COMPLETE STREETS: FROM POLICY TO PRACTICE IN THE SAN FRANCISCO BAY AREA
Submission Date: November 15, 2014

Word Count: 4,359 words + 3 tables/figures (250 words each) = 5,110 words

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ABSTRACT

This paper describes how regional funding guidelines can affect local adoption of Complete Streets projects. The Metropolitan Transportation Commission (MTC), the regional Metropolitan Planning Organization for the nine-county Bay Area region in California, has developed a funding approach called the One Bay Area Grant (OBAG) for the allocation of funds for the 2012-2016 Congestion Mitigation and Air Quality (CMAQ) and Surface Transportation Program (STP) across the Bay Area. Each jurisdiction receiving funding through OBAG was required to demonstrate compliance with Complete Streets (CS) policies either by passing a resolution or by certifying that its general plan circulation element was compliant with California’s Complete Streets Act of 2008. This analysis examines the extent and manifestation of this compliance. The OBAG framework allocated significantly more funding to County Congestion Management agencies than was provided during the prior CMAQ/STP cycle (Cycle 1 CMAQ). It also gave counties increased flexibility in decision making by removing program specific silos that were present in Cycle 1 CMAQ. This increased flexibility resulted in an increase in the number of multi-modal projects funded through OBAG. OBAG’s regional funding requirements for Complete Streets compliance through policy have the potential to influence Complete Streets implementation by local agencies in the long term and to serve as a model for other state or local planning agencies seeking to increase investments in pedestrian and bicycle infrastructure.
BACKGROUND AND LITERATURE REVIEW

The Use of Federal Flexible Funding for Active Transportation Projects

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) and the Surface Transportation Program (STP) are flexible funding sources distributed to state and local governments for transportation projects that are likely to contribute to effectively reduce air pollution. These funds are allocated to states based on a formula, and are distributed to local agencies by metropolitan planning organizations (MPOs). Both programs continue to be authorized through the Moving Ahead for Progress under the 21st century (MAP-21) transportation bill (1).

MPOs differ in their approaches to allocating this funding (2,3). Some MPOs dedicate a fixed amount of CMAQ and STP funding for active transportation projects (4,5). Handy et al. (6) examined factors that influence the use of federal flexible funding for active transportation projects and noted that the ‘top-down’ influence of federal policy on these investments is relatively weak. ‘Bottom-up’ influences such as local government policies and advocacy group efforts were found to be key drivers of regional support for these programs. The authors point to California as a model for how federal policy could support increased investments in pedestrian and bicycle infrastructure. California passed a state wide Complete Streets Act in 2008 (7). The California Department of Transportation Deputy Directive 64 (8) states that the department views all transportation improvements as opportunities to improve safety, access, and mobility for all users and modes. State level pedestrian and bicycle planning staff assist with regional and local implementation of active transportation projects.

Types of Complete Streets Policies

Most definitions of Complete Streets (CS) focus on increasing accessibility and safety for multiple travel modes (9). Implicit in the definition is the provision of infrastructure for pedestrian and bicycle facilities. Communities across the United States are adopting policies at the local, regional, and state level to comply with Complete Streets principles. The likelihood of adoption of CS policies is driven by a number of factors (10): the percentage of people who bike or walk to work in the state, and the presence of a border community with a Complete Streets policy. A commitment to Complete Streets in the planning process can take different forms including resolutions, General Plan amendments, or ordinances (11). Complete Streets policies are adopted at various levels of government: local, county, region and state. Different strategies are being used to adopt these policies across the country (12).

The Role of Advocacy in the Adoption of Complete Streets Policies

Advocacy has played an important role in the adoption of CS policies (13). Notably, the Active Living by Design Community Action Model (ALbD) (14,15) has helped create local collaborations between advocacy groups, health and transportation departments leading to the passage of several Complete Streets resolutions. The ALbD is a community grant program funded by the Robert Wood Johnson Foundation and has helped 25 communities throughout the United States create communities that support active transportation. The ALbD program in Sacramento, California was implemented by the Partnership for Active Communities. The program helped to facilitate the incorporation of Complete Streets policies into the regional transportation plan, the mobility element of the city’s general plan, and regional transit master plan. The ALbD program also led to the introduction of California Assembly Bill 1358 (the Safe
and Complete Streets Act of 2008) and the adoption of Caltrans Deputy Directive 64. Other successful examples of the ALbD program include Seattle (16), Omaha (17) and Michigan (18) and North Carolina (19).

