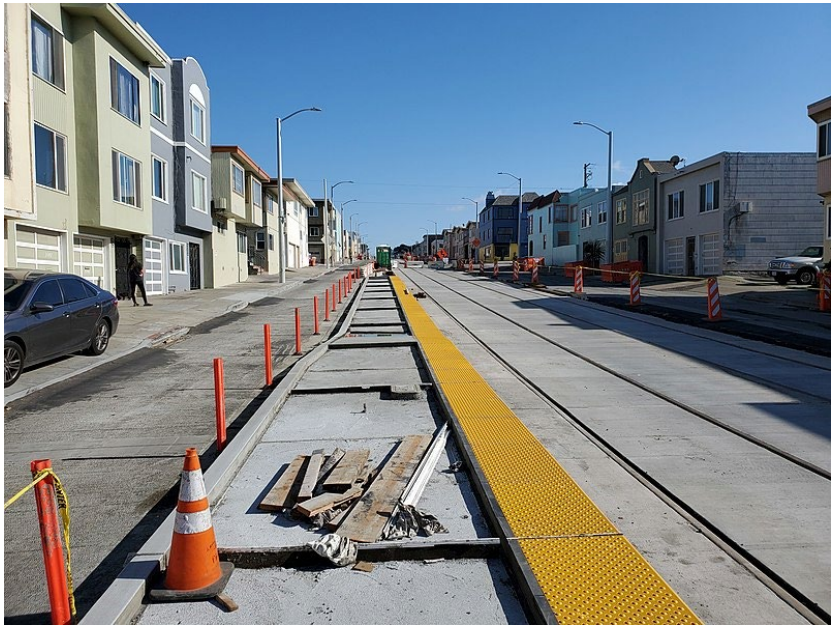
Work already underway: State of Good Repair

- Train Control Upgrade Project
  - Replaces outdated system (runs on floppy disks!)
  - Allows more trains with higher reliability
  - Reduces avoidable delays, especially at portals
- Subway Renewal Program
  - 10-year plan for subway investment
  - Replace and upgrade 40-year-old tracks
  - Modernize power supply system
  - Station enhancements



Work already underway: Muni Forward projects on surface rail

- Focus on near term needs including boarding safety, transit delay reduction, better reliability
- L Taraval in construction
- J Church, K Ingleside, M Ocean View (Broad/ Randolph segment), N Judah, T Third Street in planning



Role of Muni Metro Capacity Study

Answer the following questions:

1. How much more capacity is needed?
    - When?
    - Where?
2. How much more capacity do planned strategies “buy” us?
3. What other strategies should be added to our plans to accommodate future needs?
4. What is the most strategic way to fund these improvements?

Role of Community Working Group

- Provide input and community knowledge to SFMTA staff and help staff understand community priorities and trade-offs
- Staff will work with Community Working Group members to discuss and consider the strategies and tradeoffs presented in the Study, and how best to balance these to meet the city's future Muni Metro needs

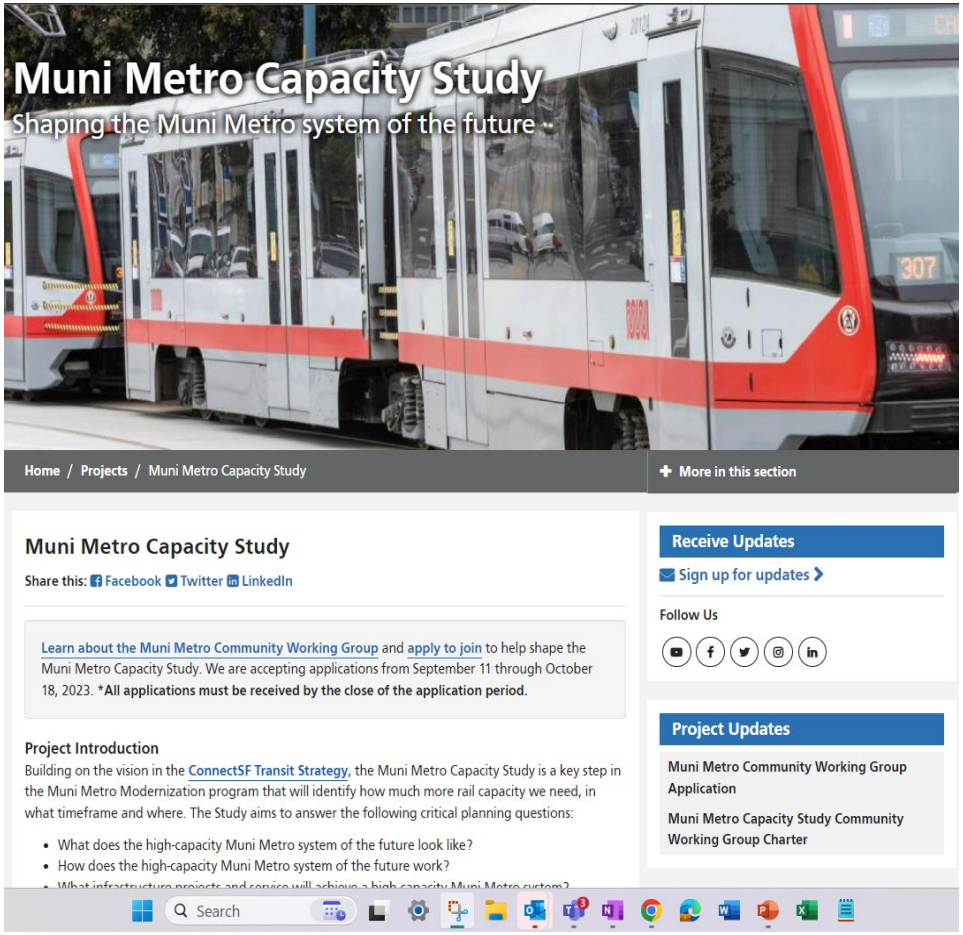
Group guidelines

- SFMTA staff will circulate meeting invitations and meeting materials in advance of meeting
- SFMTA staff will facilitate meetings and provide opportunities for questions
- Community Working Group roles and responsibilities:
    - RSVP for and strive to attend all meetings
    - Review presentations and respond to questions posed by project team
    - Inform project staff of community perspectives, priorities and concerns
    - Engage in respectful, constructive discussions

Additional study outreach

In addition to the Community Working Group, additional outreach is planned such as:

