



STRATEGIC ANALYSIS REPORT

SAR 95-1

December 11, 1995

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| I. TOPIC | Chinatown Congestion and Mobility Issues |
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| II. INITIATED BY | Commissioners Teng, Hsieh and Kaufman |
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| III. INTRODUCTION | Purpose of the Document |
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This is a document designed to present the basic facts and the issues, to inform policy making.

It provides strategic analysis of potential implications for the Authority as Prop. B administrator and as CMA. It is not meant as an in-depth technical discussion.

The purpose of this *Strategic Analysis Report* is to provide the Authority Board with a brief but comprehensive summary of background and analysis of issues regarding congestion and mobility problems affecting the Chinatown area of San Francisco. As the name suggests, this Strategic Analysis Report, or SAR for short, is furthermore intended to highlight for the Board the strategic significance of these issues in areas of Authority jurisdiction, as well as to identify implications for future policy decisions by the Board in its capacity both as administrator of Proposition B funds and as Congestion Management Agency (CMA) for San Francisco. Every effort was made to make this into a factual document, avoiding speculation, and leaving judgment to the reader. The document was designed to inform policy-level decision-making. Its abbreviated length (only 8 pages) is, therefore, an attempt to optimize its usefulness to Authority Board members. In pursuit of this goal, technical discussion has been condensed and only those facts are included which were deemed essential to outline the policy-level issues. Additional information is available from Authority staff and from the sources cited.

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| IV. BACKGROUND | Context - Previous Studies |
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Congestion and mobility issues are not new to Chinatown. The issues include circulation within Chinatown, as well as access to and from Chinatown. Even before the Loma Prieta earthquake resulted in the demolition of the Embarcadero Freeway, some studies were conducted to try to address community concerns and needs in this area. After the earthquake, the City undertook analyses necessary to implement interim traffic circulation strategies. Those studies are described below. In March 1995, Commissioner Teng expressed interest in having the Authority prepare a Strategic Analysis Report on Chinatown mobility and congestion issues. The extent of community comment on the Mid-Embarcadero DEIR has brought new focus on the need for further examination of Chinatown congestion and mobility.

a. The Proposed Rezoning Plan of 1987

"Major areas discussed in the report include traffic circulation, pedestrian circulation, parking, transit service, through vs. local traffic, truck loading issues, impacts of land uses on all of the above, and conflicts between pedestrian and other traffic."

This report was prepared by the Planning Department. It was intended to support the proposed Chinatown rezoning plan (never implemented). The report and analyses pre-date the Loma Prieta earthquake (Oct. '89) so the information must be used with that perspective in mind, since travel patterns have changed as a result of the demolition of the Embarcadero Freeway. Major areas discussed in the report include traffic circulation, pedestrian circulation, parking, transit service, through vs. local traffic, truck loading issues, impacts of land uses on all of the above, and conflicts between pedestrian and other traffic. The report points out the peculiarities of parking issues as they relate to commercial activity in Chinatown, for example, the practice of occupying loading zones with trucks which function as extensions of shops or markets.

"...[E]mphasis on addressing the connection to Chinatown is reflected in the recommendations of the Plan...."

The report "...addresses the situation both before and after the earthquake, and it discusses the impacts of removal of the Embarcadero Freeway on a set of specific intersections in the area.."

These analyses emphasize the community's concern with moving people through Chinatown, addressing the perceived shifts in circulation patterns since the earthquake and ensuring a Chinatown connection to the regional transportation system

b. The Authority's Four-Corridor Plan

In 1993, at the initiative of Commissioner Hsieh, who was then chair of the Authority's Plans and Programs Committee, the Authority undertook the development of the Four-Corridor Plan. The Plan was intended to develop much needed guidance on priorities for the investment of Prop. B funds in MUNI rail extensions, beyond the basic framework provided by the Prop. B Expenditure Plan approved by the voters in 1989. Commissioner Hsieh's emphasis on addressing the connection to Chinatown is reflected in the recommendations of the Plan, which was adopted by the Authority Board in June 1995. The Plan proposes that the terminal for the Bayshore corridor (the highest priority corridor in the Plan) be in Chinatown, in the vicinity of Kearny or Stockton and California Streets.

