

City of Morro Bay

Street Summit, Part 2

September 14, 2016



Agenda

- Pavement Management Basics
- Future of City Street Maintenance
- Future Funding Scenarios
- 2016 Street Preservation Program
- CDBG Sidewalk Gap Closure/ ADA Access
- Other Streets Activities
 - Traffic Calming /Complete Streets
 - Bikes / Signs/ Striping
 - Sweeping
 - Storm Drainage



Goal of City's Pavement Management Program

- Improve to & Maintain Average Pavement Condition Index (PCI) from 66 to 70
- Aligned with State of California Goal
- Balances Pavement Preservation with worst first (~70/30 Split)

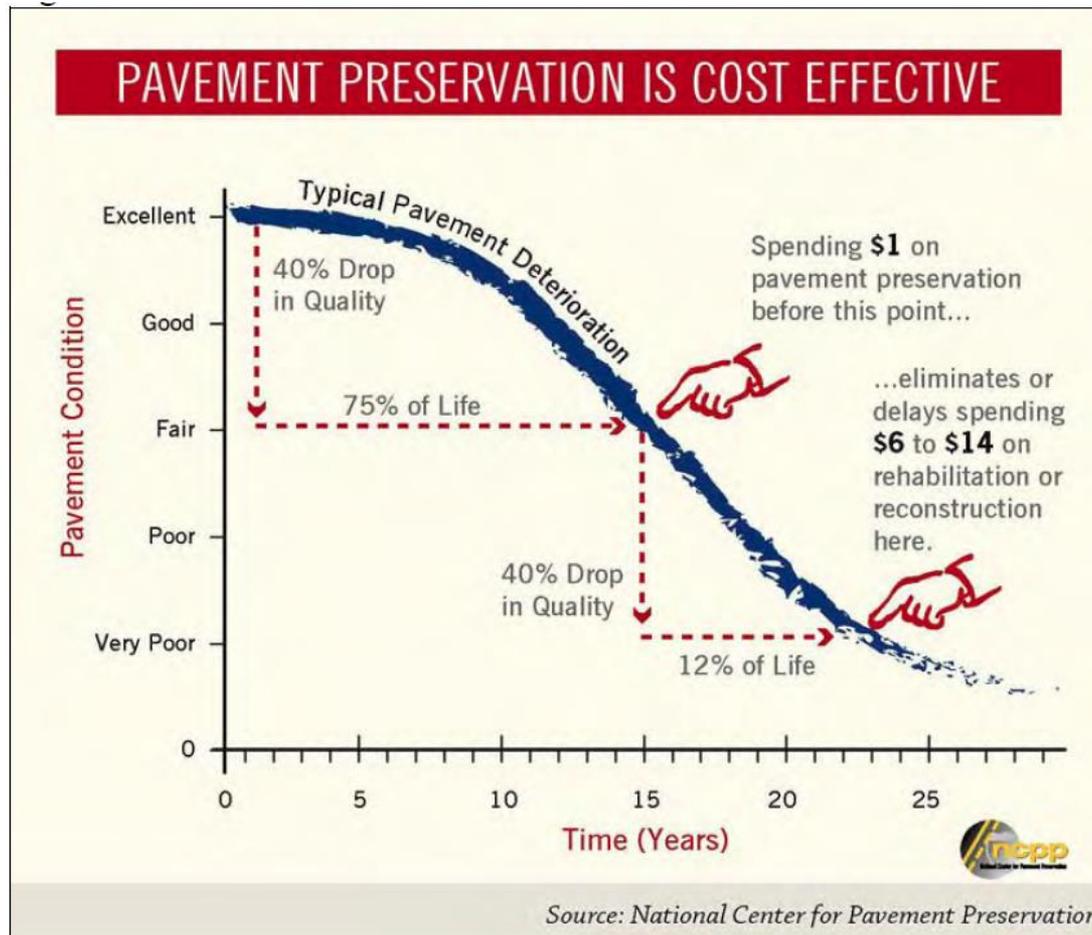


Street Maintenance Priorities

- Pavement Management (Street Repair)
- Pothole repair – In House
- ADA Sidewalk Repair
- Tree Trimming
- Storm Drain Repair/Maintenance
- Roadway Striping
- Sign & Signal Maintenance



