2013

Ciclovía Initiatives: Engaging Communities, Partners, and Policy Makers Along the Route to Success

Susan G. Zieff PhD
San Francisco State University, Dept. of Kinesiology

J. Aaron Hipp
Washington University in St. Louis, Brown School, ahipp@wustl.edu

Amy A. Eyler
Washington University in St. Louis, Brown School, aeyler@wustl.edu

Mi-Sook Kim PhD
San Francisco State University, Dept. of Kinesiology

Follow this and additional works at: https://openscholarship.wustl.edu/brown_facpubs

Part of the Community Health and Preventive Medicine Commons

Recommended Citation
Zieff, Susan G. PhD; Hipp, J. Aaron; Eyler, Amy A.; and Kim, Mi-Sook PhD, "Ciclovía Initiatives: Engaging Communities, Partners, and Policy Makers Along the Route to Success" (2013). Brown School Faculty Publications. 6.
https://openscholarship.wustl.edu/brown_facpubs/6

This Journal Article is brought to you for free and open access by the Brown School at Washington University Open Scholarship. It has been accepted for inclusion in Brown School Faculty Publications by an authorized administrator of Washington University Open Scholarship. For more information, please contact digital@wumail.wustl.edu.
Title: Ciclovia initiatives: challenges along the route to success

Authors:
Susan G. Zieff, Ph.D., Professor
Department of Kinesiology
Active Living Across the Lifespan Research Group
San Francisco State University
1600 Holloway Ave.
San Francisco, CA 94132

Aaron Hipp, Ph.D.,
Assistant Professor, Brown School
Investigator, Prevention Research Center in St. Louis
Scholar, Institute for Public Health
Washington University in St. Louis
Goldfarb Hall 352
Campus Box 1196
One Brookings Drive
St. Louis, MO 63130

Amy A. Eyler, PhD, CHES
Assistant Professor, Brown School
Investigator, Prevention Research Center in St. Louis
Scholar, Institute for Public Health
Washington University in St. Louis
Brown Hall 112
Campus Box 1196
One Brookings Drive
St. Louis, MO 63130
Mi-Sook Kim, Ph.D., Professor
Department of Kinesiology
Active Living Across the Lifespan Research Group
San Francisco State University
1600 Holloway Ave.
San Francisco, CA 94132

Hipp and Eyler are funded by Robert Wood Johnson Foundation’s Active Living Research grant #68899.
Abstract:

Context: Recent efforts to increase physical activity through changes to the built environment have led to strategies and programs that use existing public space including bicycle lanes, temporary parks and the ciclovia initiative (scheduled events in which streets are closed to motorized vehicles and opened for recreational activities) popularized in South America.

Objective: The current paper describes and compares the processes and structures involved in developing and implementing a ciclovia-type program in two U.S. urban contexts: San Francisco, California, and St. Louis, Missouri. Considering the current growth of and interest in ciclovia initiatives, important outcomes, lessons learned are offered for application in other, similar settings.

Design: Primary sources from both initiatives and from published research on ciclovias constitute the body of evidence and include: year-end reports, grant applications, meeting minutes, budgets, published ciclovia guidelines, evaluation studies and websites, media sources and interviews and personal communication with the organizers.

Main Outcome Measures: Primary source documents were reviewed and included in this analysis if they offered information on three grounded questions: What processes were used in developing the initiative? What are the current structures and practices used in implementation of initiatives? What are important lessons learned and best practices from initiatives for recommendations to stakeholders and policy-makers in other contexts?

Results: Among the categories compared, the structures and processes for implementation regarding buy-in and city department collaboration, route selection, programming, partnerships, media promotion, community outreach and merchant support were relatively similar among the two initiatives. The categories that differed included staffing and volunteer engagement and funding.