c. The 1994 Report on Traffic Conditions

This report was prepared by the Department of Parking and Traffic. It analyzes circulation conditions in Chinatown as well as North Beach and Fisherman's Wharf. The report was intended to justify funding for signal timing and other traffic circulation improvements in the area. It addresses the situation both before and after the earthquake, and it discusses the impacts of removal of the Embarcadero Freeway on a set of specific intersections in the area. It finally makes recommendations for improvements, mostly dealing with signal timing, but other general measures are suggested, as well.

d. The Analysis by Chinatown Resource Center, the Chinese Chamber of Commerce and Chinatown Trip

The above organizations responded to the Mid-Embarcadero DEIS/DEIR with letters to the President of the Board of Supervisors, City Commissions, the Authority and the Office of Environmental Review. The letters are referenced in section VI, below. Salient points from these communications, regarding the community's aspirations and needs for improvements, setting aside issues of procedures and timelines for the EIR process itself, are summarized as follows:

- recognition of the significance of the connection between Chinatown and the regional transportation system, particularly the freeways;
- solutions should focus on moving people to and through Chinatown and North Beach, not just on the Embarcadero Roadway itself;
- projects affecting transportation in the entire northeast sector of the city, including in the vicinity of the Terminal Separator Structure, should be coordinated;
- traffic analyses should address, graphically as well as with numbers, the shift in circulation from a primarily east-west direction before the earthquake to north-south after the earthquake;
- traffic analyses should be examined comprehensively, considering simultaneously the time of travel, traffic volumes, and the direction of flow, beyond the intersection volume counts;
- the intercept parking garage and circulator shuttle concepts should be reassessed thoroughly, looking at possible locations, routes and funding sources;
- improvements in transit services to and within Chinatown should be considered, including a possible extension the existing 83 line to the Embarcadero, reserving right-of-way for an F-line connection and future connections with the Bayshore and Geary corridors; and
- the analysis of all ramping structures proposed under the DEIS/DEIR should include effects on Chinatown.

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| V. STRATEGIC ANALYSIS | Areas of Opportunity, Implications For Authority Policy-Making, Key Follow-Up Issues And Recommendations |
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| A. POTENTIAL AREAS OF OPPORTUNITY | Potential New Initiatives, Projects or Services to Address Current Problems |
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a. Initiatives from the Mid-Embarcadero EIR Process

As a result of the extensive review by Chinatown community organizations of the Draft EIR for the Mid-Embarcadero Roadway, detailed in IV.d, a number of proposals have been developed under the coordination of the Waterfront Transportation Projects Office (WTPO), and with participation by various City departments and the Authority, which should result in mobility improvements in Chinatown.

These proposals include improvements such as left turn pockets, and signs, which could be put in place very soon.

These proposals include analyses to be undertaken as part of the FEIR for the Mid-Embarcadero, and to be performed by a consultant under WTPO direction.

The WTPO has already submitted an application for federal TEA funds for the gateway project.

These proposals would consider a circulation study of the NE sector of the city, and longer-term rail connections

1. Short-Term Improvement Proposals: Circulation improvements include left turn lanes and pockets at various locations, as well as restriping and addition of mixed flow and transit lanes along the Fremont/Sansome, First/Battery, Third/Kearny and Fourth/Stockton corridors. Improvements in signing and signalization are also expected, after further analysis to determine precisely where they are needed. Regarding the short-term transit improvements, within a year prior to initiation of F-line service on The Embarcadero (scheduled for 1998-99), the Public Transportation Commission (MUNI) will evaluate extending the 83 to The Embarcadero.

