

City of Berkeley

Process for Prioritizing Street and Watershed Improvements

Annual Prioritization Process

Current Process

Berkeley currently maintains a rolling 5-Year Street Rehabilitation Plan for paving and reconstructing City streets. City staff updates the plan on an annual basis. The plan is presented to the Public Works Commission, which reviews and recommends action to City Council to ensure that the 5-year Street Plan is consistent with Berkeley's Street Rehabilitation and Repair Policy, Resolutions No. 55,384-N.S. and 64,733-N.S. The 5-Year Plan is generated with the aid of a computerized StreetSaver® program (developed by the Metropolitan Transportation Commission). StreetSaver® uses the following criteria: a) street pavement condition, b) type of repair required, c) road classification, e.g., arterial, collector, or residential, d) cost effectiveness, and e) budget constraints.

Berkeley's Street Rehabilitation and Repair Policy provide additional criteria for developing the plan, including the following:

- The City shall strive to identify and implement integrated solutions that address the multiple demands on the street infrastructure that are designed for safety, environmentally sustainable and economically efficient over the long run.
- Coordination with other City programs, such as sanitary sewers, storm drains, sidewalks, utility undergrounding districts, city building upgrades, traffic signals and other traffic calming measures, bicycle improvements, park projects, and Street Maintenance Division activities.
- Coordination with utility company work, such as PG&E, EBMUD, AT&T, Comcast, and services for developments.
- Budget distributed accordingly: arterials – 10%, collectors – 50%, residential – 25%, discretionary and demonstration – 15%
- Collector and residential streets with AC Transit bus routes or bicycle routes (from Berkeley Bicycle Plan) given first consideration over those without such routes
- Contiguous blocks rather than one block at a time as much as possible

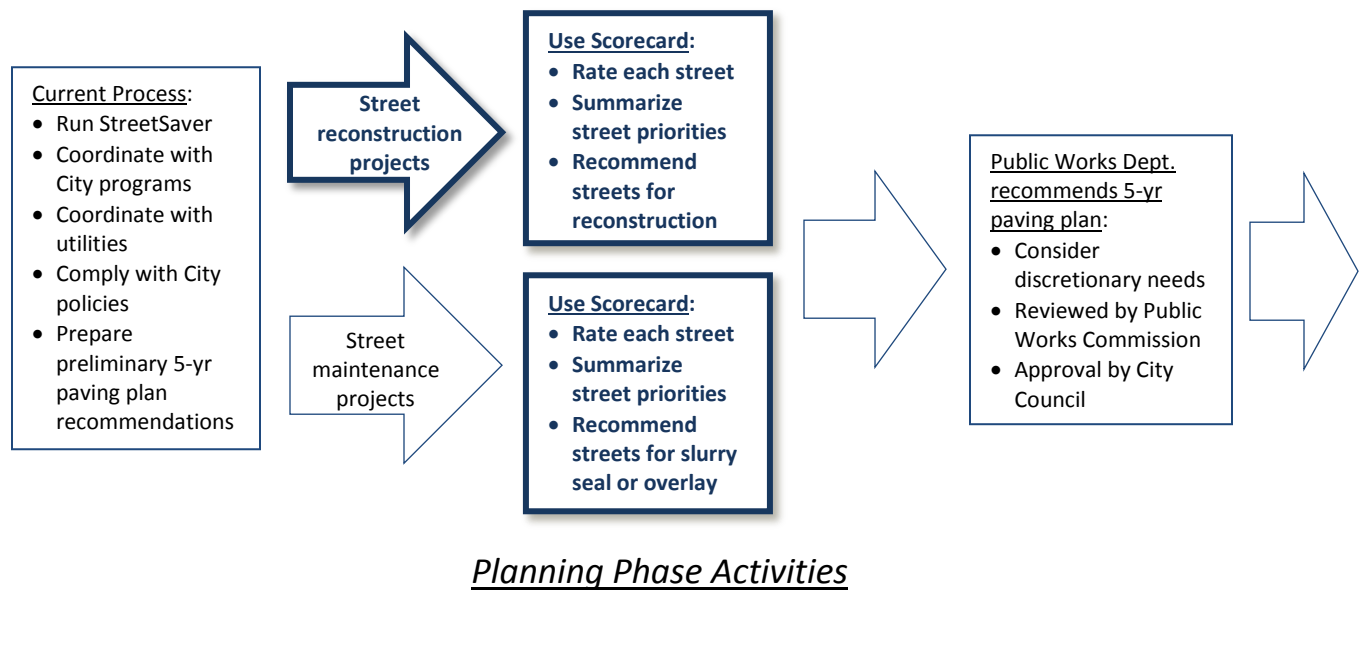
Proposed Measure M Additions to the Process