**Implementing Complete Streets**

Effective policies must go beyond affirming support for Complete Streets. Various forms of policies have different levels of effectiveness or ‘teeth.’ Locally passed resolutions serve as affirmations of support but are not legally binding. General plans include goals, objectives, principles, proposals, maps, and diagrams describing a community’s development goals (20), and provide the basis for policies and legally binding ordinances that implement the principles outlined in the plan. The circulation element of a general plan identifies transportation routes, terminals, and locations of existing and proposed arterials, roadways and other facilities. Complete Streets policies are incorporated into the circulation element of general plans, although they may also be present in other elements. California’s Complete Streets Act of 2008 requires all substantive revisions of the General Plan Circulation Element after January 1, 2011, to include a commitment to Complete Streets. The bill requires the circulation element “to plan for a balanced, multi-modal transportation network that meets the needs of all users.”

**The One Bay Area Grant: Programming Principles**

The Metropolitan Transportation Commission (MTC) is the Bay Area’s MPO. Congestion Mitigation and Air Quality Improvement Program (CMAQ) and Surface Transportation Program (STP) funding for Fiscal Year 2012-2013 through 2015-2016 were allocated through the One Bay Area Grant (OBAG) program through MTC resolution 4035 (21). Funding decisions were guided by the Regional Transportation Plan (RTP), Transportation 2035, and regional Sustainable Communities Strategy (SCS). OBAG integrates the region’s federal transportation program with California’s climate law, State Bill 375 (22).

CMAQ/STP funds are divided between regionally managed programs and programs managed locally by County Congestion Management agencies (CMAs). OBAG funding policies resulted in a greater amount of funds being available to local agencies compared with the prior funding cycle (referred to as Cycle 1 CMAQ). A total of $795 million was available for allocation throughout the region via CMAQ/STP and Transportation Enhancement funds under the OBAG program. Of these funds, $475 million was invested in regional programs while $320 million was made available to counties through the OBAG block grant program.

Local agencies thus increased flexibility in funding projects and had larger amounts of funding available to them compared with Cycle 1 CMAQ. The nine County Congestion Management Agencies (CMAs) in the Bay Area were responsible for allocating OBAG funds at the county level. The CMAs developed the project selection process, issued a call for projects, and developed scoring methodologies for projects forwarded by local agencies.

**Priority Development Areas**

The OBAG approach encouraged investment in Priority Development Areas (PDAs) and Priority Conservation Areas (PCAs) (23). PDAs are infill developments within existing communities, while PCAs are open spaces for which there is a consensus on long-term protection. Investment in PDAs and PCAs supports the Sustainable Communities Strategy.
OBAG Complete Streets Requirements

OBAG programming principles specify that project sponsors comply with regional Complete Streets policy requirements. Sponsors of local projects utilizing federally funded projects must complete a Complete Streets checklist that outlines how the projects accommodate the needs of non-motorized travellers.

Resolution 4035 also specified that jurisdictions receiving funding through OBAG demonstrate a commitment to Complete Streets. This compliance may be achieved through the adoption of a Complete Streets policy resolution or via a general plan compliant with California’s Complete Streets Act.

OBAG Program Categories

OBAG Projects may be funded in six program categories:

- CMA Planning and Outreach
- Local Streets and Roads Preservation (LSR)
- Bicycle and Pedestrian Improvements (Ped/Bike)
- Transportation for Livable Communities (TLC)
- Local augmentation for the Safe Routes to School program (SRTS)
- Priority Conservation Areas (PCA)

Pedestrian and bicycle infrastructure improvements may be funded in the LSR and TLC categories in addition to the ped/bike improvement category. The LSR project category includes a list of eligible non-pavement activities and projects including signals, signage, sidewalks, and ramps. TLC projects support multi-modal transportation modes. The program includes categories for station improvements, Transportation Demand Management (TDM), connectivity projects, streetscape projects, and projects that incentivize transit oriented development housing. The TLC program was launched in the region in 1998 (24). An evaluation of the program in 2007 found that pedestrian improvements were the most common form of proposed capital improvements funded through TLC (25).

EVALUATION METHODOLOGY

This analysis attempts to answer the following questions:

- What was the extent of compliance with the Complete Streets requirements of OBAG?
- What impact did the increased funding and flexibility in project selection at the county level result have on active transportation?
- Can regional policy requirements incentivize local commitments to Complete Streets projects?

