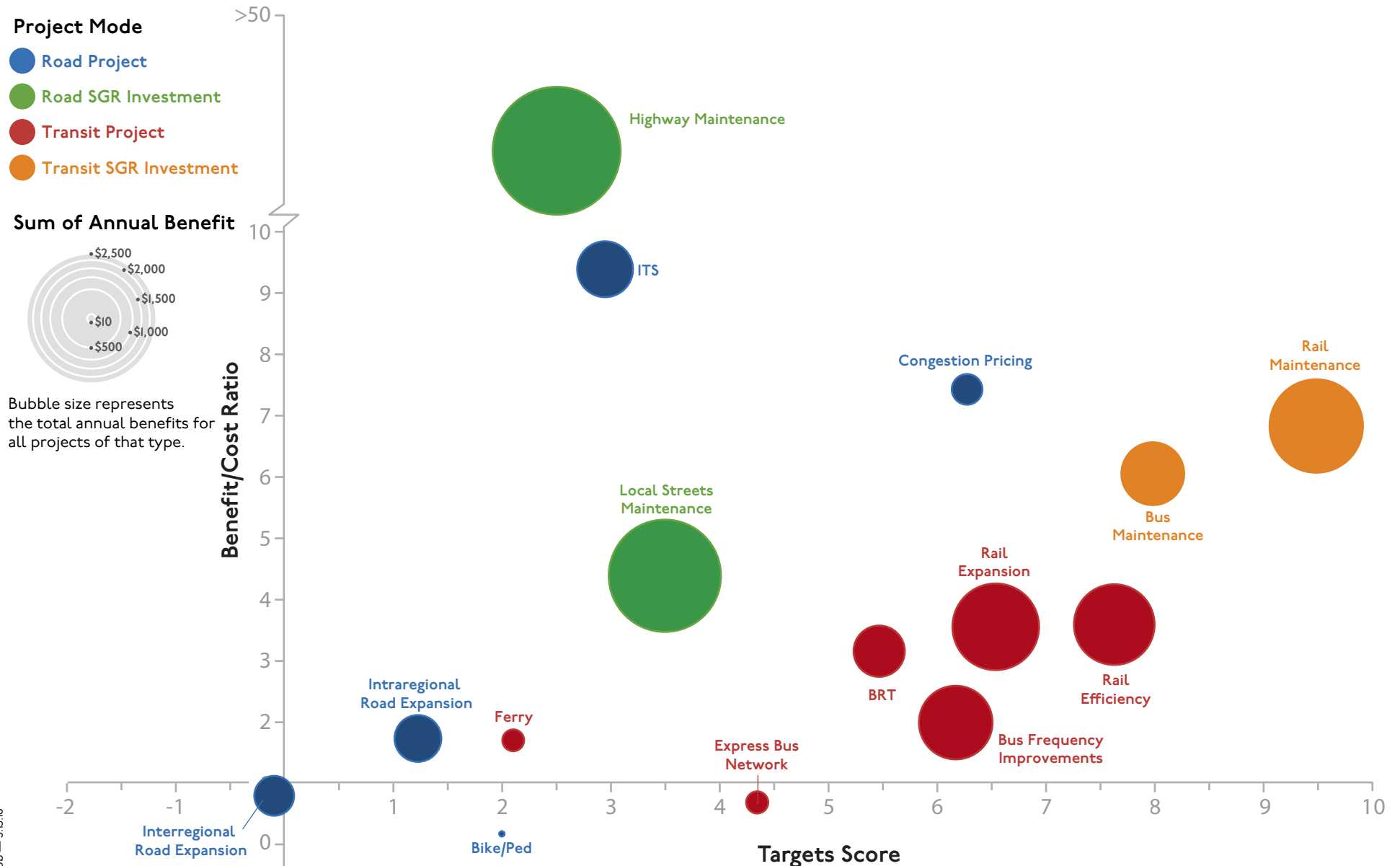