Conclusion: Buy-in from community partners, merchants, residents and city agencies are critical for a positive experience in developing and implementing ciclovia-type initiatives in urban environments. When funding and staffing are inconsistent or limited, the quality and sustainability of the initiative is less certain.
Ciclovia initiatives: engaging communities, partners and policymakers along the route to success

**Introduction**

Recent efforts to increase physical activity through changes to the built environment have led to various strategies and programs that use existing public space including bicycle lanes, temporary parks and the ciclovia initiative (regularly scheduled events in which a network of streets are closed to motorized vehicles and opened for bicycling and other recreational activities)\(^1\) popularized in South American cities such as Bogota, Colombia.\(^2\) The ciclovia\(^*\) holds promise as a large-scale intervention that corresponds to The Community Guide recommendations for increasing access to places for physical activity and providing informational outreach.\(^3-4\) Recent analysis of four global ciclovia programs suggests that health benefits of these initiatives outweigh their costs.\(^5\) Ciclovia-type events are growing in popularity, both in number of events nationally (over 70 different US cities hosted a ciclovia between 2009 and 2012\(^6-7\)) and worldwide, and in the number of participants (up to 1.5 million per event in Bogota).\(^2\)

The Alliance for Biking and Walking joined forces with OpenStreetsProject.org, a website to exchange information, on how to develop and implement ciclovias whose unique processes and structures typically require collaborations between community stakeholders, advocates and government leaders.\(^8\) The Open Streets Project developed a 7-model typology to define ciclovia initiatives according to characteristics including: population, lead organizing entity, funding, route type, setting, length and activities.\(^6\) Scholars have begun to conduct evaluations of both process and outcomes of ciclovia initiatives nationally and internationally.\(^4,9\)

**Purpose of this project:**

* There are many U.S. names for ciclovia initiatives (e.g. Sunday Streets, Open Streets, Summer Streets, Sunday Parkways). For the purposes of this paper, we will refer to all initiatives as ciclovias.
The purpose of this paper is to describe the development and implementation of two urban ciclovias representing different models according to the Open Streets Project typology: Sunday Streets, **San Francisco, California (San Francisco Model), and Open Streets, St. Louis, Missouri (Portland Model). An analysis of these two initiatives offers important outcomes and lessons for application in other contexts nationally and internationally.

**Methods**

Sunday Streets and Open Streets were selected for comparison based on differences in model: San Francisco Model (San Francisco: public/non-profit led; public/privately funded) and Portland Model (St. Louis: publicly led; public/privately funded). University researchers have evaluated Sunday Streets since 2009 and Open Streets since 2010. Due to the descriptive nature of the present study, primary sources from organizations in both cities and from published research on ciclovias, constitute the body of evidence (see Table 1). The following primary source documents were collected: a.) Project-based documents (e.g. year-end reports); b.) Published ciclovia guidelines, (e.g. Ciclovia Recreativa: Implementation and Advocacy Manual); evaluation studies (e.g. CDC evaluability study) and websites; c.) Traditional media and social media sources (e.g. Facebook); and d.) Communications with the organizers. Primary source documents were included in this analysis to address three grounded questions: What processes were used in developing the initiative? What are the current structures and practices used in implementation of initiatives? What are important lessons learned from initiatives for recommendations to potential organizers in other contexts?

**Development of Sunday Streets and Open Streets**

** Sunday Streets SF refers to the non-profit organization; Sunday Streets are the specific events.
Both Sunday Streets and Open Streets were initiated to promote cycling among city residents. The City and County of San Francisco began “Car-Free Sundays” by closing a section of Golden Gate Park in 1967 for biking, jogging and other recreational activities. By 2006, park use on Sundays was 216% of the use on Saturdays encouraging advocates to begin to push for—and achieve in 2007—additional closure on Saturdays. In 2008, Mayor Gavin Newsom and the San Francisco Bicycle Coalition (SFBC) sought to promote bicycle use among ethnic minority and low-income city residents—historically under-represented park users—to implement a ciclovia in the city. Staff from the Mayor’s Office, SFBC, Livable City (a transportation and land use advocacy non-profit) developed the initial launch of Sunday Streets, but soon established a non-profit entity, Sunday Streets SF, to collaborate with city agencies and private and non-profit organizations to manage the initiative. Livable City also serves as the project’s fiscal agent. The Department of Public Health active living collaborative, Shape Up SF, was a partner in Sunday Streets’ first year. In September 2009, Mayor Newsom announced that Sunday Streets was to become a “permanent program” and by 2010 Sunday Streets became institutionalized as a monthly program from March through October with the Municipal Transportation Agency as a main fiscal sponsor.