- Project website SFMTA.com/MetroStudy where all information like the presentation slides will be shared
- Email updates
- Muni rail rider focus group
- Presentations to relevant groups/organizations
- Strategies/proposals advanced through the Study would include more focused outreach efforts



Roadmap of future meeting topics

Meeting #1 (today, November 2): Introduction

Meeting #2 (Thursday, November 16): Project need and potential solutions to be studied

Potential subsequent meeting topics (approximately quarterly):

- Vision development for future rail system
- Benefits and tradeoffs of potential capacity expansion strategies
- Range of potential packages of systemwide improvements
- Funding and implementation timeline, phasing of improvements
- Limited discussion of specific improvements on key surface lines

Future meetings

- Will be held in hybrid format at 1 South Van Ness and via Microsoft Teams
- Poll will be conducted to select most convenient dates/times for additional meetings after Meeting #2 (November 16)
- Staff will consult community working group about desired discussion topics for future meetings

Discussion questions

1. What questions do you have about the Capacity Study and/or the role of the Community Working Group?
2. Is there additional information that would be helpful to provide at future meetings beyond what we have already planned that would encourage discussion and feedback?

Adjourn

Thank you!

Next meeting is hybrid format on

Thursday, November 16, 2023 at 6pm

1 South Van Ness, 7th Floor, Union Square conference room and online via Microsoft Teams

SFMTA

Muni Metro Capacity Study

Community Working Group Meeting #2

November 16

Agenda

1. Introductions/ice-breaker
2. Re-cap of meeting roadmap/Study purpose
3. Existing and future capacity forecasts
4. Initial capacity improvement ideas and review

Introductions and ice breaker

For everyone

- What's your name?
- Share what plans you have for the upcoming holiday season.

If you missed the first meeting, please also share:

- Where do you live/work?
- What's your connection to Muni Metro? (e.g. live/work near one of the lines, regular rider, etc.)
- What perspectives do you bring? Community or group you represent?

Meeting Roadmap

Meeting #1 (November 2): Introduction

Today **Meeting #2** (Thursday, November 16): Project need and potential solutions to be studied

Potential subsequent meeting topics (approximately quarterly):

- Vision development for future rail system
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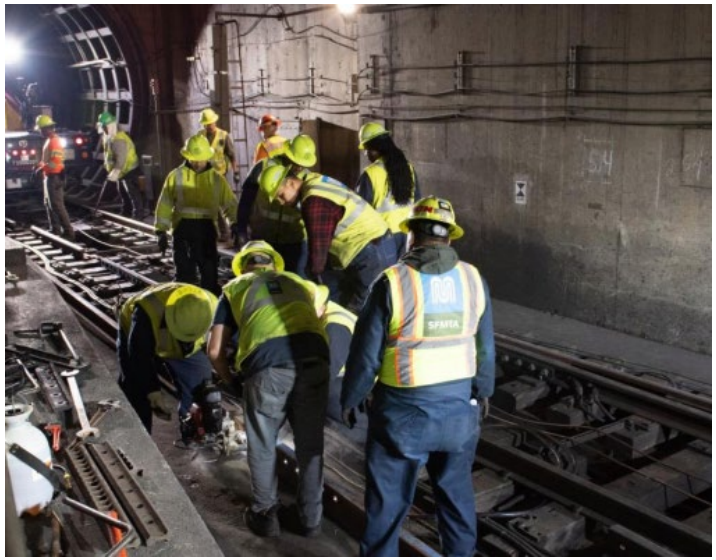
Role of Muni Metro Capacity Study

Answer the following questions:

1. How much more capacity is needed?
    - When?
    - Where?
2. How much more capacity do planned strategies “buy” us?
3. What other strategies should be added to our plans to accommodate future needs?
4. What is the most strategic way to fund these improvements?

Playing the long game for major funding: FTA's Core Capacity Grant Program

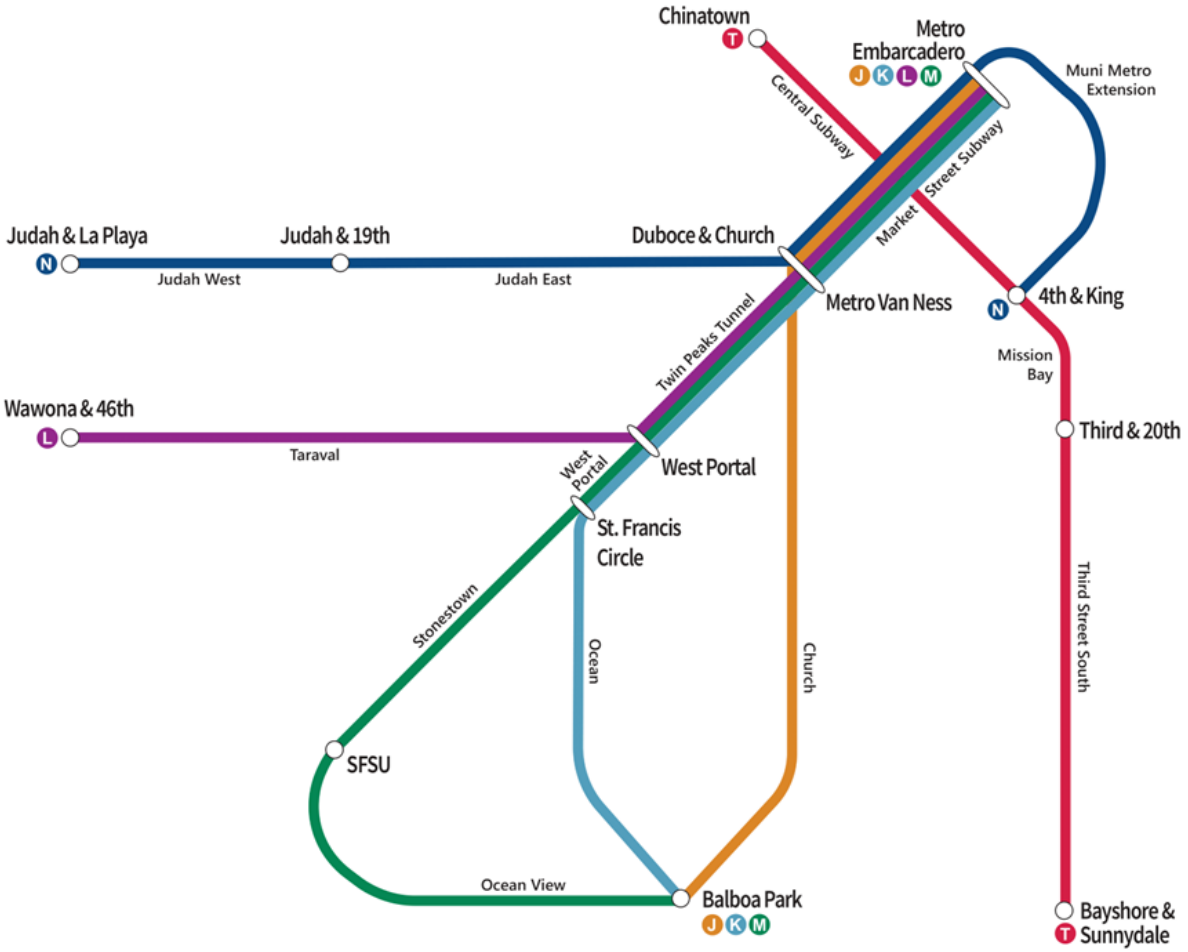
- Provides federal funding to expand the capacity of existing transit systems that are over capacity
- Application process can take 4-6 years to prepare/apply/be awarded
- Up to $1 Billion grants are distributed (half project cost)
- Ideal for systems like Muni Metro, which need to simultaneously address capacity and aging infrastructure