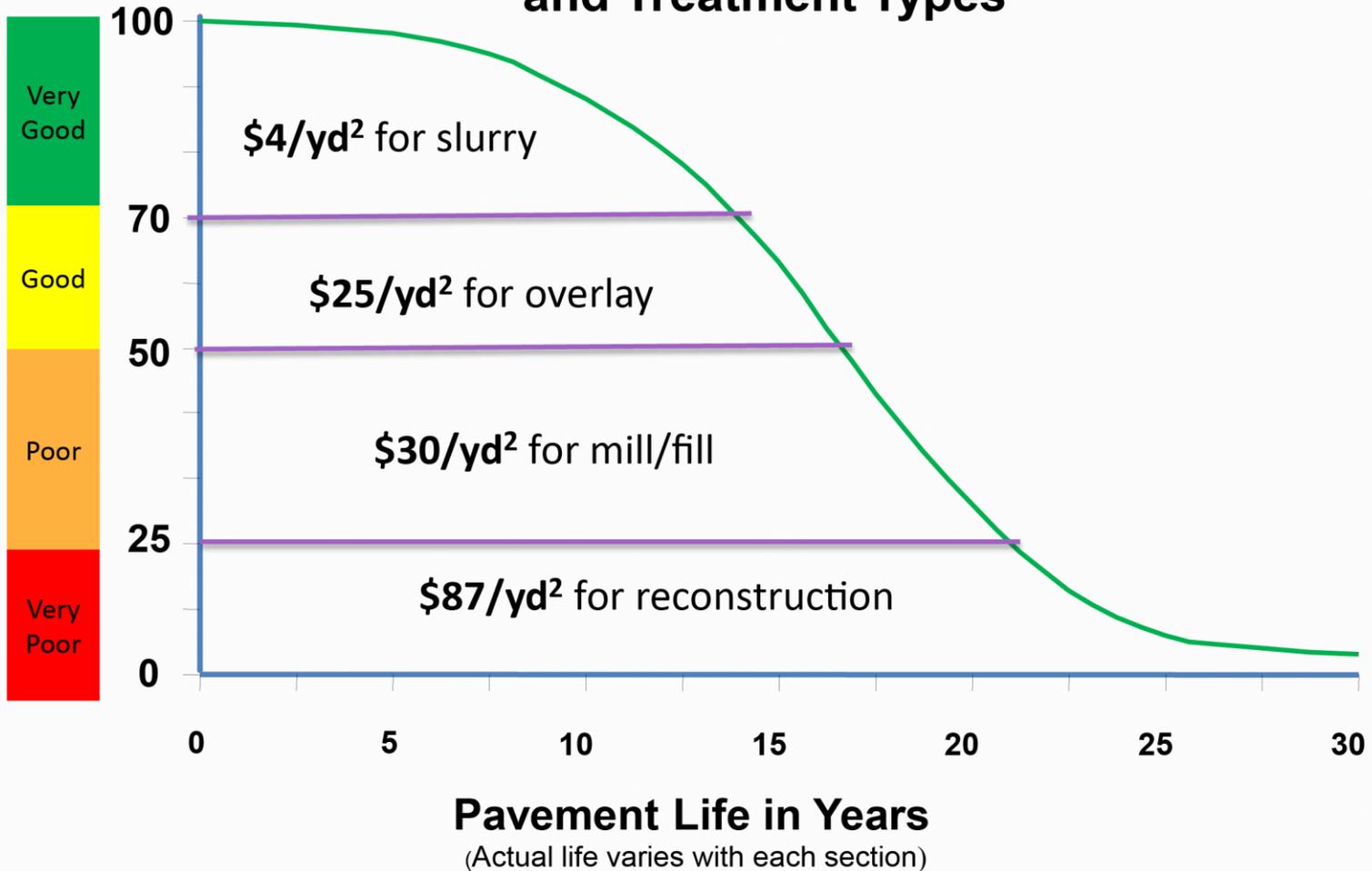
Maximizing Investment





Pavement Cost

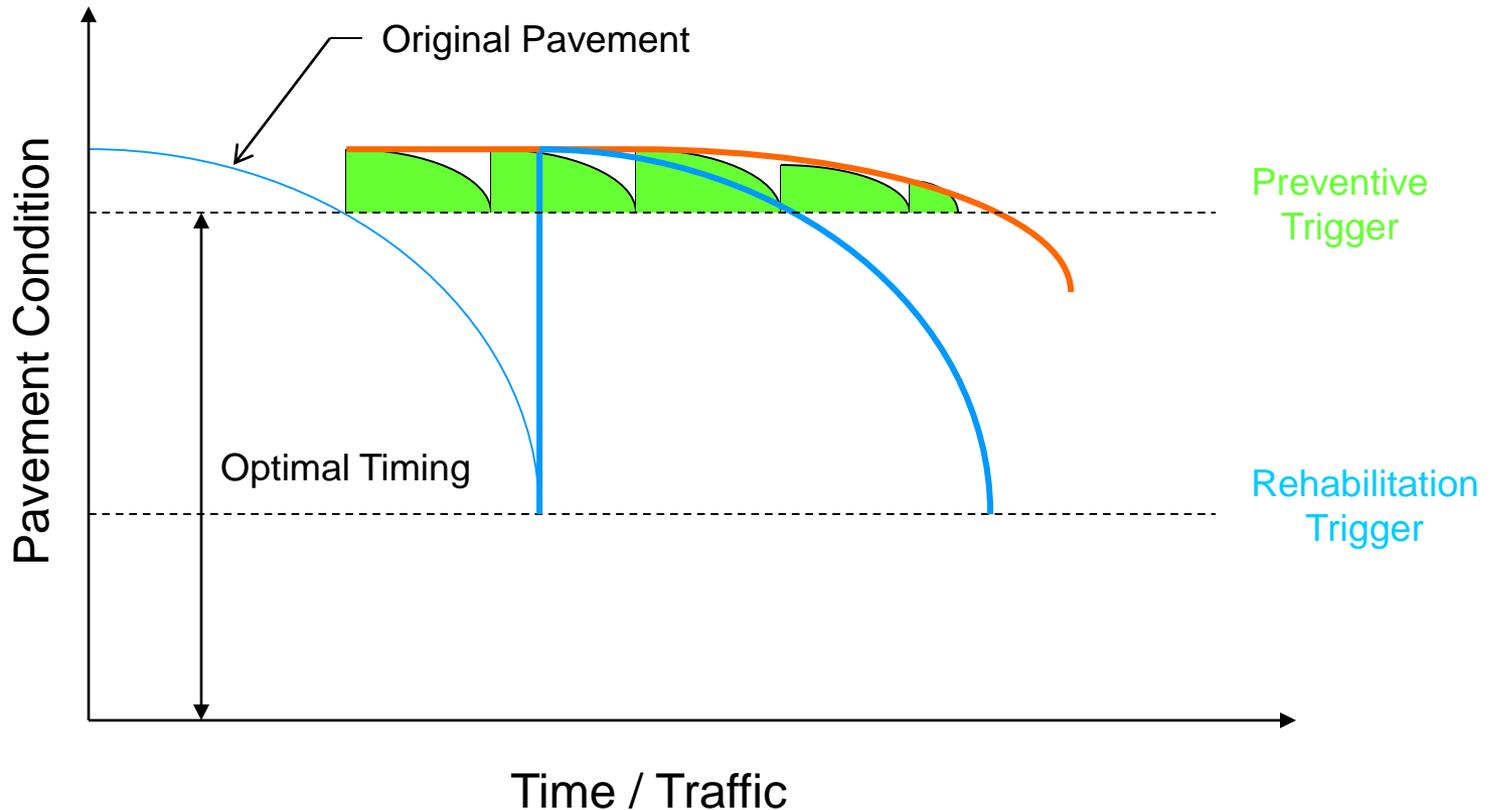
Pavement Deterioration Curve and Treatment Types