In St. Louis, the Bicycle Implementation Group within the Mayor’s Office proposed a recreational event in 2009 to highlight the short distance (<2.5 miles) and ease of bicycle travel between the city’s two largest parks, Forest and Tower Grove Parks (1371 and 289 acres, respectively). When the original plan faced difficulties in implementation, the group, familiar with ciclovias in Colombia, New York, and San Francisco, elected for a longer route (six miles) between Forest Park and the heart of downtown to the east. With funding from Boeing and Anthem Blue Cross Blue Shield, the city (including the Police and Special Events Departments) worked with a local active living advocacy organization, Trailnet, to produce four ‘Open Streets’ events in 2010. There was enough funding from the first four events to largely pay for two additional events in fall 2011. Three key members of the original Bicycle Implementation Group are no longer with the
city and the champion within the Mayor’s office has changed. The current champion, a lifelong resident of St. Louis, and his team have shifted the focus of Open Streets from a bicycle-centric initiative of four-plus miles, to a local, neighborhood initiative of 1.5 – 2.0 miles in length.16

**Buy-in and City Department Collaboration**

Cooperation between City departments, government agencies and local non-profits has been a feature of the organization and implementation of both programs. Sunday Streets SF reports that in addition to the official sponsorship of the Mayor’s Office, the San Francisco Municipal Transportation Authority (SFMTA; delivers staff leadership, support for permits, staff at events and high level marketing) and the fiscal sponsorship of Livable City, city departments who contributed to Sunday Streets include: Mayor’s Office: Economic Development (staff and financial support; Press office for media outreach, political leadership for program support); Environment, SF Arts Commission (program assistance), Public Works (equipment delivery, use and pick-up, route cleaning post-event), Recreation and Parks (use of facilities and properties, staffing during events, marketing support), Public Health with Shape Up SF (financial and staff support), and the Police.17

In 2009, a Memorandum Of Understanding developed between city departments reduced uncertainty about delivery of (in-kind) services such as staffing and resources (e.g. intersection crossing cones).18 Other government agencies involved include: the Port of San Francisco, Redevelopment Agency, and the National Park Service. Additional support comes from SF Bicycle Coalition (coordinators of the volunteer program) and the YMCA of SF (programming).19

Five different city departments provided support before or during Open Streets: St. Louis Metropolitan Police, City Special Events, Streets, Health, and Parks, Recreation and Forestry. With the current focus on shorter, localized events, neighborhood associations were also integral collaborators. Neighborhood and local business associations have petitioned for an Open Streets with route suggestions and communication assistance. Additional support, guidance and day-of
activities were provided by Trailnet, Great Rivers Greenway District (regional public entity) and the YMCA. Finally, AmeriCorps volunteers and university interns provided much free or cheap staffing in exchange for the educational opportunities associated with service learning and evaluation.

In addition, the St. Louis Board of Public Service and Grace Hill community health centers provided support through the Bicycle Implementation Group. The local Council on Government, East-West Gateway, supported Open Streets via their Bicycle Pedestrian Advisory Council, and Trailnet and St. Louis University steer a collaborative network, Livable St. Louis, which continues to support all local efforts to create a more livable city.

**Current Structures and Processes Used in Implementation**

Sunday Streets and Open Streets both aim to increase opportunities for recreation and other healthy behaviors and connect communities while supporting economic vitality through livability measures. (See Table 2) Route selection is an important feature for implementing these goals while reaching targeted populations.

**Route Selection and Implementation**

Sunday Streets has expanded each year since it began in 2008 with its current emphasis on continued use of the longer routes (>3 miles). (See Table 3) A pilot program is being conducted in 2012 to develop a permanent, sustainable route and provide the opportunity for study of the program’s impact and sustainability. The selected route will be the site of 4 events and meets the criteria set forth in the directive (e.g. well-served by bike-readable transit; creates open space in a community that is “park poor”; located where there is merchant support and connects multiple neighborhoods). Routes are initially selected to support the project’s goals by examining City of San Francisco public health data to identify neighborhoods associated with chronic disease burden; open space/park availability by neighborhood; income/poverty rates using U.S. Census
data and ethnic minority populations. The actual streets used for each route are coordinated to run
close to public transit and to avoid re-routing public transit. Due to the popularity of the events
(and a specific request from residents of a predominantly African American community residing
near one route to allow church-goers longer access), the hours were shifted from the original 9:00
a.m.-1:00 p.m. to 11:00-4:00.20.