Measure M funding provides an opportunity to integrate additional criteria into the current prioritization process. The additions were developed using information from the following:

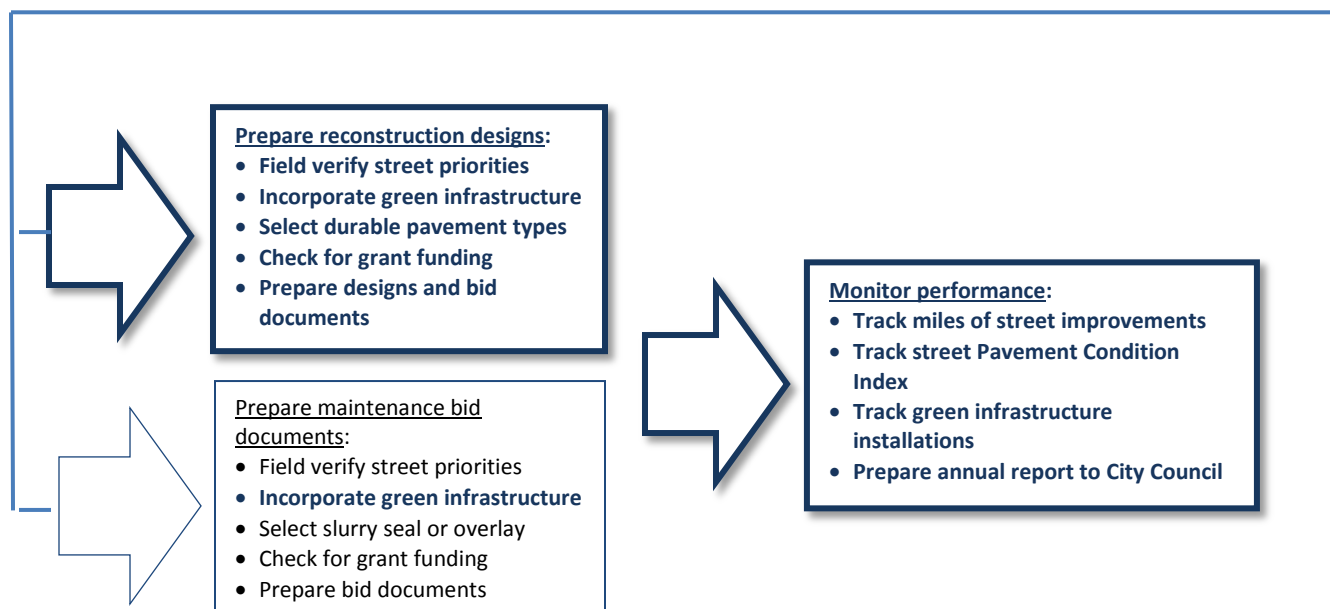
- Public input from the June 8, 2013 community meeting (see Appendix A for more details)
- Use of the Institute for Sustainable Infrastructure's Envision framework (see Appendix B for more details)
- Development of scorecard evaluation criteria by the Public Works Department
- Separation of street maintenance work (slurry seal, overlay) versus street capital work (reconstruction)

Proposed Annual Prioritization Process

The following flow chart shows the current prioritization process with the Measure M added steps show in the **bold** boxes .



