

Complete Streets Initiative Funding Toolkit

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The Orange County Complete Streets Funding Toolkit provides guidance for jurisdictions on the basics of applying for grant funding for Complete Streets plans and projects in Orange County.

How to use this document

Part A: The Grant Life Cycle

Introduction	This section opens the funding toolkit and describes what grants are, where they come from, and describes the grant life cycle.
Pre-Announcement Phase	Refer here for guidance on how to get prepared to apply for grants before their announcement, including things you can do now, and how to budget your time.
Pre-Award Phase Part 1: Funding Opportunity Announcement and Application	This section provides insight into writing your grant application, including examples on formulating a strategic approach to how to tell your project's story, write a compelling narrative, and things to look for to strengthen your application.
Grant Writing Assistance	Refer to this section for tips on the types of grant assistance available to help with your application.
Grant Writing Tips	Four helpful reminder areas on how and where to focus your narrative.
Pre-Award Phase Part 2: Grant Making Authority Review of Applications	Refer here for an example of the typical review process grant making authorities use to evaluate grant applications.
The Award Phase	This section describes the final award decision and Notice of Award.
The Post-Award Phase	Refer here for a high level overview of major components of completing your grant.

Part B: Successful Grant Case Studies

Introduction	This section provides examples of successful grants and how to best use them, including case study summaries, key application highlights and links to further examples.
Case Study 1: Santa Ana Cycling Infrastructure	Santa Ana has been particularly successful in securing cycling infrastructure through the Caltrans Active Transportation Program (ATP) Funding Cycles.
Case Study 2: Community Action Partnership of Orange County	The Community Action Partnership of Orange County was able to secure a health related grant from the Center for Disease Control (CDC) to fund Complete Streets projects.
Case Study 3: Garden Grove Open Streets	Garden Grove Open Streets creates temporary open streets for thousands of people to walk, bike, run, skate, play, and enjoy public space in safety and comfort.
Case Study 4: Newport Beach Bike Lane Improvements	The City of Newport Beach Public Works Department identified locations that needed increased bicycle infrastructure including addressing a gap in infrastructure along Eastbluff Drive, working closely with the community to calm concerns of the project's location in a constrained area.
Matrix of Complete Streets grants awarded in Orange County	Refer to this section to see what types of Complete Streets grants have been awarded throughout Orange County in the past few years.

Part C: Preparing a Grant Budget

Introduction	This section introduces the reader to one of the main components of grant application, the preparation of a grant project budget.
Characteristics of a grant budget	
How to develop a grant budget	Refer here for guidance on important considerations and what to include.
How to develop a cost budget	Refer here for an example of typical costs that may need to be included depending on the project.
Justifications	This section describes areas of your budget that may require emphasized justification, including design fees, staff and labor salaries, travel, or capital expenditures.
Reporting and invoicing	Refer here for guidance on progress reports and invoice procedures
Match Funding	Match funding is an important consideration when developing a grant budget. Refer here for a description and examples of how to approach match funding.
Budget Restrictions	Refer here for a description and examples of budget restrictions.
Budget Variations and Risks	Refer here for a description and examples of vulnerable budget areas.
Long Term Funding Post Grant	Refer to this section for a description and examples of how to ensure the ongoing funding for your project post-implementation is clear.

Appendix A: Grant application quick reference checklist

Introduction	A quick reference checklist of things to prepare ahead of time and include through the grant application process.
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Appendix B: Typical cost estimates for retrofitting Complete Streets

Introduction	This section provides cost estimates per mile for the implementation of complete street elements for each street section outlined in the OCCSI Design Handbook.
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Appendix C: Typical Cost Estimates for new build Complete Streets

Introduction	This section provides a cost estimate per mile for a new build for each street types defined by the OCCSI Design Handbook.
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Appendix D: Table of typical costs by item

Introduction	This section provides a table of typical costs that can be used as a tool to select and cost individual design components of a street.
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Appendix E: Existing Funding Sources

Introduction	This section provides a high level overview of what funding sources are currently available for application.
Full Appendix of Existing Funding Sources	Refer here for a matrix of existing funding sources that are available now including a funding look-ahead with a summary of sources coming online in the near future.

About the Orange County Complete Streets Funding Toolkit

The Orange County Council of Governments (OCCOG) Complete Streets Initiative (OCCSI) was completed in 2016 as a guide for partner jurisdictions to develop Complete Streets policies and plans across Orange County. Complete Streets encompass many different aspects of mobility, transportation planning and city building to make the best use of streets as a safe public space. Because of the broad planning, design and implementation that goes into Complete Streets, sources of funding can come from an equally wide variety. Throughout the development of the OCCSI, it became evident that jurisdictions found funding and the grant process to be one of the largest hurdles in accomplishing and implementing Complete Streets elements in their communities.

This funding toolkit is intended to complement the OCCSI by providing a baseline understanding of how to implement elements of Complete Streets through funding available by grants. The safety, health, transportation, environmental and economic benefits of implementing Complete Streets mean that many grant making authorities have an interest in seeing them implemented.

This document should be used as a starting point for:

- Understanding grants and the grant life cycle.
- Understanding what you need in place ahead of applying for a grant.
- How to formulate an approach to writing a grant application.
- Tips and tools for writing successful grant applications.
- Case studies of relevant, local, successful grants for Complete Streets.
- How to prepare a grant budget.
- Typical costs for retrofitting or building new Complete Streets elements.
- Examples of available funding sources.

This funding toolkit aims to help jurisdictions navigate an approach to obtaining the financial means to plan, implement and operate concepts and principles from the OCCSI.

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The following lays out a baseline understanding of what grants are, their life cycle, and things to think about before applying for a grant.

This helps to set you up for how to approach writing a grant, how and where you can get help, types of help you can ask for depending on your experience, timeline and available resources, and grant writing tips.

While all grants will be different, this section also describes the key elements of a grant, guiding you through an example grant that is currently available, and provides a checklist (see Appendix A) of things you should consider and have ready as you begin to think about your application.

Introduction

What are grants?

Grants are a form of financial assistance that does not need to be repaid. Grants help to fund projects, ideas and innovation that are important to the economy and have public utility.¹

Each grant will have specific criteria to determine eligibility, and require various reporting and compliance throughout the life of the grant and project.

This document aims to provide you guidance and support in submitting successful grant applications. Some cities have found more success in securing and administering grants through employing staff to work specifically on grants; considering this approach is certainly encouraged.

Useful Resource

Assistance and information on grants

<http://www.grants.gov>

¹ <http://www.grants.gov/web/grants/learn-grants/grants-101.html>

Where do grants come from?

Grants can come from many sources, including federal grants, state grants, regional or local grants, as well as grants from private industry, trusts or foundations.

See below for an example of grants administered through the Orange County Transportation Authority (OCTA).



Federal:

- U.S. Department Transportation (DOT)
- Federal Transit Administration (FTA)
- Center for Disease Control (CDC)

State:

- California Department Transportation (Caltrans)
- Air Resources Board (ARB)
- California Office Traffic Safety (OTS)

Regional

- Air Quality Management District (AQMD)
- Southern California Association of Governments (SCAG)

Local

- Orange County Transportation Authority (OCTA)
- Jurisdictions

Other:

- Business Improvement Districts (BIDS)
- Private Entities

The grant life cycle

All grants have a life cycle. It is helpful to think of them in four phases – the Pre-Announcement Phase; the Pre-Award Phase (Part 1: Funding Opportunity Announcement and Application, and Part 2: Grant Making Authority Review of Applications); the Award Phase and the Post Award Phase.



Pre-Announcement Phase

Prior to official funding opportunity announcement, preparing to apply for a grant



Pre-Award Phase Part 1

Funding opportunity announcement and application



Pre-Award Phase Part 2

Grant making authority application review



Award Phase

Award decision and notifications



Post-Award Phase

Implementation reporting and closeout

The Pre-Announcement Phase

Keeping up to date on funding opportunities

Knowing what funding opportunities are coming is half the battle. It is important to stay up to date on policy changes and press announcements that will give clues as to where money is likely to become available for Complete Streets projects.

It is important to keep an open dialogue with professional colleagues to get insight on potential opportunities. Another way is to sign up for e-mail alerts or to regularly check grant making authority websites.

Where to start

The good news is that you can start preparing now. One of the best ways to ensure you are a successful candidate for grants is by having things in place ahead of time, prior to the announcement of a funding opportunity.

1. Ensure that you are registered to apply for grants. This can take up to three weeks to complete.

This should be done as early as possible and should be factored into your timeline for application.¹

2. Determine the goals of your agency or jurisdiction.

Having a clear list of priorities and projects in mind will help to filter which grants to go after and where to spend your time and resources.

3. Ensure the appropriate policies and plans are in place.

Supporting documents that show direction and dedication to the goals of your grant application signal a strong purpose and willingness to ensure

¹ <http://www.grants.gov/web/grants/applicants/organization-registration.html>

the project is completed. Documents adopted by the Agency, City Council or Board are the strongest, and can be complemented with other supplemental pieces of work. For some grants, having an existing Regional Transportation Plan, City Plan or Complete Streets Plan can be a requirement. Examples include:

- Master, general, or specific plans.
- Active transportation plans (bicycling or pedestrian plans).
- Mobility plans or non-motorized plans.
- Transportation demand management plans.
- Safe Routes to School plans.
- Sustainable Neighborhood or Community plans.
- Transit Oriented Communities plans.

Grant applications include specific guidelines for each agency. OCTA's Call is different from Caltrans ATP, for example. Follow the guidelines for a successful project.

4. Have appropriate projects in place.

Depending on what type of grant you are going after, much like having the right policies and plans in place, having shovel ready projects can also be very important. Projects that are ready to go but just lack the funding are attractive to grant making authorities because of the limited risk for hurdles. This adds to a compelling application that the only thing standing in the way of a fully realized project is the funds for implementation.

5. Timeline and schedule.

Use the pre-Announcement phase time to form a timeline and schedule of what you need to accomplish in order to complete the grant application.

How long does it take?

It is important to dedicate an appropriate amount of time to writing a grant application. Applications are typically due 45-60 days after the grant is announced, so the majority of work will need to be done during the Pre-Announcement Phase.

Grants are a competitive process and ensuring that you can put together an application that is compelling is directly related to the amount of time and resources you can dedicate to the process. It is also important to think about how much experience you have writing grants, and if you are able to dedicate time alone, or need other resources to assist.

A basic formula to estimate the amount of time needed is:

Number of description pages allowed in the grant × 3 hours of writing, editing, and proofreading per page.

Also allow additional time for:

- ≈ 1.5 hours to carefully read and outline the RFP (grant application guidelines).
- ≈ 5 hours to write a detailed budget justification and to complete the budget forms.
- ≈ 5 hours to obtain letters of support, resumes, and job descriptions.
- ≈ 1 hour to complete the grant forms
- ≈ 5 hours to do a final review, compile, and submit the grant proposal.

This will give you a baseline approximation of the total number of hours to complete a typical federal or state grant application.¹

Using this example, a 60 page grant application would take approximately 200 hours to complete. That is roughly 5 solid weeks of full time work dedicated to completing a grant application. As you can see, preparation during the pre-announcement phase is key to a successful application.

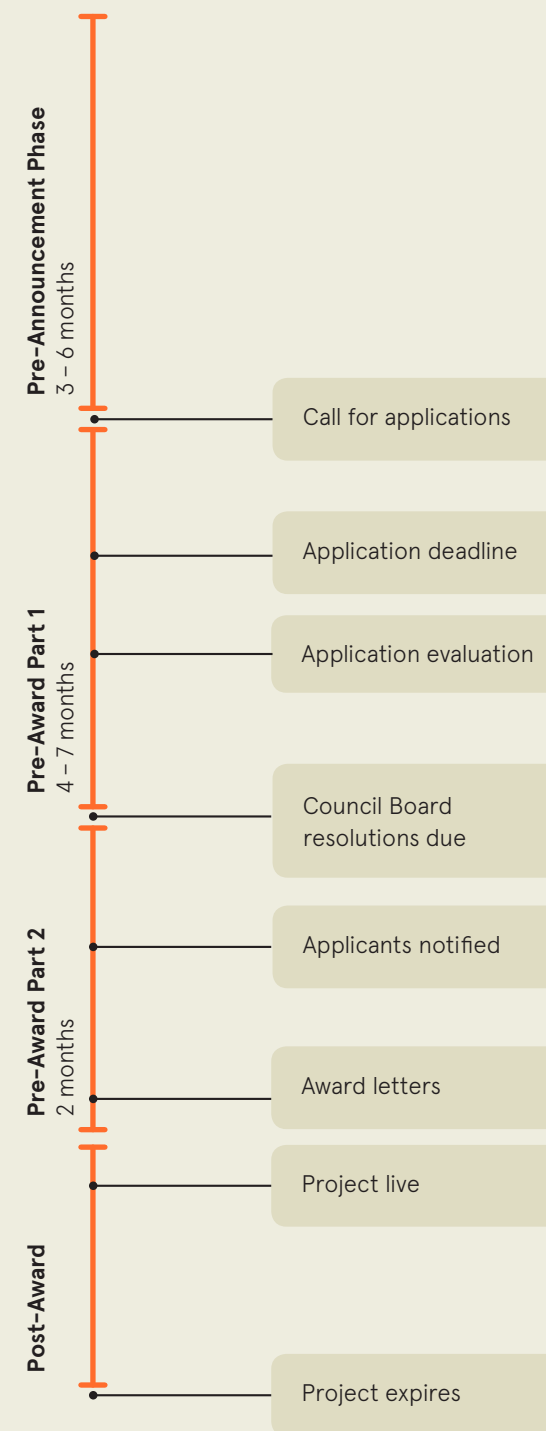
Additional considerations to include when building your timeline include:

- Your level of familiarity and experience with writing grant applications.
- Your availability and responsibility for other projects.
- Permits.
- Obtaining letters of support and commitment.
- Acquiring cost estimates for your budget; (for more on cost estimates and grant budgets, see Part C and Appendices B, C and D).
- Council / Commission / Board approval dates and lead-in time.
- Internal stakeholder / advisory review with ample review time.
- Time for revisions based on feedback.

- Turnaround time for letters of support or inputs from other groups, departments or stakeholders.
- Is data collection necessary?
- Is data analysis necessary?
- Do we have photos of current conditions?
- Do we have renderings or illustrations of the project?
- Is public or stakeholder outreach needed?
- Is internal coordination needed?
- Do we need to coordinate match funding? (for more on match funding, see page 52).

Associated activities such as public outreach and data collection should take place ahead of time, stretching the timeline for preparing a successful grant application to a year or more.

¹ http://www.grantexperts.info/tips_on_hiring.php



A top priority is to make sure cost estimates are accurate. Cost all aspects of the projects. Costs are a major component that needs to be right.

Jill Mohler, Regional Client Services Director, Blais and Associates.

Determine a leader

Leadership is critical to the success of both the grant application process and the final project.

Political leadership is particularly important to having a public facing champion of the project that can gather support at the onset, and remain steady through any hurdles or obstacles.

Political leadership can come from:

- Elected Officials.
- The City Manager.
- Department Directors or public facing executives.
- Educational leaders (professors, principals or school trustees).
- Community leaders from various areas, including disadvantaged community groups.
- Well known or respected public figures or individuals in the community.

Project leadership is also key, ensuring that the individual responsible for the grant application and project delivery is passionate about the project, understands the context and is ready and willing to see the project through to completion.



Building and maintaining important relationships

Having support from local agencies, community groups, and associations will strengthen your chances of being successful.

Often, multi-jurisdictional and/or multi-disciplinary projects score well with grant reviewers.

Partnering with neighboring cities, jurisdictions or organizations can reinforce the application and can also open the door to pooling resources in terms of grant writing and collection of important supporting documents. With multi-jurisdictional or multi-disciplinary applications, look for ways to promote alignment across plans and jurisdictional boundaries. (For more on successfully partnering to win a grant, see the Community Action Partnership of Orange County Case Study on page 28)

Ensure that, for example, if both jurisdictions have a cycling plan, that they are both mentioned. If both jurisdictions have a goal in their cycling plan to improve a specific corridor, close a gap, or pursue a specific goal (increase of commute cycling mode share) then howing strong alignment of these goals and plans is important.

Showcase important relationships by collecting letters of support from partners such as health advocacy groups, public health associations, active transportation advocacies or members of Boards. Consider approaching key business figures who may also write a letter of support.

Reinforce existing relationships by creating a Technical Advisory Committee specific to the project.

A Technical Advisory Committee (TAC) is a body of experts and stakeholders who can provide oversight, insight, expertise and a steering function to a particular project, that the grant would be supporting. A TAC can help prepare and review the application and assist through the process. As well, it keeps important members apprised of updates and where the application is at, can help identify potential friction points or barriers, and can identify ways around them. A TAC can also help with the dissemination of information to other important groups, members or individuals in the community.

Local learning and academic institutions can also provide support in terms of research or statistics, as well as writing a letter of support as an institution.

Leveraging any area colleges or universities is helpful in strengthening their ties to the project and also spreading awareness and receiving assistance from faculty or students for research or reports that help strengthen the application and foster a wider sense of involvement.

“The City must identify the project and begin gaining support early on in the process; political will and internal city staff resources.”

Jill Mohler, Regional Client Services Director, Blais and Associates.

Public outreach and engagement

One of the most important relationships a project can have is with the public.

Public support and outreach will help form a foundation of support at all levels. Political leaders are inclined to support the needs and aspirations of their community that they represent. Having a positive rapport with their constituents, and a venue for their concerns, feedback and input to be heard is critical to support of the grant application and to smooth implementation at a later stage.

Public outreach can take many forms:

- Consider establishing a project webpage to post updates and collect feedback.
- Community events are a great place to spread awareness and gain support.
- Innovative tools can be exciting and hold the attention of the public as well, such as online engagement, telephone town halls, virtual open houses, white board or storyboard videos or visualization tools.
- Including a public outreach plan in the application can show dedication to continuing a conversation with the community.

Any public outreach leading up to the application should be captured and included in an application. Photos, links to materials, statistics of support, quotes and comments add nuance and context to your application.



“The projects with community involvement are very successful, especially for ATP grant.”

Jill Mohler, Regional Client Services Director, Blais and Associates.

The Pre-Award Phase Part 1: Funding Opportunity Announcement and Application

This phase occurs when the funding opportunity is announced and represents the beginning of the grant application process. The Funding Opportunity Announcement (FOA) is made by the grant making agency and is based on their budget and any related legislation. The FOA will include all of the information required for applicants to understand if they are eligible, interested or able to apply for the grant.

When a grant is announced, there are some important questions to consider and assess including:

- ❓ Is this grant right for me or my organization?
- ❓ Is it a Federal grant? Is a Federalized grant right for me or my organization?
- Federal grant requirements can have additional onerous requirements that can have significant impacts on the project timeline.
- For example, projects with even \$1 in Federal funding need to go through the National Environmental Policy Act (NEPA) process, while state funded projects typically only require the California Environmental Quality Act (CEQA) process.
- ❓ Do we qualify to apply for this grant?
- ❓ Do we have the capacity to implement the grant should we be awarded the funding, including:
 - Is match funding is needed?
 - All necessary procedures and regulations associated with the grant.

❓ Do we have a compelling case to win the grant?

❓ Do we have the capacity, resources, and time available to write the grant application?

Once you've carefully considered these important questions and come to a conclusion to move forward with applying for a grant, you can begin the next step, which is to write your application.

Key elements to writing a successful grant

Writing a successful grant application is both an art and a science. While there are many things that can be checked off, collected and put in place, the application will also need to tell your project's story and weave these components together into a compelling case that speaks to both the grant reviewers and the goals of the agency.

This section outlines some key elements that successful grant applications contain. This can be used as a framework to guide your approach to your funding application, and is also a handy reference tool to check back on throughout the process.

On the following page are some key elements to a grant, using the Caltrans Sustainable Transportation Planning Grant as an example.

Caltrans Sustainable Transportation Planning Grant

"The Caltrans Sustainable Transportation Planning Grant was created to support the California Department of Transportation (Caltrans) current Mission: Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."
 – Caltrans Sustainable Transportation Planning Grant Application Guide

<http://www.dot.ca.gov/hq/tpp/documents/GrantApplicationGuide.pdf>

How to tell your project's story

Telling your project's story is crucial. You need to closely and carefully explain how your project is not only compelling and worthy of funding, but how it will help the grant making authority meet their goals and priorities.

One way to approach this is to thoroughly understand the goals of the grant making authority from the outset and identify ways in which your project aligns with these. It is worth spending some time brainstorming on this aspect with others knowledgeable about the project, your wider organization or jurisdiction and relevant policies. Building time for this into your grant writing timeline will help with the process moving forward.

Below are some examples of the types of things your project should look to align with when applying for a grant. The Caltrans Sustainable Transportation Planning Grant is used as an example for continuity throughout. However, it is important to note that each grant making authority's goals will be different, and can also change with time.

Grant authority goal and objectives

Look for ways that your application can support the granting authority's wider goals and objectives.

Example: Caltrans Sustainable Transportation Planning Grant:

- Created to support the mission "Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability."
- Establishing a connection between the specifics of the grant, your project and the granting authority's wider goals shows clarity and continuity of how your project helps the grant making authority achieve what they have set out to do while also supporting your project.

Current significant projects

Your application should also look for ways to support current significant projects, efforts and direction that the grant making authority is aligned with. It might help to make a preliminary list during your initial preparation for writing your application, and to search the projects for key terms related to your own efforts.

Example: Caltrans Sustainable Transportation Planning Grant:

- California Transportation Infrastructure Priorities Vision and Core Concepts.
- State Smart Transportation Initiative Assessment and Recommendations.
- Caltrans Program Review Major Actions.
- California Transportation Plan (CTP) 2040 Vision and Goals.
- Smart Mobility 2010 Principles.

Grant program objectives

Along with overall grant-making authority objectives, grants will have specific grant program objectives as well. These are the most important to take these into consideration. Think of ways to structure your application around these. Your narrative should clearly describe how your project meets these objectives.

Example: Caltrans Sustainable Transportation Planning Grant:

- Sustainability.
- Preservation.
- Mobility.
- Safety.
- Innovation.
- Economy.
- Health.
- Equity.

Transportation specific goals

In terms of Complete Streets, it is also helpful to see if there are any transportation specific goals and objectives that you can draw connections to in your application.

Example: Caltrans Sustainable Transportation Planning Grant's Statewide Transportation Goals:

- Improve Multimodal Mobility and Accessibility for All People.
- Preserve the Multimodal Transportation System.
- Support a Vibrant Economy.
- Improve Public Safety and Security.
- Foster Livable and Healthy Communities and Promote Social Equity.
- Practice Environmental Stewardship.

Support and align with Federal transportation specific planning goals. While specific funding sources and grants may have different or more specific goals, Federal goals are overarching and a good guidepost to use in terms of what to look for.

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.
- Increase the safety of the transportation system for motorized and non-motorized users.
- Increase the security of the transportation system for motorized and non-motorized users.
- Increase the accessibility and mobility of people and freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life and promote consistency between transportation improvements and state and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.

Grant-specific purpose

Align with grant-specific purpose, demonstrating a clear understanding of how the proposed project integrates the goals and objectives. This is a key point. While aligning with goals across wider agencies can strengthen your application, ultimately, your project needs to have a clear and compelling alignment with the specific grant you are trying to win.

Senate bills and wider policies

Take into account Senate bills or wider policy that support grant efforts. This will give you an inside understanding and may give clues to why certain aspects are worded a certain way, or the reason behind the funding in the first place.

Example: Caltrans Sustainable Transportation Planning Grant:

- Caltrans supports Senate Bill 375 (SB 375, 2008) Sustainable Communities Strategies.

Frameworks, toolkits and policy directions

Look for frameworks, toolkits or policy directions that are supported in tandem of the granting agency. The more similarities you can use to showcase how your project fits with not only the grant criteria but with the wider grant making authority goals, the more compelling your case will be.

Example: Caltrans Sustainable Transportation Planning Grant:

- Complete Streets tools and techniques.
- Smart Mobility Framework.

What your grant should have

Financial and accounting rules

Some grants have very specific financial and accounting rules, checks and balances and procedures. Review these requirements carefully, make sure you have these procedures in place and include it in the appropriate part of the application.

Example: Caltrans Sustainable Transportation Planning Grant:

- Accounting system in place that monitors work and expenses by line item.
- 2 Code of Federal Regulations (CFR) Part 200.

Indirect and direct costs

Indirect and Direct Costs may need to be separated out and well defined (See Part C, Page X, for more on Indirect and Direct Costs).

