Abstract

The 2005 Bicycle Plan Update consists of three parts, the Policy Framework, the Network Improvement Document, and the Design Guidelines. Together, these components provide the tools and direction for making San Francisco a more bicycle-friendly place. It includes recommendations for policies, designs and street improvements that will be some of the most progressive in the United States, some of which are unprecedented. The plan's primary goal, 10% of trips by bike by 2010, is specific and ambitious, but a lack of specific targets, budgets, or timeframes elsewhere in the plan and a review of related documents reveals that it is unrealistic to expect the actual mode split to get anywhere near that ambitious goal. The plan also lacks its own standards that our bicycle program should meet, in terms of the quality of the bicycling experience. A few policy recommendations are lauded, a few are criticized, and a few additional policies are recommended. Finally, the paper also recommends some steps we should take to more realistically approach the plan's goal of 10% of trips by bicycle within a measurable time frame.

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"Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will not die, but long after we are gone be a living thing, asserting itself with ever-growing insistence." - Daniel Burnham, 1910

I. The Bicycle Plan Update Overview

The 2005 Bicycle Plan Update should be understood in three parts, each nesting in the other like Russian dolls. The "Policy Framework" expresses the over-arching policies which guide the city's bicycle program. It includes the vision—10% of all trips by bike by 2010—and the actions necessary to reach that vision. None of the action items specifies a target date or standard for completion, or a budget necessary to achieve the action, and as such the plan is more of a wish list of bicycle-friendly actions than a plan to hold anybody accountable to. The Policy Framework's first major section is a discussion of the street network, which is followed by discussions of bicycle parking, access to transit, bridges, education, enforcement, policy reforms, and so on. The street network section does not go into specifics about changes on particular streets, and as such, avoids some environmental review requirements.

The "Network Improvement Document" spells out specific improvements to specific streets in the network. It says where the network may be expanded, changed, and improved. It says where bike lanes are to be added, bike paths built, new bridges constructed. While the "Policy Framework" is intended to last five years until the next update, the "Network Improvement Document" should be updated much more frequently as improvements to the streets are designed and approved. The Municipal Transportation Agency(MTA) may approve the document before environmental review, but specific changes that affect traffic flow may not be approved by the Board of Supervisors without a CEQA document.

Finally, the new "Design Guidelines" provide a new toolbox for bicycle planners and engineers to make improvements to the streets. Without these guidelines, city engineers would restrict themselves to designs included in relatively conservative guides such as the Caltrans Highway Design Manual and the U.S. Manual on Uniform Traffic Control Devices. The "Design Guidelines" give local staff the license they feel they need to use treatments that have proven effective elsewhere or invented right here in San Francisco. According to the Bicycle Program, this is a living document, which shall be updated as necessary.

The Bicycle Program produces one more relevant document: the 5-year expenditure plan. While the Bicycle Plan Update's components almost never refer to specific targets, standards, or budgets, the expenditure plan focuses exclusively on dollars and dates, spelling out exactly how much money will be spent on street improvements, education, parking, etc. For example, the city has \$200,000/year to spend on bicycle safety education and promotion. The Bicycle Coalition, with its annual budget of \$430,000, has a huge role in the plan's implementation, too, but they do not produce a five year plan. Reviewing the expenditure plan and considering the resources of the SFBC and the wish list of action items, one can estimate how close we will be to our goal of 10% by 2010. The short answer is "not very close at all" but exactly what the increase in bicycle trips will be by 2010 is a matter of conjecture. The last chapter of this People's Guide to the bicycle Plan Update discusses how we can get closer to that goal through implementation strategies.

As of January 2005, only the policy framework has been reviewed and approved by a representative body, the MTA. The Network Improvement Document has not been circulated for public comment. The Design Guidelines have received administrative approval by the Executive

Director of the Department of Parking & Traffic, within the MTA, the only approval that document needs. The Bicycle Advisory Committee (BAC) has reviewed the parts, but has not formally commented on any of them. The BAC is the only representative body with the explicit responsibility to develop a plan. to develop a bicycle plan that includes these three components.