Transportation System Preservation

Concept of Preventive Maintenance for Pavements





2011-15 Street Work

- \$ 4.1M over 5 years
- Repaired / maintained 17 miles or 32%
- *PCI increased from 63 (2009) to 66 (2016)*
- *5% of street w/ no pavement life*
- Reconstructed Segments of:
 - Kings, Panorama, Andros, South Bay Blvd



Potential Improvements

- ✓ Establish Geographical Project Areas
- ✓ Implement New Rehabilitation Techniques
 - ✓ Rubberized Chip or AC improves wear and durability
 - ✓ Triple Layer v. Reconstruct
 - ✓ Lime/Cement Stabilization
 - Cold in Place Recycling
- Completing Transition to StreetSaver



StreetSaver Transition

- All street data loaded
- Renovated streets have been reevaluated
- 100% streets reinspected
- Running Treatment Scenarios for Best Value
- Working out Bugs
 - Evaluating Decision Factors
 - Assessing effectiveness of alternative repairs

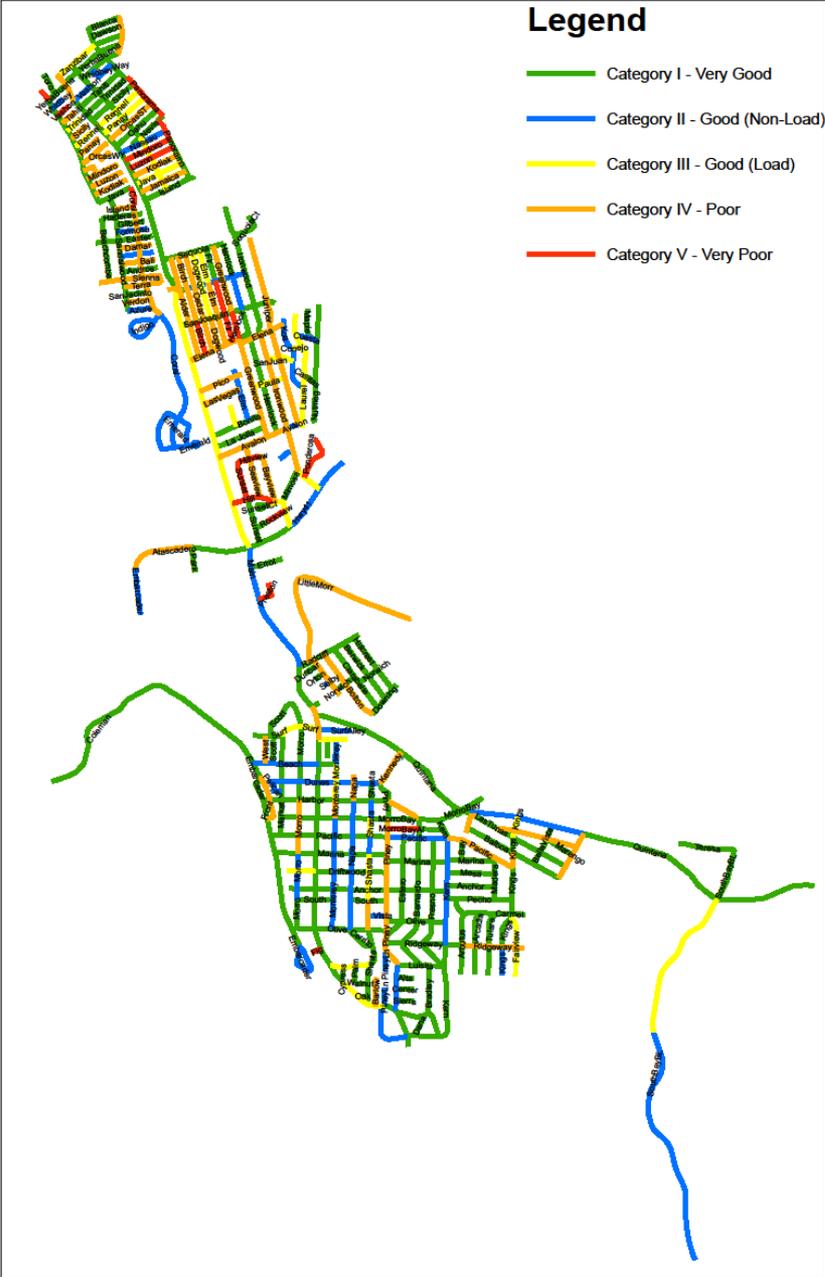


Morro Bay Street Condition

Street Category	Miles	2009 PCI	2013 PCI	2016 PCI
Minor Arterial	7.55	78	82	75
Collector	12.2	60	61	67
Local/ Residential	33.31	59	57	63
Rural Local	1.06	64	62	48
Total	54.41	63	63	66

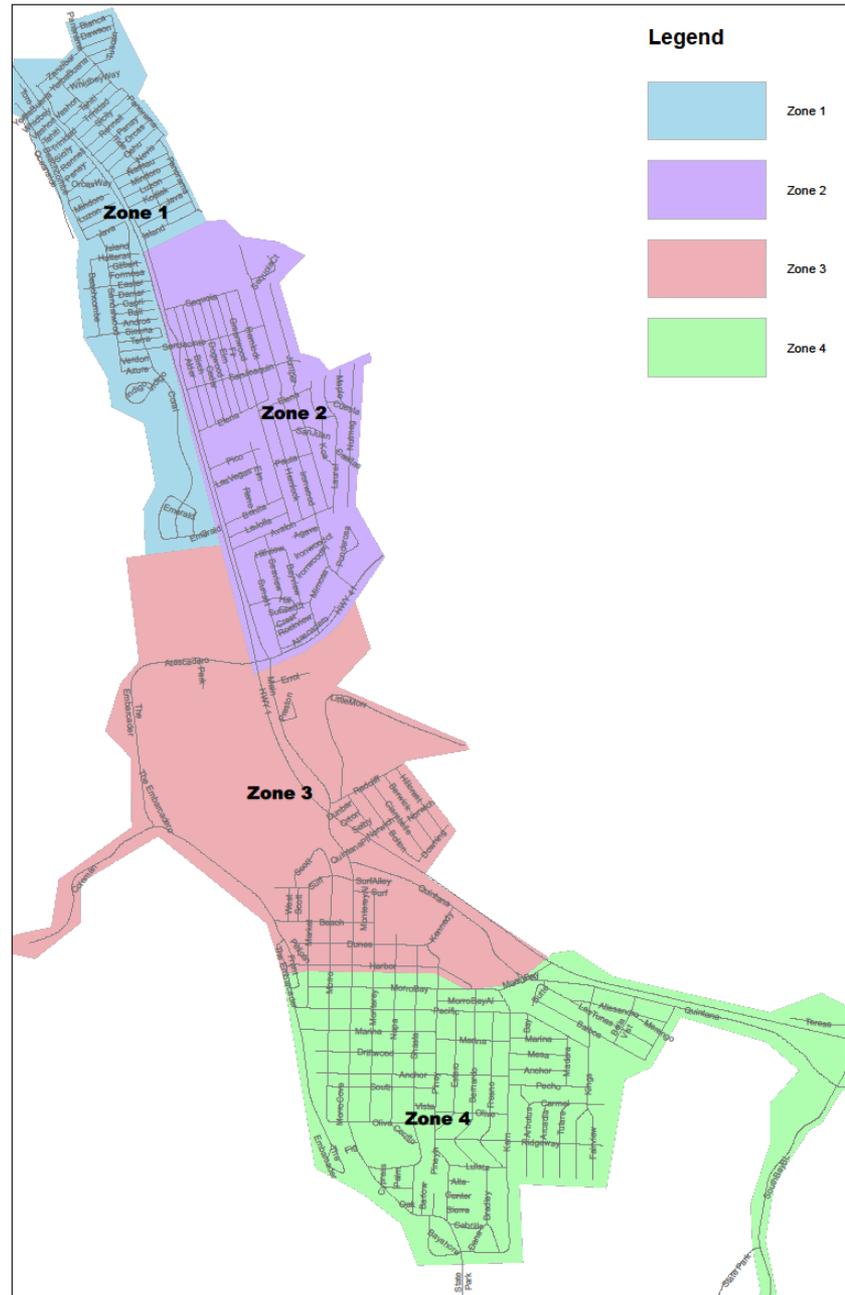


Current PCI





Geographic Areas





Unconstrained \$\$ Needs

Current PCI	Year	PM Cost	Rehab Cost	Total Cost	PCI Treated
66	2016	\$ 360,554	\$8,044,674	\$8,405,228	79
64	2017	\$ 2,162	\$ 957,779	\$ 959,941	77
61	2018	\$ 46,313	\$5,025,197	\$5,071,510	81
59	2019	\$ 109,241	\$2,159,626	\$2,268,867	81
57	2020	\$ 70,891	\$1,717,987	\$1,788,878	81
23	20yr	\$4,090,309	\$34,533,190	\$38,623,499	77