Example: Caltrans Sustainable Transportation Planning Grant:

- Indirect Cost Allocation Plan.
- Direct Costs Examples: Data gathering and analysis; planning consultants; conceptual design and drawings; public or community meetings, surveys, charrettes, focus groups; and interpretation or translation services.
- Travel expenses (if approved in Scope of Work/Timeline).

What your grant should not have

Disqualifying

Each grant may contain some disqualifying aspects, or things that the grant is specifically not designed to fund. It is important to carefully look for these, as they will not be the same in every grant. If you are unsure about an aspect of your grant application, you should seek clarification.

Example: Caltrans Sustainable Transportation Planning Grant – some examples include:

- Capital expenditures.
- Decorations.
- Vehicle acquisition.
- Membership fees for organizations.
- Unreasonable incentives for public participation.
- Charges passed on to sub-recipient for oversight of awarded grant funds.
- Items unrelated to the project.

What to be aware of

There may be some additional requirements that you have not thought about. Some examples to look out for include:

- Third party contracts must be conducted using a fair and competitive procurement process (2CFR, Part 200).
- Title VI requirements.
- DBE Reporting requirements.
- Pre-award audit, depending on award amount.
- Past performance with previously awarded grants.
- Award terms.
- Ownership of intellectual property restrictions.

Grant writing assistance

There are many experienced professionals and companies dedicated to assisting in the grant application process. If you require support, it is best to first identify what area of the grant process would be most beneficial to you:

Funding source research: This is focused on helping organizations who have the capacity and know how to write their own grants, but do not know where to look or what the appropriate opportunities are.

Full grant application review: Review of your grant application helps to target areas of a prepared grant that could use strengthening and provides a third party review. Usually this level of assistance is most worthwhile for organizations that have the resources or capability in house to prepare a grant submission, but could use external feedback to ensure all criteria and guidelines are followed. This type of assistance is much more affordable, and also very valuable.

Submission of grants: Assistance with submitting specific grants is also available to help coordinate the grant writing process. This typically involves cataloguing materials needed, organizing funding goals and objectives into a compelling submission. Maximizing meeting grant criteria is also a key component. This type of grant assistance can be expensive, as it is tailored to the specific needs of the grant and submitter.

Costing or budget assistance: If you are unable to confidently build a reliable budget in house, or if the project is relatively complex or out of your area of expertise, enlisting a consultant to assist with costing and budgeting can provide some added reliability to your application.

Accompanying activities: Other sources of assistance that may be valuable in securing a successful grant include earlier studies, business cases, or reports to provide statistical or local background. These can be done at any time, and may be part of the planning process leading up to a grant application.

Overall program review: Another area that could be helpful in applying for grants is having a third party review of how the program functions that you wish to receive funding for. Insight on key areas such as looking for alignment of plans or planning and implementation processes, timelines, cross departmental support, resources, or public engagement is helpful to form an understanding of where and how to strengthen your chances for a successful outcome.

Technical or editing assistance: Less involved than a full grant review, editing or technical assistance can be done by a grant writing expert or someone with expertise in the field that the grant is being submitted. While outside help can be contracted to do this, securing an in house peer-review from a related department or someone within the organization with experience may be a cost effective and valuable alternative.

Post grant award assistance:

Being awarded the grant is a great accomplishment, but also comes with requirements and obligations that need to be fulfilled in order to be in compliance with the funding regulations. These requirements are different for all grants, but often fall into major categories including:

- Finances – official accounting practices and reporting.
- Progress reporting – milestone or timeline achievements.

Assistance with this aspect of the grant process should not be overlooked and can be a significant strain on resources. As well, specific expertise in legal and fiduciary responsibility is needed to fulfil these requirements and may not be readily available. Smaller jurisdictions may want to seek assistance or at least alert their internal accounting and legal representatives early in the process to prepare.

Useful Resource

American Association of Grant Professionals (AAGP)

<http://www.grantprofessionals.org/>

American Grant Writers' Association, Inc.

<http://www.agwa.us/>

Grant writing tips

Here are some helpful hints and tips to remember as you write and review your grant application.



A compelling narrative

Successful grant applications keep the reviewers engaged with the goals and objectives of the project and have a clear and convincing storyline. The narrative of the grant application is your opportunity to paint the full picture of the problem your project is going to solve, and that the grant will address. Being overly technical in your writing style can take away from the sentiment and human nature of the project, which can be a distinct and persuasive advantage.

While there are many technical aspects of completing a grant application, carefully review your package to make sure your story is being told and the voice of your project is coming through.



Concise, clear writing

Proposal space should be treated preciously. If you have 20 pages to tell your story, make sure that your content is clear, concise and to the point. Ensure that your content is directly answering criteria in the evaluation of the grant, and avoid frivolous language. Take this into consideration with the need for a compelling story, however, and be careful to be clear in your responses without losing your narrative.



Relevant, local statistics

For smaller jurisdictions, national statistics may be the most readily available source. However, national statistics on cycling, for example, are unlikely to be representative of your local population. Including local statistics and data driven evidence is a crucial part of putting together a compelling case. For those reviewing your grant, reading that rates of cycling related fatalities are five times higher in your jurisdiction than the national average, is important to know. This helps separate your application from the group, and also gives an idea of reporting metrics that can be used in measuring the success of the grant, if awarded.



Alignment of goals, objectives, actions and outcomes

Goals, objectives, actions and outcomes should be clearly and closely aligned. Reviewers should not have to guess how, for example, the outcome of pedestrian lighting will improve the goal of reducing vehicle congestion. The link between infrastructure investment, behavior change, perceived safety and automobile traffic should be clearly defined. As well, objectives should be attainable.

Pre-Award Phase Part 2: Grant Making Authority Application Review

Once you have submitted a grant application, the next step is the review of applications by the grant making agency.

Review processes will vary by grant, however they follow four typical steps:

1. Initial screening to ensure application is complete

The initial screening will check the application to see if it has met the basic minimum requirements to qualify for the grant, most commonly:

- Eligibility
- Program Narrative
- Budget

This stage of review evaluates the presence of requirements and not the quality.

Missing requirements mean your application is likely to be rejected at this stage.

2. Programmatic review and assessment of the substance of the applications

As the name suggests, this is where a thorough review and evaluation of the application is undertaken.

Technical quality, programmatic storyline and demonstrated competency are evaluated.

For federal grants, a typical evaluation process includes a panel of three or more independent experts, overseen by federal agency staff to ensure a fair and objective process.¹

3. Financial review of proposed budgets

While an application can have a compelling narrative and meet the requirements and purpose of the grants, a sound financial basis is key to a successful grant.

For federal grants, the review will consist of a line by line cost analysis for compliance with statutory and financial regulations.

The review also compares the cost in the application to the amount available for funding.²

4. Decision and announcement

This leads into the next phase, the Award Phase.

The Award Phase

The Award Phase, for example for a federal grant, begins when the federal agency completes the application review process. The grant is awarded to the application that meets all basic minimum requirements, scores highest on the evaluation of content and quality and meets all financial requirements within the budget of the grant.

The final award decision is the responsibility of the federal agency staff with the legal authority and financial responsibility to enter into a binding contract. However, award recommendations are reviewed by multiple levels within the agencies to safeguard the process and decision as high-quality, unbiased and fair.

Following the final decision, a Notice of Award (NOA) is issued to those chosen for funding.

It is important to note that the NOA is the legally binding issuance of the award. By signing the grant agreement or drawing funds, you or your organization are now legally obliged to meet the full terms and conditions of the grant, and for a federal grant, are subject to federal statutory and regulatory requirements and policies.¹ The Post Award Phase

Once a NOA has been issued and signed, the Post Award phase begins. This is where the bulk of the work is done, including implementing your project.

Support and Oversight: With federal grants, a grant management officer of the funding agency will assist and oversee the life of the grant, including

reviewing reports, making site visits and auditing progress for compliance.

Progress Reporting: Reporting is essential to oversight and compliance and usually takes two forms:

- Financial
- Program Progress

Reporting requirements, timelines and milestones differ depending on the specifics of each grant and should be carefully reviewed to ensure compliance.

Completion: All final reporting and milestones must be met in agreement with the terms of the grant.²

Program Provisions

Cities need to pay attention to the Program Provisions when administering a grant. These provisions are requirements for the grant agreement. A few of the biggest challenges are:

- E76 Form (See Page 22)
- CEQA and NEPA Preliminary Process before E-76 approval
- Caltrans Right of Way Certification
- Managing the reports and schedules for payment

¹ <http://www.grants.gov/web/grants/learn-grants/grants-101/pre-award-phase.html#FOA>

² <http://www.grants.gov/web/grants/learn-grants/grants-101/pre-award-phase.html#FOA>

¹ <http://www.grants.gov/web/grants/learn-grants/grants-101/award-phase.html>

² <http://www.grants.gov/web/grants/learn-grants/grants-101/post-award-phase.html>

AUTHORIZATION / AGREEMENT SUMMARY - (E-76)

CALIFORNIA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROGRAM DLA LOCATOR: 05-SB-0-SMRA PREFIX: HSIPL PROJECT NO: 5138(050) SEQ NO: 1 STATE PROJ NO: 0514000032L-N AGENCY: SANTA MARIA ROUTE: TIP DATA MPO: SBCAG FSTIP YR: 13/14 STIP REF: 208-0000-0277 DISASTER NO: BRIDGE NO'S:	PROJECT LOCATION: IN THE CITY OF SANTA MARIA ON STOWELL - ENTRADA TO BROADWAY TYPE OF WORK: RELOCATE CROSSWALK & SIGNS AND OTHER SAFETY IMPRV FED RR NO'S: PUC CODES: PROJ OVERSIGHT: DELEGATED/LOCAL ADMIN ENV STATUS / DT: RW STATUS / DT: INV RTE: BEG MP: END MP:	PREV AUTH / AGREE DATES: PE: RW: CON: SPR: MCS: OTH:
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PROG CODE	LINE NO	IMPV TYPE	FUNC SYS	URBAN AREA	URB/RURAL	DEMO ID
MS30	10	15	M	SANTA MARIA	URBAN	

PHASE	PROJECT COST	FEDERAL COST	AC COST
PE			
PREV. OBLIGATION	\$0.00	\$0.00	\$0.00
THIS REQUEST	\$11,111.00	\$10,000.00	\$0.00
SUBTOTAL	\$11,111.00	\$10,000.00	\$0.00
R/W			
PREV. OBLIGATION	\$0.00	\$0.00	\$0.00
THIS REQUEST	\$0.00	\$0.00	\$0.00
SUBTOTAL	\$0.00	\$0.00	\$0.00
CON			
PREV. OBLIGATION	\$0.00	\$0.00	\$0.00
THIS REQUEST	\$0.00	\$0.00	\$0.00
SUBTOTAL	\$0.00	\$0.00	\$0.00
TOTAL:	\$11,111.00	\$10,000.00	\$0.00

STATE REMARKS

01/10/2014 * SEQ 1: Authorizing federal funds for PE
 * Final design is not to start until the environmental document (NEPA) is completed.
 * Maximum available federal funds = \$101,300

FEDERAL REMARKS

AUTHORIZATION

AUTHORIZATION TO PROCEED WITH REQUEST: PRE FOR: PRELIMINARY ENGR. DOCUMENT TYPE: AAGR	PREPARED IN FADS BY: PANICO, DARLEEN REVIEWED IN FADS BY: ANDERSON, PETER SUBMITTED IN FADS BY: ANDERSON, PETER PROCESSED IN FADS BY: FOGLE, JERILYNN APPROVED IN FMS BY: MARY CUNNINGHAM	ON 01/10/2014 542-4651 ON 01/13/2014 653-8431 ON 01/13/2014 FOR CALTRANS ON 01/13/2014 FOR FHWA ON 01/14/2014
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E-76 form

What is E-76?

The E-76¹ "Authorization to Proceed" form acts as both project authorization and federal-aid project agreement with Caltrans. Different phases of work (preliminary engineering, right-of-way, utility relocation, construction, etc.), scope change, or cost increases require separate E-76 approvals, and authorization must precede any reimbursable activities.² Funds are either authorized by FHWA, or for projects exempt from FHWA oversight and review, this responsibility is delegated to Caltrans.

The local agency is responsible for submitting the request for authorization and, if necessary, a California Transportation Commission vote. To initiate project authorization or seek authorization for an additional phase, the local agency must prepare a "Request for Authorization" package.³

- The appropriate "Request for Authorization" form, either Exhibit 3-A, B, C or D depending on project phase.
- Exhibit 3-E Project Prefix Checklist.
- Exhibit F Finance Letter. Exhibit 3-G Data Sheets.

The package should be submitted directly to the Caltrans District Local Assistance Engineer (DLAE). After the project is selected and programmed into the Federal Statewide Transportation Improvement Program (FSTIP), the local agency contacts the District Local Assistance Engineer (DLAE) to move forward with project implementation.

See the above sample E-76 form.

¹ <http://www.dot.ca.gov/dist4/ola/faq.html#e76>
² With special emergency exemptions

³ Forms found here: <http://www.dot.ca.gov/hq/LocalPrograms/lam/forms/lapmforms.htm>

B

Successful Grant Case Studies

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Matrix of Complete Streets grants awarded in Orange County_____40

It is often helpful to review examples of successful grant applications when thinking about your own project. Funding sources can work on annual cycles, and if you are thinking of applying for a grant that has been previously available, reviewing previously successful applications can help form a starting point of expectations.

The following case studies are examples of grant applications in Orange County that have been successful in securing funding for aspects of a Complete Street intervention, whether it is active transportation infrastructure or placemaking, or health related outcomes.

Introduction



Case Study 1: Santa Ana Active Transportation Infrastructure

The City of Santa Ana is located in North Orange County. It has a diverse population, with a disadvantaged community that relies on public transportation, walking and bicycling as major modes. Because of this, and the fact that it is one of the larger jurisdictions in Orange County, there is an interest in active transportation from many city departments as well as a dedicated staff person to champion active transportation projects.

Santa Ana has received the lion's share of Caltrans Active Transportation Grants for Orange County. In 2014 and 2015, the combined total grant awards is 12 projects. These projects include a complete streets plan, safe routes to schools enhancements and bicycle improvements.

This case study focuses on the development, design and construction of three bike boulevards secured through Caltrans ATP Cycle 2 funding.



Case Study 2: Community Action Partnership of Orange County

The Community Action Partnership of Orange County (CAPOC) was established in 1965 to operate anti-poverty programs, bring resources to help local leaders alleviate poverty, find local solutions to poverty, and expand access to equal economic opportunity.

In 2014 CAPOC were awarded a Partnerships in Community Health (PICH) grant from the Centers for Disease Control & Prevention to fund a three year initiative to support the implementation of population-based strategies that expand the reach and health impact of local policy, systems and environmental improvements.

This case study focuses on the wider health benefits that are associated with the implementation of Complete Streets and highlights the alternative funding sources available.



Case Study 3: Garden Grove Open Streets

The Southern California Association of Governments (SCAG) established the Sustainability Planning Grant program in 2005 as an innovative vehicle for promoting local jurisdictional efforts to test local planning tools. The program provides technical assistance to jurisdictions to complete planning and policy efforts that enable the implementation of the regional Sustainable Community Strategy.

In 2013 the grant was awarded to Garden Grove to help fund a community Open Streets Event – called Re:Imagine Garden Grove, and to contribute to the development of Bicycle and Pedestrian Masterplan.

This case study is an example of federal grant funds being used to directly support the policy principles outlined at a regional level and implement the principles at a local level.



Case Study 4: Newport Beach Bike Lane Improvements

The Orange County Transportation Authority (OCTA) is Orange County's regional transportation agency. It provides regional funding to OC jurisdictions. OCTA administers federal, state and local grants. In addition, Measure M Sales Tax (see page 39 for more on Measure M), funds the majority of transportation improvements. The region has been awarded a variety of transportation, health and air quality grants.

Funded projects include bikeways, safe routes to school, signalization, transit, roads and safety, health, environment and others.

OCTA also conducts its own Call for Projects. The 2016 Call for Projects includes the Bicycle Corridor Improvement Program (BCIP) as well as FTA 5310 Seniors and Disabilities. The Call funds are federal monies distributed to the regional agency; Federal Highways Administration FHWA for BCIP and Federal Transit Administration FTA for 5310 Seniors/Disabilities.

This case study focuses on the City of Newport Beach addressing a gap in cycling infrastructure along Eastbluff Drive. They were successful in securing funding by working closely with the community to calm concerns of the project's location in a constrained area.

How to use these case studies

These case studies can be used in several ways to support your own application. Reviewing successful applications can provide ideas of what type of content to include and what type of preparation work needs to be completed. From what data was collected to how outreach was conducted, points of strength within successful applications should be identified and used for benchmarking. It is also important to examine how the successful application responds to the grant requirements. How a good application frames the way in which the proposed project responds to the goals of the grant program is a valuable example to follow as this is a key element of successful efforts to secure funding.

Case studies can be a valuable tool to get traction for a project locally. Successful manifestations of grant funded projects can be used to win support, secure partnerships and build a shared vision within a community. Outreach for the project can point to best practices to inspire and get constituents on board with a project.

What to look for in examples

- What type of data was collected? How was it used to support the project?
- How does the size of this project compare to yours? Budget, project size, population size etc. important for keeping expectations to scale.
- Is there a narrative or vision tying the application together? How is this vision related to the grant program goals? How is data used to support this narrative or vision?
- What type of outreach was done, how was it implemented and how much was done?

Case Study 1:



Santa Ana Active Transportation Infrastructure

Applicant:	City of Santa Ana
Coalition of partners:	n/a
Project:	Development, design and construction of three bike boulevards on Bishop Street/Willits Street from Raitt Street to Flower Street, Pacific Avenue from First Street to McFadden Avenue, and Shelton Street from First Street to McFadden Avenue.
Cost:	\$950,000
Funder:	Caltrans Active Transportation Program, Cycle 1
Year awarded:	2014
Year completed:	Not yet completed

Full application

Full application available:

http://www.catc.ca.gov/programs/ATP/2014_Project_Applications/0760_Santa_Ana.pdf

Additional source:

<http://www.oregister.com/articles/santa-633149-city-bicycle.html>

Summary

A number of key factors were the basis for this successful grant application. These included population characteristics of Santa Ana (high density, low median age, relatively high levels of deprivation and obesity), the use of bicycles as a main mode of transportation by many and the lack of suitable bicycle infrastructure. It was also noted that the proposed bicycle boulevard routes were used by commuters (to school, work or transit stops) and utilitarian bicyclists (to local shops or markets). Many of the bicyclists used the sidewalk due to a lack of infrastructure on the streets.

The grant application was further supported by the fact that the bicycle boulevards would be located near three elementary schools (between 0.01 – 0.25mi from the proposed routes) to which 60-70% of students walk or bike.

The application also had the backing of a number of local statistics. The Draft Bicycle Master Plan (2014) estimated 15,286 bicycling trips per day in Santa Ana and predicted a 30% increase in bike commuters by 2030. In parallel to

this, the City also had a growing bicycle safety problem – bicycle collisions rose by 36% from 2011 to 2012 (163 to 222) and over the past five years there were 16 bicycle collisions and 14 pedestrian collisions on the streets of this project.

The initiative was strongly supported in numerous public outreach meetings and received letters of support from Santa Ana Unified School District, Orange County Health Care Agency, Orange County Transportation Agency, non-profit organizations and local neighborhood associations.

The location of this project was chosen with the view of building bicycle infrastructure in the heart of Santa Ana and then expanding outwards (Source: OC register). One of the streets, Bishop Street, will be a main east-west bicycle route in the City.

The elements contained in the proposal for the three bicycle boulevards include bulb outs, traffic circles (within existing right of way), traffic turning restrictions and speed bumps.

Key outcomes

- \$950,000 in ATP grant funding from California Transportation Commission in 2014.
- Funding will support the construction of three bicycle boulevards .
- Infrastructure will include bulb outs, traffic circles (within existing right of way), traffic turning restrictions and speed bumps.

Key application highlights

- Supported by local statistics (such as bicycling rates, students who walk/ bike to nearby schools, obesity rates in community).
- Benefits a disadvantaged community.
- Proximity to three elementary schools to which a high percentage of students walk or bike.
- Community support as well as from several organizations (including schools, health care agencies, non-profit organization and Orange County Transportation Authority).
- Groundwork provided by draft Bicycle Master Plan (prior to application).

Santa Ana will continue to pursue grant opportunities that improve active transportation; we've gone after different kinds of grants for health, transportation, and economic development.

Cory Wilkerson, City of Santa Ana, Active Transportation Coordinator



For other relevant applications: p.36

Case Study 2:



Community Action Partnership of Orange County

Applicant:	Community Action Partnership of Orange County
Coalition of partners:	Alliance for Healthy Orange County, City of Anaheim, the City of Garden Grove, the City of Santa Ana, Food Access Coalition, Special Service for Groups (SSG), University of California Irvine (UCI), Center for Healthy Kids and Schools, Orange County Department of Education, Anaheim YMCA and Kid Healthy
Project:	Create healthier communities and reduce rates of diabetes and other chronic disease in Anaheim, Garden Grove and Santa Ana.
Cost:	\$1,385,251 over 3 years for the cities of Anaheim, Garden Grove and Santa Ana (\$4.1M statewide)
Funder:	The Centers for Disease Control Prevention
Year awarded:	2014
Year completed:	To be completed 2017

Summary

In September 2014, Community Action Partnership of Orange County and a coalition of other organizations including the City of Anaheim, the City of Garden Grove, the City of Santa Ana, Food Access Coalition, University of California Irvine (UCI), and others were awarded a grant to improve the health of residents in the three cities. Anaheim, Garden Grove and Santa Ana were identified as being the cities with the highest health disparity rates in the county, where average life expectancy is lower than in the rest of Orange County and where residents face high socioeconomic barriers to good health. The grant is provided through the Orange County Partnerships to Improve Community Health (OC PICH) program, an initiative to support the implementation of strategies to inform policy, improve the health of communities and reduce the prevalence of chronic disease.

Obesity, diabetes, heart disease and other chronic disease rates have risen

significantly in the past decades. Nearly 24% of adults over the age of 20 are obese and nearly 35% of children are either at risk of being overweight or overweight in Orange County. These statistics are even higher in some populations in the three target cities.

The coalition was tasked with using the grant funding to address the chronic disease burden and associated risk factors among residents in three ways:

Improve nutrition – by increasing the number of people with greater access to environments with healthy food or beverages; including through farm-to-school programs, home and community gardens, promoting water over sugar-sweetened beverages, and reevaluating vending machine policies;

Increase physical activity – by increasing the number of people with better access to physical activity; including through safe Walk and Bike to School programs, increased physical activity during school

through P.E. classes and Fit Kid Centers, collaborating with a variety of community resources and partners (such as YMCA's after-school programs and the Kid Healthy Parents in Action program that uses parent volunteers to ensure an active recess for kids), and enhancing active transportation plans;

Increase communications about active lifestyle choices – through a robust communications strategy involving municipal channels (such as community announcements and programming, banners, signs and city-sponsored events to promote drinking water and active transportation), ethnic media (newspaper, radio and television), social media (targeted messages using mass text messaging, Facebook, Twitter, Instagram, Snapchat, and existing municipal and agency websites) and the creation of a media toolkit (including graphics and text for all partners that can be individualized).

Each of these three goals was subdivided into manageable milestone projects with appropriate timescales, lead staff, key partners and tangible outputs, a process that is credited with helping the success of the grant application.

Each of the three cities is also using other funding streams to improve their built environments in order to encourage active transportation and more generally advance the objectives of the OCPICH program. For example, Anaheim is updating its Master Bike Plan, Garden Grove is drafting its Bike/Pedestrian Master Plan and Santa Ana is working on its plan, Safe Mobility Santa Ana, which aims at improving safety for all and reducing collisions.

Key outcomes

- \$1,385,251 over 3 years for the cities of Anaheim, Garden Grove and Santa Ana.
- Funding to support three key goals: Improve nutrition, increase physical activity and increase communications about active lifestyle choices.

Key Application Highlights

- **Leadership:** AHOC Director, Michele Martinez, is able to bring community groups and politicians together to rally around Active Transportation.
- **Strong Partnerships:** The Alliance for a Healthy Orange County (<http://www.ohealthalliance.org/>) is a county wide collaborative of health care organizations, community based organizations and universities whose mission is to champion policy strategies and leverage funding opportunities that result in enhanced health outcomes and reduced health disparities for Orange County. AHOC serves as the community collaborative for the OC Project Partnerships to Improve Community Health (PICH) grant. One major component of the OC PICH project is advocating for active transportation.
- **Clarity:** The grant proposal's three overarching goals were clearly subdivided into manageable milestones, timescales, lead staff, key partners and tangible outputs.