2. Short-Term Analyses: The FEIR on the Mid-Embarcadero provides an opportunity to complete the evaluation of certain traffic, parking and transit issues which could lead to implementation of additional improvements in the short term. Studies already proposed as part of the FEIR include updates of traffic counts at key locations and identification of major changes in traffic flows, as well as an evaluation of feasibility of a remote parking facility in South of Market. At Commissioner Teng's request, this will include analysis of the feasibility of a through lane from the Fremont exit to Chinatown. In addition, at Commissioner Kaufman's request, the study will consider a Chinatown (and North Beach) gateway concept, which would provide for some form of physical marker, such as a gate or similar monument on The Embarcadero and/or some directive markers along the Broadway and Washington Corridors, which would guide travelers into Chinatown/North Beach. The concept would work in concert with shuttle service connecting remote parking with Chinatown and North Beach. At the Authority's suggestion, the WTPO has already submitted an application for federal TEA funds for the gateway project. The consultant study will also include analysis of implications of reserving right of way and/or installing spur tracks from the Embarcadero into Washington, Broadway, or other streets. A summary of financial information on the Mid-Embarcadero/TSS project is also being prepared by WTPO. At Commissioner Teng's request, this study will include an assessment of using the proceeds from the sale of land to fund any improvements relevant to the project, which qualify under the funding guidelines.

3. Longer Term Solutions/Studies: Areas of opportunity for further study that are being proposed as a result of the Mid-Embarcadero DEIR comment process include: obtaining policy direction and funding for a study of circulation in the NE sector of the city; and evaluating the extension of underground or

surface rail service into Chinatown as part of the Bayshore Corridor EIR. In addition, the community is interested in exploring a possible loop of the F-line through Chinatown/North Beach. The WTPO consultant will provide a preliminary assessment of the feasibility of these rail extension concepts and identify potential funding sources (see below).

b. Other Initiatives

Studies and initiatives that would complement those suggested through the Mid-Embarcadero EIR process are addressed below:

"Emphasis should be on an approach that enlists the community and merchants in the development of comprehensive solutions to the underlying causes of parking problems."

"The results will provide a comparative picture of mobility for different San Francisco neighborhoods."

"This study could be used to complement the analysis of the shuttle bus service..."

1. Parking Regulations/Enforcement: It is essential to consider further investigation and changes in enforcement of traffic regulations within Chinatown, particularly as relates to double parking. Emphasis should be on an approach that enlists the community and merchants in the development of comprehensive solutions to the underlying causes of parking problems. For example, truck double-parking should be considered in the context of loading and unloading needs, business hours, and vehicular access to commercial sites.
2. Multimodal Performance and Mobility Study: As part of the 1995 Congestion Management Program, the Authority will be conducting a citywide mobility study. The study is aimed at evaluating the degree of mobility and availability of travel options for people traveling between various origins and destinations in the city. The study will evaluate travel time by transit and other modes, and develop mobility ratios taking into account factors such as topography, neighborhood safety, and transit route safety, for different times of the day. The results will provide a comparative picture of mobility for different San Francisco neighborhoods. The Authority is working with Chinatown community representatives to coordinate and complement the Chinatown Trip studies currently underway, and to incorporate any special considerations regarding travel into and within Chinatown. This study could be used to complement the analysis of the shuttle bus service described in a.2. above.

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| B. IMPLICATIONS FOR THE AUTHORITY | Likely Impacts in Areas of Significance to the Authority's Role |
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In the short term, the Authority can only prioritize funds for these Chinatown activities at the expense of other, already established, transportation priorities. The long term opens up other possibilities.

a. Prioritization and Programming of Funds

Section V.A. includes possible initiatives to preserve right-of-way, install rail spurs from The Embarcadero, and analyze underground or surface extensions of the Bayshore LRT corridor into Chinatown. The viability of these concepts will have to be analyzed from various perspectives, as required by the state and federal environmental processes. As regards funding, in the short term, the Authority can only prioritize funds for these Chinatown activities at the expense of other, already established, transportation priorities, such as replacing MUNI Metro's LRV fleet or complying with ADA. The long term opens up other possibilities. From the Authority's perspective as a programming agency, the decision-making process to arrive at funding decisions for these concepts is likely to involve the development of additional information through analyses or studies. The following section describes the main steps for the Authority Board to reach decisions on the two major capital project proposals: an F-line loop through Chinatown, and the extension of rail service into Chinatown from the Bayshore corridor.