\$1,931,174 /yr required for very good roads

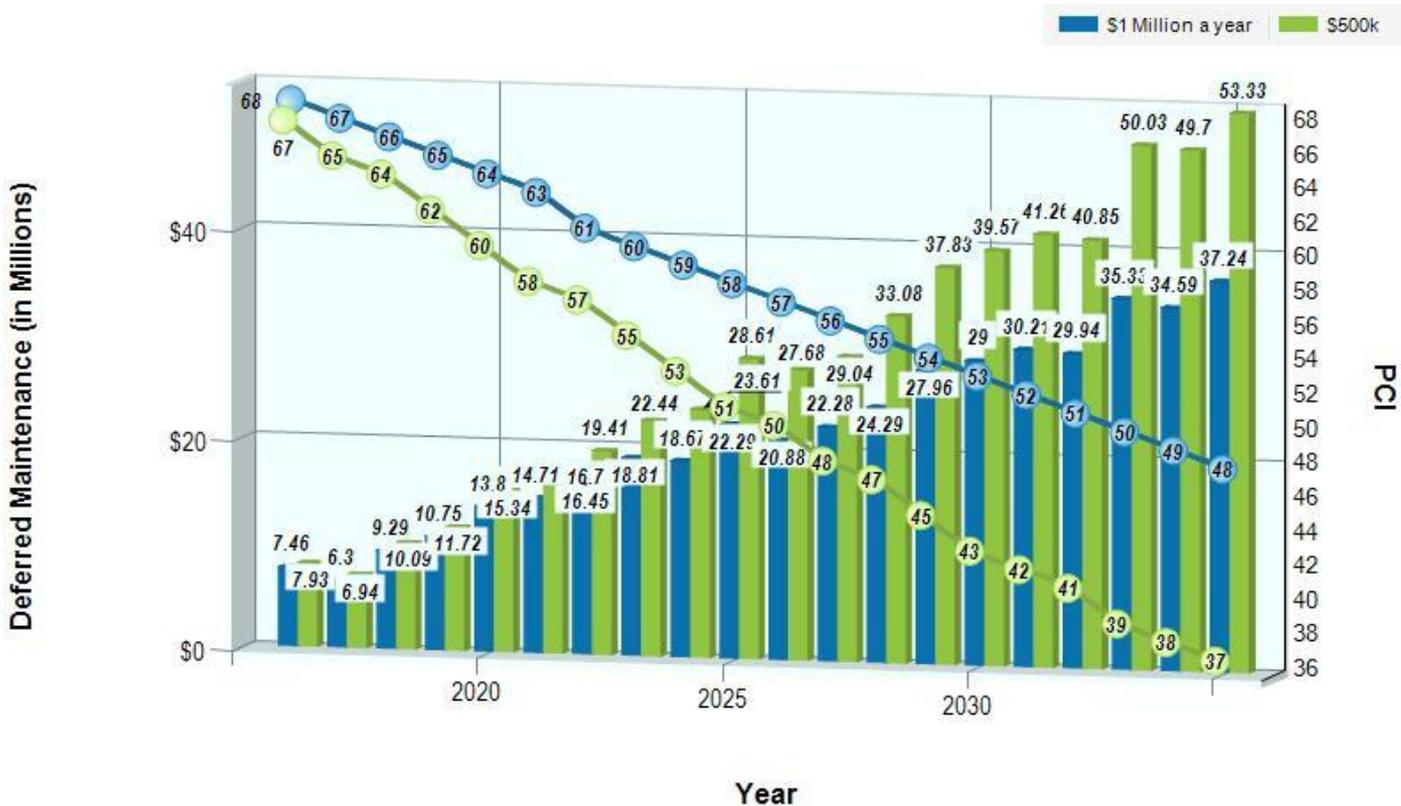
Budget is 25% of current M&R cost



Current Funding

Measure Q + Measure J (\$1M/yr)