For other relevant applications: p.38

Case Study 3:



Garden Grove
Open Streets

Applicant:	City of Garden Grove, Community Development Department
Coalition of partners:	n/a
Project:	Re:Imagine Downtown – Pedals & Feet
Cost:	\$200,000
Funder:	SCAG Sustainability Planning Grant Award
Year awarded:	2013
Year completed:	2014 & 2015

Summary

This SCAG Sustainability Planning Grant Award was the City of Garden Grove's first application for an Active Transportation grant. Inspired by other local communities' Open Streets events, the city decided to plan one in Garden Grove. Applying for the SCAG grant was a great opportunity to help fund two important things for the community: an Open Streets Event (\$80,000) and a Bike & Pedestrian Master Plan (\$120,000 for technical expertise).

Garden Grove received their award letter in 2013, amidst the planning process for the very first Open Streets Event in 2014. Although the SCAG grant was not received ahead of the occasion, the city delivered a successful Open Streets Event. The city was able to apply the grant funds to an even bigger event in 2015. During the last few years, the Bike & Pedestrian Master Plan has evolved into a more comprehensive Garden Grove Active Streets Plan, also made possible through the Sustainability Planning Grant Award.

Garden Grove Open Streets creates temporary open streets for thousands

of people to walk, bike, run, skate, play, and enjoy public space in safety and comfort. Food, music, art, crafts, games and other interactive programs help to bring Downtown Garden Grove to life in a fresh and exciting way. Branded as Re:Imagine Garden Grove, this project complements complete streets efforts by offering opportunities for placemaking and highlights the flexible uses of community streets.

In its second year, the event expanded to two distinct segments, a daytime celebration and a night-time block party. Re:Imagine Garden Grove also hosted an interactive urban planning workshop to provide outreach and solicit feedback on the Garden Grove Active Streets Master Plan. Residents were asked to provide their input on walking and biking conditions throughout Garden Grove. They were also encouraged and given the opportunity to test out pop-up pedestrian and bicycle crossing improvements along Nelson Street and Acacia Parkway. This Master Plan, once finalized, will allow the city to apply for state grant funds to implement the proposed project and programs.

The Plan will help Garden Grove move towards a Complete Street approach as a growing number of people choose to walk, bike, and use forms of transportation other than an automobile.

Key outcomes

- Hosted two successful Re:Imagine Garden Grove events.
- Garden Grove Active Streets Plan is currently in a draft edition, ready for distribution and review by the general public.
- Intent is to adopt the Active Streets Plan and include in the General Plan in 2016.
- Garden Grove submitted a Bicycle Corridor Improvement Program grant application to implement a bikeway improvement identified in the Draft Active Streets Plan.

Key Application Highlights

- Garden Grove emphasized its commitment to sustainability and progress in recent years toward achieving the goals of mixed use development, lively streetscapes, and alternative modes of transportation.
- Summarizing the need for grant funding and the opportunities it would provide for the city (using images, maps, and examples from other municipalities).
- A proposal that includes detailed timeframes, costs, and deliverables for both the community engagement event and bike/pedestrian transportation planning process.
- Letters of support from a diverse range of key stakeholders, including City Council/County Board of Supervisors, subregional organizations, and other community leaders.



For other relevant applications: p.39

Case Study 4:



Newport Beach Bike Lane Improvements

Applicant:	City of Newport Beach, Public Works Department
Coalition of partners:	n/a
Project:	Eastbluff Drive/Ford Road Bike Lane Improvements
Cost:	\$270,600
Funder:	OCTA Bicycle Corridor Improvement Program (CMAQ Funds)
Year awarded:	2012
Year completed:	2016

Summary

The City of Newport Beach Public Works Department identified locations that needed increased bicycle infrastructure in the community, and applied for several grants totaling \$485,677 that would aid in the design and construction of new bicycle facilities throughout the city.

One application was for bike lane improvements along Eastbluff Drive and Ford Road. This \$270,600 project is located within the City of Newport Beach along Eastbluff Drive (from Vista del Oro to Jamboree Road) and Ford Road (from Jamboree Road to MacArthur Boulevard).

Eastbluff Drive provided designated bike lanes, though there was a gap in bicycle infrastructure along the selected project segment. The project added a striped bike lane along the identified portion of Eastbluff Drive and continued it past Jamboree Road onto Ford Road. In addition to the bike lanes, the project enhanced bike facilities at the intersections, including mixing zones that improved bicycle and vehicle interaction by better defining the pathways for the users. Regulatory and warning signage came along with

the installation of Class II bike lanes and intersection improvements.

Work along Eastbluff Drive required significant modifications at some portions of the road, including striping, road widening, and intersection improvements such as signal relocation. Throughout the project, the City worked closely with community stakeholders, including the adjacent schools, church, and several homeowners associations to ensure an open flow of communication. This helped to calm concerns about the project's location within a constrained area. Project work along Ford Road did not require widening the road to accommodate the addition of the striped bike lanes, and minimal restriping was needed for improvements at intersections.

The Eastbluff Drive/Ford Road project closed a significant gap in the bikeway network adjacent to Corona del Mar High by creating a continuous bike lane that connects to the school, large residential communities, regional parks, sports facilities, and the University of California at Irvine. Additionally, Eastbluff Drive now connects to the

Mountains-to-Sea regional bike trail. The Eastbluff Drive/Ford Road project segment is located within one mile of Newport Center regional employment center and Fashion Island and is within an OCTA defined Bikeway Priority Zone. It also continued the city's goal of encouraging safe and responsible cycling, without adversely impacting other roadway users.

Key outcomes

- Project listed in the Federal Transportation Improvement Program.
- Preliminary design was completed and submitted to Caltrans for formal approval as required by the federal funding process.
- Required funding (local contribution) for the bicycle corridor improvement projects was included within FY 2013/14 Capital Improvement Budget.
- Eastbluff Drive bike lanes now connect to the Mountains-to-Sea regional bike trail, providing more bicycle mobility and connectivity.

Key Application Highlights

- Described project component costs in precise detail – including the preliminary engineering phase, right-of-way/acquisition phase, and construction phase.
- Included visuals such as project site photos, maps, and engineering drawings.
- Completed Evaluation Criteria section, including potential air quality improvements, for easy point allocation by reviewer.



For other relevant applications: p.40

Other successful applications

City of Santa Ana Grants

The City of Santa Ana: ATP Cycle 2

Redesign of Edinger Avenue to include protected bike lanes

Cost: \$2.3 M

Summary: The City of Santa Ana, along with a group of seven middle and highschool students involved with Bikelt! Santa Ana and KidWorks, (a local non-profit that focuses on mentoring youth in disadvantaged communities) came together to secure \$2.3 million of funding from multiple sources to redesign Edinger Avenue – a 1.7 mile stretch of road that connects 8 schools with protected bike lanes. Supported by KidWorks staff, the youth leaders wrote a successful grant application supported by their research, documentation, community outreach and first-hand understanding of the community.

The City of Santa Ana: Self Funded

Bicycle Tree

Summary: Bicycle Tree is a community bike center and shop funded through donations and grants. It offers people a place for repairs, rides and a variety of programming aimed at youth and disadvantaged persons. The Bicycle tree began operation in 2006, opening its current location in 2008 with \$20,000. Annual costs are currently \$100,000/year. Funding is received from the OC Probation Department and the OC Department of Education who contribute \$4,200 annually for the weekly Wrench and Ride Program, and the Active Transportation Leadership Program. Two-thirds of monthly income comes from the sale of bikes and from service fees for repairs undertaken by volunteers.

<http://www.thebicycletree.org/>

The City of Santa Ana: ATP Cycle 1

Complete Streets Plan

Cost: \$300,000

Summary: The City of Santa Ana was awarded a grant to prepare a Complete Corridors Plan after identifying five key corridors that present significant mobility challenges, to address above average pedestrian and cyclist crash rates for a city of their size, and to serve as a basis for a wider Citywide Complete Streets Guideline plan.

Application #2 of 11 in order of agency priority

http://www.catc.ca.gov/programs/ATP/2014_Project_Applications/0752_Santa_Ana.pdf

The City of Santa Ana: ATP Cycle 1

Safe Routes to School Enhancements for Heninger Elementary

Cost: \$480,000

Summary: The City of Santa Ana, in partnership with the Orange County Health Care Agency, was awarded a grant to fund their project of adding traffic signals, curb extensions, upgraded wheelchair ramps and an educational safety outreach program for an important intersection on the way to Heninger Elementary that due to a lack of funding did not have a crossing guard to control vehicular and pedestrian traffic.

Application #4 of 11 in order of agency priority

http://www.catc.ca.gov/programs/ATP/2014_Project_Applications/0754_Santa_Ana.pdf

The City of Santa Ana ATP Cycle 1

Safe Routes to School Enhancements for King Elementary

Cost: \$500,000

Summary: The City of Santa Ana partnered with the Orange County Health Care Agency and was awarded a grant to improve a hazardous crossing environment with new traffic signals, as well as curb extensions, upgraded wheelchair ramps and educational safety outreach programs.

Application #9 of 11 in order of agency priority

http://www.catc.ca.gov/programs/ATP/2014_Project_Applications/0756_Santa_Ana.pdf

The City of Santa Ana: ATP Cycle 1

Newhope-Civic Center-Grand Class II Bike Lanes

Cost: \$271,512

Summary: The Newhope-Civic Center-Grand Class II Bike Lanes Project required additional right of way to provide bike lane access to mixed use areas including commercial, schools, transit and recreation facilities, and to reduce conflict with pedestrians from cyclists using the sidewalk. This project also connects other important active, upcoming and future cycling facilities and is closely aligned with local and regional plans and goals.

Application #11 of 11 in order of agency priority

http://www.catc.ca.gov/programs/ATP/2014_Project_Applications/0751_Santa_Ana.pdf

The City also has also received other active transportation related grants, from other funding sources, besides Caltrans. A few samples of recent grant awards from different agencies include:

- Air Resources Board Cap/Trade Affordable Housing Sustainable Communities (AHSC) – The Depot at Santa Ana. Developer lead project. Santa Ana involvement is for bicycle and pedestrian improvements.
- NHTS, California Office of Traffic Safety (OTS) – Santa Ana Travel Safe, Share the Space Bicycle and Pedestrian Safety Campaign. Programming includes bicycle safety rodeos, group rides and educational seminars.

<http://www.santa-ana.org/bike/>

Grants to Improve Community Health

Los Angeles County Metropolitan Transportation Authority (Metro): USDOT TIGER VII (Transportation Investment Generating Economic Recovery Act)

Rail to Rail Active Transportation Corridor Connector Project

Cost: \$34.3 M (including Metro contribution \$19.3 M)

Summary: Metro secured funding through the USDOT TIGER VII grant to transform an underutilized Metro owned right of way into a bike and pedestrian path to serve over 100,000 residents of a high density, largely minority and disadvantaged community that relies heavily on transit, bike and pedestrian to connect to jobs. The project connects both future and current rail stations with a safe multi-modal option for travel needs. The project will improve resident's access to transit while improving health, local environment and the local economy.

<https://lasentinel.net/metro-receives-15-million-in-federal-grant-to-construct-pedestrianbicycle-corridor-in-south-l-a.html>

Community Action Partnership of Orange County (CAPOC): Partnerships to Improve Community Health

Bicycle Safety Rodeo

Summary: The Community Action Partnerships of Orange County partnered with the Alliance for a Healthy Orange County to fit 300 children with free helmets and were taught by Safe Moves, bike safety professionals, on how to safely navigate on a bike in an urban setting.

<http://voiceofoc.org/2015/09/miller-300-oc-kids-get-an-a-and-free-helmets-at-bicycle-rodeos-in-garden-grove-and-anaheim/>

Orange County Transportation Authority: SCAG / ATP Funding

Orange County Sidewalk Inventory Project

Cost: \$184,495 (\$21,162 in matched funds from OCTA, \$163,333 from SCAG/ATP)

Summary: The funding for this yearlong study was awarded to the Orange County Transportation Authority to cover over 1,600 miles of roadways, major transit centers and corridors and within half a mile of all Metrolink stations, to establish a county-wide inventory of pedestrian sidewalk hurdles, such as gaps in connections, obstructions or needed amenities. This critical inventory is the first step in providing a solid evidence based approach to implementing improvements including complete street principles and first and last mile connections. Increased use of active modes has significant health benefits; regular physical activity can reduce risk of various chronic diseases.

<http://www.octa.net/News/About/Grant-Will-Help-Search-for-O-C--Sidewalk-Gaps/>

Open Street Event Grants

CicLAvia

Summary: CicLAvia catalyzes vibrant public spaces, active transportation and improved health through car-free streets. As the biggest open streets event in the United States, CicLAvia has delivered over 110 miles of open streets, and has impacted local and regional transportation policy related to pedestrians and bikes.

<http://www.ciclavia.org/>

SCAG Funded Events

Summary: In coordination with regional partners, SCAG successfully applied for the statewide 2014 Active Transportation Program (ATP) call for projects, and received \$2,333,000 in Caltrans grant funding to coordinate the Southern California Active Transportation Safety and Encouragement Campaign (Campaign). The primary goals of the Campaign are to reduce collisions involving pedestrians and cyclists, while increasing the levels of walking and biking in Southern California. To achieve these goals, SCAG and its partners are implementing a regional advertising campaign focused on promoting roadway safety as well as supporting the implementation of Open Streets & Temporary Demonstration Events, and active transportation trainings focused on encouraging more walking and biking. SCAG currently has resources through the Campaign to fund six Open Streets events in six cities (including the Orange County cities of Brea, Fullerton, and Garden Grove).

http://scag.granicus.com/Viewer.php?view_id=27&clip_id=922&meta_id=16903

Caltrans Active Transportation Program Grants

Cycle 1 Active Transportation Program Grant

Summary: The City of Pomona applied for a Cycle 1 Active Transportation Program Grant to help fund bikeway improvements on 16 city owned streets and pedestrian crossing improvements at eight intersections. The application includes existing conditions and project information, as well as screening criteria. It also provides answers to the required grant narrative questions dealing with the potential impacts and improvements of the proposed project.

http://www.catc.ca.gov/programs/ATP/2014_Project_Applications/0466_Pomona.pdf

Active Transportation Program Cycle 1 Grant

Summary: The City of Santa Ana successfully applied for an Active Transportation Program Cycle 1 Grant for the implementation of a Complete Streets Plan. The city identified five corridors that presented mobility challenges to both pedestrians and bicyclists, including safety concerns, crossing issues, lack of bikeways, and poor connectivity. In the grant application, the city proposed addressing these challenges by preparing a Complete Streets Plan. This plan is intended to improve conditions for walking, bicycling, driving and transit on the five corridors.

http://www.catc.ca.gov/programs/ATP/2014_Project_Applications/0752_Santa_Ana.pdf

Caltrans Transportation Planning Grant Program

Summary: Anaheim Resort Transportation requested \$160,000 through the Caltrans Transportation Planning Grant Program for help in conducting a stakeholder-driven, community-based planning effort to outline operation designs and methodologies of the transportation systems in the city. This was done in effort to prepare for the Anaheim Regional Transportation Intermodal Center and Anaheim Rapid Connection deployments. The primary goal of the grant was to work with stakeholders to formulate a vision for ideal transportation operations in the existing and proposed service areas, to determine future transit needs, and to develop financing and institutional structures that meet the needs of the business and commuting constituencies.

<http://rideart.org/wp-content/uploads/2014/01/Item-16-Grant-Applications.pdf>

<http://rideart.org/wp-content/uploads/2014/12/ATN-RFP-2015-003-Integrated-Transportation-and-Capacity-Building-Plan.pdf>

State/Federal Programs:

State Highway Operation and Protection Program (SHOPP) –Funds the management, preservation, and safety improvements of the State Highway System, through taxes and fees placed on vehicle fuels.

State Transportation Improvement Program (STIP) – Biennial five-year plan adopted by the Commission for future allocations of certain state transportation funds for state highway improvements, intercity rail, regional highway, and transit improvements.

Federal Transportation Improvement Program (FTIP) – Capital listing of all transportation projects proposed over a six-year period. Projects include highway improvements, transit, rail and bus facilities, high occupancy vehicle lanes, signal synchronization, intersection improvements, freeway ramps, etc. The OCTA FTIP database, includes all projects that are deemed regionally significant, regardless of the funding source and allow local agencies access to view and amend their projects.

County Programs:

Measure M Sales Tax – Orange County’s half-cent transportation sales tax continues to make a significant difference for residents and visitors who utilize the improvements being made on freeways, streets, roads, and the transit system. OCTA administers a variety of Measure M funding programs for cities to widen streets, improve intersections, coordinate signals, build Smart Streets and rehabilitate pavements. OCTA also administers regional streets and roads improvement projects. In order for cities to participate in these programs, cities are required to meet specific requirements to be deemed eligible to receive the funds.

<http://www.octa.net/Projects-and-Programs/Measure-M/Overview/>

The Comprehensive Transportation Funding Programs (CTFP)

CTFP represents a collection of competitive grant programs offered to local agencies to assist in funding street improvements, transit expansion, and even environmental mitigation projects. The CTFP was created to provide a common set of guidelines and project selection criteria for a variety of funding programs, establishing a simplified and consistent process. The CTFP is comprised primarily of M2 funds, but can also include state/federal funding sources such as the Regional Surface Transportation Program (RSTP) and supplemental State-Local Partnership Program (SLPP) fund.

<http://octa.net/Measure-M/Measure-M-Funding/Comprehensive-Transportation-Funding-Programs/>

Matrix of Complete Streets grants awarded in Orange County

This section provides an overview of grants awarded to Orange County communities over the past few years. These grants are from various funding sectors and for different elements of Complete Streets across all types of geographies.

While this list is not comprehensive, it is intended to show a representation

of successful Complete Streets grants in Orange County, as well as their primary funding source. This resource can be used as a starting point for continued research into successful grant applications and potential grant funding opportunities.

Case studies chosen for this funding toolkit are highlighted in the following table.

Grant Agency	Acronym	Primary Sector	Primary Grant Fund Name	Grant Project	Grantee
Business Improvement Districts	BIDs	Economics	Anaheim Tourism Improvement District	ARTIC Shuttle Circulator	Anaheim, ATN and OCTA
Business Improvement Districts	BIDs	Economics	HB Tourism Business Improvement District Fund	Surf City USA Shuttle	Huntington Beach
California Department of Transportation	Caltrans	Transportation	Active Transportation	Edinger Protected Bike Lane	Santa Ana
California Department of Transportation	Caltrans	Transportation	Active Transportation	Irvine Bike/Ped Motorist Safety Campaign	Irvine
California Air Resources Board	ARB	Environment	Affordable Housing/Sustainable Communities	The Depot Development Pedestrian Enhancements	Santa Ana and C & C Development
California Department of Transportation	Caltrans	Transportation	State Research and Planning	Pacific Coast Corridor Study	OCTA
California Department of Transportation	Caltrans	Transportation	Active Transportation	Anaheim Safe Routes to School	Anaheim

Grant Agency	Acronym	Primary Sector	Primary Grant Fund Name	Grant Project	Grantee
California Department of Transportation	Caltrans	Transportation	Active Transportation	Bishop-Pacific-Shelton Bike Boulevards	Santa Ana
California Department of Transportation	Caltrans	Transportation	Sustainable Communities	Fullerton Priority Bike Connection	Fullerton
Center for Disease Control	CDC	Health	Partnership to Improve Community Health	Healthy Community - Active Transportation	Alliance for Healthy Orange County & CPOC
Federal Transit Administration	FTA	Transportation	Map 21 New Starts	Orange County Street Car	OCTA
Federal Transit Administration	FTA	Transportation	5307 Transit	Santa Ana and Fullerton Transit Centers	OCTA, Santa Ana and Fullerton
National Highway Traffic Safety	NHTS	Transportation	California Office of Traffic Safety	Travel Safe, Share the Space - Bicycle & Pedestrian Safety	Santa Ana
Orange County Council of Governments	OCCOG	Environment	OCCOG Grant	District 5 Bikeways Strategy Report	Orange County District 5, OCTA and OCCOG
Orange County Transportation Authority	OCTA	Transportation	Measure M Comprehensive Transportation Funding Program CTFP	Anaheim Bio-infiltration	Anaheim
Orange County Transportation Authority	OCTA	Transportation	Measure M-2 Fair Share & P1b SLPP	Newport Bicycle Trail Restoration	Tustin
Orange County Transportation Authority	OCTA	Transportation	Measure M Comprehensive Transportation Funding Program CTFP	Bristol Street Traffic Signal Synchronization	OCTA
Orange County Transportation Authority	OCTA	Transportation	FTA 5310 Funding	Anaheim Senior Mobility Program Bus Purchase	Anaheim

Grant Agency	Acronym	Primary Sector	Primary Grant Fund Name	Grant Project	Grantee
Orange County Transportation Authority	OCTA	Environment	CMAQ Bicycle Corridor Improvement Plan (BCIP)	Cerritos Avenue Bicycle Corridor	Cypress
Orange County Transportation Authority	OCTA	Transportation	Arterial Pavement Management	Portola and Alton Pkwy Resurfacing	Lake Forest
Orange County Transportation Authority	OCTA	Transportation	CMAQ Bicycle Corridor Improvement Plan (BCIP)	Eastbluff Dr and Ford Rd Class II Bike Lane Improvement	Newport Beach
Public Private	PP	Economic	California Endowment	Santa Ana Building Healthy Communities	Santa Ana
Public Private	PP	Economic	Kaiser Permanente	Healthy Eating Active Living Zone - Active Anaheim	Anaheim
Public Private	PP	Health	St. Jude Healthy Communities	Buena Park Complete Streets	Buena Park
South Coast Air Quality Management District	AQMD	Environment	MSRC Clean Transportation Funding	Angels Express Bus	OCTA and Anaheim
South Coast Air Quality Management District	AQMD	Environment	MSRC Clean Transportation Funding	Orange County Fair Express	OCTA and Costa Mesa
South Coast Air Quality Management District	AQMD	Environment	AB2766	Bicycle Improvements Max Berg Park	San Clemente
South Coast Air Quality Management District	AQMD	Environment	AB2766	Countdown Pedestrian Signal Heads	Rancho Santa Margarita

Grant Agency	Acronym	Primary Sector	Primary Grant Fund Name	Grant Project	Grantee
Southern California Association of Governments	SCAG	Transportation	SCAG Sustainable Planning	Dana Point Doheny Village	Dana Point
Southern California Association of Governments	SCAG	Transportation	SCAG Sustainable Planning	Fullerton Smart Growth 2030	Fullerton
Southern California Association of Governments	SCAG	Transportation	SCAG Active Transportation	SCAG Open Streets	Brea, Fullerton and Garden Grove
Southern California Association of Governments	SCAG	Transportation	SCAG Sustainable Planning	Garden Grove Active Streets Master Plan	Garden Grove
Southern California Association of Governments	SCAG	Transportation	SCAG Corridor Planning	Pacific Electric Santa Ana Branch Corridor	OCTA and Los Angeles Metro
United States Department of Transportation	US DOT	Transportation	TIGER	Gene Autry Way ARTIC - Carpool and Bus Connectivity	Anaheim and OCTA

C

Preparing a Grant Budget

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The Grant Budget is the back bone of the funding application. Where the project narrative provides a picture of the proposal in words, the budget sets out the numbers.

A well-structured budget will break the project narrative down into key tasks and associated costs at each stage. It is important that these key tasks are in proportion with the narrative and the overarching objectives of the grant. This will allow the grantor to clearly understand cost allocation across the lifetime of the grant.

When preparing your budget provide a cost estimate that relates the budget to the project timeframe. Include task headings and sub task headings, each showing projected costs. Consider any costs that may change over time and include any assumptions made within the budget. An example of this could be material costs that are subject to inflation, or an increase in staff salaries. It is unlikely that you will be able to make amendments to the budget once the grant has been awarded.

Characteristics of a grant budget

How to develop a grant budget

Getting started

Prior to writing the budget consider what stage of the project life cycle you are at and what activities may be involved. Grant requirements will vary and some funding may only apply for certain stages or activities.

Understand budget restrictions

Make sure you have an understanding of the source of funding. The cost estimates in the grant budget must be established in accordance with the grant's funding criteria which will vary between grant applications.

For example:

- Some expense categories are not allowed to be paid with federal funds, and some funding agencies will disallow ineligible costs such as overhead, indirect costs, or foreign travel.
- The grant may have a minimum and a maximum value that your budget must realistically meet.