"...[T]he cost of an F-line loop through Chinatown/North Beach would probably be in the order of \$50 to 75 million. There are currently no funds available for such a project."

This analysis would identify the viability of this concept at the fatal-flaw level

This analysis would be done at the order-of-magnitude level, to allow the Authority Board to try to resolve strategic fund programming issues before committing to the full-fledged environmental and design process.

This analysis would take place only after the feasibility analysis, described above, was complete.

The F-Line Loop: Based on the current costs for construction of the F-line, the cost of an F-line loop through Chinatown/North Beach would probably be in the order of \$50 to 75 million. There are currently no funds available for such a project, although some of the service that this line could provide may be addressed, instead, as part of the surface alternatives for the Bayshore corridor (see below), which have the highest priority under Prop B rail extensions. The F-line, as originally planned, currently has a shortfall of about \$6 million. In addition, if MUNI requests and the Authority decides to fund the construction of a connection between the F-line and the MUNI Metro extension, to allow F-line cars to run south on The Embarcadero, that project is estimated to cost an additional \$7 to \$10 million. Information necessary for the Authority Board to consider funding for an F-line loop would include at least the following:

1. A preliminary feasibility analysis, to be performed by the WTPO consultant and completed in the January time frame, and which is intended to identify the viability of this concept at the fatal-flaw level.
2. If the preliminary feasibility analysis warrants it, an overall feasibility analysis, including constructibility analysis, expected impacts on F-line performance, fleet management issues, and impacts on operating costs. This analysis would be done at the order-of-magnitude level, to allow the Authority Board to try to resolve strategic fund programming issues before committing to the full-fledged environmental and design process. This study would have to be performed by MUNI, through a consultant contract, and could be completed within a year. A legal analysis would have to be conducted first to determine if Prop. B funds earmarked for the F-line could be used for this study. The Board of Supervisors would have to request that MUNI conduct this study, with or without Prop. B funding. If use of Prop. B funds were found to be legal, MUNI would request the funds and the Authority Board would have to authorize the expenditure.
3. A funding and financial feasibility analysis, including implications for Prop. B, impacts on other Federal and state funding sources, including FTA Section 3, STP, state Flexible Congestion Relief, and possibly CMAQ. This analysis would take place only after the feasibility analysis, described above, was complete. The analysis would have to determine:
 - the need to reprogram any already-committed funds (state or federal);
 - the extent to which future revenue streams (state and federal) would have to be reserved for this project and for how long;
 - the effect of such a decision on other (already identified) transportation funding priorities in San Francisco (trade-off analysis); and
 - Prop. B eligibility issues and impacts, including the possibility of an extension of Prop. B.

It is important to note that there are no federal dollars in the current F-line funding plan. The potential use of federal funds would have implications for the extent of environmental review. Depending on how the loop is structured, this could reopen the need for further environmental review of the current F-line project.

This analysis would be performed by the Authority through a consultant contract, probably through an update of the Prop. B Strategic Plan, and could be completed in about 6 months.

The Authority Board would have to "...[i]dentify new funds or re-prioritize funds from other San Francisco projects through a special action amending the SF CIP...."

4. The required environmental review, based on 2. and 3. above, would need to be undertaken, culminating in the Board of Supervisors approving the environmental document. This process could take between 18 and 24 months.