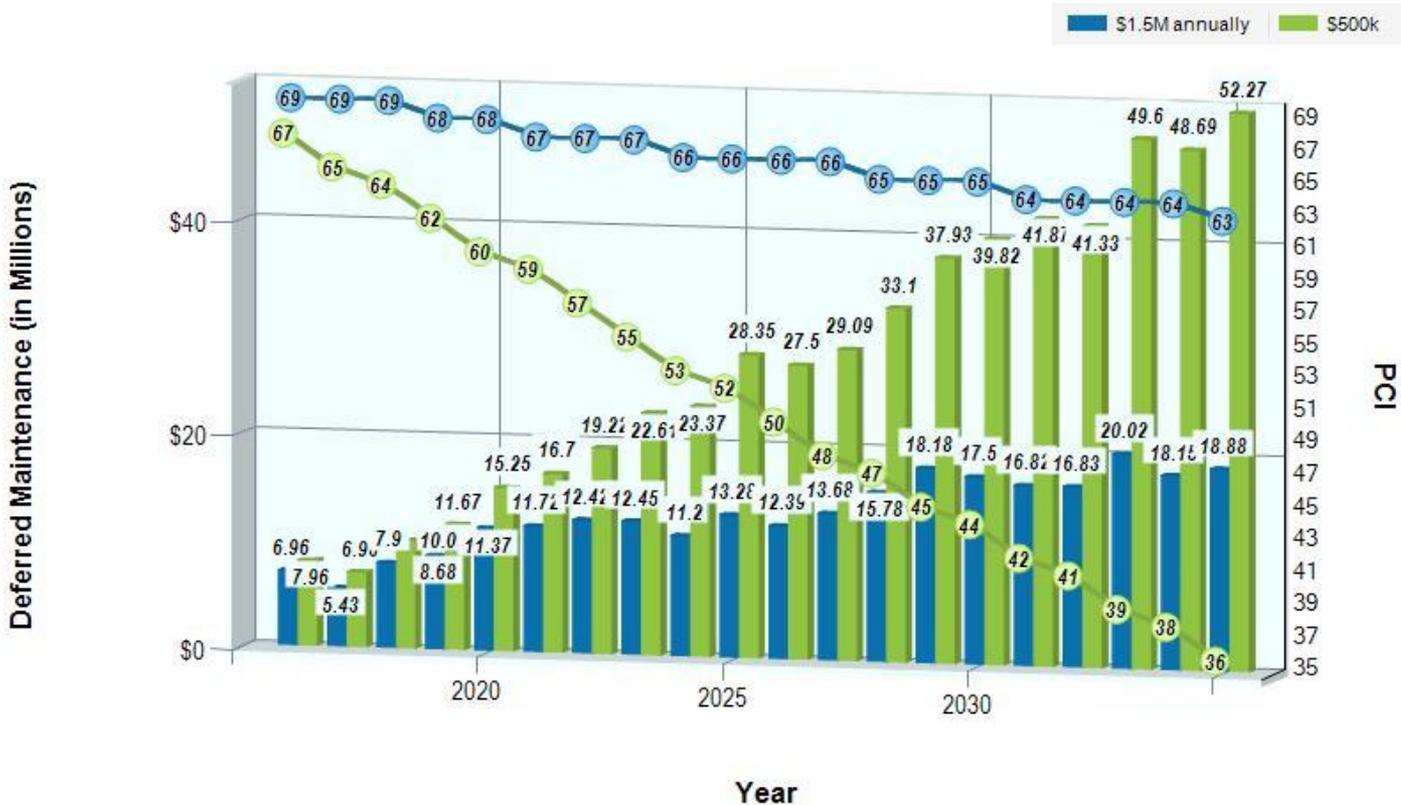
Scenario Comparison - Deferred Maintenance and PCI





Current Funding (Measure Q) + Measure J + Other (\$1.5M/yr)

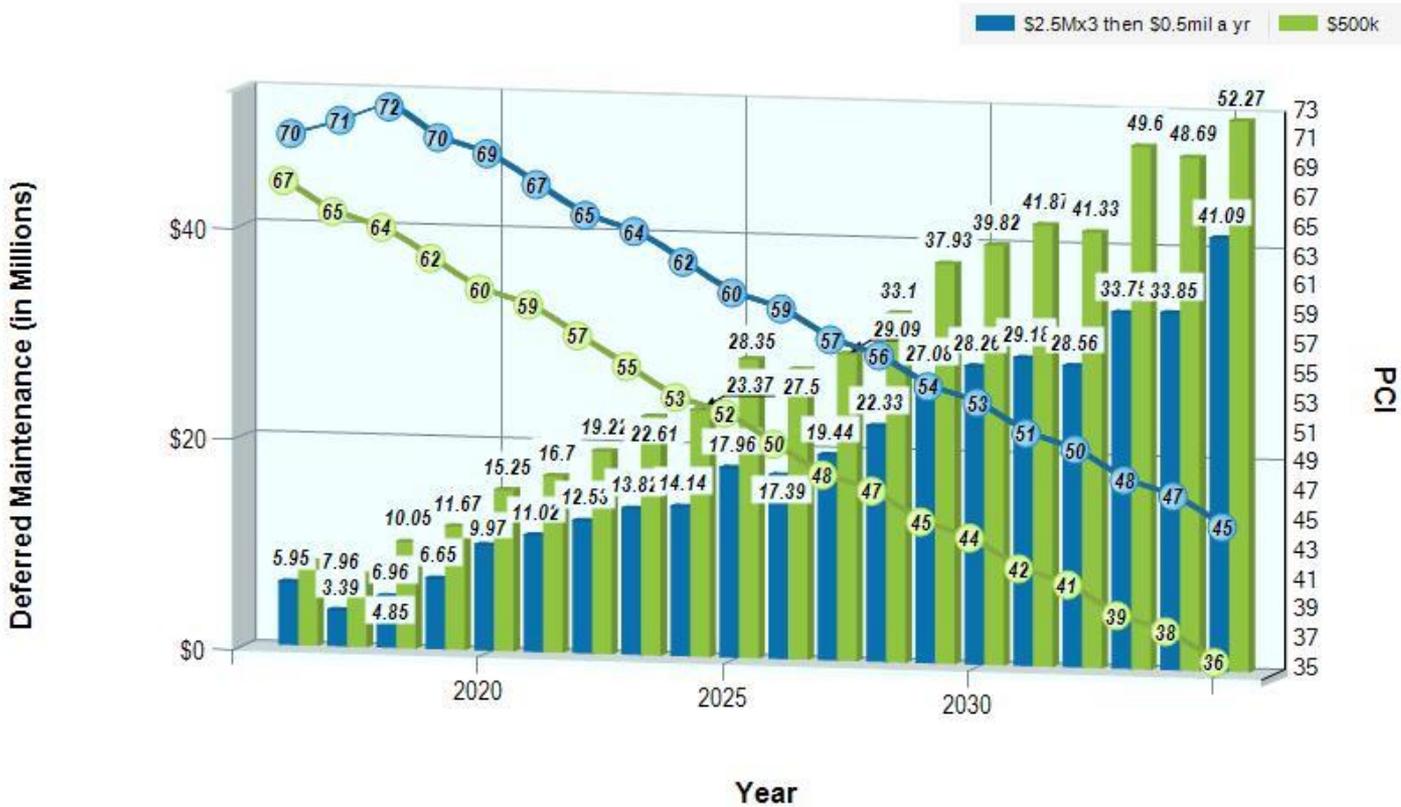
Scenario Comparison - Deferred Maintenance and PCI