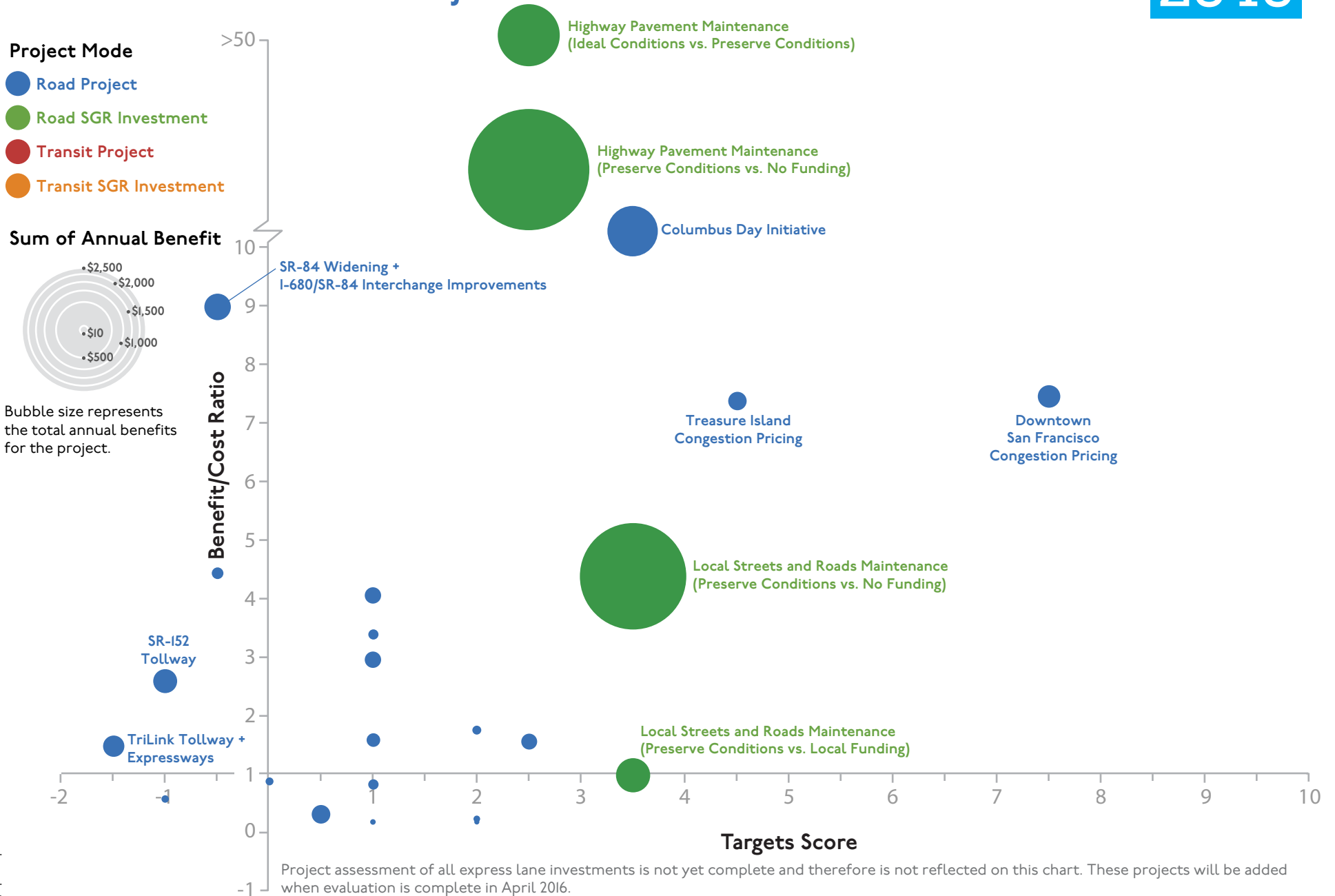