Assuming that the Board of Supervisors supported this project through the conclusion of the environmental process, the Authority Board would have to:

- Identify new funds or re-prioritize funds from other San Francisco projects through a special action amending the SF CIP (subject to approvals at the regional and state levels). This action would include authorization of Prop. B funds to be used as match; and
- Prioritize the F-line loop to receive state and federal funding in the next several funding cycles, starting with the 1998 State Transportation Improvement Program (STIP) and the 1999 Federal TIP (subject to approvals at the regional and state levels). Use of federal dollars would be subject to the same caveat as in 3. above.

It is important to note that in its review of the SAR, the Authority's Citizens Advisory Committee expressed a view that any work on an F-line loop should not jeopardize work on the current F-line project, and that a Bayshore corridor link would be much more effective. The CAC also supported potentially privatized shuttle loop service as a good short term, low-cost solution.

The plan envisions "...a tunnel section under 3rd or 4th streets...into a potential Chinatown terminal at either Kearny or Stockton and California Streets..." as part of the Bayshore Corridor priority project.

The Bayshore Corridor Extension into Chinatown: The Authority's 4-Corridor Plan, adopted in September 1995, identifies the Bayshore Corridor as the highest priority out of four proposed rail corridors in the city, to receive Prop. B rail corridor funding. A total of \$200 million is available for rail corridor development under Prop. B. It is expected that the funds will be used to leverage state and federal dollars. The Bayshore corridor has already been the subject of a systems-level study, concluded in 1993. A project-level EIR/EIS for this corridor will be prepared starting in early 1996. The corridor, as described in the 4-Corridor Plan, envisions at-grade service along 3rd Street in Bayview, and a tunnel section under 3rd or 4th streets in the South of Market area, then crossing Market St. and heading north into a potential Chinatown terminal at either Kearny or Stockton and California Streets.

This project would essentially provide a grade-separated connection between Chinatown and the regional transportation system which could address a number of the issues described in section IV, above, including a direct rail connection between Chinatown and Visitacion Valley, which is home to a large Asian community.

The Bayshore EIR can look at alternative ways to phase the Bayshore project, including access to Chinatown.

Because of the high cost of the tunnel sections, and given the uncertainties about future availability of federal funding, the Bayshore EIR will look at ways to phase the project. One alternative would be to have a connection to the MUNI Metro Extension tracks at King Street, so that the Bayshore trains could operate in the Market Street tunnel. Another option that could be considered would connect to King Street but run the Bayshore trains along The Embarcadero all the way into a surface terminal in Chinatown, accessed through either Washington or Broadway Streets.

This option would require construction of a connection between the F-line tracks and the MUNI Metro extension tracks, at a cost of about \$7 million, and it would use the switches (spurs) proposed by the community at Washington Street and/or Broadway. Further extension of the subway into Chinatown could also be considered. As part of the Bayshore EIR, MUNI could be asked to make an early assessment of the best location of a terminal in Chinatown, anywhere from Market to Jackson Streets, either along Kearny or Stockton.

Because the Authority Board already adopted the 4-corridor plan, and because the Bayshore Corridor is priority 1, the process for programming funds to this project is relatively straightforward. In order to further program funds to the Bayshore Corridor, the Authority Board will need:

- a) the results of the EIR, which should be completed in mid-1997 (including the necessary actions by the Board of Supervisors, selecting a preferred alternative and approving the final EIR); and
- b) financial feasibility analyses to address:
 - the extent to which future revenue streams (state and federal) would have to be reserved for this project and for how long; and
 - the effect of such a decision on other (already identified) transportation funding priorities in San Francisco (trade-off analysis).

As regards funding for this project, the Authority Board would have to:

- Program it to receive state and federal funding in the next several funding cycles, starting with the 1998 State Transportation Improvement Program (STIP) and the 1999 Federal TIP (subject to approvals at the regional and state levels); and
- Authorize Prop. B funds to be used for the project.