Budget timeline:

The grant budget should be aligned with both the project timeframe and the grant timeframe. The budget should outline detailed tasks/line items for the entire grant period. If the project timeframe spans more than one year the budget should present each fiscal year of the project separately. For project initiation and planning projects the timeframe for implementation will impact the initial budget estimates.

Formatting:

A budget should be developed in a format that is clear for the grantor but easy for the grantee to develop and monitor. The budget is the backbone of the project and will be used for reporting. It is critical to monitor the ongoing work and expenses to ensure the project is completed according to the project narrative and timeline as provided in the grant. See the example of a budget timeline on page 48.

Characteristics of a grant budget

Specific	The budget should be consistent with the project narrative specifically align with the Grant's objectives.
Realistic	The budget should be a realistic representation of what is required to meet the project objectives without any manipulation. The budget and timeframe allowed should be achievable.
Accurate	The budget should include accurate cost estimates that have been collated specifically for the grant. Calculations should be carried out through a transparent process. Any uncertainties should be explained in the project narrative.
Flexible	The budget should be clearly set out with different components in case the grantor wants to negotiate any items on the budget.

Project Stages	Typical Activities
Project Initiation and Planning	Identify the projects, reviews the context, needs and priorities, assess feasibility, outline scope, consider environmental factors, facilitate public engagement.
Programming and Preliminary Design	Conduct site analysis, carry out site utility and topographic surveys, determine economic viability, determine right of way impact, outline design criteria and parameters, initial design concepts, marketing and community engagement.
Final Design	Finalize plans and specifications, acquire planning approvals and right-of-ways, construction cost estimate, develop program, traffic management plans.
Advertise and Bid	Prepare contract documents, advertise for bid, hold a pre-bid conference, receive and analyze bids, assign contracts.
Construction	Assign contracts, construction schedule, mobilize on site, procurement of materials and resources, identify utilities, carry out construction, design management.
Maintenance	Redesign, maintenance contracts, replacement of elements.

Example

The Caltrans 2016-2017 Sustainable Transportation Planning Grants are only for transportation planning projects, and do not include actual construction.

<http://www.dot.ca.gov/hq/tpp/documents/GrantBrochure.pdf>

The FTA Fixed Guideway Capital Investment Grant MAP 21 for New Starts Projects (awarded to the OC Streetcar) eligible activities include design and construction of new fixed-guideways or extensions to fixed guideways.

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/5309_Capital_Investment_Grant_Fact_Sheet.pdf

How to develop a cost budget

Either use in-house staff or professionals to prepare cost estimates that can be the basis for an accurate, detailed budget. Depending on the projects development stage your cost estimate may include some or all of the following costs shown in the table.

Each type of project cost should then be broken down into tasks and sub tasks (also known as line items or cost categories). The budget should show the total cost of each sub task and identify what funding is allocated to cover the costs.

In the early stages of a project there may not be sufficient data available to prepare a detailed project cost estimate. A factual cost estimate may be built up based on a cost per mile for a similar type of project. Most Complete Street projects will be a retrofit of an existing street typology and it may be necessary to conduct a thorough site analysis to obtain factual data to establish a realistic cost estimate.

Project Costs	Examples
Set up costs	The cost of establishing and managing the project. E.g software, site surveys, site set up, cost of leases, insurances.
Public Outreach	The cost of marketing and communication for the project. E.g online resources, public engagement, surveys.
Design Costs	E.g project scoping, site analysis, design, production of plans and specifications, design management, design review meetings, planning approvals, right-of-way acquisition, third party requirements, re-design.
Construction Costs	E.g site clearance, materials, labor, construction management, utilities, traffic management, material disposal.
Contingency Costs	The cost to cover any risk or change during the project. E.g. design changes, inflation, environmental impacts, health and safety issues (see page 49 for more information).

Contingency and risk

Contingency funding is a financial tool for managing the risk of cost escalations and covering potential cost estimate shortfalls that are inherent in Grant Budgets. Contingencies may include design contingencies (to reflect the percentage of design completed to date), construction contingencies, management contingencies and other contingencies based on an assessment of risks.

A construction contingency would cover cost escalations that may occur as a result of unknown variables during the estimating stage. In the case of Complete Streets projects this may include material disposal, mitigating environmental impacts or traffic management.

A design contingency should be a percentage based on the level of design completion. For example, at the beginning of the design stage a contingency could be set at 30% of the of the overall cost but as the design reaches completion the level of risk decreases and the design contingency should approach 0%.

Contingency funds should be accurate and relative to specific budget items as opposed to a lump sum of money. When you are preparing a Grant Budget you should complete a risk assessment to define and quantify the potential risk areas and types. Within the budget risk contingencies

may be allocated to major cost items as opposed to a lump sum to assist in mitigation of uncertain variables and help to create a conservative estimate. On large projects an overall management contingency that is a percentage of the total project cost may be included to cover unanticipated risks.

The budget will also be divided into direct and indirect costs. The split between direct and indirect costs will be determined by the grants funding criteria.

http://www.fhwa.dot.gov/ipd/project_delivery/resources/financial_plans/contingency_fund.aspx

Indirect costs

Indirect costs are activities or services that are more difficult to justify because the precise benefit to the project is difficult to trace. Overhead costs are usually considered an indirect cost because while they are necessary it is difficult to determine precisely how they benefit the project. Therefore these are often calculated as a percentage of the direct costs project budget. There may be some grants that do not include indirect costs at all. Most organizations use a pre-determined formula to calculate the agencies' overhead or indirect costs to be charged to the grant.

Example

All FTA grant subrecipients must complete an indirect cost allocation plan (ICAP). The purpose of the ICAP is to guide the allocation of costs as follows:

- All activities of the local government departments have been considered.
- Distribution of indirect costs is based on a method(s) reasonably indicative of the amount of services provided.
- Services provided are necessary for successful conduct of federal programs.
- Level of costs incurred is reasonable.
- Costs of State or local centralized government services may be charged in conformance with government-wide cost allocations plans.
- Costs claimed are allowable in accordance with OMB A-87, as applicable.

Task Number	Project Title	City of Can Do Planning Project			Grantee			The Council of Governments												Deliverable						
		Responsible Party	Fund Source		Total Cost	Fiscal Year 2011/12				FY 2012/13				FY 2013/14												
			Grant	Local		J	A	S	O	N	D	J	F	M	A	M	J	J	A		S	O	N	D	J	F
1.0 Project Contracting																										
1.1	Project Initiation / Kick-off Meeting	The COG	\$500	\$450	\$50																					Meeting Summary
1.2	Staff coordination	The COG	\$3,000	\$2,700	\$300																					Monthly meetings with summary notes
1.3	RFP for consultant selection	The COG	\$1,500	\$1,350	\$150																					Consultant contract
2.0 Public Outreach																										
2.1	Community Workshop #1	Consultant	\$5,000	\$4,500	\$500																					Workshop summary
2.2	Community Workshop #2	Consultant	\$7,000	\$6,300	\$700																					Workshop summary
2.3	Safety/Bicycle Advisory Commission Meeting	Consultant	\$800	\$720	\$80																					Joint Planning/Parking and Safety/Bicycle Advisory Commission
3.0 Streetscape Design																										
3.1	Develop Streetscape Concept	Consultant	\$10,000	\$9,000	\$1,000																					Develop Streetscape Concept
3.2	Develop Design Concept Alternatives	Consultant	\$15,000	\$13,500	\$1,500																					Develop Design Concept Alternatives
3.3	Draft Final Design Concept & Report	Consultant	\$10,000	\$9,000	\$1,000																					Draft Final Design Concept and Report
3.4	Final Design Concepts & Report	Consultant	\$5,000	\$4,500	\$500																					Final Design Concept and Report
3.5	Community Workshop #3	Consultant	\$8,000	\$7,200	\$800																					Workshop summary
3.6	City Council Adoption	The COG	\$200	\$180	\$20																					Council Resolution and/or Meeting Minutes
4.0 Project Management & Administration																										
4.1	Project Administration	The COG	\$3,000	\$2,700	\$150																					Project administration and coordination
4.2	Submit Info for Quarterly reports	The COG	\$0	\$0	\$0																					Quarterly Reports
TOTALS			\$69,000	\$62,100	\$6,750																					

Sample project timeline Transportation Planning Grant
Source: <http://www.dot.ca.gov/hq/tp/documents/GrantApplicationGuide.pdf>

Costs usually charged directly	Costs either charged directly or allocated indirectly	Costs usually allocated indirectly
Project staff salaries	Telephone charges	Utilities
Contract payments	Travel	Cost of leases
Consultants	Computer use	Audit and legal
Construction costs	Software	Administrative and executive staff
Materials	Insurance	Equipment rental
Capital Expenditure/Equipment	Printing	
Right of way acquisitions	Miscellaneous office supplies	

Direct costs

Direct costs are for the activities or services that benefit project specifically. For example this may include construction costs or salaries for project staff. These costs are considered to be more tangible and can usually be directly traced to the project. The direct costs should have accurate estimates outlined in the budget under task headings.

The level of detail required for direct costs will vary according to what stage of the project life cycle you are at – key project stages as recognized by Caltrans are as follows:

Caltrans Project Life cycle:

- Project Initiation Documentation
- Permits & Environmental Studies
- Plans, Specifications & Estimates
- Right of Way
- Construction

Local Assistance Procedures Manual (Caltrans+FHWA) project phases:

- Preliminary Engineering
- Right of Way
- Utility Relocation
- Construction

<http://www.dot.ca.gov/hq/LocalPrograms/lpp/LPP06-04.pdf>

It is important to note that items that are classified as direct or indirect costs will vary between grants. For example the costs of stationary on a stakeholder engagement project may be a direct cost but on construction project stationary may be considered an indirect cost.

http://www.dot.ca.gov/hq/projgmt/documents/pmhb_5thed.pdf Page 18

For more information

OMB Circular A-87: establishes principles for standards for determining costs for Federal awards carried out through grants, cost reimbursement contracts and other agreements with State and local governments and federally-recognized Indian tribal governments.

https://www.whitehouse.gov/sites/default/files/omb/assets/agencyinformation_circulars_pdf/a87_2004.pdf

Justifications

Some areas within the budget may need a detailed written narrative or justification these could include:

- Design fees
- Staff salaries and labor costs
- Travel
- Capital expenditure
- Materials and supplies
- Reporting and invoicing

Design Fees

Design fees are the payment for services agreed under a contract and are variable depending on size and type of design project. They are generally calculated as a percentage of the initial project cost estimate although there are many contributing factors that could determine the percentage such as:

- Project Location and site conditions
- Type of client (public vs private)
- Schedule of deliverables
- Specialist design requirements

Staff/Labor Costs

To create an estimate of the labor costs involved consider what roles are required and the amount of time needed to develop, manage, monitor, implement and maintain a project. Where work is being completed in-house it may be easier to obtain accurate costings from relevant departments based on previous projects. Where work may be carried out by a third party, cost estimates should be outlined in a quote directly from the respective service provider. To minimize the risk in out-sourcing work, quote requests should explicitly

detail what is required to avoid any variation to the budget throughout the project. Third party contracts must be conducted using a fair and competitive procurement process (2CFR, Part 200).

Travel

If travel expenses are covered within the grant funding criteria. The budget should include a separate task for travel that details the purpose of the travel, expected results and total cost for anticipated trips.

Capital expenditure

Equipment purchases should be described for function and cost. Take note that federal acquisition rules require purchased equipment to be returned to the government following the end of the grant period.

Material and supplies

There may be material and supply items that are not distinguished under the funding criteria. Include a description around how they are used to support the program.

Reporting and invoicing

A reporting and invoicing schedule should be outlined within the funding criteria. A task for each should be outlined within the budget that identifies the content and frequency allowed for during the grant timeframe. A grant financial report should include actual cumulative expenditures against the total approved project budget. If the project has match funding the report should include all expenditure and funding received and show how funds are being allocated to each task/line item. If there is any variation to the approved grant budget a detailed explanation should be included in the report.

Most Caltrans grants will require Quarterly Progress reports and grant funds will be reimbursed based on expenditure to date. Invoices or Requests for Reimbursements (RFR) need to be submitted no more frequently than monthly or at a minimum quarterly.

A request for reimbursement should include a copy of the original signed invoices, purchase order, proof of payment for materials, supplies, and equipment such as canceled checks, bank statements, electronic funds transfer confirmation, or other proof that payment was made.

EXHIBIT 5-F SAMPLE "STIP OR ATP PROJECT" STATE INVOICE
(Prepare on Letterhead of Local Agency)

Date of Invoice:
 Name, District Local Assistance Engineer:
 Department of Transportation:
 District Local Assistance:
 Street/P.O. Box:
 City, CA, Zip Code:
 Billing Number: 1, 2,....., or Final
 Invoice Number: Local Agency's Invoice Number
 Project Number: Prefix Project Number
 Tax Identification Number: Agency IRS ID Number
 Date Project Accepted by City/County: Final Date or "Ongoing" if not Final
 Project Location: Project Limits
 Expenditure Authorization or Advantage Project Number:
 Reimbursement for State funds is claimed pursuant to Local Agency-State Agreement No. _____, Program Supplement No. _____, executed on date _____.

	Environmental Studies & Permits	PS&E	Right of Way Acquisition	Construction Including CE & Non-Infrastructure	Total
State Participating costs From	05/12/2014	05/12/2014	05/12/2014	05/12/2014	
To	06/29/2014	06/29/2014	06/29/2014	06/29/2014	
Total Indirect Costs to Date	\$825.00	\$1,865.50		\$4,323.22	\$7,013.72
Total Direct Costs to Date	\$4,000.60	\$8,400.30	\$8,400.30	\$150,652.00	\$171,342.00
Less Retention				(\$20,000.00)*	(\$20,000.00)
Liquidated Damages				\$0.00**	\$0.00
Nonparticipating Costs	(\$350.00)	(\$840.00)	(\$1,200.00)	(\$16,000.00)	(\$18,390.00)
Total State Participating Costs to date	\$4,475.60	\$9,425.80	\$7,090.00	\$118,975.22	\$139,966.62
Less Participating Costs on Previous Invoice	\$2,120.95	\$6,350.20	\$0.00	\$98,231.00	\$106,702.15
Change in Participating Costs	\$2,354.65	\$3,075.60	\$7,090.00	\$20,744.22	\$33,264.47
Reimbursement Ratio	75.00%	75.00%	75.00%	75.00%	
Amount of this Claim	\$1,765.98	\$2,306.70	\$5,317.50	\$15,558.16	\$24,948.34
TOTAL INVOICE AMOUNT					24,948.34

INDIRECT COST CALCULATION

Environmental Studies & Permits Indirect Costs:

	Fiscal Year 2012-2013	Fiscal Year 2013-2014
Direct Cost Base Expense	\$1,944.00	\$673.82
Approved Indirect Cost Rate	31%	33%
Subtotal****	\$602.64	\$222.36

Total Indirect Costs to Date for Environmental Studies & Permits **\$825.00** (this Amount is carried to the front of the invoice under the Environmental Studies & Permits column)

PS&E Indirect Costs:

	Fiscal Year 2012-2013	Fiscal Year 2013-2014
Direct Cost Base Expense	\$4,756.23	\$1,185.07
Approved Indirect Cost Rate	31%	33%
Subtotal****	\$1,474.43	\$391.07

Total Indirect Costs to Date for PS&E **\$1,865.50** (this Amount is carried to the front of the invoice under the Construction Engineering column)

Construction Engineering or Non-Infrastructure Indirect Costs:

	Fiscal Year 2012-2013	Fiscal Year 2013-2014
Direct Cost Base Expense	\$9,500.00	\$4,176.43
Approved Indirect Cost Rate	31%	33%
Subtotal****	\$2,945.00	\$1,378.22

Total Indirect Costs to Date for Construction Engineering or Non-Infrastructure **\$4,323.22** (this Amount is carried to the front of the invoice under the Construction Engineering column)

I certify that the work covered by this invoice has been completed in accordance with approved plans and specifications; the costs shown in this invoice are true and correct; and the amount claimed, including retention as reflected above, is due and payable in accordance with the terms of the agreement.

Signature, Title and Unit of Local Agency Representative _____ Phone No. _____

For questions regarding this invoice, please contact:

Name _____ Phone No. _____

- * Total retention amount withheld from contractor. At the end of the project and after all retention has been released, this amount should be zero.
- ** Show "liquidated damages" amount on final invoice.
- ***
 - Indirect cost for this project equals the direct cost base expense (i.e., direct salaries & wages plus fringe benefits) for this project multiplied by the approved indirect cost rate.
 - Indirect cost reimbursement will not apply to direct costs, i.e., payment of construction contracts and right of way purchases, not included in the direct cost base.
 - An indirect rate must be approved by Caltrans every fiscal year to be used for only those costs incurred for that year.

Distribution: Original & 2 copies to DLAE

Match funding

Match funds are funds that are of varying proportions set to be paid in equal amounts to funds available from the grant, or other sources. While some grants do not require match funding, your proposal will be improved if you can demonstrate to the grantor a higher level of funding/support for the project. Most federal projects will require a local match contribution. This will usually be detailed as a percentage of the total project cost.

Depending on the funding agency, match funding can take the form of a monetary match, volunteer hours, or an in-kind donation.

An in-kind contribution may take

the form of materials, equipment or services that are given to the project without charge. These items should be disclosed in the project narrative and not in the grant budget submitted as the financial reports should show actual cumulative revenue and expenditure.

To be applicable for some grants you must have secured your match funding prior to the funds being awarded. Depending on the requirements of your grant the details of match funding required at the proposal stage will vary and a letter of support may be sufficient disclosing full details of the match funding could enhance your proposal.

Example

The Caltrans Strategic Partnerships grants require the applicant to provide a minimum of 20% non-federal local match. The Sustainable Communities grants require the applicant to provide a minimum 11.47% local match – federal fund grant recipients, primarily MPO's, must provide a non-federal local match and other grantees may use any source. A secondary grant may be used as the local match providing the funding is from a non-federal source or alternatively this may be an in kind contribution.

Budget variations and risks

Variation and risk are inherent characteristics of all budgets. A well prepared grant budget will address any foreseeable issues and justify these within the project narrative. It is important to understand the budget conditions so you are aware of the grants stance on contingency and variation. Budget adjustments after the grant award are sometimes not possible.

Some vulnerable budget areas are:

- Costs of leases
- Salary increase
- Insurance
- Transportation
- Cost of materials

Budget revisions

Be realistic when preparing budgets to avoid having to revise the scope of the project after cost estimates and quotes are submitted. In most cases minor variances between budgeted amounts and actual expenditures can be explained in the financial report. If substantial changes to the budget are required a new budget may be deemed necessary. Be prepared to make up funding shortfall if the project is not revised to meet the grant budget.

Long term funding post grant

There is a risk that high cost capital funded schemes cannot be maintained adequately by jurisdictions once completed due to lack of revenue / maintenance funding brought about by budget restrictions and / a change in policy / political priorities.

Include information on how the project will be funded long-term beyond the grant period in order to:

- Demonstrate to the funder that there is a long-term commitment to the project (this also affirms the importance of the project to the community).
- Commit your own jurisdiction to ongoing support for the project after the grant funding is exhausted.

Useful references

AASHTO Practical Guide to Cost Estimating (2013)

California State Contracting Manual.
April 2015

http://www.documents.dgs.ca.gov/ols/SCM%202015/SCM_Apr_2015_Complete.pdf

Caltrans. Grant Application Guide – Partnership Planning for Sustainable Transportation, Transit Planning for Sustainable Communities, Transit Planning for Rural Communities. FY2014–2015

<http://www.dot.ca.gov/hq/tpp/offices/orip/Grants/2015/FINALGrantApplicationGuide11-21-13.pdf>

Caltrans. State Management Plan Federal Transit Programs. August 2013

<http://www.dot.ca.gov/hq/MassTrans/Docs-Pdfs/SMR/finalsmp2013.pdf>

Caltrans Sustainable Transportation Planning Grant Program. Grant Application Guide. FY2016–2017

<http://www.dot.ca.gov/hq/tpp/documents/GrantApplicationGuide.pdf>

FHWA. Major Project Program Cost Estimating Guidance. January 2007.

https://www.fhwa.dot.gov/ipd/pdfs/project_delivery/major_project_cost_guidance.pdf

National Cooperative Highway Research Program. (NCHRP) Report 574 (2007)

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_574.pdf

National Cooperative Highway Research Program. (NCHRP) Report 574 Procedures Guide for Right-of-Way Cost Estimation and Cost Management

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_625-2.pdf

Acknowledgments

Contributions

The authors wish thank everyone who has been involved in the OCCSI study and provided inputs and guidance:

- Alliance for a Healthy Orange County
- Blais and Associates
- City of Santa Ana
- OCCOG TAC
- OCTA
- Grant Managements Associates

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Photos

All photos taken by Steer Davies Gleave, unless otherwise indicated in the photo caption.

Appendix A: Grant application quick reference checklist

The following appendix is a checklist intended as a quick reference guide to remind you of some of the most important aspects of preparing for a grant application

Grant application quick reference checklist

Establish Leadership

- Identified political leadership
- Internal project lead
- Established Technical Advisory Committee

Establish Partnerships

- Joint or multi-jurisdictional partners
- Collected letters of support from community partners
- Collected reports or findings from community partners

Public Outreach and Engagement

- Conduct public outreach ahead to include in the grant application
- Collect qualitative and quantitative data:
 - Photos, sign in sheets, meeting notes, questionnaires, etc.
 - Show proof of public discussion, incorporation of feedback
- Include a Public Outreach Plan
- Use new technologies or creative ways to reach the public
 - Crowdsourcing, online comments, photo contest, school assembly visits, etc.
- Include outreach to disadvantaged communities
- Include meetings with elected officials, directors, internal staff, Technical Advisory Committee

Collect Qualitative and Quantitative Data

- National, regional and local statistics relevant to your project
- Local data that can add context and nuance to your project's relevance
 - Employment statistics, health statistics, demographic data, etc.
- Data collected from public outreach
- Data collected from the project site
 - Field counts, neighborhood audits, observations
- Data collected from project partners, champions or community organizations
 - Bicycle coalition, neighborhood business improvement areas, youth groups
- Maps and photos of the project site existing conditions
- Renderings, illustrations or mockups of the project

Outlined Goals and Objectives of the Project

- How does the project meet the goals and objectives of the grant?
- How does the project meet the goals and objectives of the grant making authority?
- How does the project align with greater goals?
 - State / Federal / Other Projects
- What are the 'value-add' aspects of the project?
 - Increase active transportation
 - Improve overall transportation safety
 - Decrease congestion
 - Enhance economic development opportunities
 - Foster community, youth, neighborhood or business engagement
 - Improve public health
 - Benefit disadvantaged communities
 - Contribute to arts and culture
 - Demonstrate local and regional consistency

Supporting Documentation

- Demonstration of how key grant tenants are institutionalized
 - General Plan
 - Bicycle Plan
 - Pedestrian Plan
 - Non Motorized or Mobility Plan
 - Safe Routes to School Plan
 - Sustainable Communities Plan
 - Specific Plans
 - Support letters
 - City Council or Board Resolutions
 - Project Commitment Letters

Timeline

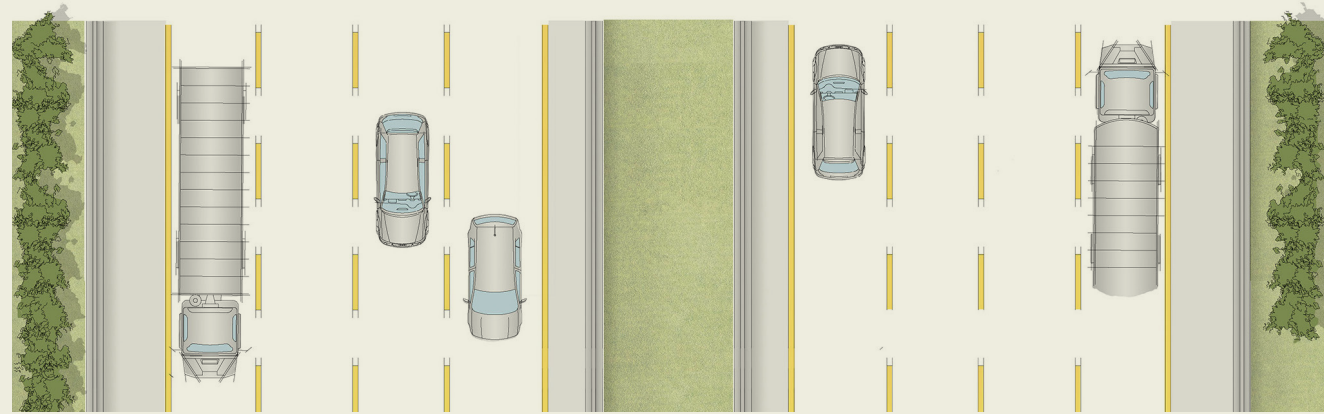
- Develop a timeline for the grant application
- Plan your timeline backwards from the application due date
- Build in ample time for internal review, cross departmental deadlines and Council or Board approval dates
- Note important dates and deadlines in the Pre-Award, Award and Post Award phases
- Develop a timeline for project implementation

Appendix B: Typical cost estimates for retrofitting Complete Streets

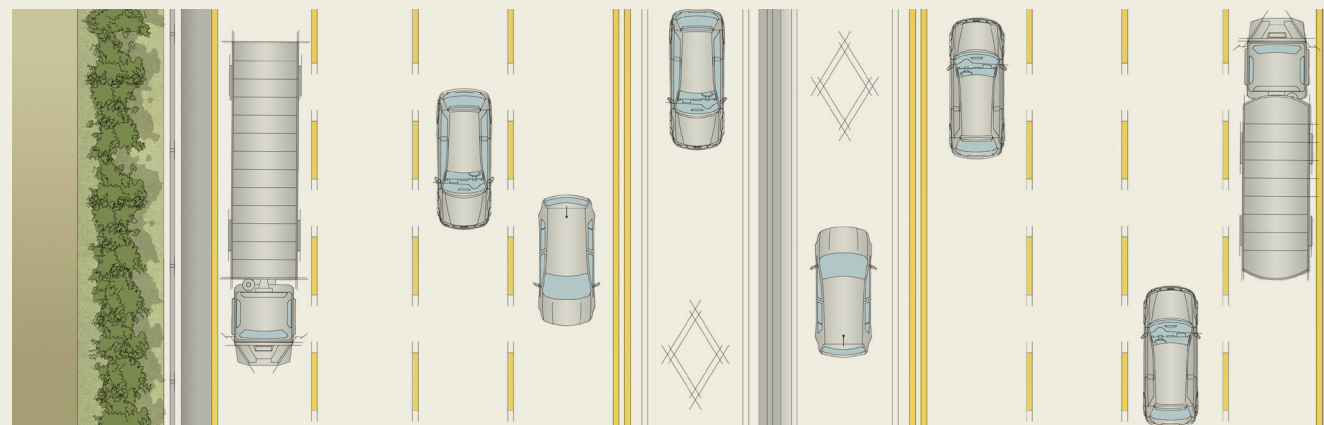
Preparation of cost estimates to be used in grant budgets requires a methodical analysis of project work required. There is no project that will be the same as another and as such it is critical to understand the project narrative and timeline in order to establish accurate cost estimates. Appendix A, B and C provide examples of costs per mile estimates for Complete Street elements to be used as a guide to identify ball-park costs for projects.