The extent of compliance with the Complete Streets requirements of OBAG was determined by studying the Complete Streets resolutions or self-certifications of general plan compliance submitted to CMAs by local agencies. MTC had provided agencies with a model Complete Streets resolution. This resolution included nine elements of Complete Streets. Adopted resolutions were compared with this MTC model resolution.

The Fund Management System (FMS) (26) is an online and publicly accessible database of all transportation projects managed by MTC. FMS can be used to generate reports on project funding sources, locations, primary mode served, and delivery milestones. A list of all OBAG funded projects
was retrieved from the FMS database. MTC resolution 4035 and the OBAG report card (27) were used as additional sources of project information.

The Complete Streets checklist database includes details of the proposed accommodations of pedestrians and bicyclists for all federally funded projects in the region. The checklist is available online and can be queried by project and location. Checklist entries for all projects funded through OBAG were retrieved and linked to OBAG project information retrieved from FMS. A single OBAG project may have multiple checklist entries (28). This is a useful data source as it helps quantify detailed proposed active transportation and Americans with Disabilities Act (ADA) accommodations for all projects.

**RESULTS AND KEY FINDINGS**

**Complete Streets Compliance**

Table 1 lists the Complete Streets policies adopted through resolutions, general plan compliance or ordinance in the 109 Bay Area jurisdictions. A total of 64 Complete Streets resolutions were passed regionally in response to the call for OBAG projects, while 41 jurisdictions certified compliance with SB 1358. Most jurisdictions adopted the MTC model resolution verbatim. All jurisdictions receiving OBAG funds complied with the Complete Streets requirement. Alameda County required all local jurisdictions receiving distributions from local measure B sales tax revenues as well as OBAG to pass a Complete Streets resolution.

MTC’s model resolution incorporated nine elements addressing Complete Streets principles, implementation, and exemptions. Some jurisdictions modified this to include additional elements such as specific performance measures, while others modified the exemptions or the review section of the model resolution. The City and County of San Francisco complied with the Complete Streets requirement through the Better Streets ordinance passed in December 2010 (29).

Jurisdictions self-certified compliance with general plans. The Valley Transportation Authority (VTA), the CMA for Santa Clara County, required additional documentation from jurisdictions certifying compliance with SB 1358 (30). These agencies had to complete one of two assessment forms to provide additional evidence of compliance. One form was based on the specific language of AB 1358 and the other was based on the guidelines authorized by AB 1358, prepared by the Governor’s Office of Planning and Research. Ten agencies in the county completed the assessment providing detailed information about how the Circulation Element defined Complete Streets and specific policy areas to address the needs of all roadway users, in different settings (urban, suburban and rural). No other county required this additional documentation.
TABLE 1 Complete Streets Policies for the Bay Area Region

<table>
<thead>
<tr>
<th>County</th>
<th># Jurisdictions</th>
<th>CS Resolutions</th>
<th>General Plan Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>15</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>20</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>Marin</td>
<td>12</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Napa</td>
<td>6</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>San Francisco</td>
<td>1</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>San Mateo</td>
<td>21</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>16</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Solano</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Sonoma</td>
<td>10</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>109</td>
<td>64</td>
<td>41</td>
</tr>
</tbody>
</table>

TABLE 2 OBAG Funding by Category

<table>
<thead>
<tr>
<th>County</th>
<th>Bike/Ped (000)</th>
<th>LSR (000)</th>
<th>TLC (000)</th>
<th>SRTS (000)</th>
<th>Planning (000)</th>
<th>Total (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alameda</td>
<td>$9,578,000</td>
<td>$14,102,000</td>
<td>$30,130,000</td>
<td>$2,000,000</td>
<td>$7,106,000</td>
<td>$62,916,000</td>
</tr>
<tr>
<td>Contra Costa</td>
<td>$3,349,000</td>
<td>$16,605,000</td>
<td>$21,000,000</td>
<td>$0</td>
<td>$4,250,000</td>
<td>$45,204,000</td>
</tr>
<tr>
<td>Marin</td>
<td>$2,450,000</td>
<td>$2,587,000</td>
<td>$1,900,000</td>
<td>$0</td>
<td>$3,091,000</td>
<td>$10,028,000</td>
</tr>
<tr>
<td>Napa</td>
<td>$300,000</td>
<td>$794,000</td>
<td>$2,894,000</td>
<td>$0</td>
<td>$2,673,000</td>
<td>$6,661,000</td>
</tr>
<tr>
<td>San Francisco</td>
<td>$7,762,239</td>
<td>$0</td>
<td>$26,063,823</td>
<td>$1,189,938</td>
<td>$3,568,000</td>
<td>$38,584,000</td>
</tr>
<tr>
<td>San Mateo</td>
<td>$9,236,000</td>
<td>$4,138,000</td>
<td>$9,641,000</td>
<td>$0</td>
<td>$3,509,000</td>
<td>$26,524,000</td>
</tr>
<tr>
<td>Santa Clara</td>
<td>$22,609,000</td>
<td>$30,872,000</td>
<td>$25,926,000</td>
<td>$2,719,000</td>
<td>$6,000,000</td>
<td>$88,126,000</td>
</tr>
<tr>
<td>Solano</td>
<td>$5,700,000</td>
<td>$5,479,000</td>
<td>$2,873,000</td>
<td>$1,200,000</td>
<td>$3,517,000</td>
<td>$18,769,000</td>
</tr>
<tr>
<td>Sonoma</td>
<td>$2,083,000</td>
<td>$9,788,000</td>
<td>$8,495,000</td>
<td>$0</td>
<td>$2,673,000</td>
<td>$23,039,000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$319,851,000</td>
</tr>
</tbody>
</table>