II. The Bicycle Plan Update's Three Main Parts

A. The Policy Framework

The Policy Framework consists of general goals, and specific actions to achieve those goals. The plan's goals, appearing in chapter one, are paraphrased below:

- 1. Increase safe bicycle use to 10% by 2010 while reducing (by an unspecified amount) the rate of injuries.
- 2. Refine and expand the existing bicycle route network, using innovative designs and with clear signage, accessing all transit stations and reaching to within a quarter-mile of all major neighborhoods, as well as within and on more trains and buses.
- 3. Ensure plentiful, high quality bicycle parking, from short-term parking on the street to long-term parking in buildings, including attended parking at major transit stations and public events, and ensure the public is aware of bicycle parking options throughout San Francisco.
- 4. Adopt bicycle-friendly practices and policies, gaining greater access to trains and buses, reforming environmental review procedures, and improving cooperation among agencies and nongovernmental organizations.
- **5.** *Promote safe bicycling* through DPT bicycle safety curriculum and initiatives.
- 6. Increase enforcement of bicycle-related violations, focusing on violations most likely to cause bicyclist injuries.
- 7. Prioritize and increase bicycle funding (i.e. get more money).

The rest of the chapters contain the action items to implement those goals. They do not directly correspond to the goals above, but instead are grouped as follows:

2. Bicycle Network Actions	7. Promotion
3. Bicycle Parking	8. Procedural issues
4. Transit Access and Bridge Access	amendments, enviro
5. (Safety) Education	coordination)
6. Enforcement and Safety	

(general plan nmental review, The chart below reviews the action items to help the reader understand the breadth of the plan's recommendations. For brevity's sake, some of the action items are grouped together and others, such as ongoing procedural actions ("hold meetings"), or trivial actions that the average resident won't notice, are omitted entirely.

Action Item #	Action Item Description, paraphrased and consolidated, with comments in italics.
2.1	Complete the Bicycle Plan: Network Improvement Document. Most important thing in the
	document. Implementing this task to a decent standard of completion by 2010 will require a nearly
	million-dollar planning and outreach effort in the next two to three years, but no such effort is
	contemplated in this plan.
2.2	Update the Official Bicycle Route Network Map to reflect route relocations, and periodically
	update the Bicycle Route Network identified within the San Francisco General Plan.
	The commercial version of the map (Reineck's SF Walking & Biking Guide) needs substantial
	changes to reflect best practices in bike route mapping.
2.3	Complete the required design and engineering for improvements to Recommended Study Streets
	and implement, if feasible and according to the Department of Public Works (DPW)'s Five Year
	Proposed Paving Plan. Related to item 2.1, in that the required design and engineering should be
	done in batches as part of the semi-annual update of the Network Improvement Document.
2.7	Review multi-lane streets that currently have excess capacity (i.e. less than 600 vehicles per lane
	per hour during the peak-hour). The removal of a travel lane due to excess capacity could assist in
	accommodating bicycle lanes or other bicycle-friendly treatments. In the implementation phase,
	single lane streets with excess width should also be examined.
2.8	Adopt the SFCTA technical working group's recommend revisions to San Francisco's level of
	service (LOS) standards and methodologies such that they better respond to the multimodal nature
	of San Francisco's transportation system, specifically addressing bicycles. Important, but SFCTA
	proposals are still in draft form and may not help bicyclists and pedestrians.
2.9	Define and identify "bicycle arterial streets," conduct public outreach, and seek a Municipal
	Transportation Agency (MTA) policy decision to modify the Traffic Calming Guidelines.
	Very Important, because currently traffic calming money is not available for bicycle-specific
	safety projects. This will require leadership and cooperation from the advocacy community
	(SFBC, TLC, Walk SF) because it changes an existing, carefully-crafted funding program.
2.10	Implement Supplemental Design Guidelines on specific Recommended Network Improvement
	projects with the appropriate level of analysis and study. The adoption of innovative strategies
	from around the world is one of the most important things in this bicycle plan.
2.12	Develop and enforce a set of standards that must be strictly adhered to by contractors for street
	excavation restoration, including a guarantee of one year for replacement of any defective work.
	Very important; must be applied to speed hump installation.
2.16	Increase the profile of the Bicycle Route Network within DPW's street resurfacing and paving
	prioritization process. This improves pavement quality on bicycle routes.
3.1-	Consolidate Sections 155.1, 155.2, 155.3, and 155.4 of the Planning Code to rationalize bicycle
3.3	parking requirements, adding such requirements to new residential construction.
3.12	Amend the Planning Code to allow tenants to bring their bicycles into buildings unless Class I
	bicycle-parking is provided.
3.14	Develop and maintain a DPT, City-distributed, bicycle-parking outreach campaign in print, audio-
	visual, and web-based formats to provide relevant bicycle-parking information such as garage
	locations and locker availability.
3.15	Work with the the San Francisco Police Department (SFPD) to make bicycle theft investigation a
	higher priority and to create a better system for returning recovered bicycles to their owners.