Provides a cross-reference with the capital and maintenance costs chapter in OCCSI Design Handbook and illustrates examples of per mile costs of the typical sections. Assumptions have been outlined for each section to present comparative per mile cost estimates for different modal priorities. The costs have been built up on the basis of an existing street typology that is being retrofitted with design components to make the street more complete.

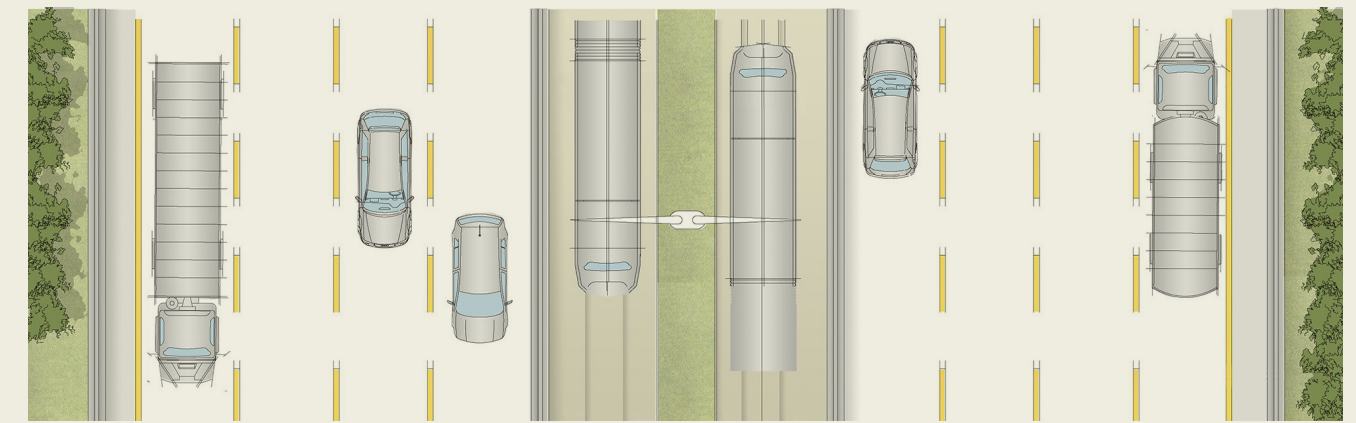
MF Multimodal Freeway Corridor



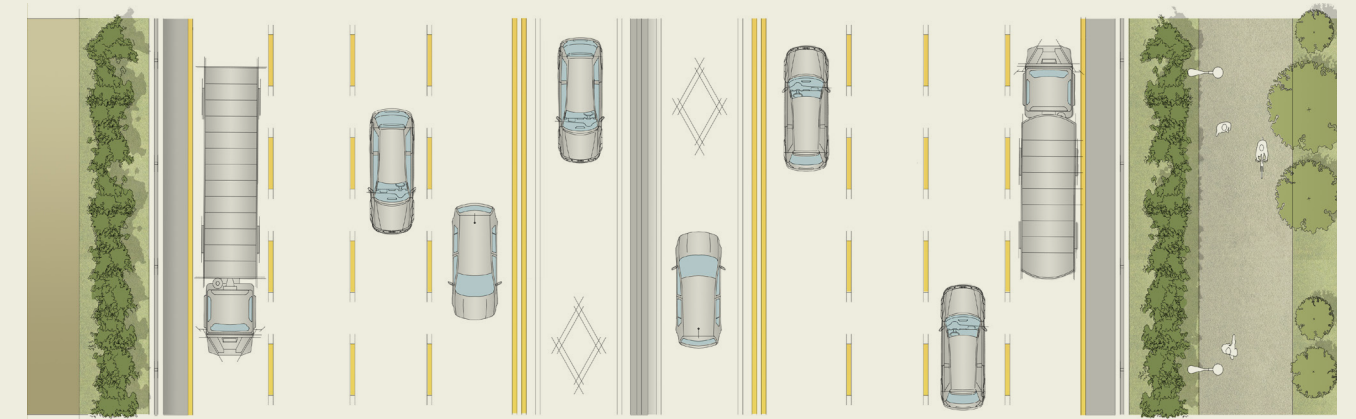
Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Provision for pedestrian/cyclist freeway crossing every mile.				
Option A: One pedestrian and cyclist overbridge	1	EA	6,000,000	6,000,000
Option B: One pedestrian and cyclist underpass	1	EA	5,000,000	5,000,000
Option C: Redesign of interchange for pedestrian and cyclists	1	EA	5,000,000	5,000,000
Total				16,000,000



Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Reallocate central reserve to new HOV lanes	1	Mile	2,600,000	2,600,000
Concrete barriers	440	EA	650	286,000
8 Ft high sound wall on both sides of the corridor	10,560	LF	227	2,400,000
Total				5,286,000

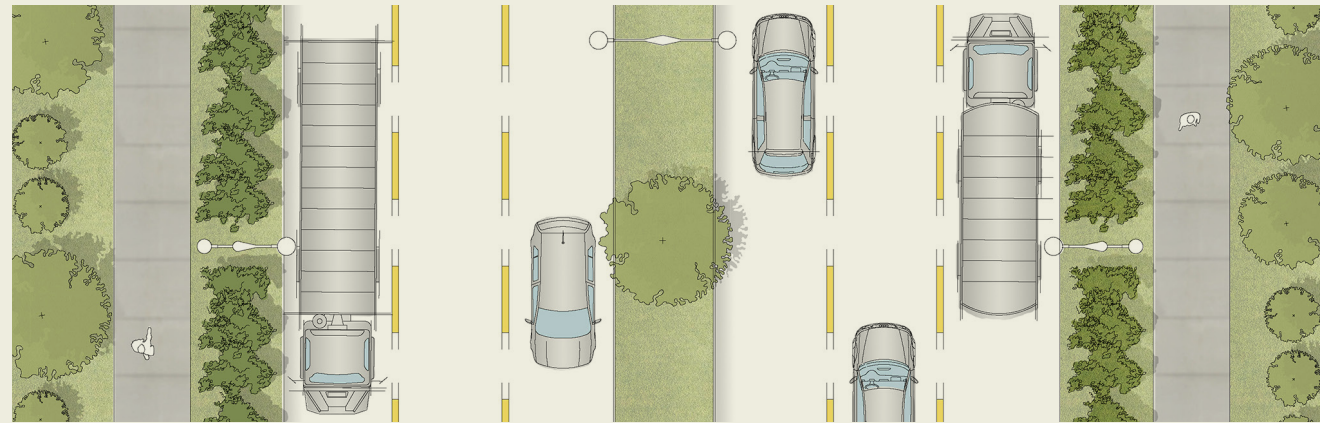


Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Reallocate central reserve to a fixed guideway.				
Option A: LRT	1	Mile	55,000,000	55,000,000
Option B: BRT	1	Mile	22,000,000	22,000,000
Provision for overbridge to connect pedestrian facilities to transit	1	EA	6,000,000	6,000,000
Reallocate existing lane to HOV	1	Mile	80,000	80,000
Roadmarking	42,500	LF	4	170,000
Signage	1	EA	50,000	50,000
Total Option A				61,300,000
Total Option B				28,300,000

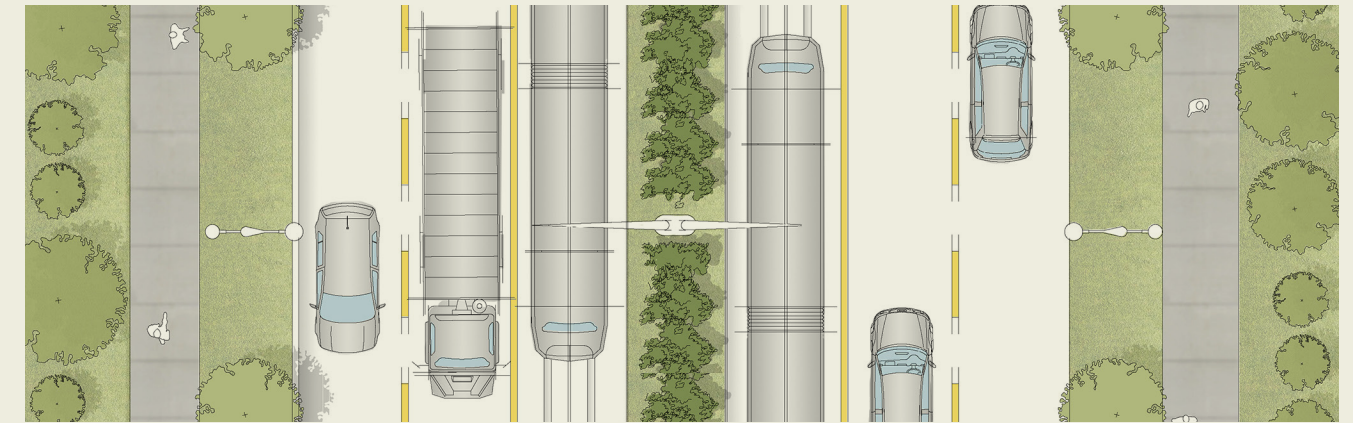


Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
8 Ft high sound wall on both sides of the corridor	1	Mile	2,400,000	2,400,000
New 12ft wide concrete pedestrian and cycle trail	39,600	LF	4	158,400
Pedestrian lights spaced every 100ft	52	EA	1,450	76,560
Provision for pedestrian/cyclist freeway crossing every mile.				
Option A: One pedestrian and cyclist overbridge	1	EA	6,000,000	6,000,000
Option B: One pedestrian and cyclist underpass	1	EA	5,000,000	5,000,000
Option C: Redesign of interchange for pedestrian and cyclists	1	EA	5,000,000	5,000,000
Total Option A				13,634,960
Total Option B				12,634,960
Total Option C				12,634,960

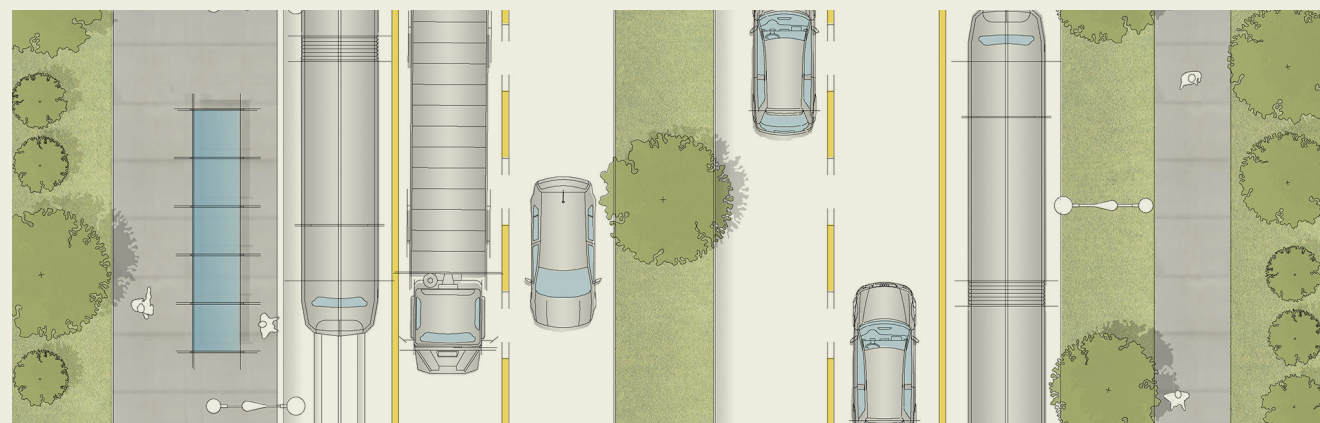
MC Movement Corridor



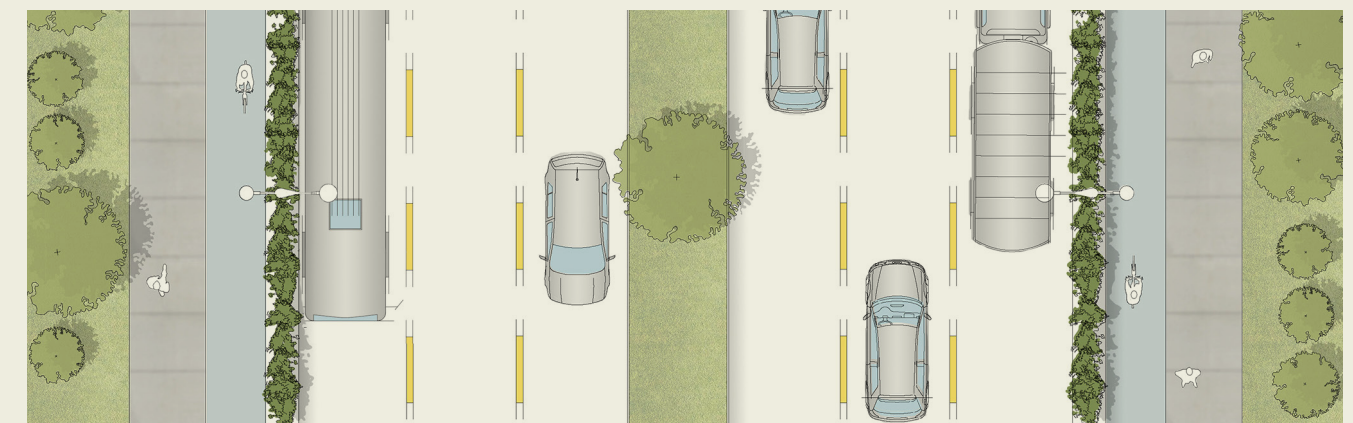
Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
7ft wide concrete sidewalk on both sides of the corridor	73,920	ft2	10	740,000
8ft wide planted buffer strip on both sides	84,480	ft2	20	1,690,000
Two 6m street trees at 100ft spacing in the existing central median	106	EA	1,600	169,000
Streetlight with pedestrian lighting provisions at 200ft spacing	26	EA	2,460	65,000
Pedestrian light at 200ft spacing (alternating with streetlight)	26	EA	1,450	38,280
Streetlights spaced at 200ft in the existing central median	26	EA	4,430	117,000
Total				2,819,280



Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Central reservation transit corridor in each direction				
Option A: LRT	1	Mile	55,000,000	55,000,000
Option B: BRT	1	Mile	22,000,000	22,000,000
Provision for midblock crossing to connect transit every 1/2 mile	2	EA	3,500	7,000
Total				77,007,000



Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Side-running Fixed guideway LRT in each direction				48,000,000
7ft wide concrete sidewalk	73,920	ft2	10	740,000
12ft wide concrete sidewalk	126,800	ft2	10	1,268,000
Transit stop shelter	1	EA	23,000	23,000
Total				50,031,000

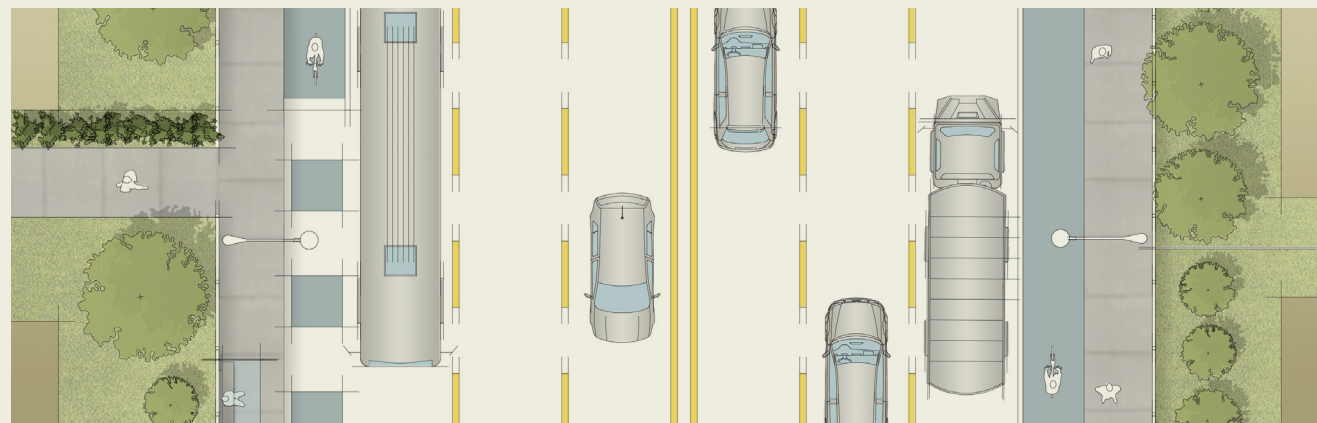


Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
7ft wide Class IV separated on-street bikeway in each direction	73,920	ft2	8	581,000
4ft wide planted buffer strip	42,240	ft2	20	845,000
Bench and route information every 1/2 mile	2	EA	650	1,500
Total				1,427,500



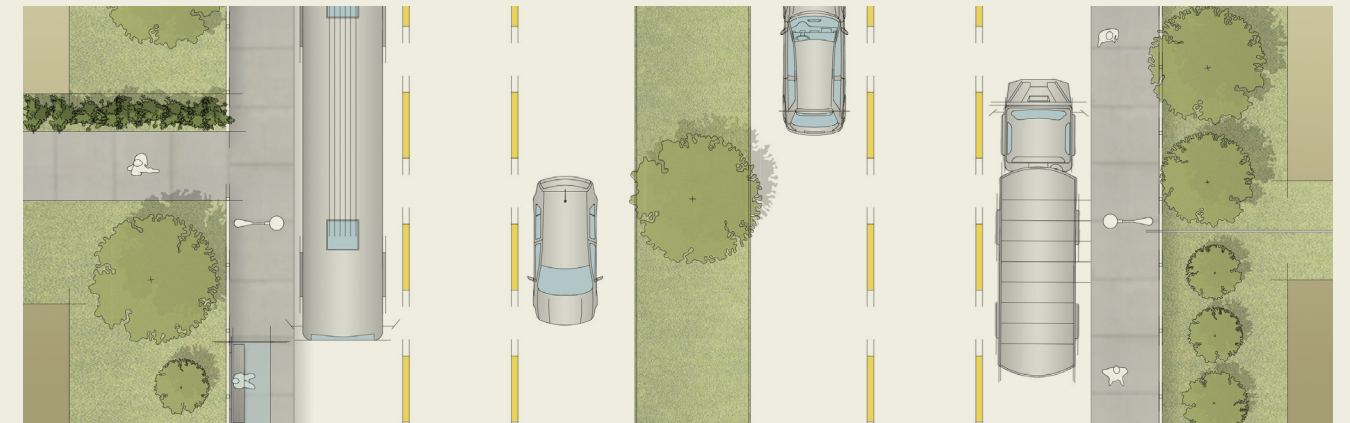
Road Diet

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Reallocate roadway to accommodate a bikeway				
Option A: Narrow existing travel lanes	21,120	LF	4	85,000
Option B: 7ft wide Class II buffered bike lane in each direction	73,920	ft2	6	450,000
8ft wide grassed berm	42,240	ft2	20	844,800
Total Option A				929,800
Total Option B				1,294,800



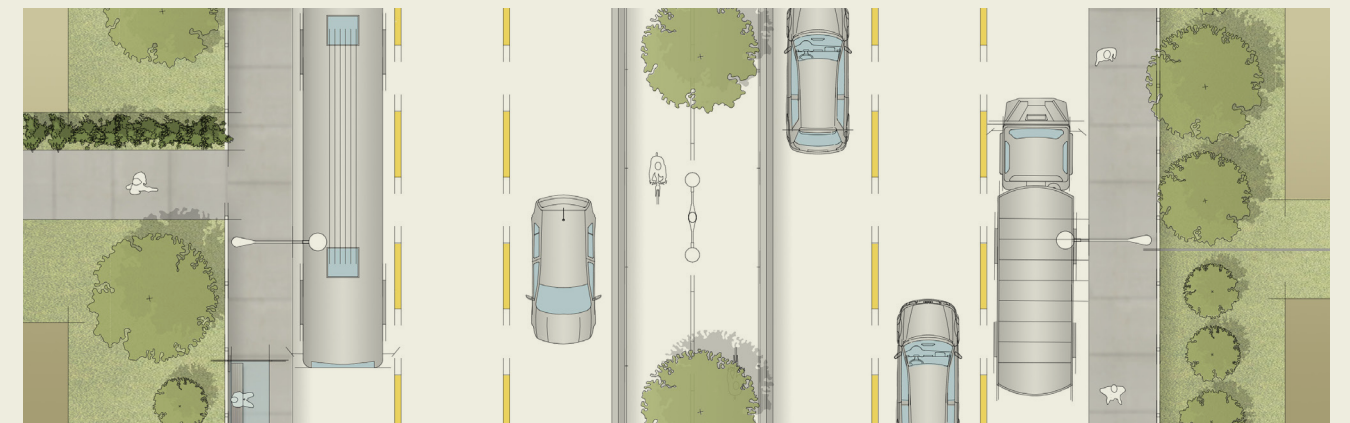
Auto Priority with Bike Lane

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Curb realignment to accommodate bike lane on each side	10,560	LF	35	370,000
7ft wide Class II bike lane in each direction	73,920	ft2	6	450,000
Transit stop shelter	1	EA	23,000	23,000
6ft high sound wall	10,560	LF	218	2,300,000
Total				3,143,000