Active Transportation Projects Under OBAG

Table 2 summarizes OBAG funding by category for all Bay Area counties. The amounts allocated to counties substantially increased during this funding cycle compared with Cycle 1 CMAQ. A total of 195 projects in 91 jurisdictions were funded across the region under the block grant program, while 36 projects were funded under the ped/bike category across all 109 Bay Area jurisdictions. The average grant size for ped/bike projects was $7 million. The proportion of funds invested in the ped/bike category varied across counties. These projects will provide a wide range of infrastructure improvements including bike lanes (Class I, II and III), green bike lanes, multi-use pathways, sidewalk construction, landscaping, pedestrian signals, median island construction, traffic signal upgrades, bus stop areas, curb ramps, and sidewalks.

Comparing active transportation infrastructure funded through OBAG with funding allocated during the Cycle 1 CMAQ is complicated because funding categories changed between the two cycles. The Regional Bicycle Program category was discontinued under OBAG. A total of $19.5 million was allocated to the Regional Bicycle Program through the Cycle 1 CMAQ block grant program. This funding did not specifically include pedestrian projects but allowed the use of funds for construction of multi-use paths. These funds were applied to projects that would complete the...
Regional Bicycle Network. The removal of this programming silo resulted in a greater amount of pedestrian facilities being constructed through OBAG.

The Fund Management System (FMS) database includes a field for project descriptions but does not quantify the number of improvements to be funded through each project. The Complete Street checklist database can help quantify the count of proposed ADA, pedestrian, and bicycle improvements. However, there were not completed checklists in the database for all OBAG projects. At the time this analysis was conducted, completed checklists were available for projects in six of the nine counties. Table 4 summarizes these improvements for Alameda County for OBAG funded projects compared with projects funded during Cycle 1 CMAQ).

### TABLE 3 Proposed Complete Streets Elements in Alameda County: Cycle 1 CMAQ and OBAG

<table>
<thead>
<tr>
<th></th>
<th>Cycle 1 CMAQ</th>
<th>OBAG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Funding</td>
<td>$24,803,700</td>
<td>$62,916,000</td>
</tr>
<tr>
<td># Non Planning Projects Funded</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td>ADA-Compliant Ramps</td>
<td>34</td>
<td>27</td>
</tr>
<tr>
<td>Class I Bike Lanes</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Class II Bike Lanes</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Class III Bike Lanes</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Bicycle Parking</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Bicycle Boulevards</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Bicycle Actuated Traffic Signals</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Widening Sidewalks</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Sidewalks on Both Sides of the Street</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Frequent Crosswalks</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>High Visibility Crosswalks</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Refuge Islands on Roadways</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Pedestrian Lighting</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Traffic Signal Push Buttons</td>
<td>9</td>
<td>3</td>
</tr>
</tbody>
</table>

ADA compliance was met by all of the pedestrian projects. All transportation projects that provide a pedestrian facility are required to provide ADA accessibility as per Section II of the Rehabilitation Act of 1973 and Title II of the Americans with Disabilities Act (ADA) of 1990 (31).