Project Performance Assessment: Overall Draft Results by Project Type



Project assessment of all express lane investments is not yet complete and therefore is not reflected on this chart; these projects will be added when evaluation is complete in April 2016. State of good repair (SGR) investment bubbles on this chart reflect the evaluation of preserve conditions vs. no funding.

Project Performance Assessment: Draft Results for Road Projects

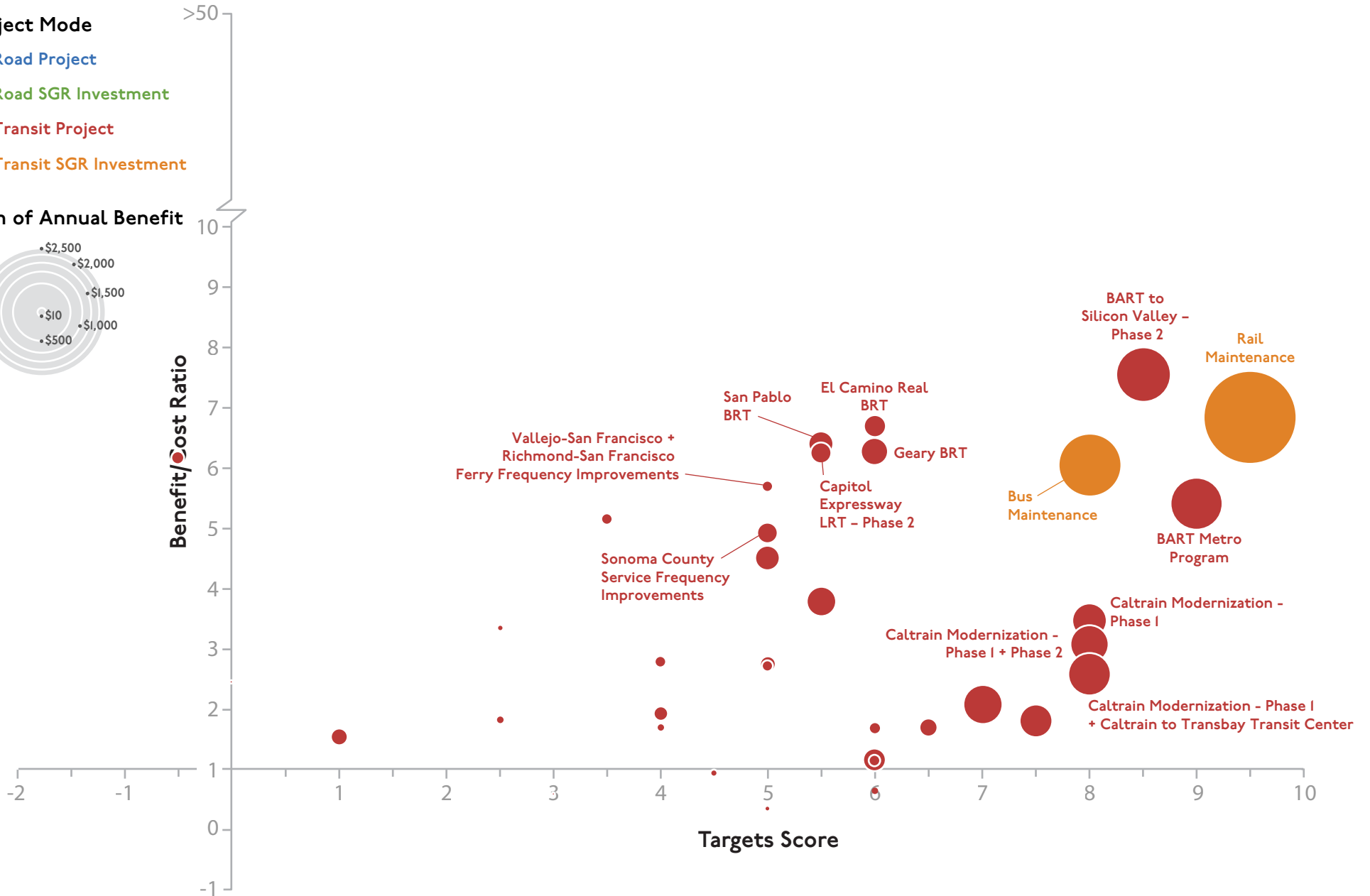
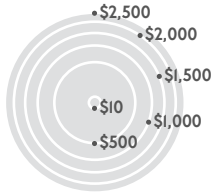