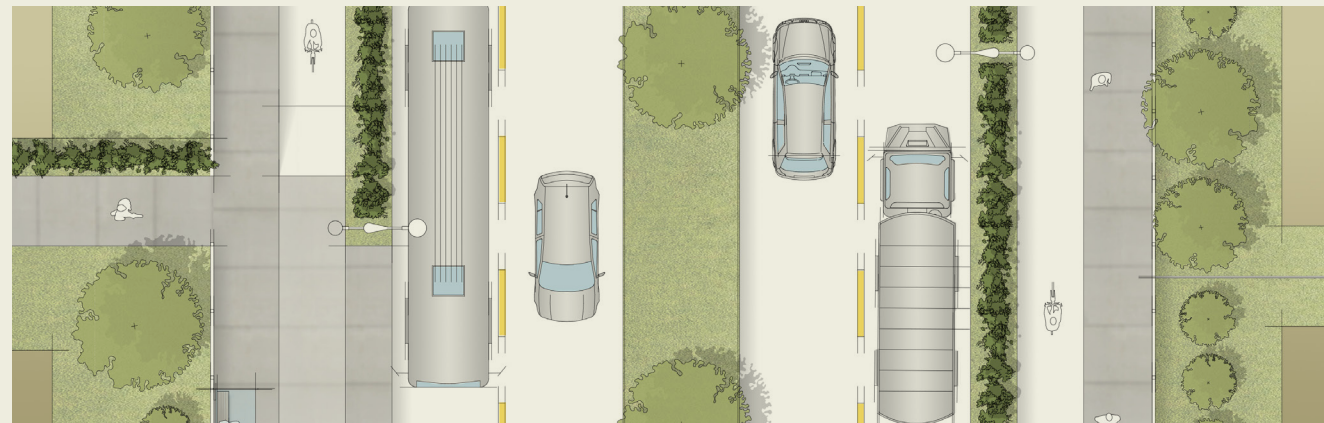
Auto Priority

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Curb realignment to widen existing footway 2ft.	10,560	LF	35	370,000
4m street trees planted in central reservation at 50 ft spacings	106	EA	950	100,320
Total				470,320



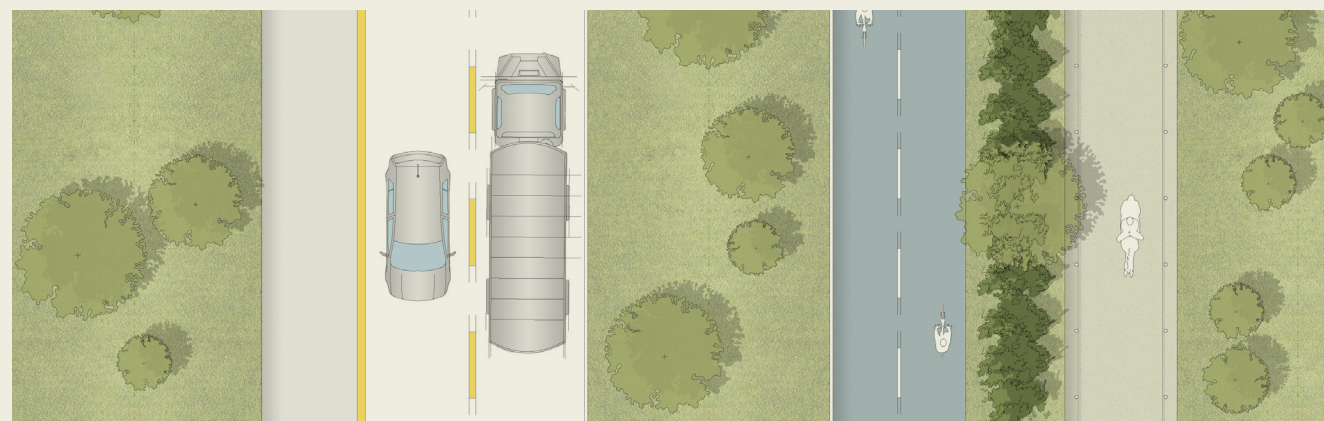
Auto Priority with Center Bike Lane

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Reallocate central median to create a bi-directional bike lane.				
Option A: 14ft wide concrete Class I separated bikeway	73,920	LF	11	792,000
Option B: Concrete Barriers on either side of the bikeway	10,560	LF	50	528,000
Option C: Pedestrian lighting spaced every 100m	17	EA	1,450	25,520
Streetlight with pedestrian lighting provisions at 200ft spacing	26	EA	2,460	65,000
Total Option A				857,000
Total Option B				595,000
Total Option C				90,520



Active Transportation Priority

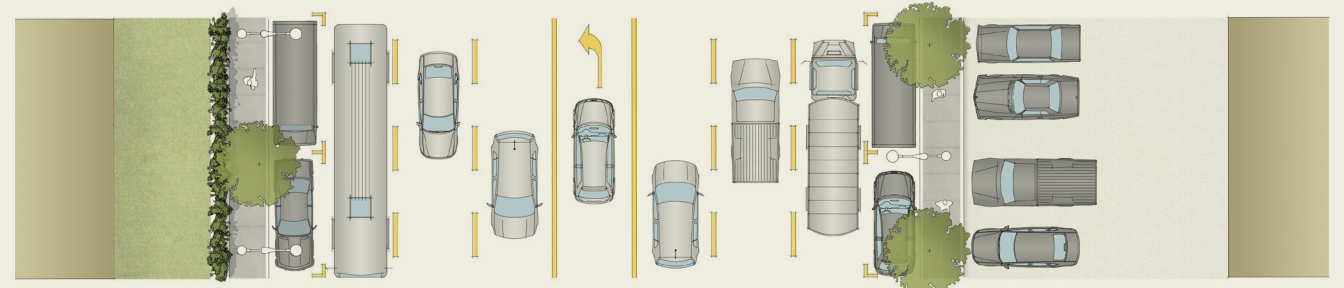
Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Curb realignment to accommodate a protected bike lane				
7ft wide Class IV separated on-street bikeway in each direction	73,920	ft2	8	581,000
6ft wide planted buffer strip	31,680	ft2	20	634,000
6ft wide floating bus stop spaced every 1/4 mile	4	EA	750	3,000
Total				1,218,000



Auto with Horse Trail Priority

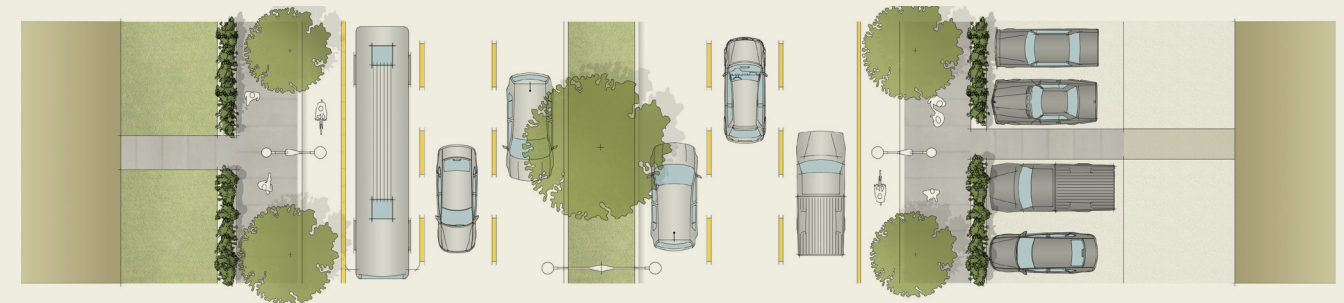
Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
14ft wide Class I separated bikeway	73,920	ft2	11	792,000
12ft wide Equestrian Trail	63,360	ft2	15	950,400
Timber fencing on either side of the horse trail	10,560	LF	10	105,600
Total				1,848,000

ML Mixed Land Use Corridor / Hub



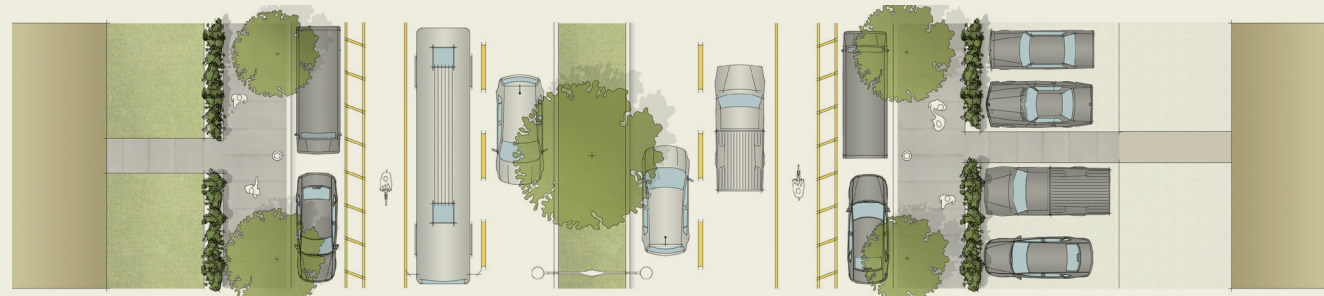
Auto Priority with On Street Parking

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
7ft wide concrete sidewalk on both sides of the corridor	73,920	ft2	10	740,000
Reallocate central median to a left turn lane	1	EA	600,000	600,000
Three 6m street trees at 100ft spacing planted in verge	158	EA	1,300	205,920
Streetlight with pedestrian lighting provisions at 100ft spacing	53	EA	1,450	76,560
Total				1,622,480



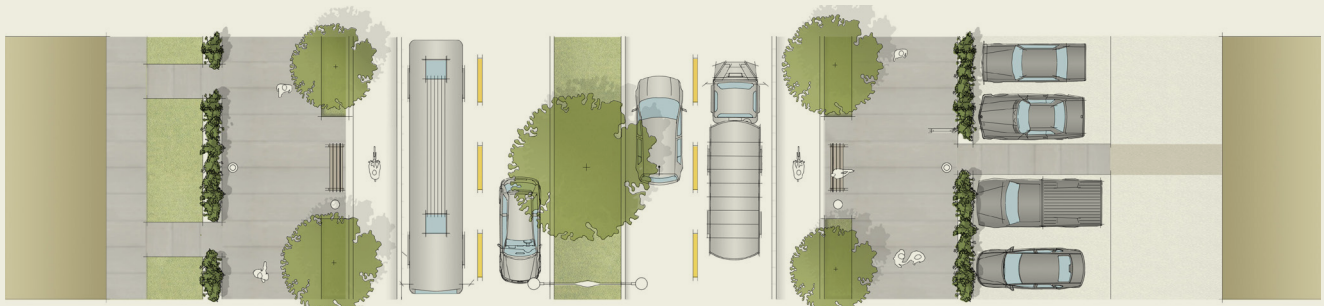
Auto Priority with Active Transportation

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Conversion of central median to an 8ft raised median	42,240	ft2	20	845,000
Narrow existing travel lanes	21,120	LF	4	85,000
Removal of on-street parking lane	1	Mile	20,000	20,000
7ft wide Class II bike lane in each direction	73,920	ft2	6	450,000
Curb realignment to create 12ft wide sidewalk	63,360	ft2	20	1,268,000
Bus stop with bench and route information every 1/2 mile	2	EA	750	1,500
Total				2,669,500



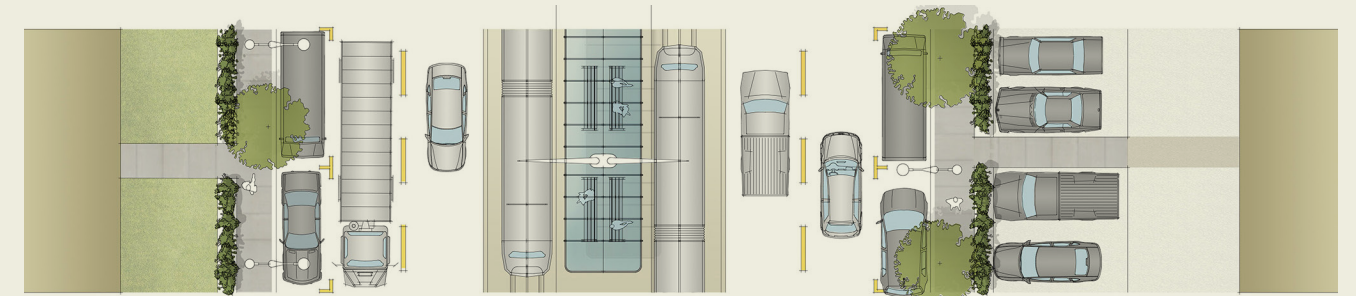
Balanced Movement Priorities

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
7ft wide Class II buffered bike lane in each direction	73,920	ft2	6	450,000
Two 4m street trees planted in tree-pits at 50ft spacing	200	EA	950	190,080
Reallocate travel lane to an on-street parallel parking	1	Mile	20,000	20,000
Midblock crossing every 1/4 mile	4	EA	1,250	5,000
Total				665,080



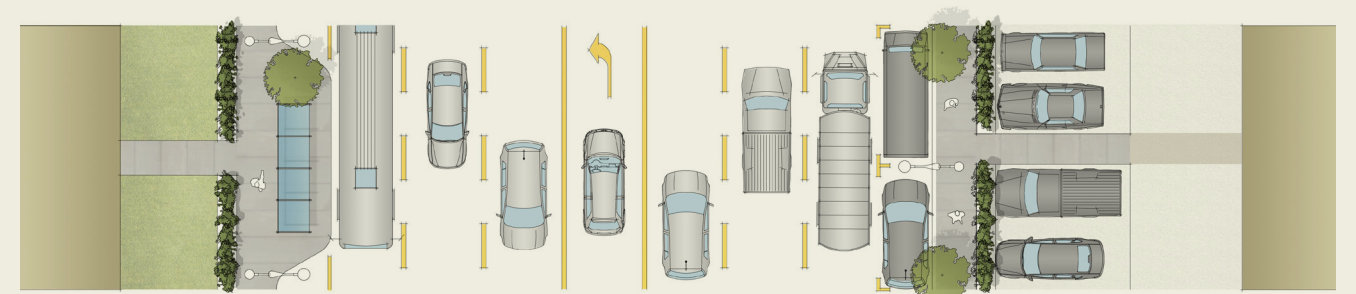
Pedestrian And Bicycle Priority

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
20ft wide sidewalk on both sides of the corridor	211,200	ft2	10	2,112,000
7ft wide Class IV separated on-street bikeway in each direction	73,920	ft2	8	581,000
Raised curb on the inside of the bikeway to create physical barrier	10,560	LF	10	106,000
Feature Pedestrian Lights at 50ft spacing	106	EA	1,450	153,120
Two benches at 1/4 mile spacings	8	EA	700	5,600
Total				2,957,720



Auto Priority with On Street Parking And Transit

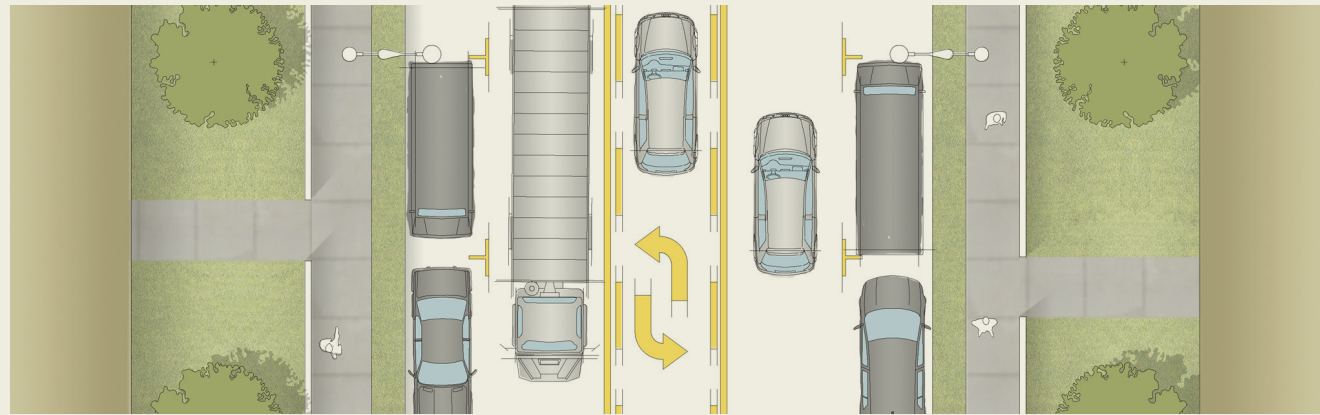
Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Central reservation LRT in each direction	1	Mile	55,000,000	55,000,000
LRT Stop spaced every 2 miles	0.5	EA	25,000	12,500
Signalised crosswalk every mile	1	EA	4,400	4,400
Total				55,016,900



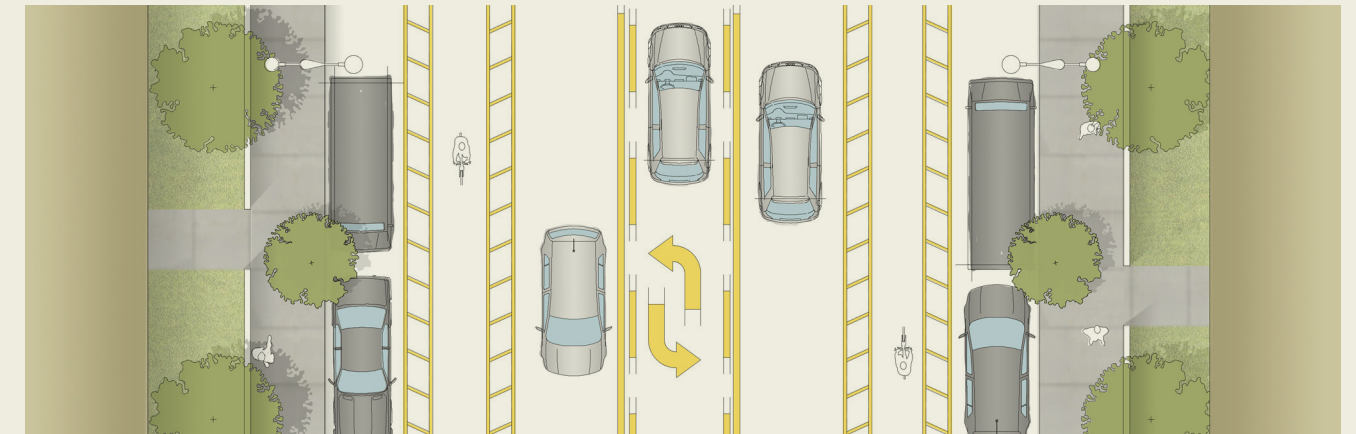
Priority For Dedicated Transit Row with On Street Parking

Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Curb Relignment for a bulb out	1	EA	15,000	15,000
Bus Shelter	1	EA	23,000	23,000
Dedicated ROW signage	1	EA	1,280	1,280
Total				39,280

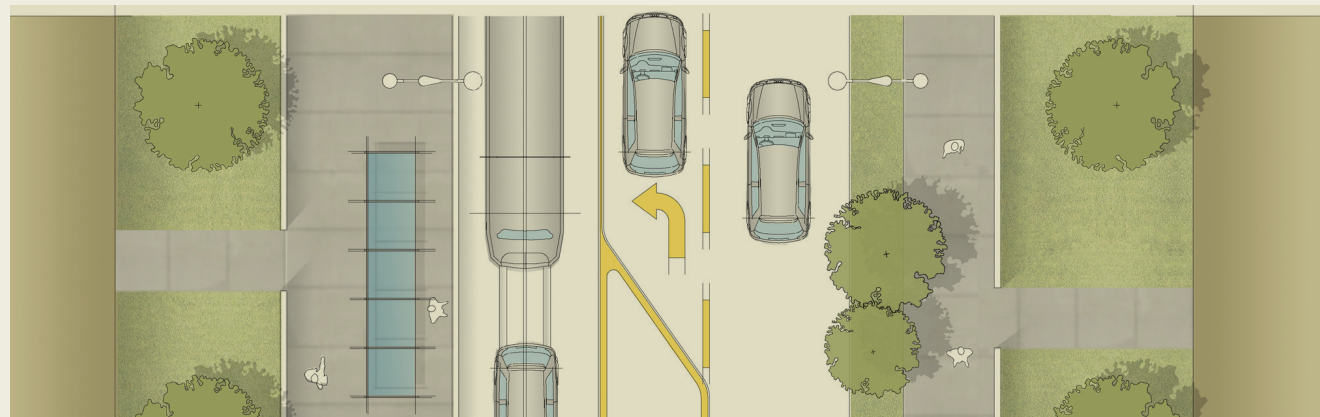
BP Industrial / Business Park



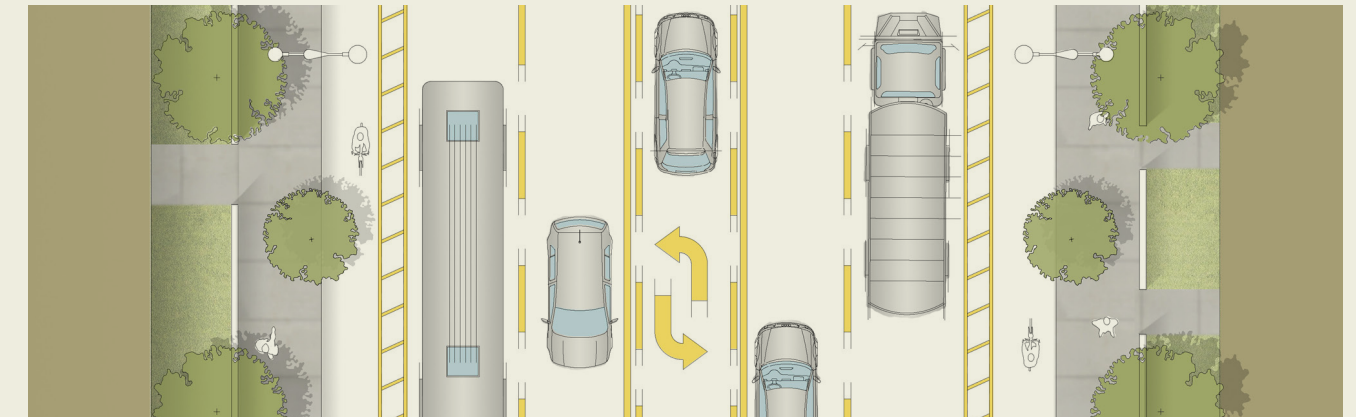
Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
7ft wide concrete sidewalk on both sides of the corridor	73,920	ft2	10	740,000
3 ft grassed buffer	31,690	LF	20	633,750
Reallocate central median to a two-way left turn lane	1	EA	600,000	600,000
Streetlight with pedestrian lighting provisions at 100ft spacing	53	EA	1,450	76,560
Re-classify on-street parking designations	1	Mile	20,000	20,000
Total				2,070,310



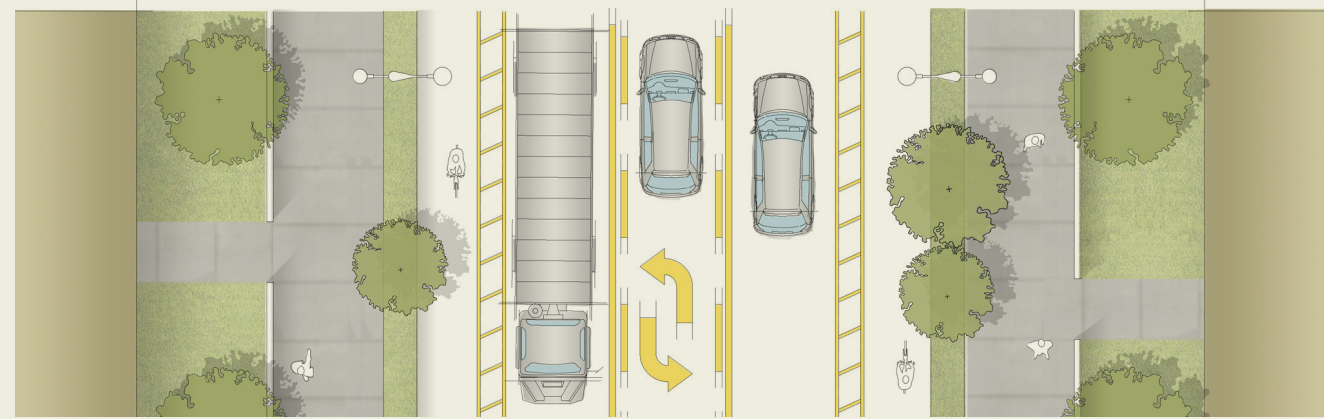
Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Narrow existing travel lanes	47,520	ft2	4	190,080
7ft wide Class II double buffered bike lane in each direction	73,920	ft2	6	450,000
10ft wide concrete sidewalk	52,800	ft2	10	528,000
Total				1,168,080



Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Fixed route LRT in one direction	1	Mile	27,500,000	27,500,000
LRT Stop every 1/4 mile	4	EA	25,000	100,000
20ft wide sidewalk on one side	105,600	ft2	10	1,056,000
Total				28,656,000