4.1-	Permit folded and disabled bicycles on all San Francisco Municipal Railroad (Muni) vehicles, and	
4.3,4.9	run a trial program to permit bicycles on light rail. Intall bike racks on all buses operating within	
-4.10	San Francisco, including the 45-foot long Golden Gate Transit buses.	
4.4	Request that BART expand bicycle-access times and create a trial program for non-folding bicycle	
	access in both directions on Transbay peak period trains.	
4.5	Request that Caltrain expand bicycle access on its fastest service "Baby Bullet" trains.	
4.6	Ensure that all San Francisco transit stations, including the new Transbay Terminal, provide	
	barrier-free bicycle access and state-of-the-art bicycle parking facilities.	
4.8	Promote bicycle parking "stations" at transit hubs that provide secure, monitored bicycle parking,	
	commuter information, and bicycle maintenance services.	
4.11	Ask the GGBHTD and Caltrans to provide improved bicycle access to and upon all San Francisco	
	bridges, including the design and building of a multi-use path on the west span of the Bay Bridge.	
5.1-	Provide DPT bicycle-safety information as appropriate to diverse age, income, ethnic, and	
5.10	language populations. Employ mass mailings, participation in events, classes for city employees,	
	workshops for transit operators and other large fleet vehicle operators. Develop curriculum for the	
	SFUSD. Promote new bicycle facilities.	
6.1	Place a high priority on SFPD enforcement of both bicyclist and motorist violations that most	
6.2	frequently injure cyclists. Develop a SFPD "fix-it ticket" program, in collaboration with the DPT,	
	for bicycle equipment violations.	
6.4	Develop and implement, in collaboration with the SFPD, a DPT bicycle-safety traffic school	
	curriculum as an option for those cited for moving violations.	
6.6	Clarify sections of the San Francisco Traffic Code that pertain to double parking in bicycle lanes	
	and increase parking enforcement and fines for this violation.	
	Current law provides for a \$100 fine for parking in a bike lane during the hours of 7 to 9 am and	
	4 to 6 pm. At other times, the \$50 fine against double parking applies. The law should be amended	
- -	to apply \$100 fine should be applied at all hours.	
6.7	Post "no parking in bike lane" signs along bicycle lanes where double parking occurs.	
6.8	Increase the enforcement against motorcycles operating in bike lanes. Should read, "Request the	
()	SFPD to increase enforcement" as the MIA has no jurisdiction.	
6.9-	Develop a DPT bicycle-safety curriculum for all SFPD police officers that focuses the rights and	
0.14	responsibilities of bicycle traffic and techniques required for safe and legal sharing of the	
	roadway. Increase SFPD and DP1 bicycle-mounied pairois. Implement a system to allow cyclists	
	or report consists directly to the bicycle Program website. Inform cyclists that they are legally anticled to file a collision report if one is not initiated by the police.	
7 1	Promote the banefits of the Biavale Poute Network facilities to diverse and income and other	
/.1	populations, with free bicycle maps, web based route planning system, maps posted in high	
	visibility locations, and formal recognition as a bicycle-friendly community	
73	Expand bicycle promotion and incentive programs for City employees:	
1.5	Create a city bicycle pool ²	
	• Reimburse city employees for bicycle use:	
	• Substitute bicycles for motor vehicles at fleet purchase time for departments where feasible:	
	• Incorporate bicycle promotions in various city opportunities, such as in paychecks, etc	
7.5	Promote bicycle-related businesses.	
	For example, increase the range of streets pedicabs are allowed to operate in, and support the	
	development of a freight-moving bicycle delivery service such as Pedalers' Express in Berkeley.	
8.1-	Incorporate this Bicycle Plan in whole by reference into the General Plan, and ensure the	
8.3	Planning Department's plans and methods are consistent with the goals of this bicycle plan.	
8.4	Update the Planning Department's "Guidelines for Environmental Review: Transportation	
	Impacts," to ensure adequate accommodation of bicycles. Currently, guidelines already insist that	
	bicycle impacts be evaluated, but there is no objective standards against which to judge impacts.	