Open Streets began in 2010 with four, 6-mile events held from 8:00 a.m.-1:00 p.m. focusing on ease
of travel between two specific urban destinations. In 2011 and 2012, Open Streets offered two
shorter events with reduced hours (9am – 1pm). The 2011 and 2012 routes were determined
based on neighborhood requests following the successful first event in 2010 and were associated
with neighborhood street fairs and farmer’s markets. These four Open Streets events preceded the
street fairs with the goal of funneling participants from Open Streets into the specific
neighborhoods. With the neighborhood events as one terminus, the City and Trailnet worked to
incorporate existing bike lanes and greenways as the opposite terminus.

In addition to crossing multiple neighborhoods and incorporating existing events, each Open
Streets has used streets with bike lanes. Each event has also terminated either at a large park or a
greenway to better accommodate cyclists looking for longer rides. Open Streets have been
accessible via bus at each event, but have only been accessible via lightrail (MetroLink) at four
events.

Staffing, Volunteer Engagement and Programming

Staff and volunteer capacity operate differently between Sunday Streets and Open Streets. Sunday
Streets has 2 full-time paid staff members--a Project Director and Program Assistant--as well as a
logistics team (responsible for route planning, event schedules, permits, traffic safety, detours,
public safety tasks) and volunteer program coordinator. In collaboration with the SFBC, a volunteer
program was established in 2009. Staff members currently include a Volunteer Coordinator
(responsible for recruiting, training more than 600 volunteers for public safety and event support, placing 100-150 at each event), and four paid Volunteer Program Interns to supervise volunteers on-site. Volunteers receive a Sunday Streets t-shirt and lunch voucher.

There is no permanent or part-time position specifically charged with Open Streets coordination. Open Streets is currently organized and supported by the St. Louis Mayor’s Office, led by a Special Assistant to the Mayor. The Special Assistant works closely with the city’s Special Events Program Executive and a private sector event coordinator for each event. In addition, a Policy Specialist with Trailnet attends Open Streets organizing meetings and assists with route selection to include bike lanes and greenways. Neighborhood leaders attend the meetings specific to the events transiting their communities.

Volunteers for Open Streets in 2010 were coordinated by the St. Louis Bike Federation (now part of Trailnet). The coordination was an uncompensated position with several dozen volunteers at the events. In 2011 and 2012, the city recruited 15 volunteers per event through contacts and local universities to canvass the neighborhoods before Open Streets and assist with set-up and take-down of activity hubs and traffic barriers, though they did not participate in controlling street closures or day-of information.

**Programming**

Both Sunday Streets and Open Streets include a variety of programmed and informal activities. From 2008-2010, each San Francisco community engaged local partners and advocates to develop the program of activities (e.g. bike education) and offer scheduled and drop-in classes (e.g. yoga, dance, tai chi chuan, hula-hooping) at specific Sunday Street events. The Committee also coordinated activities by category (80+ groups), ensured permits and resources, managed insurance certificates and other documentation, provided information on activity locations, created
schedule and information for activity guides and provided amplification (including permits) for live music activities.

Some events were coordinated with other citywide activities. For example, the first event of 2009, along the Embarcadero, was a collaborative effort with the Fisherman’s Wharf Health & Safety Fair. The second event that year coincided with the 20th anniversary of the Bay Trail and the route included most of San Francisco’s Bay trail, while the 3rd event was a partnership with the SF Symphony during their annual Dolores Park Free concert, a park along the route.

Activities offered during Open Streets have varied greatly. The city has engaged neighborhood groups, citywide programs and merchant associations who have a history of supporting public events and are related to the healthy living message. The event coordinator (2011-2012) also invited specific organizations and performers. The majority of activity hubs were unfunded, with the exception of one musical act per event. A Robert Wood Johnson Foundation Active Living Research (RWJF-ALR) grant supported youth-focused activity hubs during 2011 and 2012 with mini-grants of $200-600 each. The grants supported the purchase of materials and supplies that were used by the organization during and after the event (e.g. portable basketball goal). Activity hubs included skating demonstrations and lessons, yoga, ZUMBA®, soccer skills, guided bike rides, active living crafts, table tennis, and basketball. DJs, live musicians, and hula hoop gymnasts also provided active entertainment and food trucks and farmer’s markets have been available. Beyond activity hubs directly associated with Open Streets, six of the seven events have been linked with other city events including a Bike-to-Busch baseball game and Halloween festivities.