Projects in the Local Streets and Roads Preservation (LSR) category were found to contribute to Complete Streets by providing pedestrian and bicycle infrastructure. An example of such a project is the Oakland Complete Streets project, a pavement rehabilitation project being implemented in the City of Oakland in Alameda County. The project description states that the scope of work includes installation of ADA-compliant curb ramps and installation of bikeway facilities recommended by the City’s Bicycle Master Plan. These include Class III bike lanes, crosswalks, and traffic signal push buttons throughout a number of locations in Oakland. The total cost for this project is $4,351,000 of which $422,000 is funded through OBAG.

The largest amount of OBAG funding was allocated to the Transportation for Livable Communities (TLC) category, which saw an increase of 40% over Cycle 1 investments. This funded 46 diverse, multi-modal projects across all jurisdictions. The average grant size funded was $2.5 million. This category received the highest proportion of OBAG funding in eight of the nine Bay Area counties. San Francisco invested 67% of the total funding allocated to the county to TLC.
projects. San Francisco has funded three Complete Streets projects in the TLC category: Chinatown Broadway Complete Streets Phase IV, Second Street Complete Streets, and Masonic Avenue Complete Streets. San Francisco’s Masonic Avenue Complete Streets project received $10,227,539 through OBAG. Masonic Avenue is a major north-south arterial in San Francisco and serves as the main transit and bicycle route through the area. It was identified as a high injury corridor by the San Francisco Pedestrian Safety Task Force (32). This project was developed with extensive community input (33).

CONCLUSION AND DISCUSSION
The One Bay Area Grant (OBAG) funding approach resulted in greater amounts of Congestion Mitigation and Air Quality (CMAQ) and Surface Transportation Program (STP) funds being allocated to local agencies. Compliance with Complete Streets through resolution was widespread. Some jurisdictions developed additional, detailed performance measures in their resolutions. The Complete Streets checklist can help quantify proposed active transportation investments during this funding cycle. Jurisdictions vary in the quality of documentation provided in the checklists, as well as in the timeliness of completing the checklists.

Active transportation infrastructure investments have been proposed across all OBAG project categories. The large increase in investment in Transportation for Livable Communities (TLC) has resulted in several projects that will fund Complete Streets improvements across all Bay Area jurisdictions.

Various factors determine which local projects are submitted by local agencies for federal funding. OBAG Complete Streets policy requirements do not appear to be an influential factor in local project selection. A GAO report (34) examined the challenges faced by local agencies in administering FHWA funds. The complexities of working with federal funding can affect the types of projects forwarded for OBAG funding consideration.

The presence of matching funds is a major requirement: all projects funded through OBAG must provide a minimum of 11.47 percent in matching funds. Many projects exceeded this minimum requirement by utilizing various other funding sources. Five Bay area counties are ‘self-help’ counties, which have enacted voter-approved funding mechanisms such as a half-cent sales tax for transportation projects. Such mechanisms are an important source of matching funds for active transportation projects and the availability of local funds can support large-scale Complete Streets projects.

Project readiness is another important factor for federally funded projects and was an important selection criterion for OBAG projects. Most projects selected for funding by the County Congestion Management agencies had completed the design phase. For OBAG funded projects, readiness factors included the completion of the design phase, acquisition of right-of-way, and completion of California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance. Large, multi-modal projects require substantial efforts to demonstrate project readiness, which could result in delays in investments in Complete Streets projects.

Local policies determine the prioritization of transportation projects within a city. One example of this is the Project Prioritization Tool used by the city of Oakland (35), which allocates up to 100 points for a particular proposal or project using various criteria, awarding up to 40 points for projects that meet Complete Streets criteria. The main impact of advocacy on this funding cycle has been on the large-scale adoption of Complete Streets policies in the region. Most Complete Streets resolutions in the Bay Area were passed in response to OBAG requirements. The performance measures specified in detailed policy documents can help tailor local advocacy efforts for Complete Streets...
Streets projects. The Complete Streets checklists can help monitor local projects that receive federal flexible funding. This strong place based advocacy can result in wide-scale implementation of Complete Streets projects.

OBAG’s funding requirements for Complete Streets compliance through policy not only have the potential to influence implementation of Complete Streets by local agencies in the San Francisco Bay Area in the long term, but also to serve as a model for other state or local planning agencies seeking to increase investments in pedestrian and bicycle infrastructure.
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TABLE 2 OBAG funding by category

TABLE 3 Proposed Complete Streets Elements in Alameda County: Cycle 1 CMAQ and OBAG

REFERENCES

1. Federal Highway Administration. *Congestion Mitigation and Air Quality Improvement Program (CMAQ).* (MAP-21 §1113; 23 USC 149).


29. San Francisco, California, Public Works Code section 2.4.13