Project Performance Assessment: Draft Results for Transit Projects

Project Mode

- Road Project
- Road SGR Investment
- Transit Project
- Transit SGR Investment

Sum of Annual Benefit



ROW	ID	PROJECT NAME	LOCATION (COUNTY)	PROJECT TYPE	ANNUAL BENEFIT	ANNUAL COST	B/C RATIO	TARGETS SCORE
1	1503	Highway Pavement Maintenance (Ideal Conditions vs. Preserve Conditions)	Multi-County	Highway Maintenance	\$638	(\$1)	>50	2.5
2	1502	Highway Pavement Maintenance (Preserve Conditions vs. No Funding)	Multi-County	Highway Maintenance	\$2,433	\$144	17	2.5
3	1301	Columbus Day Initiative	Multi-County	ITS	\$421	\$38	11	3.5
4	209	SR-84 Widening + I-680/SR-84 Interchange Improvements (Livermore to I-680)	Alameda	Intraregional Road Expansion	\$116	\$13	9	-0.5
5	501	BART to Silicon Valley – Phase 2 (Berryessa to Santa Clara)	Santa Clara	Rail Expansion	\$472	\$62	8	8.5
6	306	Downtown San Francisco Congestion Pricing (Toll + Transit Improvements)	Multi-County	Congestion Pricing	\$84	\$11	7	7.5
7	302	Treasure Island Congestion Pricing (Toll + Transit Improvements)	San Francisco	Congestion Pricing	\$56	\$8	7	4.5
8	1651	Public Transit Maintenance - Rail Operators (Preserve Conditions vs. No Funding)	Multi-County	Rail Maintenance	\$1,351	\$198	7	9.5
9	506	El Camino Real BRT (Palo Alto to San Jose)	Santa Clara	BRT	\$85	\$13	7	6.0
10	207	San Pablo BRT (San Pablo to Oakland)	Multi-County	BRT	\$106	\$16	6	5.5
11	301	Geary BRT	San Francisco	BRT	\$124	\$20	6	6.0
12	505	Capitol Expressway LRT – Phase 2 (Alum Rock to Eastridge)	Santa Clara	Rail Expansion	\$77	\$12	6	5.5
13	518	ACE Alviso Double-Tracking	Santa Clara	Rail Efficiency	\$36	\$6	6	-0.5
14	1650	Public Transit Maintenance - Bus Operators (Preserve Conditions vs. No Funding)	Multi-County	Bus Maintenance	\$623	\$103	6	8.0
15	1203	Vallejo-San Francisco + Richmond-San Francisco Ferry Frequency Improvements	Multi-County	Ferry	\$29	\$5	6	5.0
16	1001	BART Metro Program (Service Frequency Increase + Bay Fair Operational Improvements + SFO Airport Express Train)	Multi-County	Rail Efficiency	\$430	\$80	5	9.0
17	203	Irvington BART Infill Station	Alameda	Rail Efficiency	\$30	\$6	5	3.5
18	903	Sonoma County Service Frequency Improvements	Sonoma	Bus Frequency Improvements	\$75	\$15	5	5.0
19	523	VTA Service Frequency Improvements (15-Minute Frequencies)	Santa Clara	Bus Frequency Improvements	\$103	\$23	4	5.0
20	211	SR-262 Widening (I-680 to I-880)	Alameda	Intraregional Road Expansion	\$22	\$5	4	-0.5
21	1403	Local Streets and Roads Maintenance (Preserve Conditions vs. No Funding)	Multi-County	Local Streets Maintenance	\$1,875	\$428	4	3.5
22	210	I-580 ITS Improvements	Alameda	ITS	\$44	\$11	4	1.0
23	504	Stevens Creek LRT	Santa Clara	Rail Expansion	\$144	\$38	4	5.5
24	1101	Caltrain Modernization - Phase 1 (Electrification + Service Frequency Increase)	Multi-County	Rail Efficiency	\$195	\$56	3	8.0
25	605	Jepson Parkway (Fairfield to Vacaville)	Solano	Intraregional Road Expansion	\$17	\$5	3	1.0
26	1202	Oakland-Alameda-San Francisco Ferry Frequency Improvements	Multi-County	Ferry	\$16	\$5	3	2.5