Current Funding (Measure Q) +CoP w/ Measure J

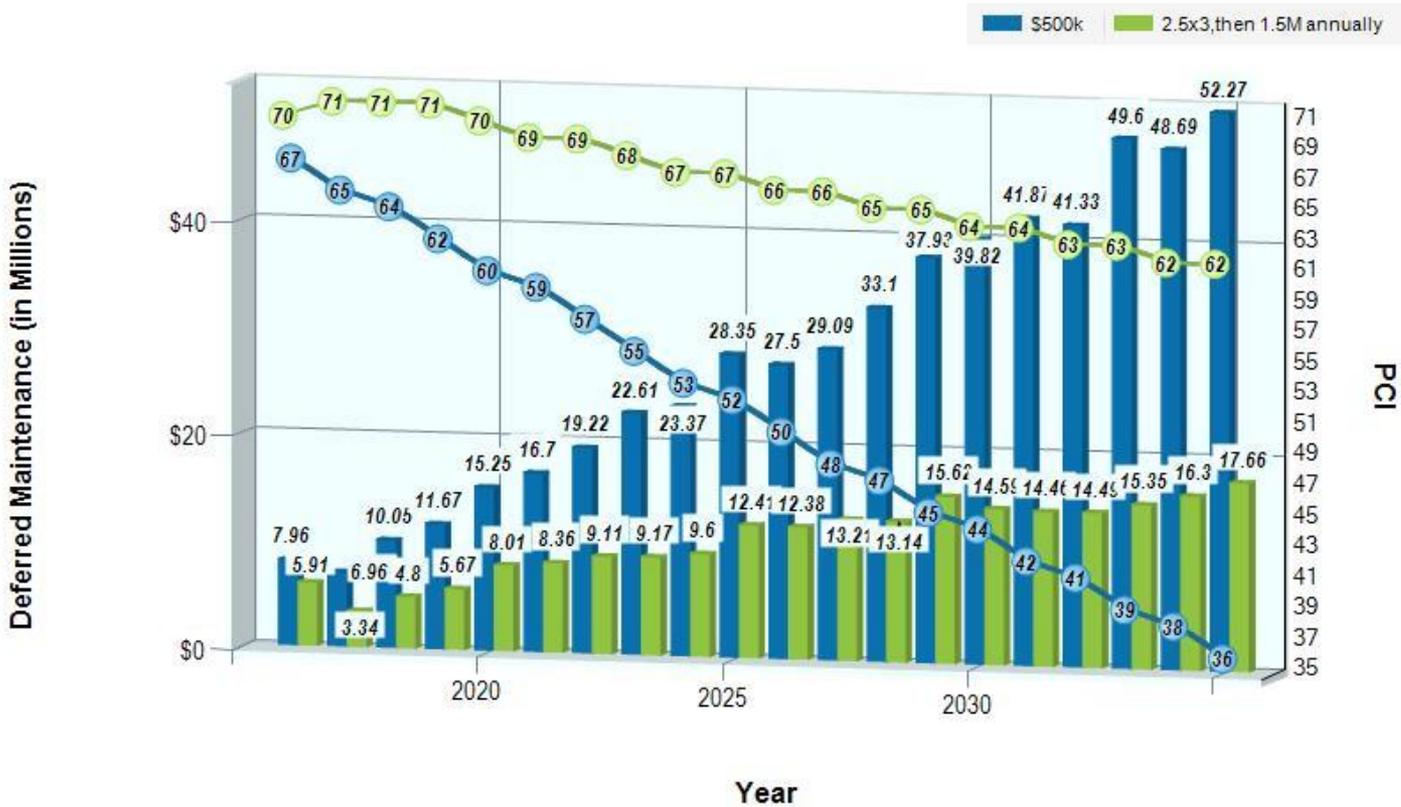
Scenario Comparison - Deferred Maintenance and PCI





Current Funding (Measure Q) +CoP w/ Measure J+Other (\$1.5M)