Muni Metro system demand forecasting approach

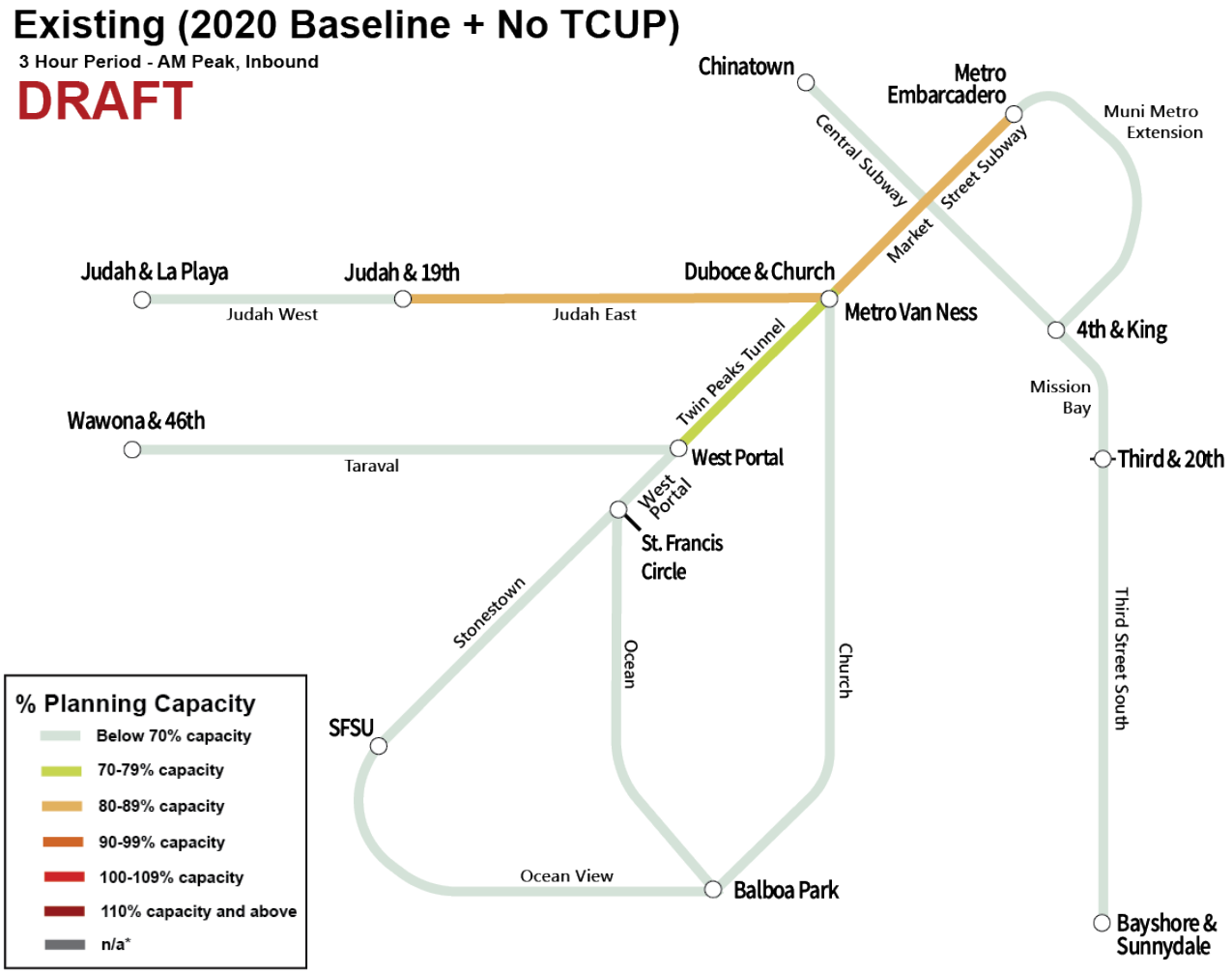
- Travel model outputs from San Francisco's activity-based travel model, SF-CHAMP
- Uses observed travel patterns, detailed representations of San Francisco's transportation system, population and employment data, transit boardings, roadway volumes, and number of vehicles available to predict future travel
- Each Muni Metro system segment's future capacity represented by comparing:
    - **Demand**: SF-CHAMP model outputs for 3-hour morning rush hour
    - **Capacity**: 139 people per car (-3.7 ft^2/standing passenger) * trains per hour * length of train (e.g. 1 vs. 2-car) 3 hour rush hour