8.5	Ensure that non-automated traffic counts conducted as part of any City transportation or
	development study include: bicycle counts at the same locations where motor vehicles are
	counted; an inventory of existing bicycle parking within a two-block radius of the study site; and
	the project's impacts on any existing or proposed bikeways designated in the General Plan.

The following action items are some of the recommendations that came up during or after the process for developing the Policy Framework. They could be added to the plan through amendment at any stage of its journey through the approval process, or simply implemented despite not being included in the plan. The first two action items relate to the network improvement document (chapter 2). The third relates to bicycle parking (chapter 3) and the fourth to policies and procedures (chapter 8)

Action Item #	Action Item Description, with comments in italics.
M-1	Implement a trial colored bicycle lane to test the technology and evaluate wear after one year. It would probably cost \$4 million to pave the entire bicycle lane network with a layer of colored pavement, a reasonable expense, but a substantial one that deserves careful consideration and a trial application before budgeting. The plan does not recommend such a trial, but privately I have heard that the MTA Bicycle Program is planning to do one.
M-2	Evaluate route numbering system and signage system to implement best practices in on-street route designation. <i>The public does not follow the route numbering system, and the signage system does not guide cyclists to destinations with the simplest presentation of necessary information: direction, destination, and distance.</i>
M-3	Build sheltered bicycle parking areas at transfer points on new BRT lines and existing LRV lines. The plan does call for bicycle parking at transit hubs, but not specifically covered bicycle parking at what will be important transit transer points when the BRT system is developed ten to twenty years from now.
M-4	Staff the Bicycle Advisory Committee. Some city committees have staff support for sending out agendas, reserving rooms, etc. Providing this support for the BAC would free up its Chair to focus on policy not practical details.

B. Network Improvement Document

The Network Improvement Document is what most people think of when they hear about "the bicycle plan." It lists every street in the network, and what improvements are contemplated. The *ideal* Network Improvement Document would specify a network of bicycle-friendly streets that reaches to within a 1/4-mile of every important destination, with respect to the city's contours and shortcuts that cyclists take, even if the result is the designation of two adjacent streets as official network streets. It would specify improvements that are feasible politically and financially in the next five years (relying heavily on new bike lanes and stencils) and long-term options that will require new funding or political changes to implement (e.g. new class 1 paths, extensive traffic calming).

The current draft of the Network Improvement Document does not propose specific improvements for very many of the streets on the network, although considering the effort it takes to determine the feasibility of a specific improvement it's a fair representation of what we should expect given the resources of the current Bicycle Program staff. It also does not propose a

sufficiently dense network of streets, excluding many segments that ought to be included for the network to achieve the goal of reasonably linking every destination and reaching every neighborhood to the 1/4-mile standard specified in the goals.