all benefits and costs are in millions of 2017 dollars

ROW	ID	PROJECT NAME	LOCATION (COUNTY)	PROJECT TYPE	ANNUAL BENEFIT	ANNUAL COST	B/C RATIO	TARGETS SCORE
27	1102	Caltrain Modernization - Phase 1 + Phase 2 (Electrification + Service Frequency Increase + Capacity Expansion)	Multi-County	Rail Efficiency	\$236	\$77	3	8.0
28	411	SR-4 Auxiliary Lanes - Phases 1 + 2 (Concord to Pittsburg)	Contra Costa	Intraregional Road Expansion	\$44	\$15	3	1.0
29	507	Vasona LRT – Phase 2 (Winchester to Vasona Junction)	Santa Clara	Rail Expansion	\$30	\$11	3	4.0
30	515	Tasman West LRT Realignment (Fair Oaks to Mountain View)	Santa Clara	Rail Expansion	\$48	\$18	3	5.0
31	517	Stevens Creek BRT	Santa Clara	BRT	\$29	\$11	3	5.0
32	503	SR-152 Tollway (Gilroy to Los Banos)	Santa Clara	Interregional Road Expansion	\$95	\$37	3	-1.0
33	307	Caltrain Modernization - Phase 1 (Electrification + Service Frequency Increase) + Caltrain to Transbay Transit Center	Multi-County	Rail Expansion	\$290	\$113	3	8.0
34	1206	Alameda Point-San Francisco Ferry	Multi-County	Ferry	\$12	\$5	2	0.0
35	1204	Berkeley-San Francisco Ferry	Multi-County	Ferry	\$10	\$4	2	3.0
36	206	AC Transit Service Frequency Improvements	Multi-County	Bus Frequency Improvements	\$248	\$120	2	7.0
37	513	North Bayshore LRT (NASA/Bayshore to Google)	Santa Clara	Rail Expansion	\$42	\$22	2	4.0
38	604	Solano County Express Bus Network	Multi-County	Express Bus Network	\$21	\$12	2	2.5
39	522	VTA Service Frequency Improvements (10-Minute Frequencies)	Santa Clara	Bus Frequency Improvements	\$177	\$99	2	7.5
40	407	SR-4 Auxiliary Lanes - Phase 1 (Concord to Pittsburg)	Contra Costa	Intraregional Road Expansion	\$13	\$8	2	2.0
41	402	eBART – Phase 2 (Antioch to Brentwood)	Contra Costa	Rail Expansion	\$21	\$12	2	4.0
42	311	Muni Forward Program	San Francisco	Bus Frequency Improvements	\$60	\$36	2	6.5
43	331	Better Market Street	San Francisco	BRT	\$32	\$19	2	6.0
44	901	US-101 Marin-Sonoma Narrows HOV Lanes – Phase 2	Multi-County	Intraregional Road Expansion	\$31	\$19	2	1.0
45	409	I-680/SR-4 Interchange Improvements + HOV Direct Connector	Contra Costa	Intraregional Road Expansion	\$42	\$27	2	2.5
46	103	El Camino Real Rapid Bus (Daly City to Palo Alto)	San Mateo	Bus Frequency Improvements	\$54	\$36	2	1.0
47	401	TriLink Tollway + Expressways (Brentwood to Tracy/Altamont Pass)	Multi-County	Interregional Road Expansion	\$75	\$51	1	-1.5
48	801	Golden Gate Transit Frequency Improvements	Multi-County	Express Bus Network	\$11	\$8	1	4.5
49	313	Muni Service Frequency Improvements	San Francisco	Bus Frequency Improvements	\$89	\$79	1	6.0
50	312	19th Avenue Subway (West Portal to Parkmerced)	San Francisco	Rail Efficiency	\$30	\$27	1	6.0
51	1413	Local Streets and Roads Maintenance (Preserve Conditions vs. Local Funding)	Multi-County	Local Streets Maintenance	\$194	\$198	1	3.5
52	516	VTA Express Bus Frequency Improvements	Santa Clara	Express Bus Network	\$18	\$19	0.9	4.5