Existing Muni Metro system



Today's system: generally, not overcapacity

Fullest segments: 1) N-Judah to 19th Avenue 2) Twin Peaks Tunnel



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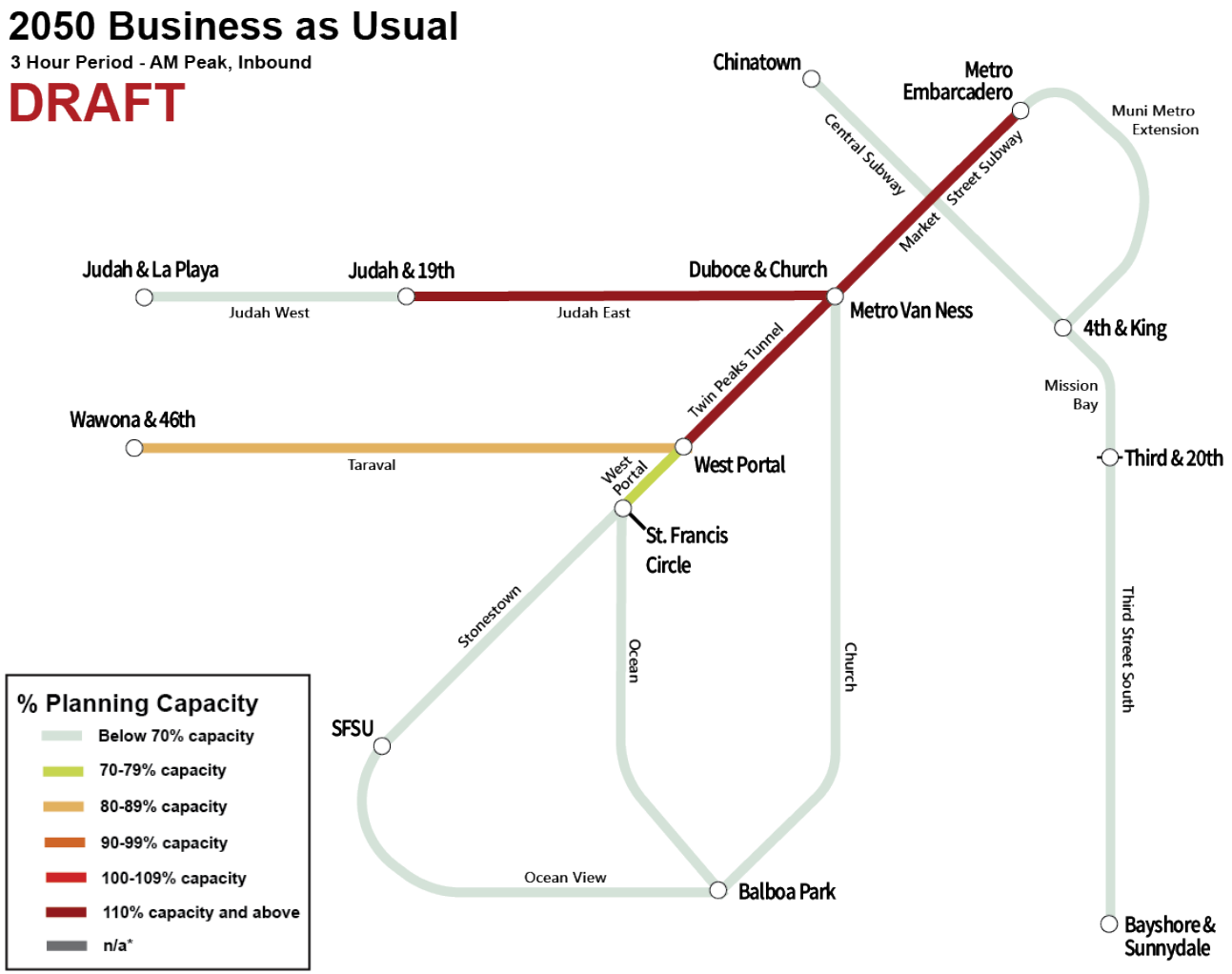
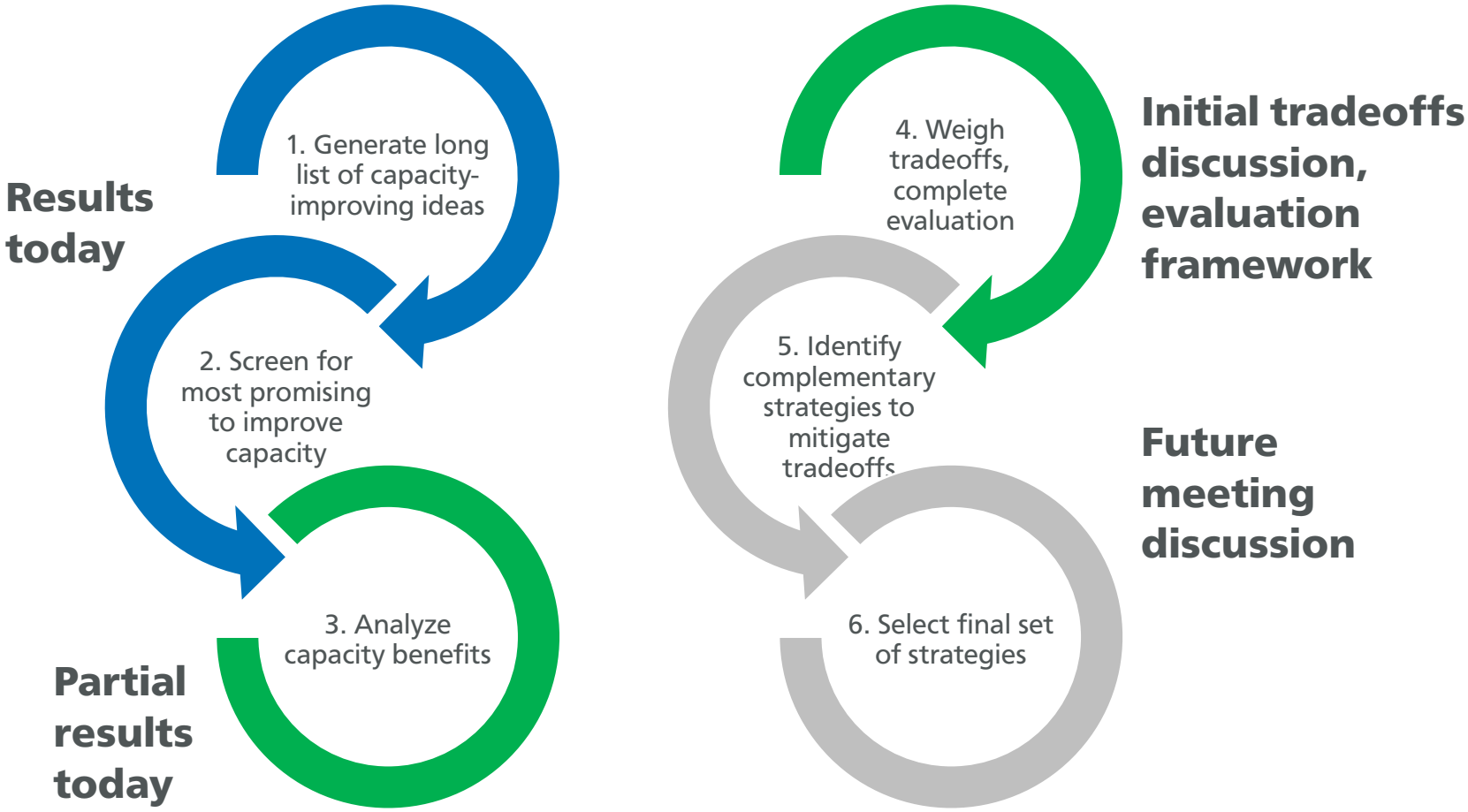
By 2050, segments forecast overcapacity