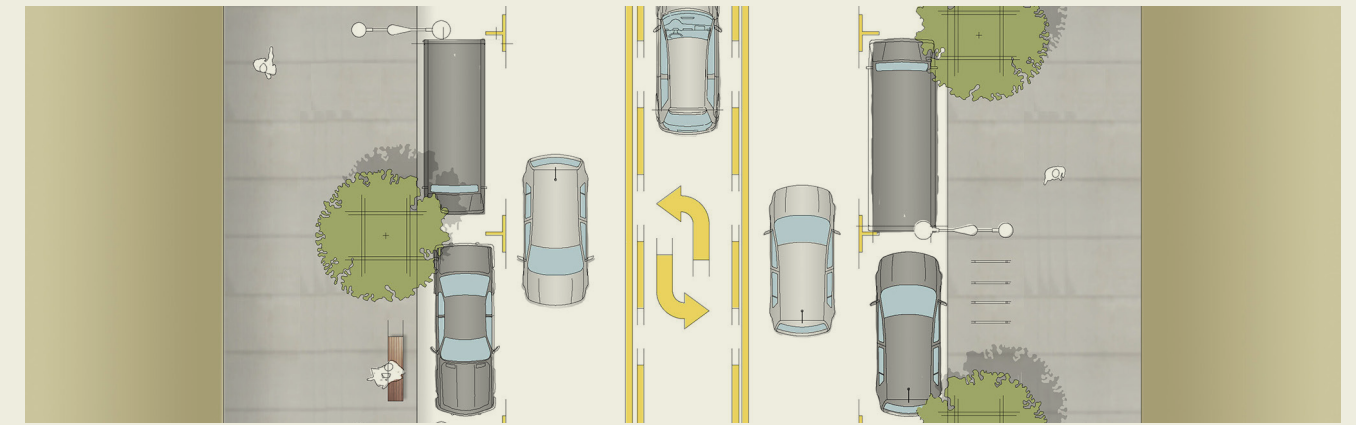


Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Curb realignment to accommodate bike lane	10,560	LF	35	370,000
7ft wide Class II buffered bike lane in each direction	73,920	ft2	6	450,000
Mill and re-surface 12ft travel lane	63,360	LF	3	200,000
Total				1,020,000

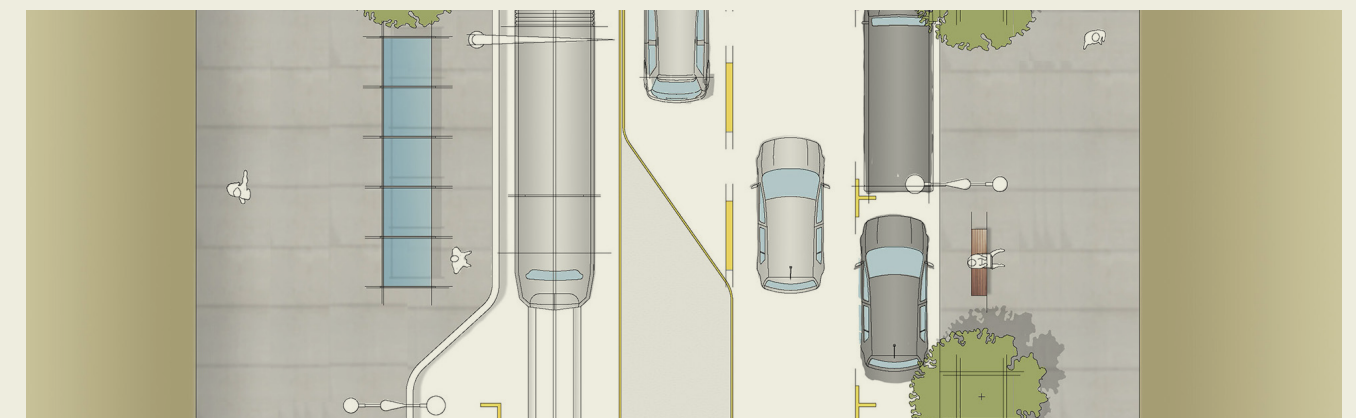


Assumptions	Quantity	Units	Cost (\$USD)	Cost per mile
Narrow existing Travel Lanes	47,520	ft2	4	190,080
Convert central median to a two-way left turn lane	1	EA	400,000	400,000
Total				590,080

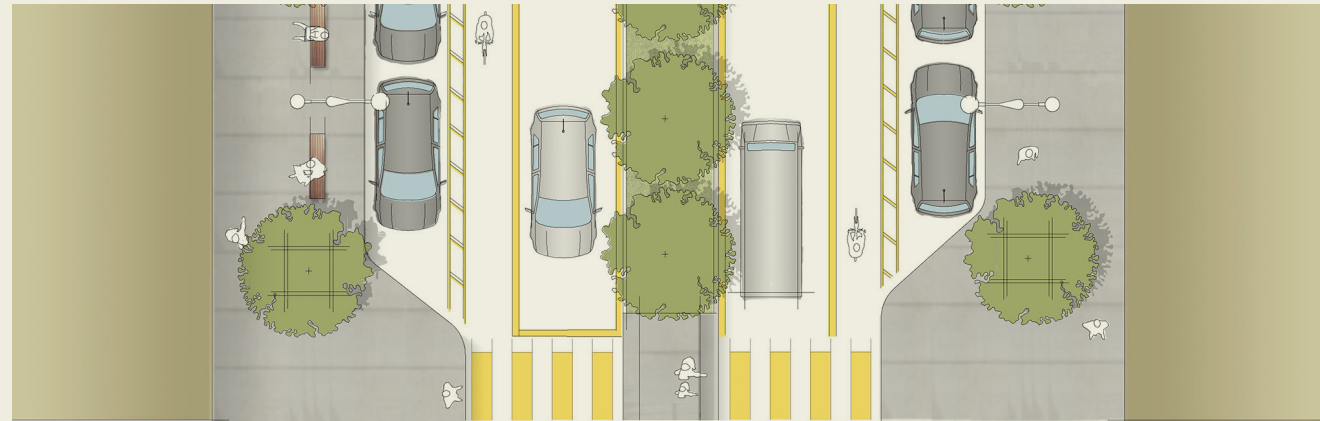
NM Neighborhood Main Street



Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/4 mile
20ft wide paved sidewalk on either side	52,800	ft2	10	528,000
Raised Table Intersection every 1/4mile	1	EA	4,500	4,500
Class III Bikeway (Sharrow)	1,320	LF	2	1,500
15 Cycle Stands every 1/4 mile	15	EA	200	3,000
Benches at 500ft spacings	3	EA	600	1,800
Pedestrian lights at 50ft spacings	26	EA	1,450	38,280
6m Street Trees in tree pits at 50ft spacings	26	EA	1,600	42,240
Total Cost per 1/4 Mile				619,320
Total Cost per Mile				2,477,280



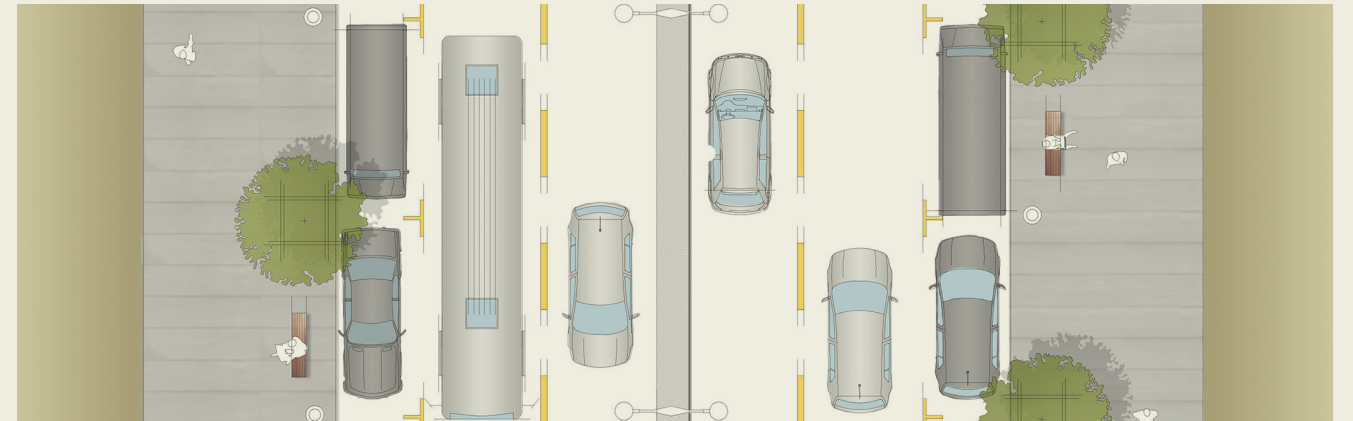
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/4 mile
Fixed route LRT in one direction	0.25	Mile	27,500,000	6,875,000
LRT Stop every 1/4 mile	1	EA	25,000	25,000
Bulb out for street furniture between parking bays every 100ft	13	EA	3,750	49,500
Marked midblock crosswalk at 350ft spacings	4	EA	1,175	4,700
Wayfinding totem every 1/4 mile	1	EA	3,500	3,500
Total Cost per 1/4 Mile				6,957,700
Total Cost per Mile				27,830,800



Pedestrian And Bicycle Priority

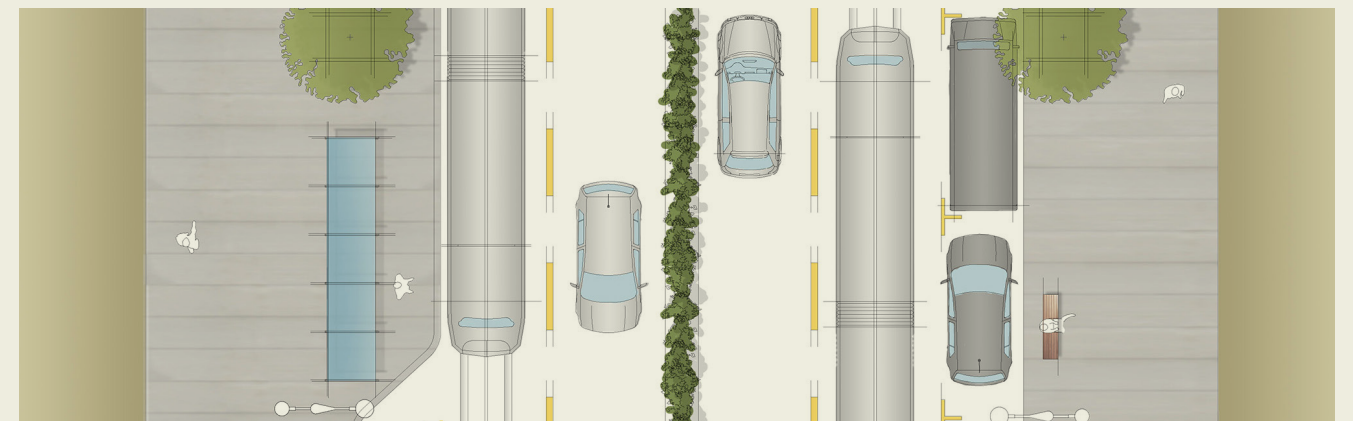
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/4 mile
12 ft wide block paved sidewalk on either side	31,680	ft2	10	316,800
8ft wide planted central median	10,563	ft2	20	211,250
7ft wide Class II buffered bike lane in each direction	18,750	ft2	6	112,500
Bulb out and raised crossings at 350ft spacings	4	EA	7,125	28,500
Total Cost per 1/4 Mile				669,050
Total Cost per Mile				2,676,200

DS Downtown Street



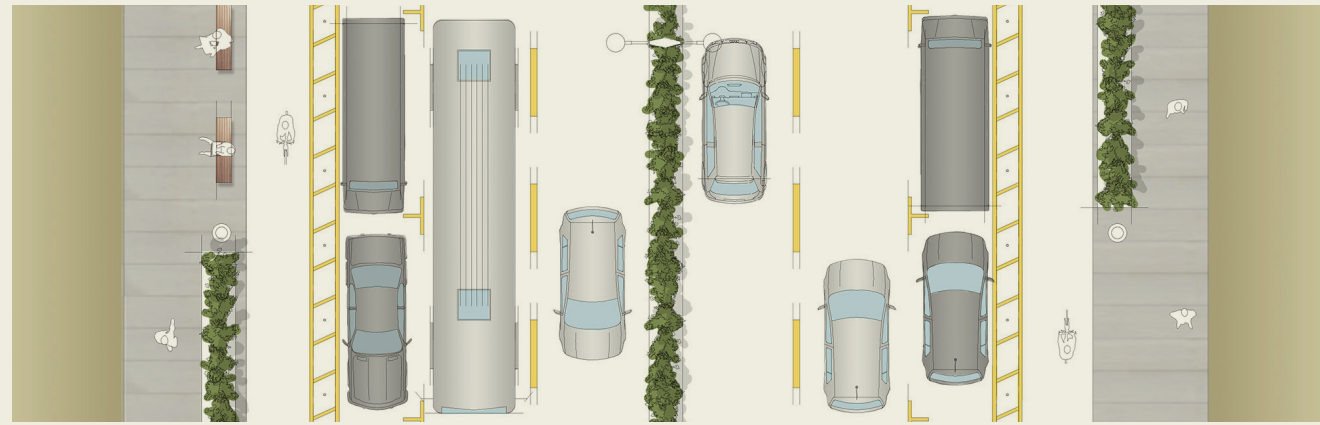
Auto Priority

Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/4 mile
3ft wide raised central median	3,960	ft2	20	79,250
20ft wide paved sidewalk on either side	52,800	ft2	10	528,000
Benches at 300ft spacings	4	EA	600	2,400
Pedestrian lights at 50ft spacings	26	EA	1,450	38,280
Streetlights at 150ft spacings	8	EA	5,225	41,800
Reclassification of parking bay designation	1	EA	5,000	5,000
Parklet every 1/2 mile	0.5	EA	20,000	10,000
Total Cost per 1/4 Mile				704,730
Total Cost per Mile				2,818,920



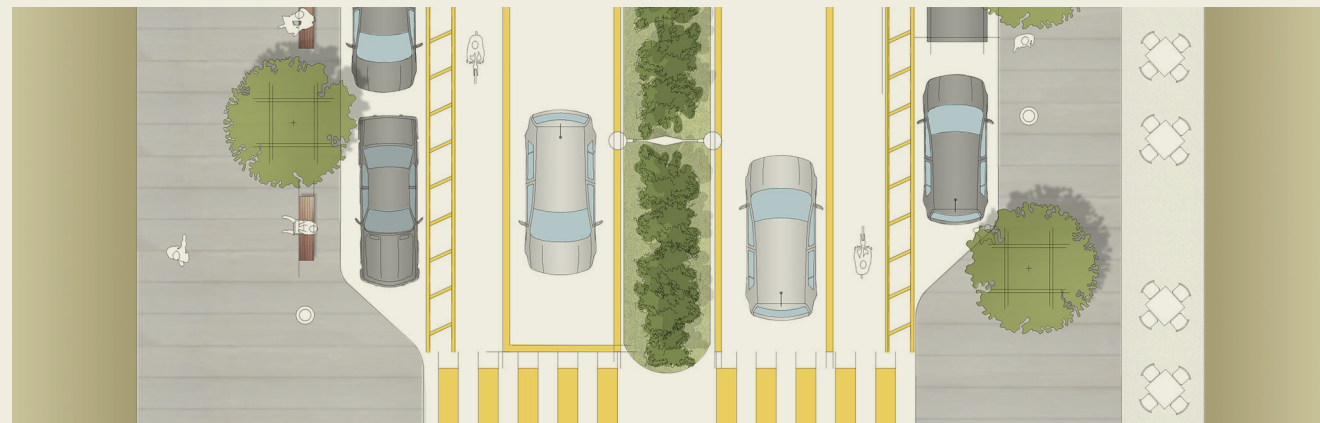
Transit Priority

Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/4 mile
Side-running Fixed guideway LRT in each direction	0.25	Mile	55,000,000	13,750,000
LRT stop every 1/4 mile	1	EA	25,000	25,000
3ft wide planted median	3,960	ft2	20	79,200
Two 6m street trees in tree pits at 100ft spacing	26	EA	1,600	42,240
Total Cost per 1/4 Mile				13,896,440
Total Cost per Mile				55,585,760



Pedestrian And Bicycle Priority

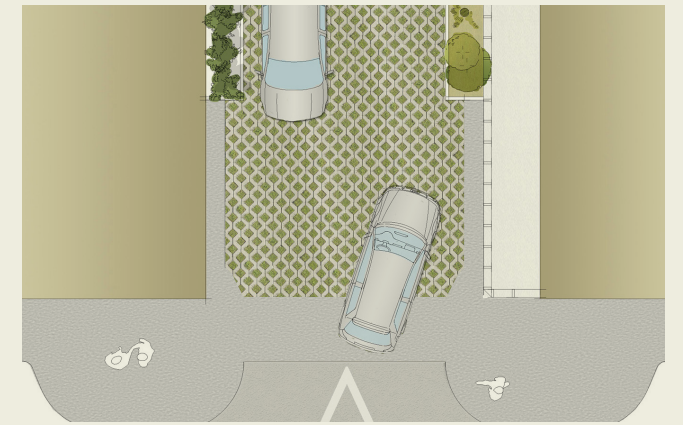
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/4 mile
12ft wide paved sidewalk	31,680	ft2	10	316,800
50 ft Raised feature planters at 350ft spacings	4	EA	1,500	6,000
Tighten corner radii at intersections every 1/4mile	1	EA	25,000	25,000
7ft wide Class II buffered bike lane in each direction	18,750	ft2	6	112,500
Benches at 300ft spacings	4	EA	600	2,400
Total Cost per 1/4 Mile				462,700
Total Cost per Mile				1,850,800



Road Diet

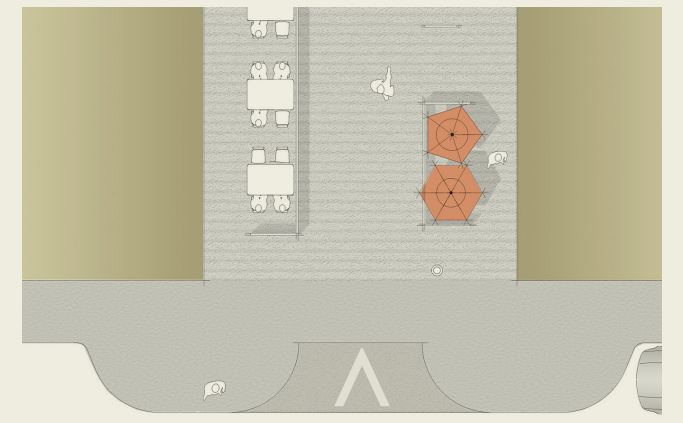
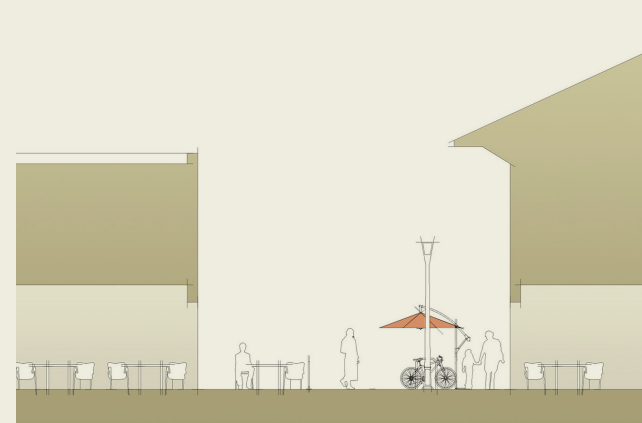
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/4 mile
7ft wide Class II buffered bike lane in each direction	18,750	ft2	6	112,500
8ft wide planted median	10,563	ft2	20	211,250
Marked crosswalks and signage at 700ft spacings	2	EA	1,000	2,000
Total Cost per 1/4 Mile				325,750
Total Cost per Mile				1,303,000

AL Alley



Auto Priority

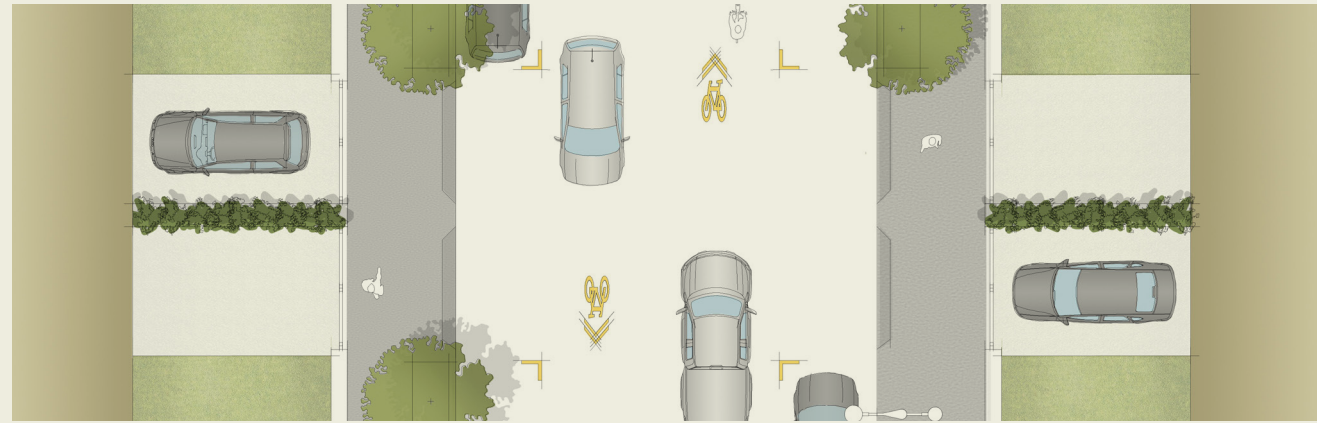
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/8 mile
25ft wide permeable paving	16,500	ft2	15	247,500
6ft2 raingarden at 50ft spacings				XXX
New vehicle access entrance treatment	1	EA	5,000	5,000
Total Cost per 1/8 Mile				252,500
Total Cost per Mile				2,020,000



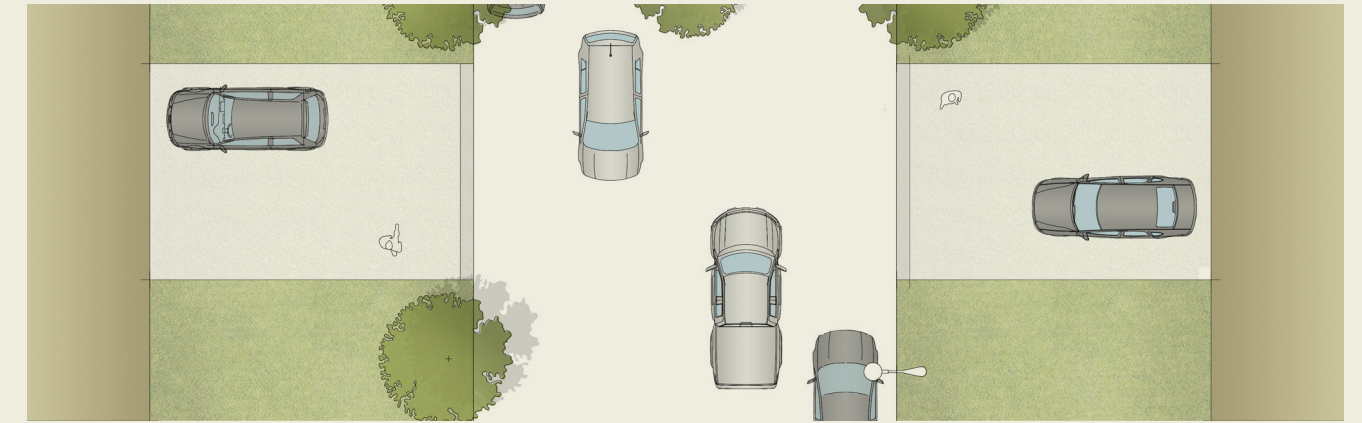
Pedestrian Priority

Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/8 mile
25ft wide concrete paving	16,500	ft2	4	66,000
Four retractable bollards every 1/8 mile	4	EA	600	2,400
Pedestrian lights at 50ft spacings	13	EA	1,450	19,000
Total Cost per 1/8 Mile				87,400
Total Cost per Mile				699,200