To approach the ideal, additional streets should be added to the network. A preliminary list of those streets is included as Appendix A of this Guide. Also, city planers should undertake the effort necessary to propose specific improvements for every network street. Even if the resources do not exist to implement such proposals, it is absolutely critical that they are included in the plan as soon as possible so that when unrelated developments take place city planners will know how that unrelated development might affect, or be affected by, a potential improvement for bicycles. For example, if we had determined the need for a bike lane on WB Market Street approaching Church Street several years ago, Safeway, Inc. could have been required to pay for the street reconfiguration necessary to build that bike lane as part of its massive reconstruction.

Assuming two to three years' staff time and attendant traffic engineering and public outreach costs, the effort to propose at least one *feasible* option and other *potential* options for every segment on the bicycle network would cost just short of \$1 million. A 2003 estimate by the Bicycle Coalition determined that a complete build-out of the bicycle network (colored bike lanes, and inclusive of planning and public outreach costs) would cost just over \$100 million. A short-term planning investment of less than \$1 million, then, could result in a \$100 million "bicycle network plan," a vision that could be promoted as a single public works project, and which could serve as the basis of requests for major funding beyond what is currently contemplated. Marin County and Chicago are just two examples of jurisdictions that have sought and received federal earmarks for specific projects.

C. Design Guidelines

San Francisco's new Design Guidelines haven't received the credit they deserve for promoting unconventional innovations to improve bicycle safety on San Francisco's crowded streets. The innovative treatments include moving bike lanes (which provide a "bike lane" next to parked cars or the curb when the cars are towed away at peak hour), colored bike lanes through dangerous intersections, shared bus/bike lanes, contra-flow bike lanes, bike boxes (bicycle waiting areas ahead of cars stopped at a traffic light), pavement markings to warn bicyclists in bike lanes away from opening car doors, and shared lane markings (the "sharrow"). With the exception of the first one in the above list, all of these have been tried elsewhere and usually have proven successful.

There are other common treatments that did not make it into the design guidelines. For example, the design guidelines do not encourage planners to follow what is emerging as the international speed limit standard of 18 mph for calm, residential streets. Chicago is borrowing the concept of "home streets" from the United Kingdom for their bicycle plan. Another treatment popular in the Netherlands turns a narrow two-lane two-way street without bike lanes into a street with a bike lane in each direction and a two-way single middle lane, creating what is known in the U.S. as a "pull-out street." Cars would have to pull out of the auto lane into the bike lane to pass opposing traffic. The design guidelines also do not recommend a trial of placing the bike lane between

parked cars and the sidewalk as is common in Berlin. The guidelines do not deal with the problem caused by the intersection of a multi-use path and a street, where blind pedestrians must be directed safely to a sidewalk but bicyclists must be directed safely to the roadway.

The design guidelines sometimes severely restrict the usefulness of a recommended treatment. The section on contra-flow lanes does not recommend permitting two-way bicycle traffic on most one-way alleys, a common practice throughout Europe and potentially beneficial in our city with so many narrow alleys. The section on bike lane and traffic lane widths does not explicitly mention the opportunity to narrow traffic lanes below 10 feet in width, although such narrow lanes are common throughout San Francisco. The section on painting bike lanes through intersections restricts the treatment to just a few of the largest and most complex intersections, though it would help promote bicycling to paint them much more liberally.

These omissions notwithstanding, the design guidelines do provide an impressive array of new tools for San Francisco's bicycle planners. What they do not provide is a *standard*, or an objective way to judge the comfort and safety of the bicycling experience. Such a standard would help in the policy context because it would allow the Board of Supervisors to insist upon a minimum quality of bicycling conditions on all official bicycle routes. (The Board could pass a law requiring all bicycle routes to provide a Level of Service B or better, for example, and the Bicycle Program would be pre-authorized to make those proposals.)

III. Putting the Pieces Together in the Implementation Phase

These three pieces, the Policy Framework, Network Improvement Document, and Design Guidelines, provide a hopeful context for bicycle planning in San Francisco. Despite the ambitious goal of 10% of all trips by bike by 2010, however, the plan does not indicate a pace of change, or a defined level of accommodation for bicyclists that we can promise to provide for San Francisco travelers within a specified time frame. Those things depend on the next step: implementation. The rest of this People's Guide explores some options for implementing the Plan so that it might more closely achieve its goal.