1) Market Street Subway; 2) Twin Peaks Tunnel; 3) N-Judah to 19th Avenue



*includes capacity benefits anticipated from the Train Control Upgrade Project

Capacity strategy development and screening approach



1. Long list of capacity-improving ideas

Ideas generated via past study review including:

- SFMTA Rail Capacity Strategy
- MTC Core Capacity Planning Study
- ConnectSF Transit Strategy
- Past 19th Avenue/M-Ocean View studies

Potential Capacity-Improving Strategies

1. 3-car N Judah trains
2. 3- or 4-car trains between SF State and downtown
3. Different vehicles for better performance on surface-only lines
4. Low-floor trains for all lines
5. Transit-only/-preferential streets
6. Signal priority/pre-emption
7. New turnback track at Harrison Street
8. Service restructuring
9. Grade separation at key locations
10. Coupling trains at portals

(More information on each strategy at end of slide deck)

2. Screen for most promising to improve capacity

Greatest potential	Further Study	Low potential	Complementary
• Train Control Upgrade Project (TCUP), assumed in baseline • 3-cars to La Playa/Judah • 3- or 4-cars between Downtown and SF State • Service restructuring	• Different vehicles for surface-only lines • Low-floor trains for all lines • New turnback track at Harrison Street • Grade separation at key locations	• Coupling trains at portals	• Transit-only/preferential streets • Transit signal priority/pre-emption

2. Screen for most promising to improve capacity

Greatest potential	Further Study	Low potential	Complementary
• Train Control Upgrade Project (TCUP), assumed in baseline • 3-cars to La Playa/Judah • 3- or 4-cars between Downtown and SF State • Service restructuring	• Different vehicles for surface-only lines • Low-floor trains for all lines • New turnback track at Harrison Street • Grade separation at key locations	• Coupling trains at portals	• Transit-only/preferential streets • Transit signal priority/pre-emption

Strategy's preliminary capacity benefits analysis results presented today.

3- and 4-car trains

What is it? Operate 3-car train to Judah/La Playa and 3- or 4-car train between Downtown and SF State.

Benefit: Could provide 50-100% more capacity on these lines.

Tradeoff: May require lengthening station platforms, consolidating stops, and/or closing intersections.

Reminder: for consideration to solve future 20+ year capacity needs. This Study will not be a decision-making phase for infrastructure plans to support longer trains, which would require extensive future outreach and additional analysis.

Route restructuring

What is it? Remove one or more 1- to 2-car Muni Metro rail lines from the subway to allow their scheduled slots in the subway to be used by 3- to 4-car trains

Benefit: Could alleviate crowding by providing 2-3 times as much capacity per train slot

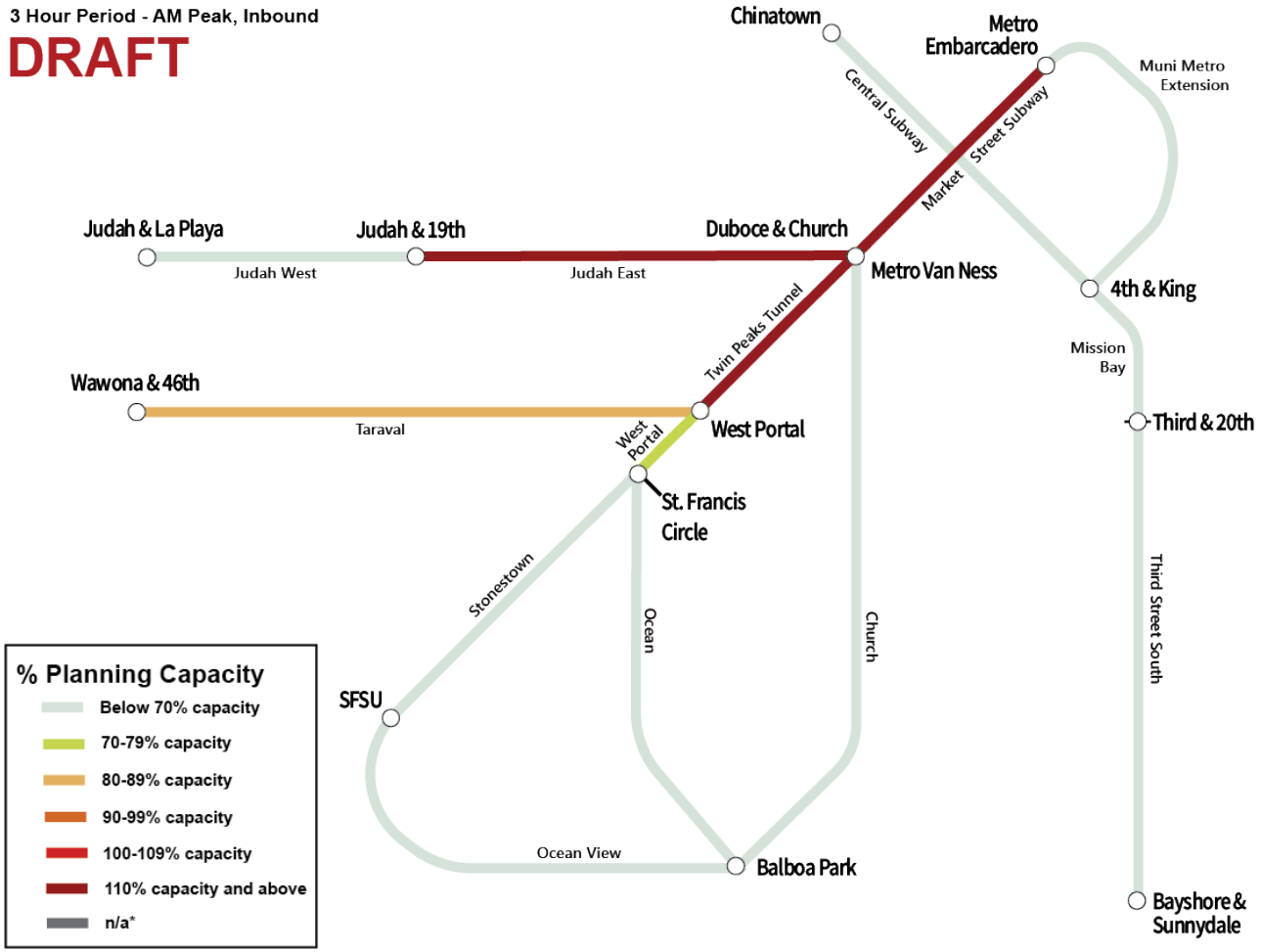
Tradeoff: Some riders would need to transfer (more travel time, need to physically change locations, etc.)