ROW	ID	PROJECT NAME	LOCATION (COUNTY)	PROJECT TYPE	ANNUAL BENEFIT	ANNUAL COST	B/C RATIO	TARGETS SCORE
53	202	East-West Connector (Fremont to Union City)	Alameda	Intraregional Road Expansion	\$10	\$12	0.9	0.0
54	406	I-680/SR-4 Interchange Improvements	Contra Costa	Intraregional Road Expansion	\$18	\$22	0.8	1.0
55	304	Southeast Waterfront Transportation Improvements (Hunters Point Transit Center + New Express Bus Services)	San Francisco	Express Bus Network	\$16	\$27	0.6	6.0
56	410	Antioch-Martinez-Hercules-San Francisco Ferry	Multi-County	Ferry	\$9	\$16	0.6	1.5
57	403	I-680 Express Bus Frequency Improvements	Multi-County	Express Bus Network	\$12	\$21	0.6	3.0
58	404	SR-4 Widening (Antioch to Discovery Bay)	Contra Costa	Interregional Road Expansion	\$9	\$17	0.5	-1.0
59	510	Downtown San Jose Subway (Japantown to Convention Center)	Santa Clara	Rail Efficiency	\$10	\$18	0.5	5.5
60	308	San Francisco Express Bus Network	Multi-County	Express Bus Network	\$5	\$14	0.3	4.0
61	104	Geneva-Harney BRT + Corridor Improvements	Multi-County	BRT	\$15	\$46	0.3	5.0
62	508	SR-17 Tollway + Santa Cruz LRT (Los Gatos to Santa Cruz)	Santa Clara	Interregional Road Expansion	\$57	\$200	0.3	0.5
63	519	Lawrence Freeway	Santa Clara	Intraregional Road Expansion	\$7	\$34	0.2	2.0
64	204	Broadway Streetcar	Alameda	Rail Expansion	\$2	\$14	0.2	2.5
65	601	I-80/I-680/SR-12 Interchange Improvements	Solano	Intraregional Road Expansion	\$5	\$32	0.2	1.0
66	1304	Bay Bridge West Span Bike Path	San Francisco	Bike/Ped	\$4	\$30	0.1	2.0
67	905	SMART – Phase 3 (Santa Rosa Airport to Cloverdale)	Sonoma	Rail Expansion	\$0	\$12	0	4.0
68	1201	San Francisco-Redwood City + Oakland-Redwood City Ferry	Multi-County	Ferry	\$0	\$8	0	2.0
69	205_15	Express Bus Bay Bridge Contraflow Lane	Multi-County	Express Bus Network	\$0	\$10	0	5.0
70	1407	Local Streets and Roads Maintenance (Ideal Conditions vs. Preserve Conditions)	Multi-County	Local Streets Maintenance	TBD	TBD	TBD	3.5
71	102	US-101 HOV Lanes (San Francisco + San Mateo Counties)	Multi-County	Express Lanes	TBD	TBD	TBD	0.5
72	201	ACTC Express Lane Network	Alameda	Express Lanes	TBD	TBD	TBD	1.5
73	101	US-101 Express Lanes (San Francisco + San Mateo Counties)	Multi-County	Express Lanes	TBD	TBD	TBD	0.0
74	502	VTA Express Lane Network	Santa Clara	Express Lanes	TBD	TBD	TBD	3.0
75	1302	MTC Express Lane Network	Multi-County	Express Lanes	TBD	TBD	TBD	2.5
76	1305	Managed Lanes Implementation Plan	Multi-County	Express Lanes	TBD	TBD	TBD	6.0

all benefits and costs are in millions of 2017 dollars

Attachment C: Identifying Projects Subject to Evaluation

Projects Subject to Evaluation

Committed projects and programs, as defined by MTC Resolution No. 4182 in April 2015, are not subject to project performance assessment. Of the uncommitted projects submitted in the Call for Projects by the September 2015 deadline, MTC staff evaluated projects that met the following criteria:

1. The project impacts can be evaluated with the regional travel demand model.
2. The total project costs are at least \$100 million (as measured in 2017 dollars).

Examples of projects that were evaluated:

- New/enhanced transit service, including travel time savings of rapid bus or bus rapid transit (BRT) infrastructure
- Freeway-to-freeway interchanges
- Freeway widenings, including HOV lanes & auxiliary lanes
- Capacity-increasing improvements to state highways and major arterials
- State of good repair investments for state highways and local streets & roads
- State of good repair investments for public transit systems

Examples of projects that were not evaluated even if met the cost threshold:

- Intersection improvements or other non-capacity-increasing improvements
- Freeway-to-freeway interchanges that do not include mainline widening
- Local interchanges
- Transit center improvements and parking expansion
- Transit projects that increase capacity within trains and on platforms but that do not result in increased frequency or travel time improvements
- Grade separations

Unlike Plan Bay Area 2013, staff **did not** evaluate uncommitted regional programs for Plan Bay Area 2040. These programs will be considered during the investment strategy separately from the performance assessment. Staff also **did not** evaluate any project with total costs less than \$100 million. These projects will be prioritized by Congestion Management Agencies, subject to fiscal constraint.

Per this evaluation criteria, all committed projects and projects that are currently under construction are exempt from the project performance evaluation for Plan Bay Area 2040. A list of major capacity increasing projects that we are not evaluating is included in **Table C-1** on the following page. A full accounting of which projects were assessed in Plan Bay Area and that are no longer subject to the evaluation will be provided as an online resource (see Attachment D).