To more realistically approach the goal, the bicycle network system must be so robust that bicycle advocates should be able to tell any physically able person, without special training, to just stay on the bike routes and almost guarantee them an easy and safe bicycle ride. That is, 999 times out of 1,000, bicycle riders should be able to ride side-by-side on most of the network, at speeds as slow as 10 mph, without having to constantly scan for hazards, swerve around double-parked cars, or worry about angering delayed drivers behind them. People who want some safety training should be able to get free advice in the form of a booklet or online videos, or in the form of personal training for a fee. A strong promotional campaign should excite people about the possibility of bicycling. San Francisco should become known as the United States' cycling Mecca like Amsterdam is known in Europe. *How can the components of this plan be implemented to achieve this?* Let's take them in reverse order, starting with the Design Guidelines.

A. Implementing the Design Guidelines

The Bicycle Advisory Committee should recommend an update to the Design Guidelines by September, 2005, which would be two years after the approval of the first version. A BAC hearing could accept comment on changes to the guidelines, which the BAC could then present to the Board of Supervisors as part of a request to update the Guidelines. This would permit the addition of numerous tools to our planners' toolbox.

The lack of standards could be addressed through the development of "bicycle level of service" standards (Bicycle LOS) that would specify what conditions create excellent streets for bicycling (Bicycle LOS A) and what conditions result in dismal streets (Bicycle LOS F). Such standards are already in use elsewhere in the United States, but customizing those standards for our purpose would still require a great deal of effort. Having bicycle LOS measurements would guide planners' improvements of the street and help to justify reductions in automobile LOS.

B. Implementing the Network Improvement Document

As noted, it makes sense for the Network Improvement Document to specify plans for the entire robust network envisioned a few paragraphs earlier, even if the money to construct those plans is not available in the near term. Such a complete plan will help advocates seek funding for the improvements. Also, since every hour of staff time in the MTA Bicycle Program must be charged to a specific project, treating "the bicycle network" or a large portion of it as a single project could simplify the task of covering the staff costs in the MTA Bicycle Program, not to mention reduce those costs on a per project basis.

Analyzing multiple options for each segment of the bicycle network will take years, on the one hand; on the other hand, there is considerable political pressure to expedite this analysis. Indeed, the sooner we have a sense of the cost and feasibility of various improvements to the bicycle network, the sooner we can prioritize them. Should we spend millions paving bike lanes with colored pavement before we retrofit Market Street with a bike path (and how much would that cost)? How important is the proposal to widen the uphill sidewalk in the Broadway Tunnel, at a cost of over \$1 million? What about the proposal for two sidepaths on San Jose just south of Randall Street?

The BAC should develop a process to evaluate various proposals for improvements to the network at an expedited pace, i.e. make regular updates to the Network Improvement Document. The updates should be infrequent enough to allow sufficient time between updates to analyze substantial changes, yet frequent enough to facilitate the combining of multiple projects into a single batch (it's easier to tell advocates for a particular project to accept a delay in the approval process of their project for the sake of batching it with others if the delay is not too long). A semi-annual update, every May and November, for example, might be perfect.

C. Putting It All Together in a Visionary Way

Implementing the bicycle plan so that its results get us closer to 10% by 2010 will require a great deal more explicit political support than currently exists, in direct proportion to this paper's criticisms of the current Bicycle Plan Update as insufficiently visionary. (The plan's authors

have written a good plan for the *current* degree of expressed political support.) Bicycle advocates—primarily the SFBC—must come up with a plan to get our political leaders—most importantly the Mayor—to express that support. World Environment Day, this June, presents a prime opportunity. How can the Mayor call for a visionary implementation of this plan?