Community Engagement and Outreach

____________________________
Sunday Streets SF and Open Streets are characterized by some notable differences in the extent of community engagement. Community leadership and involvement have been key to the planning and implementation of Sunday Streets since 2008. Since events are intentionally routed through underserved neighborhoods, targeted populations are represented through key stakeholders and community organizations in the development of the event and are given priority in placement and scheduling of activities and performances. Community organizations are also given the opportunity to plan and implement “companion events” such as the Bayview Music and Arts Festival held in conjunction with the Bayview/Dogpatch event. Community organizers are consulted on dates of events and specific route details. Face to face meetings during the planning phase are another example of community engagement and feedback. City departments such as Mayor’s Office of Neighborhood Services and Office of Community Engagement participate in outreach to non-English speaking populations.

Monthly meetings with entities such as Police Community Relations, neighborhood associations and merchant associations engaged those along the route. Of special concern were efforts to inform residents of potential car towing through fliers and neighborhood canvassing. Support was provided by the Mayor’s Office on Neighborhood Services in providing outreach and contact with neighborhood stakeholders. Focused marketing was conducted to inform residents about the goals and activities of the event through local and ethnic media.

Open Streets is an example of a top-down approach, although local stakeholders participated in routing and assisted with activity hubs. Community feedback took the form of city-run Facebook and Twitter forums, and a direct survey in which participants were asked to provide a “wish-list” for activities and structure of Open Streets. The local alderperson has also been engaged early in the process with each route. This higher order engagement has not always translated into complete neighborhood engagement as the majority of participants in some routes
resided outside of the surrounding neighborhood. Also, each event has had a few residents who were unaware of street closures and the event. Yet, there has been notable community support for these events.

**Merchant Buy-in**

Both initiatives experienced mixed feedback from merchants along the route. While there were initial fears of slower businesses in both cities, there have also been many examples of requests for the program by merchant associations. For the inaugural Sunday Streets event of 2008, Fisherman's Wharf Community Benefits District Merchants expressed concern about the absence of parking and car access and a consulting group was hired to conduct interviews. The results indicated that 68.4% of the participants attended the Fisherman's Wharf Health & Safety Fair specifically to participate in Sunday Streets; 30.9% of attendees arrived at the event by private vehicles but 50% came by bike or walked. More than 65% purchased a meal while attending the Fair and attendees spent an average of $38 (less than other Wharf visitors). However, the following year, the Fisherman's Wharf merchants, as well as those in at least two other districts, began requesting that a Sunday Streets event be developed for their neighborhoods.

Sunday Streets SF has institutionalized its approach to sponsorship offering two levels of investment and benefits: Community Sponsor ($5,000 per event) that includes logo or name recognition on all media event materials (e.g. banners, fliers, etc.); and Route Sponsor ($15,000 per event) offering route exclusivity, media recognition and event media.

Community and merchant support for Open Streets has been “mixed at best”. Open Streets are on Saturday and not Sunday as requested by church communities along initial routes. In general, boutique stores and restaurants were supported by shoppers, but national chains and those merchants with larger, street-facing parking lots reported lost business due to the closing of
Across the four surveyed events (each a different route), 61.9–82.3% of respondents reported spending money at the event and 34.1–73.9% became aware of a new business.

To engage local merchants, each business along the route was personally visited by organizers and provided with Open Streets advertising materials. The merchants were encouraged to engage Open Street participants with signage and activities on the sidewalk or street. Open Streets has not institutionalized sponsorship, but does provide logo or name recognition on printed materials for all financial and in-kind donations.

**Media**

Both initiatives use a variety of media to inform the public including fliers and posters, print advertising in local newspapers and television spots. In San Francisco, press conferences are typically held prior to an event often with the local District Supervisor and information is distributed through the Mayor’s Press Office and MTA Marketing. In-kind media support is provided by the *SF Examiner* and Clear Channel Radio. SFMTA supports marketing Sunday Streets through transit media: electronic signage, ads on its homepage and printed materials on transit vehicles. As of September 10, 2012, 9,148 fans “like” Sunday Streets on Facebook and there are more than 3,665 followers on Twitter.

In St. Louis, yard signs are placed along the route and at nearby intersections the week of the event. In addition, Open Streets has tried to engage social media and the Internet with an Open Streets website, Facebook page (822 Likes as of 8/23/2012), Twitter account (375 followers), and reaching out to St. Louis-specific blogs. Cycling and running-specific Listservs are also emailed.