Note that there is not a question about Prop. B eligibility or about the need to reprogram funds from already committed projects, but rather about Prop. B funding strategy and leveraging of other funds.

b. Impacts on the CMP Network and Multimodal Performance

As Congestion Management Agency for San Francisco, the Authority must periodically monitor the level of service (LOS) on the designated CMP network, which includes several streets in Chinatown. When the performance of a segment of the network deteriorates below the established LOS standard of "E" (very congested), this triggers the requirement for deficiency plans, and it may even lead to loss of state fuel tax revenues as well as loss of federal and state funding for capital projects. A review of the LOS monitoring results for 1991, 1993 and 1995, shows a mixed picture of performance changes, without a clear pattern. No deficient (LOS F) segments were identified in Chinatown proper, but there are some segments, particularly Clay and Pine Streets, which are operating at LOS E in the p.m. peak period. Stockton Street is not included in the CMP network. In addition, Kearny, Columbus, Broadway and Washington are all operating at LOS D. These performance levels appear to be fairly stable, with no major changes over the last two measurement cycles, but if they were to worsen, they could create the need for deficiency plans which would probably be difficult to implement, given physical and operating constraints in the Chinatown area. The Authority will therefore need to closely track the progress of Chinatown studies, to ensure that data on likely deficiencies and congestion trends are being collected and analyzed properly as part of the environmental process.

"...[T]here is not a question about Prop. B eligibility...but rather about Prop. B funding strategy and leveraging of other funds."

The Authority needs to closely monitor LOS. "When the performance of a segment of the network deteriorates below the established LOS standard of "E" (very congested), this triggers the requirement for deficiency plans...."

In addition, the 1995 CMP introduces the concept of multimodal performance (including transit, bicycles, etc, in addition to cars). The Authority is proposing to include Chinatown concerns in its Multimodal Performance and Mobility Study (see V.A.b.2. above).

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| C. NEXT STEPS | SAR Recommendations |
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The following actions are recommended:

1. Depending on the results of the preliminary feasibility analysis, to be conducted by the WTPO consultant, direct the Executive Director to determine if funding for the overall feasibility analysis of the F-line loop (as described in V.B.a.2), is legally permitted.
2. If the answer to 1. is favorable, consider authorizing the necessary funds for the overall feasibility study.
3. Depending on the conclusions of the feasibility analysis, consider directing Authority staff to perform the financial feasibility analysis described in V.B.a.3.
4. Direct Authority staff and urge the appropriate City departments to coordinate the Authority's Citywide Mobility Study with any analyses on parking garages and Chinatown shuttles.
5. At the time when application is made for Prop. B funding of the Bayshore EIS/EIR, require MUNI to also analyze alternatives that provide surface rail access into a Chinatown terminal and assess the appropriate location of an underground terminal in Chinatown as described in V.B.a.
6. Support the recommendations produced by the Waterfront Projects Office regarding proposed studies and improvements in Chinatown, as described in V.A.a., above.

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| VI. SOURCES | Reports and Information Used in the Preparation of this SAR |
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1. *Transportation Impact Analysis for the Proposed Chinatown Rezoning Plan*. DCP, January 1987.
2. *Report on Traffic Conditions in the Chinatown, North Beach, and Fisherman's Wharf Districts Before and After the 1989 Loma Prieta Earthquake*. DPT, 1994.
3. *Proposition B Streets and Traffic Safety Capital Development Program*. DPT, May 1, 1995
4. *Four-Corridor Plan*, SFCTA, June 1995
5. *Proposition B Strategic Plan*. SFCTA, August 1995
6. Chinatown responses to the Mid-Embarcadero DEIS/DEIR: 9/28/95 letter from the Chinese Chamber of Commerce to Supervisor Kevin Shelley; 10/12/95 memo from the Chinatown Resource Center to various City Commissions and the Authority; 10/23/95 letter from the Chinatown Resource Center to the Office of Environmental Review (OER); and 10/23/95 letter from Sue Hestor to the OER on behalf of the Chinatown Resource Center, the Chinese Chamber of Commerce and Chinatown Trip.