A forward-looking name would help, such as in Chicago, whose "Bike 2010 Plan" is widely known as a favorite of the Mayor's. Mayor Newsom should call for a complete network of bike-friendly streets by 2010, and give that effort a catchy name, like Bikeable Streets 2010. Bicycle advocates should support the Mayor if he chooses a more realistic mode split goal— say, 10% by 2020, or six percent (doubling the current rate) by 2010—if he is willing to be held accountable for efforts to reach that goal.

Conclusion

Oliver Gajda of the MTA Bicycle Program, says, and he's right, "we have three building blocks of a successful program—the Policy Framework, the Network Improvement Document, and the Design Guidelines." He also says, "it's not everything we want" and he's also right.

Our challenge in going forward is to implement the existing documents in as visionary a manner as possible. We must help to garner strong support from the public and politicians to ease the implementation of these documents, and reward the Bicycle Program staff for taking risks. We must subject our plans to continual review and update, informed by robust public involvement, and we must volunteer much of that work so that it doesn't detract from the planners' work actually implementing the existing documents.

We may not be able to reach the goal of 10% of all trips in San Francisco by bike by 2010, but we may be able to come close, if we work together and, as soon as possible, spell out the details about what it will take to do that.

Appendix A. Street Segments to Consider to Add to the Bicycle Network

High Priority: The following streets should be added immediately, due to the availability of funding to make improvements on them:

• DeLong near Daly City BART (eligible for Safe Routes to Transit funding)

• Sansome Street from Washington to the Embarcadero (extending the route which starts at Market St.) (eligible for Safe Routes to Transit funding)

• outer Geary (already popular bike route, must be considered in BRT planning).

• Geary, and O'Farrell east of Van Ness (bike improvements are being made already as part of the TPS treatment; these become more attractive routes and should be included on the map).

• St. Mary's from San Jose to Mission Street. (This connects the newly added San Jose Ave. to Mission Street, and will become even more important if the 2-way path is added on the east side of San Jose.)

Medium Priority: The following list of streets should be added as soon as possible.

• 20th Ave. connector to Stern Grove path (eliminates a 2-block detour and would improve traffic safety near the park)

• Route 45 extension to Marina Green (via Fillmore, probably. Connects Pacfic Heights to Ft. Mason and the Marina Green.)

• Mason Street from Columbus to Jefferson (Connects Chinatown/downtown to Fisherman's Wharf)

• Mission Commons in Mission Bay (this was intended by Catellus to be a class 3 bike route).

• Stockton Street from Post to Market (creates a direct connection from Stockton Street to Market Street; other alternative is more than twice as long)

- Bryant from 17th to Duboce (direct route to 11th Street from this area of the Mission)
- Howard Street from 11th St. to Duboce St.

• Jennings from Carroll to Gilman (necessary to provide quiet, neighborhood street alternative to Third Street, which cannot accommodate bike lanes)

• Gilman from Jennings or Fitch to Third (links with segment listed above)

The following three routes are necessary to meet plan's goal of bike routes within 1/2-mile of major neighborhoods and destinations:

- Teresita Blvd. (entire length)
- Clarendon from 17th to Laguna Honda
- Vienna from Geneva to Silver

Low priority. The following streets should *probably* be added to the street network.

• Twin Peaks (recreational route only; depends on outreach to determine feasibility and importance)

- Irving Street (very popular bike route, but very busy)
- Land's End connection between route 10 & 395 (important recreational connection, but uses park land).
- Clay from Battery to Drumm (depends on outreach to determine feasibility and importance)
- Drumm from Market to Washington (depends on outreach to determine feasibility and importance)
- Grant and Kearny from Market to Columbus (depends on outreach to determine feasibility and importance)
- Hampshire from Cesar Chavez to 17th (depends on success of Potrero bike lanes)
- Bike paths around eastern terminus of Islais Channel (depends on outreach to determine feasibility and importance)
- Holloway from Plymouth to Ocean (depends on Balboa Park plan development)
- Sunnydale from Bayshore to Santos (alternative to Geneva, necessary only if Geneva can't have bike lanes)
- Sunnydale, entire length (necessary for access to McLaren Park)
- Santos from Sunnydale to Geneva (links to above segment)