Planning Phase Activities



Design and Monitoring Phase Activities

Scorecard Evaluation Criteria

The proposed annual prioritization process includes the use of a scorecard evaluation rating step. Each street will be given a project rating based on the following scorecard. The proposed maximum point for each category is shown. Points will be given for sub categories and rolled up where applicable. The total assigned points will be tabulated to develop an overall preliminary prioritization of streets and watershed improvements.

No.	Evaluation Criteria	Project Rating	
		Max. Points	Rating
Resource Allocation and Durability			
RAD 1	Rates high on StreetSaver® output for complete “reconstruction”	10	
RAD 2	Leverages funds	10	
RAD 2.1	Secures grant funds		
RAD 2.2	Cost effective in the long run		
RAD 2.3	Spend money on things that will solve multiple problems		
RAD 3	Candidate for durable or permeable paving -- long lasting	5	
RAD 3.1	Use durable pavement systems		
RAD 3.2	Use durable permeable pavement where advantageous		
RAD 4	Ready to implement	10	
RAD 4.1	Involves few utility interferences		
RAD 4.2	Engineering and evaluations can be done quickly		
	Subtotal	35	
Overall Community Improvement			
OCI 1	Enhances public health and safety	10	
OCI 1.1	Improves traffic safety		
OCI 1.2	Advances traffic calming		
OCI 2	Advances Berkeley Complete Streets Policy	10	
OCI 2.1	Advances bicycle and pedestrian plans		
OCI 3	Integrates with City Plans	5	
OCI 3.1	Advances SOSIP, DAP, CAT, and/or Area plans*		
	Subtotal	25	
Environment and Climate			
EC 1	Consistent with Watershed Management Plan	10	
EC 1.1	Improves stormwater quality		
EC 2	Includes Green Infrastructure	10	
EC 3	Mitigates flooding	10	
EC 4	Reduces greenhouse gas emissions	5	
EC 5	Prepares for long term adaptability	5	
	Subtotal	40	
	TOTAL	100	

*SOSIP (Streets and Open Space Improvement Plan), DAP (Downtown Area Plan), CAT (Climate Action Plan)

Implementation Scenarios

The City of Berkeley has approximately 217 miles of streets. The condition of the streets is characterized by a Pavement Condition Index (PCI). New streets have a PCI of 100 and a target PCI of 75 is generally accepted as streets in good condition. For streets needing rehabilitation or repairs, the current practices are to use either a slurry seal, to use an asphalt overlay, or to reconstruct the street. The Public Works Department currently estimates that 155 miles of Berkeley streets need rehabilitation or repairs (36 miles – slurry seal, 63 miles – asphalt overlay, 56 miles – reconstruction). The balance of 62 miles is in between the above categories or is in good condition.

The current 5 Year Street Paving Plan (2013-2017) calls for the following expenditures from maintenance funds (gas tax, Measure B sales tax and federal, state and local funds) appropriated by the City Council:

Treatment Type	5 Year Expenditures
Slurry seal	\$3,095,736
Asphalt overlay	\$2,311,028
Reconstruction	\$8,031,529
Totals	\$13,438,293

The proposal is to separate the use of current funds for maintenance activities (street slurry seal or asphalt overlay) and Measure M funds for capital project activities (street reconstruction). This will help meet the Measure M goals of accelerating the 5 year paving plan implementation and to improve the condition of Berkeley's streets. It will also allow for the use of green infrastructure and durable pavements in the capital projects. The proposed implementation scenarios include the following:

Scenario #1 – Maintenance funded: Direct tax monies are typically paid annually and are used to pay for ongoing operations and maintenance. The proposal is to use all the current 5 year Paving Plan direct tax monies to do asphalt overlay treatment. The benefits of doing this are:

- Approximately 2 to 3 times more streets will be improved as compared to the current level.
- Complies with the Measure M language of “significant acceleration of street rehabilitation”.

Scenario #2 – Measure M funded: A bond is a long-term loan and is traditionally used to fund capital improvements that are intended to last longer than the repayment period. The proposal is to use Measure M funds for those streets that need ‘Reconstruction’ treatment. The benefits of doing this are:

- Allows time to plan and design complex durable street reconstruction projects.
- Allows time to check for grant funding opportunities.
- Allows time to integrate green infrastructure, flooding mitigation plans and other City programs, where appropriate, into reconstruction projects.