Reminder: for consideration to solve future 20+ year capacity needs. This Study will not be a decision-making phase for any service restructuring ideas, which would require extensive future outreach and additional analysis.

2050 Business as Usual

Segments forecast overcapacity:

1) Market Street Subway;
2) Twin Peaks Tunnel;
3) N-Judah to 19th Avenue

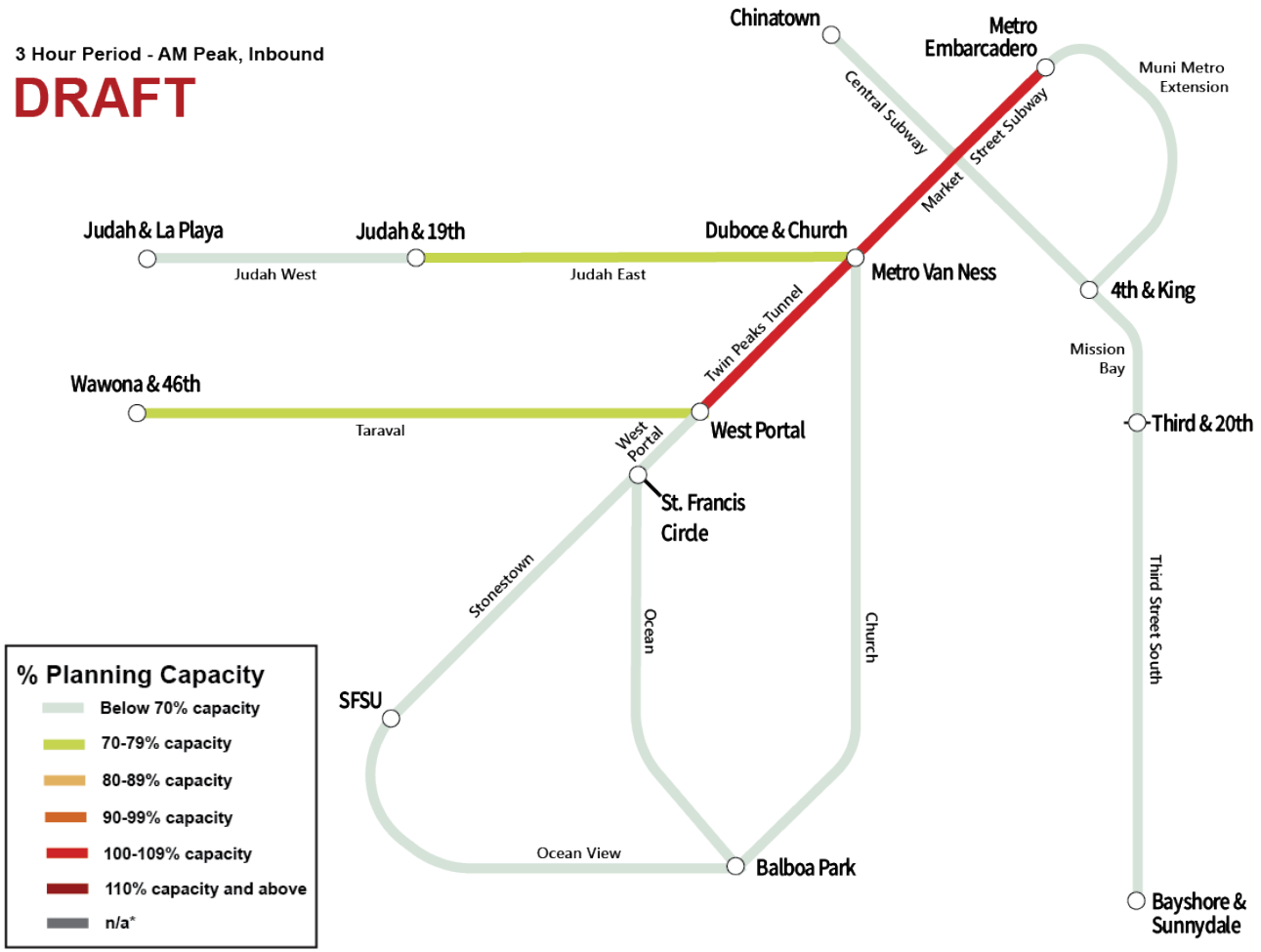


* Note that T-Third future demand/capacity is not shown here. Additional T Third speed and reliability solutions are currently being developed through a nearer term study. More reliable demand data, particularly for the northern part of the corridor is pending

2050 with 3-cars to Judah/La Playa and between Downtown and SF State

Segments forecast overcapacity:

1) Market Street Subway;
2) Twin Peaks Tunnel



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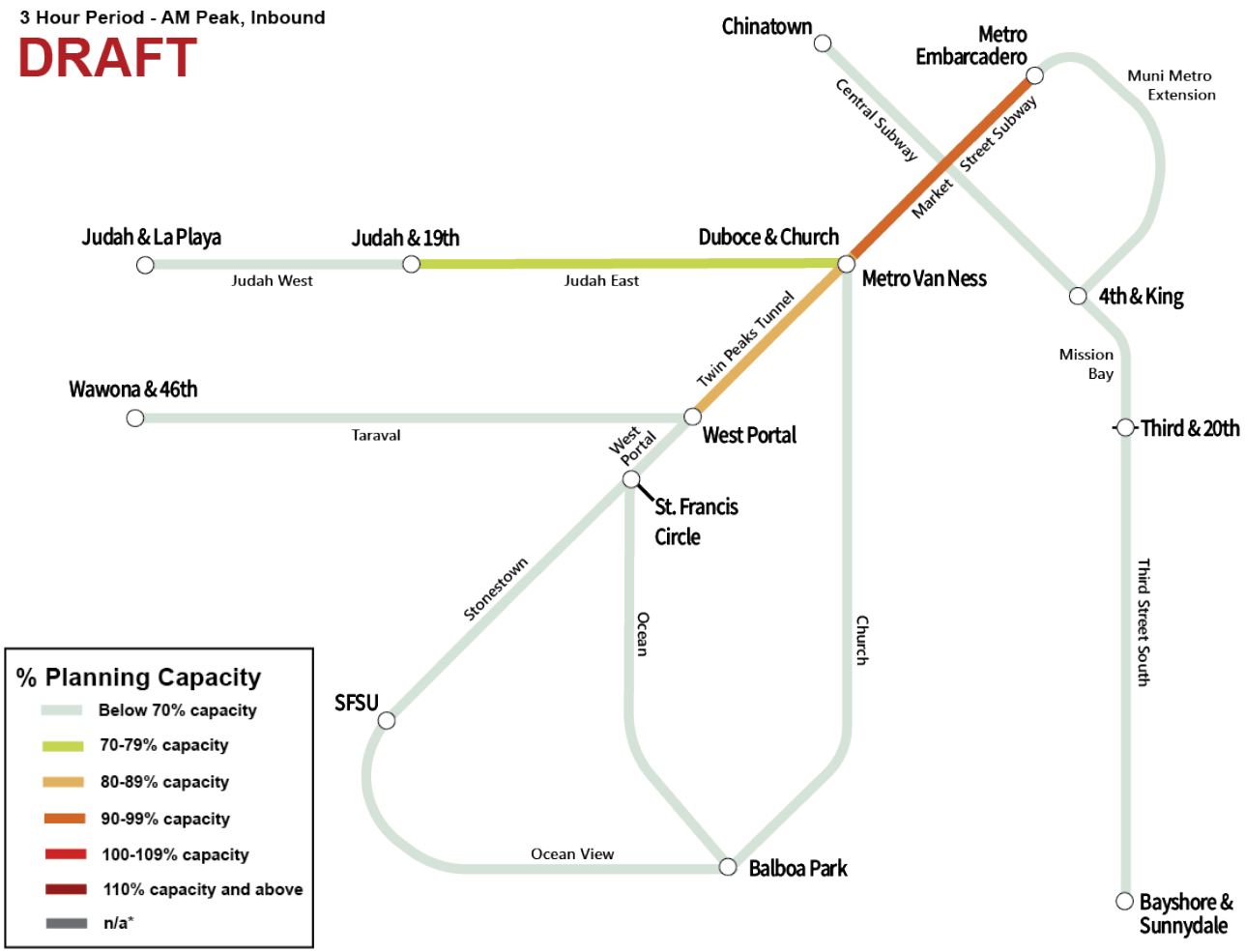
2050 with 3-cars to Judah/La Playa and between Downtown and SF State and one surface-only line

Segments forecast overcapacity:

None, though Market Street Subway would be near capacity

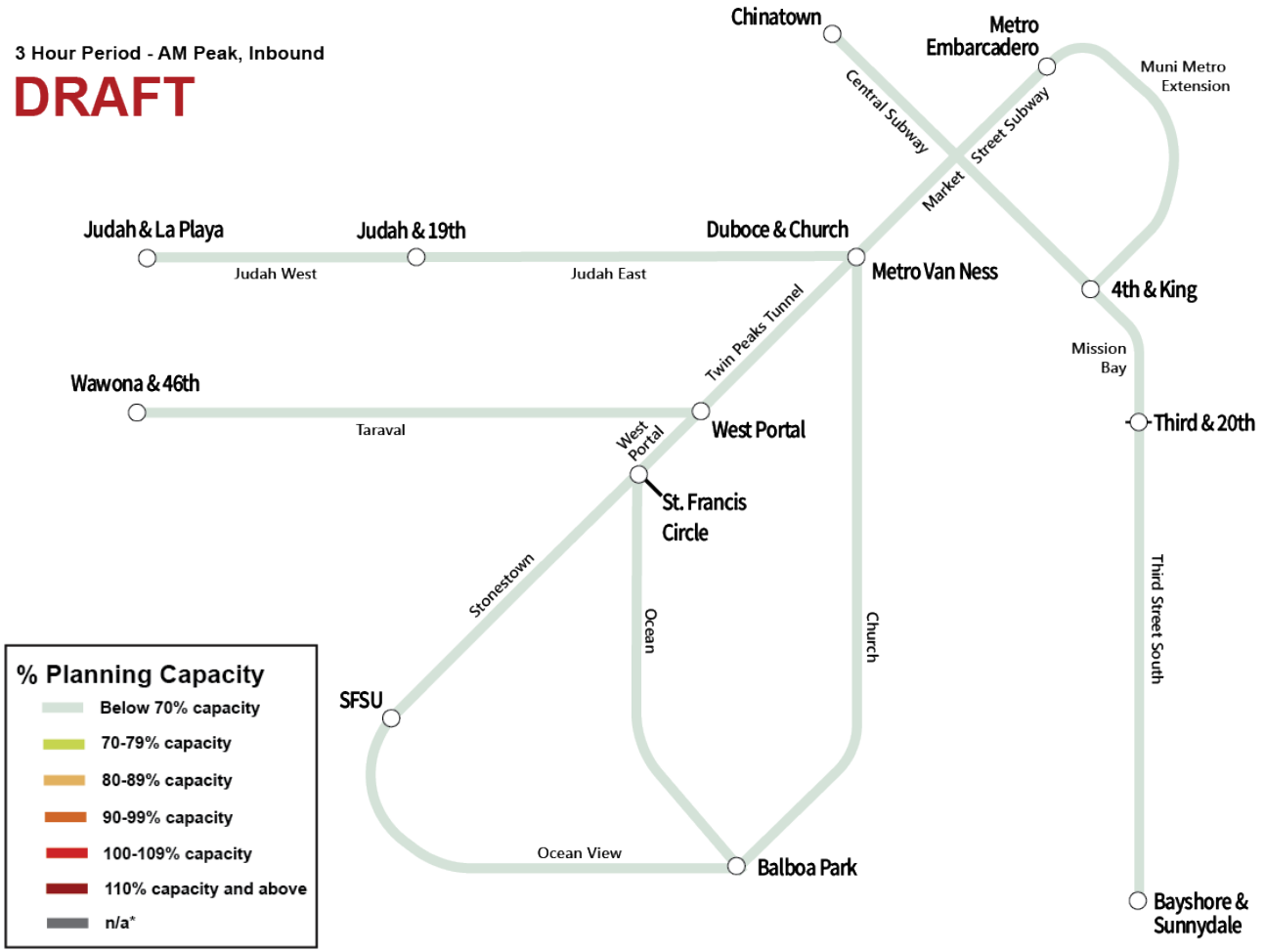


* Note that T-Third future demand/capacity is not shown here. Additional T Third speed and reliability solutions are currently being developed through a nearer term study. More reliable demand data, particularly for the northern part of the corridor is pending

2050 with 3-cars to Judah/La Playa and between Downtown and SF State and multiple surface-only lines

Segments forecast overcapacity:

None



* Note that T-Third future demand/capacity is not shown here. Additional T Third speed and reliability solutions are currently being developed through a nearer term study. More reliable demand data, particularly for the northern part of the corridor is pending

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Evaluation framework

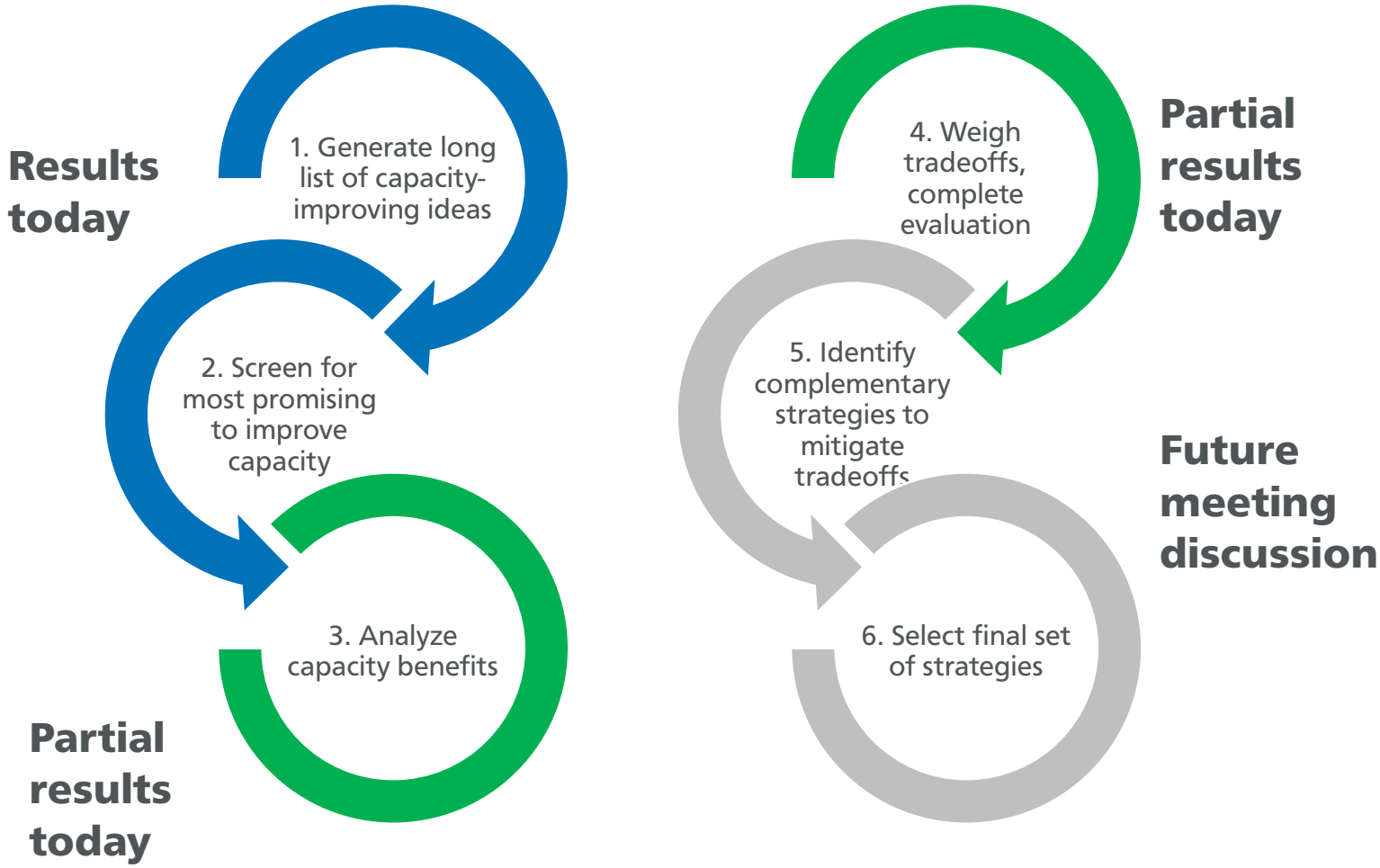
Key funding objectives

- **Capacity:** Expand capacity enough to meet demand where needed
- **State of Good Repair:** Effectively repair or replace aging infrastructure

Additional important goals

- **Cost effectiveness** (are there other ways to achieve the same results for less money?)
- **Improve transit speed and reliability** (necessary for capacity increases to be effective)
- **Trade-offs** How many tradeoffs (e.g. construction disruption or other impacts on surrounding neighborhoods, how well solutions respond to community member and rider concerns
- **Accessibility:** Improve Muni Metro system accessibility
- **Equity:** Improve Muni Metro equity

Capacity strategy development and screening approach



Discussion questions

1. What questions or comments do you have about the existing and future capacity forecasts and initial screening of strategies?
2. What comments or concerns do you have on the tradeoffs expressed for the strategies of focus tonight (3-car trains, route restructuring)?
3. What feedback do you have on the draft evaluation framework?