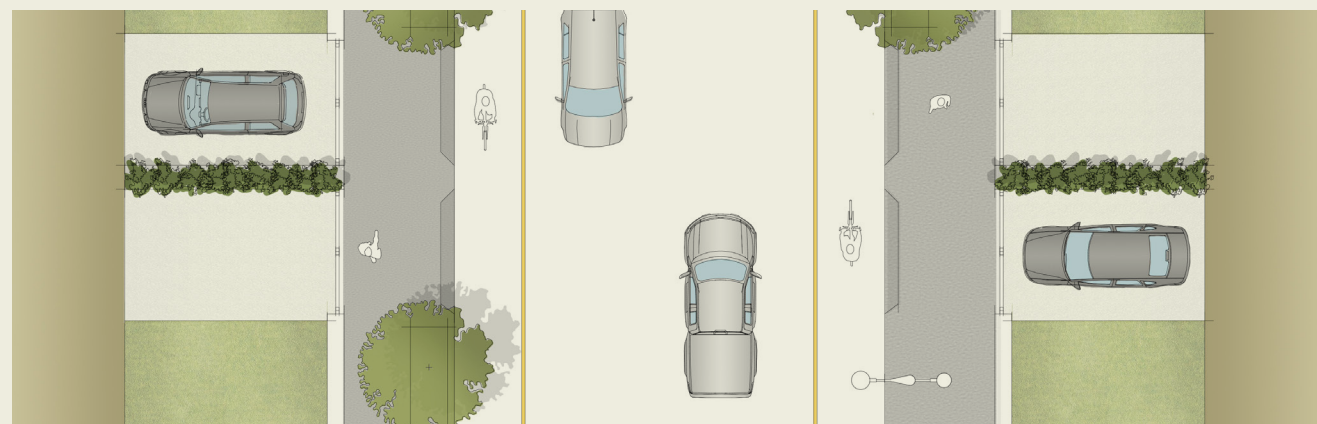
RS Residential Street



Balanced Access Priority				
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/8 mile
7ft wide concrete sidewalk	9,250	ft2	10	92,500
4ft wide grassed berm	2,640	ft2	20	52,800
Class III Bikeway (Sharrow)	500	LF	2	750
6m Street tree in verge at 100ft spacings	6	EA	1,430	8,580
Streetlights at 100ft spacings	6	EA	1,500	9,570
Total Cost per 1/8 Mile				164,200
Total Cost per Mile				1,313,600



Low Speed Access Priority				
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/8 mile
40 ft wide roadway mill and re-surface	26,400	ft2	3	83,333
6m tree planted in central island spaced every 500ft	1	EA	1,500	1,500
20ft drop curb for driveways at 50ft spacing	250	LF	20	5,000
Total Cost per 1/8 Mile				89,833
Total Cost per Mile				718,664



Bicycle Priority				
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/8 mile
Class II Bikeway	1,000	LF	5	5,422
Traffic Circle every 1/8 mile	1	EA	4,500	4,500
Total Cost per 1/8 Mile				9,922
Total Cost per Mile				79,373

SS Shared Street



Pedestrian Priority				
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/8 mile
100ft wide high quality block paving	66,000	ft2	8	528,000
Raised feature planters spaced every 15ft	44	EA	1,000	44,000
Two 6m Street Trees in tree pits at 50ft spacings	13	EA	1,600	20,800
Parklet space every 200ft	3	EA	20,000	60,000
Two benches at 50 ft spacing	26	EA	600	15,600
Total Cost per 1/8 Mile				124,800
Total Cost per Mile				998,400



Servicing Priority				
Assumptions	Quantity	Units	Cost (\$USD)	Cost per 1/8 mile
100ft wide high quality block paving	66,000	ft2	8	528,000
Bespoke benches every 50ft	13	EA	700	9,100
Raised feature planters spaced every 15ft	44	EA	1,000	44,000
Two 6m Street Trees in tree pits at 50ft spacings	13	EA	1,600	20,800
Flush curbs	1,320	LF	13	16,500
Pedestrian lights at 50ft spacings	13	EA	1,450	19,000
Total Cost per 1/8 Mile				637,400
Total Cost per Mile				5,099,200

Appendix C: Typical cost estimates for new build Complete Streets

Provides a typical cost estimate per mile for a new build for each of the street typologies defined by the OCCSI Design Handbook. This will be a useful guide for jurisdictions planning new street types that meet the Complete Street Criteria. Jurisdictions could then use the variations of street type included in Appendix A, or the design components from Appendix C to develop the base case.

MC

Movement Corridor

6 Lane Auto priority corridor with Class IV Bikeways, 10' sidewalks, at-grade intersections at 1/4 mile, no parking, raised median, roadway lighting, transit stops, landscaping (10' median, 8' each planter strip)

Project Length (LF)	5,280
New Pavement (SF)	432,960
Sidewalk (SF)	105,600
Curb and Gutter (LF)	10,560
Curb Ramps (EA)	32
Pavement Delineation	42,240
Median Curb (LF)	10,560
Landscaping (SF)	137,280

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	25,570	CY	\$25	\$640,000
2	Asphalt Concrete	16,040	TON	\$100	\$1,604,000
3	Aggregate Base	18,480	CY	\$70	\$1,294,000
4	Concrete Sidewalk	105,600	SF	\$10	\$1,056,000
5	Concrete Curb and Gutter	10,560	LF	\$35	\$370,000
6	Median Curb	10,560	LF	\$20	\$212,000
7	Landscaping	137,280	SF	\$20	\$2,746,000
8	Curb Ramps	32	EA	\$2,500	\$80,000
9	Transit Stop with Shelter	8	EA	\$25,000	\$200,000
10	Cycle Track Buffer	10,560	LF	\$55	\$581,000
11	Pavement Delineation	42,240	LF	\$4	\$169,000
12	Storm Drain	1	LS	\$660,000	\$660,000
13	Street Lighting	42	EA	\$2,500	\$106,000
14	Traffic Signals	4	EA	\$400,000	\$1,600,000
15	Equestrian Trail (10' DG Path)	5,280	LF	\$25	\$132,000
16	BRT Lane Enhancements	1	MI	\$2,000,000	\$2,000,000
17	Soundwall (10' tall)	10,560	LF	\$450	\$4,752,000
Estimated Construction Cost Subtotal					\$18,202,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$911,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$1,821,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$3,641,000
Estimated Construction Cost Total					\$24,575,000
Design (10% of Estimated Construction Cost Total)					\$2,458,000
Construction Administration (10% of Estimated Construction Cost Total)					\$2,458,000
Engineering and Administration Total					\$4,916,000
Total Estimated Project Cost					\$29,491,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, BRT & Transit Stop, Equestrian Trail)					\$6,821,000

ML

Mixed Land Use Corridor

4 Lane Mixed use corridor with Class II Buffered Bikeways, enhanced 10' sidewalks, at-grade intersections at 1/4 mile, no parking, raised median, ped scale lighting, transit stops, landscaping (10' median, 8' each planter strip)

Project Length (LF)	5,280
New Pavement (SF)	316,800
Sidewalk (SF)	105,600
Curb and Gutter (LF)	10,560
Curb Ramps (EA)	32
Pavement Delineation	31,680
Median Curb (LF)	10,560
Landscaping (SF)	137,280

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	19,850	CY	\$25	\$497,000
2	Asphalt Concrete	11,740	TON	\$100	\$1,174,000
3	Aggregate Base	14,180	CY	\$70	\$993,000
4	Decorative Concrete Sidewalk	105,600	SF	\$18	\$1,901,000
5	Concrete Curb and Gutter	10,560	LF	\$35	\$370,000
6	Median Curb	10,560	LF	\$20	\$212,000
7	Landscaping	137,280	SF	\$20	\$2,746,000
8	Curb Ramps	32	EA	\$2,500	\$80,000
9	Transit Stop with Shelter	8	EA	\$25,000	\$200,000
10	Buffered Bike Lane	10,560	LF	\$15	\$159,000
11	Pavement Delineation	31,680	LF	\$4	\$127,000
12	Storm Drain	1	LS	\$660,000	\$660,000
13	Street Lighting	106	EA	\$2,000	\$212,000
14	Traffic Signals	4	EA	\$400,000	\$1,600,000
15	Midblock crossing (RRFB)	2	EA	\$50,000	\$100,000
Estimated Construction Cost Subtotal					\$11,031,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$552,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$1,104,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$2,207,000
Estimated Construction Cost Total					\$14,894,000
Design (10% of Estimated Construction Cost Total)					\$1,490,000
Construction Administration (10% of Estimated Construction Cost Total)					\$1,490,000
Engineering and Administration Total					\$2,980,000
Total Estimated Project Cost					\$17,874,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, Transit Stop)					\$5,106,000

BP

Industrial Business Park

4 Lane Auto Focused corridor with Class II Bikeways, 6' standard sidewalks, at-grade intersections at 1/4 mile, no parking, raised median, ped scale lighting, transit stops, landscaping (8' median, 6' each planter strip)

Project Length (LF)	5,280
New Pavement (SF)	295,680
Sidewalk (SF)	63,360
Curb and Gutter (LF)	10,560
Curb Ramps (EA)	32
Pavement Delineation	31,680
Median Curb (LF)	10,560
Landscaping (SF)	105,600

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	17,500	CY	\$25	\$438,000
2	Asphalt Concrete	10,960	TON	\$100	\$1,096,000
3	Aggregate Base	12,620	CY	\$70	\$884,000
4	Concrete Sidewalk	63,360	SF	\$10	\$634,000
5	Concrete Curb and Gutter	10,560	LF	\$35	\$370,000
6	Median Curb	10,560	LF	\$20	\$212,000
7	Landscaping	105,600	SF	\$20	\$2,112,000
8	Curb Ramps	32	EA	\$2,500	\$80,000
9	Transit Stop with Shelter	8	EA	\$25,000	\$200,000
10	Bike Lane	10,560	LF	\$4	\$43,000
11	Pavement Delineation	31,680	LF	\$4	\$127,000
12	Storm Drain	1	LS	\$0	\$0
13	Street Lighting	53	EA	\$2,000	\$106,000
14	Traffic Signals	4	EA	\$400,000	\$1,600,000
15	Wayfinding Finger Post	4	EA	\$1,800	\$8,000
16	Midblock Crossings	2	EA	\$50,000	\$100,000
Estimated Construction Cost Subtotal					\$8,010,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$401,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$801,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$1,602,000
Estimated Construction Cost Total					\$10,814,000
Design (10% of Estimated Construction Cost Total)					\$1,082,000
Construction Administration (10% of Estimated Construction Cost Total)					\$1,082,000
Engineering and Administration Total					\$2,164,000
Total Estimated Project Cost					\$12,978,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, Transit Stop)					\$3,097,000

NM

Neighborhood Main Street

2 Lane neighborhood retail corridor with Class II Bikeways, 15' standard sidewalks, stop controlled intersections at 1/8 mile, no parking, no median, ped scale lighting, limited transit stops, landscaping (street trees)

Project Length (LF)	5,280
New Pavement (SF)	179,520
Sidewalk (SF)	158,400
Curb and Gutter (LF)	10,560
Curb Ramps (EA)	64
Pavement Delineation	15,840
Median Curb (LF)	0
Landscaping (SF)	141

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	14,710	CY	\$25	\$368,000
2	Asphalt Concrete	6,650	TON	\$100	\$665,000
3	Aggregate Base	10,080	CY	\$70	\$706,000
4	Concrete Block Pavers	158,400	SF	\$10	\$1,584,000
5	Concrete Curb and Gutter	10,560	LF	\$35	\$370,000
6	Median Curb	0	LF	\$20	\$0
7	Street Trees	141	EA	\$4,000	\$564,000
8	Curb Ramps	64	EA	\$2,500	\$160,000
9	Transit Stop with Shelter	4	EA	\$25,000	\$100,000
10	Bike Lane	10,560	LF	\$4	\$43,000
11	Pavement Delineation	0	LF	\$4	\$0
12	Storm Drain	1	LS	\$0	\$0
13	Street Lighting	0	EA	\$2,000	\$0
14	Traffic Signals	0	EA	\$400,000	\$0
15	Raised Intersection	8	EA	\$3,500	\$28,000
16	Bicycle Rack	32	EA	\$200	\$7,000
17	Benches	16	EA	\$750	\$12,000
18	Public Art	1	LS	\$100,000	\$100,000
Estimated Construction Cost Subtotal					\$4,707,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$236,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$471,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$942,000
Estimated Construction Cost Total					\$6,356,000
Design (10% of Estimated Construction Cost Total)					\$636,000
Construction Administration (10% of Estimated Construction Cost Total)					\$636,000
Engineering and Administration Total					\$1,272,000
Total Estimated Project Cost					\$7,628,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, Transit Stop)					\$2,438,000

DS

Downtown Street

4 Lane urban corridor with Class IV Bikeways, 15' sidewalks with furniture zones, signal controlled intersections at 1/8 mile, on-street parallel parking, no median, ped scale lighting, transit stops, landscaping (street trees)

Project Length (LF)	5,280
New Pavement (SF)	380,160
Sidewalk (SF)	158,400
Curb and Gutter (LF)	10,560
Curb Ramps (EA)	64
Pavement Delineation	31,680
Median Curb (LF)	10,560
Landscaping (SF)	141

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	24,600	CY	\$25	\$615,000
2	Asphalt Concrete	14,080	TON	\$100	\$1,408,000
3	Aggregate Base	17,510	CY	\$70	\$1,226,000
4	Decorative Concrete Sidewalk	158,400	SF	\$10	\$1,584,000
5	Concrete Curb and Gutter	10,560	LF	\$35	\$370,000
6	Median Curb	10,560	LF	\$20	\$212,000
7	Street Trees	141	EA	\$4,000	\$564,000
8	Curb Ramps	64	EA	\$2,500	\$160,000
9	Transit Stop with Shelter	16	EA	\$25,000	\$400,000
10	Cycle Track Buffer	10,560	LF	\$55	\$581,000
11	Pavement Delineation	31,680	LF	\$4	\$127,000
12	Storm Drain	1	LS	\$660,000	\$660,000
13	Street Lighting	106	EA	\$2,000	\$212,000
14	Traffic Signals	8	EA	\$400,000	\$3,200,000
15	Side running Fixed guideway LRT	1	Mi	\$50,000,000	\$50,000,000
16	Raised Central Median Paving	42,240	SF	\$10	\$423,000
17	Benches	16	EA	\$750	\$12,000
18	Wayfinding totem	4	EA	\$5,000	\$20,000
Estimated Construction Cost Subtotal					\$61,774,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$3,089,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$6,178,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$12,355,000
Estimated Construction Cost Total					\$83,396,000
Design (10% of Estimated Construction Cost Total)					\$8,340,000
Construction Administration (10% of Estimated Construction Cost Total)					\$8,340,000
Engineering and Administration Total					\$16,680,000
Total Estimated Project Cost					\$100,076,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, Transit Stop)					\$3,584,000

AL

Alley

2 Lane alley with Class III Bikeways, no sidewalks, uncontrolled intersections at 1/8 mile, no parking, no median, ped scale lighting, no transit stops, no landscaping

Project Length (LF)	5,280
New Pavement (SF)	126,720
Sidewalk (SF)	0
Curb and Gutter (LF)	0
Curb Ramps (EA)	32
Pavement Delineation	5,280
Median Curb (LF)	0
Landscaping (SF)	70

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	6,250	CY	\$25	\$157,000
2	Permeable Paving	4,700	SF	\$25	\$118,000
3	Aggregate Base	4,700	CY	\$70	\$329,000
4	Concrete Sidewalk	0	SF	\$10	\$0
5	Concrete Curb and Gutter	0	LF	\$35	\$0
6	Median Curb	0	LF	\$20	\$0
7	Street Trees	70	EA	\$4,000	\$282,000
8	Curb Ramps	32	EA	\$2,500	\$80,000
9	Transit Stop with Shelter	0	EA	\$25,000	\$0
10	Class III Markings	10,560	LF	\$2	\$22,000
11	Pavement Delineation	0	LF	\$4	\$0
12	Storm Drain	1	LS	\$660,000	\$660,000
13	Street Lighting	53	EA	\$2,000	\$106,000
14	Traffic Signals	0	EA	\$400,000	\$0
Estimated Construction Cost Subtotal					\$1,754,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$88,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$176,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$351,000
Estimated Construction Cost Total					\$2,369,000
Design (10% of Estimated Construction Cost Total)					\$237,000
Construction Administration (10% of Estimated Construction Cost Total)					\$237,000
Engineering and Administration Total					\$474,000
Total Estimated Project Cost					\$2,843,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, Transit Stop)					\$304,000

RS

Residential Street

2 Lane neighborhood corridor with Class III Bikeways, 6' standard sidewalks, stop controlled intersections at 1/8 mile, parallel parking, no median, ped scale lighting, limited transit stops, landscaping (6' planter strips)

Project Length (LF)	5,280
New Pavement (SF)	200,640
Sidewalk (SF)	63,360
Curb and Gutter (LF)	10,560
Curb Ramps (EA)	64
Pavement Delineation	15,840
Median Curb (LF)	0
Landscaping (SF)	63,360

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	12,820	CY	\$25	\$321,000
2	Asphalt Concrete	7,440	TON	\$100	\$744,000
3	Aggregate Base	9,100	CY	\$70	\$637,000
4	Concrete Sidewalk	63,360	SF	\$10	\$634,000
5	Concrete Curb and Gutter	10,560	LF	\$35	\$370,000
6	Median Curb	0	LF	\$20	\$0
7	Landscaping	63,360	SF	\$20	\$1,268,000
8	Curb Ramps	64	EA	\$2,500	\$160,000
9	Transit Stop with Shelter	4	EA	\$25,000	\$100,000
10	Bike Lane	10,560	LF	\$4	\$43,000
11	Pavement Delineation	15,840	LF	\$4	\$64,000
12	Storm Drain	1	LS	\$660,000	\$660,000
13	Street Lighting	106	EA	\$2,000	\$212,000
14	Traffic Signals	0	EA	\$400,000	\$0
15	Speed Hump	29	EA	\$2,200	\$64,000
16	Traffic Circle	1	EA	\$6,000	\$6,000
Estimated Construction Cost Subtotal					\$5,213,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$261,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$522,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$1,043,000
Estimated Construction Cost Total					\$7,039,000
Design (10% of Estimated Construction Cost Total)					\$704,000
Construction Administration (10% of Estimated Construction Cost Total)					\$704,000
Engineering and Administration Total					\$1,408,000
Total Estimated Project Cost					\$8,447,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, Transit Stop)					\$2,327,000

SS

Shared Street

2 lane shared urban corridor with no Bikeways, 10' sidewalks with furniture zones, stop controlled intersections at 1/8 mile, on-street parallel parking, no median, ped scale lighting, no transit stops, landscaping (street trees)

Project Length (LF)	5,280
New Pavement (SF)	200,640
Sidewalk (SF)	105,600
Curb and Gutter (LF)	0
Curb Ramps (EA)	0
Pavement Delineation	10,560
Median Curb (LF)	0
Landscaping (SF)	141

ITEM	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	Roadway Excavation	13,150	CY	\$25	\$329,000
2	Concrete Block Paving	7,440	SF	\$25	\$186,000
3	Aggregate Base	9,390	CY	\$70	\$658,000
4	Concrete Block Paving	105,600	SF	\$25	\$2,640,000
5	Concrete Curb and Gutter	0	LF	\$35	\$0
6	Median Curb	0	LF	\$20	\$0
7	Street Trees	141	EA	\$4,000	\$564,000
8	Curb Ramps	0	EA	\$2,500	\$0
9	Transit Stop with Shelter	0	EA	\$25,000	\$0
10	Bike Lane	0	LF	\$55	\$0
11	Pavement Delineation	10,560	LF	\$4	\$43,000
12	Storm Drain	1	LS	\$660,000	\$660,000
13	Street Lighting	106	EA	\$2,000	\$212,000
14	Traffic Signals	0	EA	\$400,000	\$0
15	Raised Planters	16	EA	\$1,000	\$16,000
16	Benches	16	EA	\$750	\$12,000
17	Trash Can	16	EA	\$850	\$14,000
18	Bicycle Racks	32	EA	\$200	\$7,000
Estimated Construction Cost Subtotal					\$5,341,000
Miscellaneous Items (5% of Estimated Construction Cost Subtotal)					\$268,000
Mobilization (10% of Estimated Construction Cost Subtotal)					\$535,000
Contingencies (20% of Estimated Construction Cost Subtotal)					\$1,069,000
Estimated Construction Cost Total					\$7,213,000
Design (10% of Estimated Construction Cost Total)					\$722,000
Construction Administration (10% of Estimated Construction Cost Total)					\$722,000
Engineering and Administration Total					\$1,444,000
Total Estimated Project Cost					\$8,657,000
Complete Street Elements (Sidewalk, Landscaping, Bikeway, Lighting, Transit Stop)					\$3,465,000

Appendix D: Table of typical costs by item

Is a table of typical costs that can be used as a tool to select individual design components of a street. This can be used by jurisdictions to build up a cost estimate for a Complete Streets initiative that may cover a designated area where a per-mile cost is not applicable. For example a Safe Routes to School project may involve the installation of a certain number of new crossing facilities across a region.

Typical costings

Complete Street Improvement	Cost (\$USD)	
Curb Ramp		
Concrete pavement	15-25	ft ²
Detectable warning strip	40-45	ft ²
Drop curb	20-25	LF
Bicycle		
Painted buffer strip 3ft wide	26-31	LF
Raised buffer strip 1ft wide	3-8	LF
Bicycle dotted line marking extension	2.50-4	LF
Bicycle lane colored surfacing	4-7	LF
Painted roadmarking line	3-4	LF
Bicycle storage shed	10,000+	each
Bicycle stand	150-250	each
Bicycle two stage turn queue box	2,600-2,900	each
Bicycle locker	950-1,100	each
Bus Stop		
Bench	600-700	each
Bin	650-800	each
Shelter	23,000-26,500	each
Signpost	190-220	each
Lighting		
Feature pedestrian light	1,450-1,650	each
New feature streetlights (Neighborhood Main Street)	16,000	each
New streetlights (Industrial Business Park)	450,000	each
New streetlight	4,750-6,000	each
Retrofit streetlights to include pedestrian scale	300-400	each
Line Marking		
Bicycle buffer strip 3ft wide	26-31	LF
Crosswalk marking high visibility	25-40	LF
Crosswalk marking standard	4-6	ft ²
Crosswalk marking striped	10-15	LF
Line marking	3-4	LF
Line marking at intersection	3-4	LF
Parallel parking space	8-10	each space
Angled parking space	8-10	each space
Bicycle shared lane marking	4-6	LF
Shared lane Signage	145-160	each

Complete Street Improvement	Cost (\$USD)	
Planting		
Freeway landscaped area	100 -120	ft ²
Geotextiles	2.50-4	ft ²
Irrigation	1-2.50	ft ²
Planting	20-25	ft ²
Raised planter	1,000+	each
Root protection	2,500-3,000	each
Soil	3-5	ft ³
Tree 13 ft height	950-1,100	each
Tree 20 ft height	1,300-1,600	each
Placemaking		
Public art	5,000+	each
Open Street / other event traffic management	5,000+	each
Kiosk	10,000+	each
Parklet construction	55,000-70,000	each
Wayfinding totem	3,500-5,000	each
Roadway Conversion		
Bridge widening	170-190	ft ²
Pedestrian and bicycle overbridge	1,100-1,400	LF
Intersection realignment	3,000,000+	each
Lane conversion: 11 ft width	2.6-2.9M	mile
Lane realignment	1,000,000+	mile
HOV lane	2.6-2.8M	mile
LRT	48-55M	mile
Crossing island	4,500+	each
Raised crosswalk	3,800-4,500	each
Raised table	3,800-4,500	each
Raised intersection	11,800-13,750	each
Speed hump	1,900-2,200	each
Traffic circle	4,500-6,000	each
Signage		
Electronic Variable Message Sign	50,000-150,000	each
Transit lane signposts	280-350	each
Mid-block crossing lights/beacons	3,500+	each
Mid-block crossing signage	150+	each
Wayfinding fingerpost	1,600-1,850	each
Wayfinding totem	3,500-5,000	each

Appendix E: Existing funding sources

The following section aims to help you navigate funding sources currently available for aspects of Complete Streets. It is important to note that these funding sources are both cyclical and fluid in their existence. Some sources are committed for several rounds and years, while some are one time or limited time sources. It is important to keep up to date with sources, especially considering the time required to build into the front end when considering applying for a grant. The more time you have to evaluate a grant for your project eligibility, to do the appropriate research and to write the grant, the better. The following appendix is relevant and up to date as of May 2016.