Appendix A Public Input to Evaluation Criteria

The evaluation criteria input received at the June 8, 2013 community meeting is summarized as follows:

Top Priority Criteria	Additional Criteria
Breakout Group 1	
<ul style="list-style-type: none"> • Integrate with other plans, especially watershed plan, but also the pedestrian, bike, climate, downtown, and area plans • “Best bang for the buck” and longevity • Leverage funds, e.g. public/private partnerships 	<ul style="list-style-type: none"> • Undergrounding utilities – projects are hard to come by, hard to implement, take the opportunity • Collaborate with neighboring cities (funding, projects) • City municipal permit re stormwater, regulatory compliance • Geologic considerations, e.g. landslides, earthquakes • Focus on getting things done, projects in the ground • Helps to grow parks and greenspace • Consider parking – loss could be good or bad depending on circumstance • Number of people impacted • Visibility
Breakout Group 2	
<ul style="list-style-type: none"> • Flood prevention • Durability (should be a pre-requisite, not just a criteria) • Stormwater quality • Cost effectiveness – long term cost <p>Note: Group 2 emphasized that durable pavement and permeable pavement are not equivalent.</p>	<ul style="list-style-type: none"> • Determination should be data driven, e.g. it’s more cost effective to repair streets before they fail. Replacement is the most expensive street repair. • Longevity • Materials, e.g. consider toxicity and greenhouse gas emissions • Slope and direction of the street as a factor influencing water storage and infiltration • High visibility of a project should not be a determinant but rather what works over the long-term • High use
Breakout Group 3	
<ul style="list-style-type: none"> • Spend money on things that will actually solve problems • Quick action – want to see this happen soon, not committee meetings and Council meetings. May want to avoid projects that require lots of engineering. • Safety for school children and bikes, e.g. potholes. Safe routes for those not driving. 	<ul style="list-style-type: none"> • Durability – city is recycling streets one every 60 years. We want to keep up rather than falling behind. • Multiple criteria, e.g. small streets keep falling behind, so need more or different criteria so that they eventually “rise to the top”. • Leveraging funds • Life-cycle costs – should evaluate materials for example • Flooding prevention for ‘below grade’ garages – is there something we can do that will actually work.

Appendix B

Envision Assessment Tools

Envision™ is the product of a joint collaboration between the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design and the Institute for Sustainable Infrastructure. Envision™ provides a holistic framework for evaluating and rating the community, environmental and economic benefits of all types and sizes of infrastructure projects. It evaluates, grades, and gives recognition to infrastructure projects that use transformational, collaborative approaches to assess the sustainability indicators over the course of the project's life cycle.

Envision™ can be used by infrastructure owners, design teams, community groups, environmental organizations, constructors, regulators, and policy makers to:

- Meet sustainability goals
- Be publicly recognized for high levels of achievement in sustainability
- Help communities and project teams to collaborate and discuss, "Are we doing the right project?" and, "Are we doing the project right?"
- Make decisions about the investment of scarce resources
- Include community priorities in civil infrastructure projects

Envision™ has assessment tools that can be used for infrastructure projects of all types, sizes, complexities, and locations, as follows:

- Envision™ checklist:
 - The Envision™ Checklist is an educational tool that helps users become familiar with the sustainability aspects of infrastructure project design. It can be used as a stand-alone assessment to quickly compare project alternatives or to prepare for a more detailed assessment.
 - The Envision™ Checklist is structured as a series of Yes/No questions based on the Envision™ rating system. It organized into five categories and fourteen subcategories.
- Envision™ sustainable infrastructure rating system:
 - May enable projects to become eligible for an Envision™ award.
 - Used by the project team to self-assessment the project, or for a third-party, objective review by ISI Verifiers.
 - Includes a guidance manual and scoring system.

More information is available at www.sustainableinfrastructure.org