Table C-1: Committed Capacity-Increasing Projects (*exempt from performance assessment*)

Committed Category	Project Name	Notes
Analyzed in PBA and committed in PBA40	SR-4 Bypass (Antioch to Brentwood)	Now has full funding - reclassified as committed.
	East Bay BRT (Oakland to San Leandro)	Now has EIR/EIS + full funding - reclassified as committed.
	Van Ness BRT	Now has EIR/EIS + full funding - reclassified as committed.
	Dumbarton Express Bus Frequency Improvements	Now has full funding - reclassified as committed.
	Richmond-San Francisco Ferry	Now has full funding - reclassified as committed.
	SMART – Phase 2 (San Rafael to Larkspur)	Now has full funding - reclassified as committed.
Committed in PBA & PBA40	SR-4 Widening (Pittsburg to Antioch)	
	Central Subway (Caltrain to Chinatown)	
	BART to Silicon Valley – Phase 1 (South Fremont/Warm Springs to Berryessa)	
	eBART – Phase 1 (Pittsburg/Bay Point to Antioch)	Project renaming reflects existence of Phase 2 proposal.
	Transbay Transit Center	Project will be complete in 2017.
	SR-4/SR-160 Direct Connector	Project will be complete in 2017.
	King Road Rapid Bus (Berryessa to Downtown San Jose)	Project was merged into BART to Silicon Valley (Phase 1).
Completed or construction underway	Presidio Parkway	Project will be complete in 2016.
	Oakland Airport Connector	Project was completed in 2014.
	BART to Warm Springs	Project will be complete in 2016.
	Caldecott Tunnel	Project was completed in 2013.
	SMART Initial Operating Segment	Project will be complete in 2016.
	Marin-Sonoma Narrows (Phase 1: Interchanges in Novato & Petaluma)	Project was completed in 2015.
	Santa Clara-Alum Rock BRT	Project will be complete in 2016.
	SR-12 Widening (Jameson Canyon)	Project was completed in 2014.
	SR-238 Hayward Operational Improvements	Project was completed in 2013.
	US-101 HOV Lanes (Santa Rosa Avenue to Pepper Road)	Project was completed in 2013.
	US-101 Auxiliary Lanes (SR-85 to Embarcadero Road)	Project was completed in 2014.
	I-880 HOV Lanes (SR-237 to US-101)	Project was completed in 2013.
	I-80 ITS Improvements	Project will be complete in 2016.
Tasman Double-Tracking (Mountain View to Alum Rock Direct LRT Service)	Project will be complete in 2016.	
I-580 Altamont Pass Truck Climbing Lane	Project will be complete in 2016.	

Attachment D: Detailed Project and State of Good Repair Performance Documentation Online

For more information on all aspects of the project performance assessment and the state of good repair performance assessment, please take advantage of our online resources on the following website:

<http://metropolitantransportationcommission.github.io/performance/>

Plan Bay Area 2040 Performance Dashboard

Data available includes:

- Complete list of project and state of good repair performance results (sortable by project location)
- Interactive bubble chart
- Breakdown of quantified project benefits
- Breakdown of targets score
- Confidence results by project
- Equity results by project

Plan Bay Area 2040 Project-Level Equity Map

This interactive tool allows sponsors, stakeholders, and members of the public to explore all of the major uncommitted transportation investments analyzed – and see which projects provide access to the draft Plan Bay Area 2040 Communities of Concern.

Reference Documentation

1. *Plan Bay Area 2040 Performance - Approach to Benefits and Costs* – describes methodology for estimating benefits using the travel model, provides valuations for benefits, and describes the calculations for project costs
2. *Plan Bay Area 2040 Performance - Targets Score Methodology* – provides a table of the targets criteria and explains the methodology
3. *Plan Bay Area 2040 Performance - Confidence Assessment Methodology* – highlights the overall framework of the benefit-cost confidence assessment discloses potential limitations in the benefit-cost assessment related to travel model accuracy, project purpose considerations, and project implementation timeline
4. *Plan Bay Area 2040 Performance - Highway and Local Streets State of Good Repair Methodology* – draft methodology document for road state of good repair discussed with the Local Streets and Roads Working Group in February 2016
5. *Plan Bay Area 2040 Performance - Public Transit State of Good Repair Methodology* – draft methodology document for road state of good repair discussed with the Transit Asset Management Steering Committee in February 2016
6. *Plan Bay Area 2040 Performance - Sensitivity Testing* – explores sensitivity of benefit-cost results (*not currently available; will be released by the end of April*)
7. *Comparison of Plan Bay Area and Plan Bay Area 2040 Project Performance Lists*