**Funding**

Sunday Streets SF and Open Streets support their initiatives through grant writing, donations, and in-kind support. Shape Up SF and Kaiser Permanente were among the early agencies providing
substantial support to Sunday Streets. Since implementation, the balance between public and private funding sources has shifted and in 2010, the San Francisco's Mayor's Office directed all city agencies to absorb their respective costs associated with each event and appointed the SFMTA as the lead agency for Sunday Streets, instead of the Department of Public Health.\textsuperscript{11} Funding to support the full-time program director and part-time program assistant and external costs (e.g. equipment rental, printing, graphic design, other administrative costs) is raised through corporate and nonprofit sponsorships, individual donations and grants from private and non-profit organizations, and local and regional government. Sunday Streets SF was purposefully established as an independent nonprofit in order to facilitate the fiscal management of the program and to seek grant funding.\textsuperscript{11}

Prior to the 2010 event, the St. Louis Mayor’s Office raised approximately $80,000 to support Open Streets. Funding sources included Boeing, Anthem Blue Cross Blue Shield, HealthLink, and Great Rivers Greenway. Additional, smaller funding and in-kind donations have enhanced this initial funding. The RWJF-ALR grant provided some marketing funding for the 2012 events. There are currently no sustainable fundraising initiatives for St. Louis Open Street.

Conclusions

Through systematic investigation and analyses, we have described the process of initiation, development, implementation and challenges to sustainability of two ciclovia initiatives (with over 40 total events). This analysis of processes used to develop Sunday Streets and Open Streets and the structures and practices used for implementation offers lessons learned and reflections on similarities and differences between two models of ciclovia initiatives:

1. Structure collaborations. Formalize agreements with city agencies, including safety personnel, to minimize confusion, secure support and to maintain responsibility and accountability.
2. Community, merchant and government buy-in increases likelihood of sustainable initiatives. Buy-in and community awareness is raised by participating in community meetings rather than by creating separate ones. This also involves incorporating local stakeholders, community advocates and organizers into the process.

3. Volunteers are an essential component of a successful initiative. Develop a bank of available volunteers—particularly those invested in specific events and neighborhoods—who are committed to the sustainability of the initiative.

4. Operationalize an efficient programming process. Streamline application, select food vendors to comply with goals of program, market scheduled events, and encourage local communities to offer programs.

5. Route selection is key. Finalize and announce routes and schedule as early as possible to build community and organizational support and find funders, partners and other sponsors. Routes with key destinations (parks, fairs, other events) and along major or recognizable streets provide greater incentives to participate. Also, route selection vetting should include identification of other events in community and across city, major holidays, location of places of worship, private functions held near location, and public safety issues.

6. Longer routes and hours increase the reach of health benefiting physical activity, and include the potential to engage more people.\(^4\)

7. Promotion of event is necessary for success. Market through a variety of media and include a line item in the budget for paid media. Day of wayfinding (connected bus routes, metro stops, and where to park) and signage and maps posted throughout the route indicating route, activities and facilities are critically important.
REFERENCES

1. Car Free Sundays (Ciclovía Recreativa) Implementation and Advocacy Manual, the Pan American Health Organization’s Regional Council on Healthy Eating and Active Living and Non-Communicable Disease Unit, La Vía RecreActiva of Guadalajara, the Schools of Medicine and Engineering of the University of the Andes, Bogotá Colombia, the Centers for Disease Control and Prevention, 2009, and Ciclovía of Bogotá.


10. Ciclovía Recreativa Implementation and Advocacy Manual, the Pan American Health Organization’s Regional Council on Healthy Eating and Active Living and Non-Communicable Disease Unit, La Vía RecreActiva of Guadalajara, the Schools of Medicine and Engineering of the University of the Andes, Bogotá Colombia, the Centers for Disease Control and Prevention, 2009, and Ciclovía of Bogotá. [http://cicloviarecreativa.uniandes.edu.co/](http://cicloviarecreativa.uniandes.edu.co/).


12. San Francisco County Transportation Authority. Summer 2006. Golden Gate Park Transportation access, weekend access conditions. San Francisco: San Francisco County Transportation Authority.


21. [www.healthmattersinsf.org](http://www.healthmattersinsf.org)