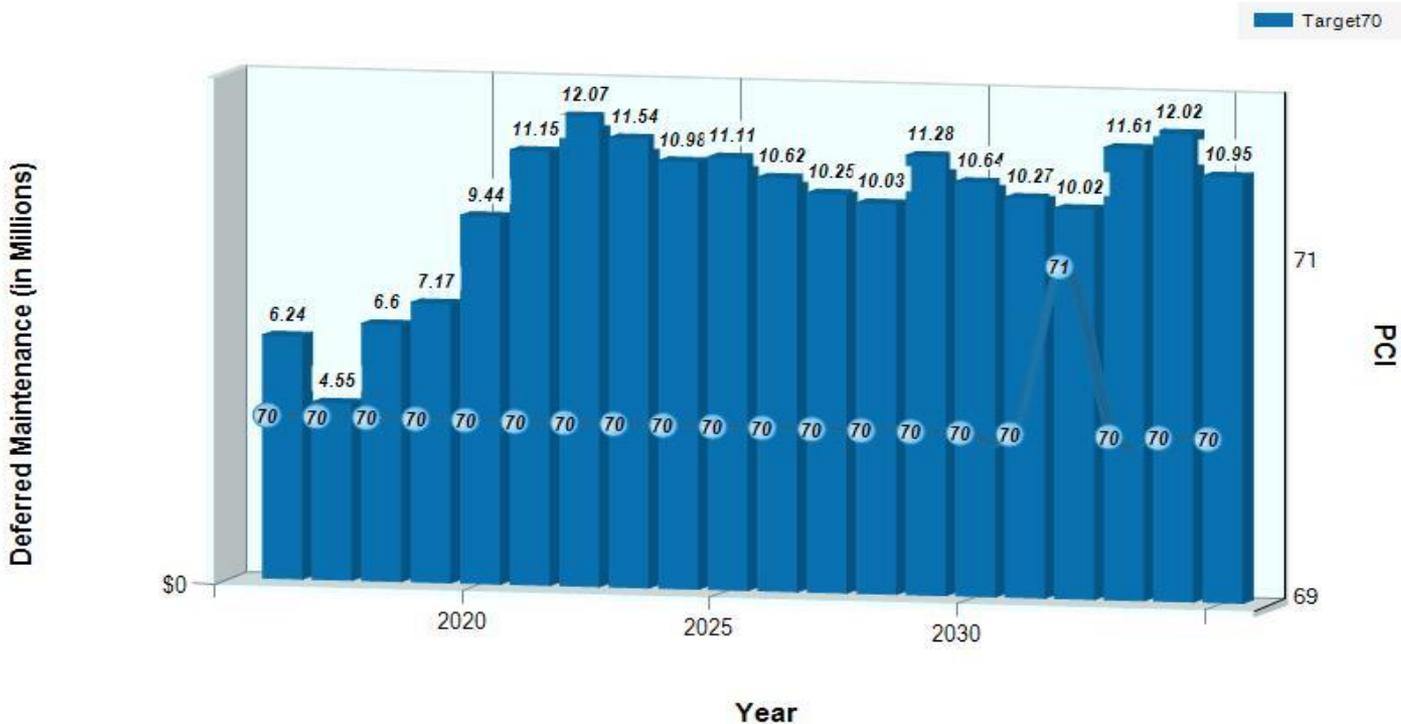
Scenario Comparison - Deferred Maintenance and PCI





Cost for PCI Target 70

Target-Driven Scenario Comparison - Deferred Maintenance and PCI



\$33,586,965 or \$1.68M /year
\$168/ resident



2016/17 Street Work

- \$986,000 Adopted Budget
- Stretch Limits of Innovative Treatments
 - Preserve Poor Streets to buy time
- Funds allocated based on Geo Area & PCI
- 5 year plan will change based on budget
- Establish Pavement Preservation IDIQ
- Maximize \$37K CalRecycle Grant
 - 1 mile sealcoat/ microsurfacing/ chip seal



Proposed 2016/17 Street Work

Triple Cape Seal

- Avalon
- Bali
- Elena
- Hill
- Harbor
- Pacific
- Panorama
- Piney
- Prescott
- San Juan
- Sienna
- Tuscan
- Zanzibar

Mill & Double Chip

- Beachcomber
- Birch
- Coral
- Elm
- Greenwood
- Little Morro Crk
- Luzon
- Mindoro
- Ponderosa



Proposed 2016/17 Street Work

Slurry Seal

- Acacia
- Driftwood
- Dunes
- Monterey
- Napa
- Shasta
- Vista
- Walnut

Penetrating Seal

- Andros
- Bayshore
- Clarabelle
- Kings
- SouthBay

Base Seal/Dust Palliative

- Dirt Embarcadero



PAVEMENT ALTERATIONS TRIGGER ADA

Crack Filling and Sealing
Surface Sealing
Chip Seals
Slurry Seals
Fog Seals
Scrub Sealing
Joint Crack Seals
Joint Repairs
Dowel Bar Retrofit
Spot High-Friction Treatments
Diamond Grinding
Pavement Patching

Open-graded Surface Course
Cape Seals
Mill & Fill / Mill & Overlay
Hot In-Place Recycling
Microsurfacing/Thin Lift Overlay
Addition of New Layer of Asphalt
Asphalt and Concrete Rehabilitation and
Reconstruction
New Construction

ADA Maintenance

ADA Alterations

Alterations trigger
wheelchair ramps



ADA Improvements

- Sidewalk IDIQ Contract Successful
- \$257K of gaps filled in existing network
- \$60K for Sidewalk repairs (trip hazards)
- \$67K for 2017 CDBG
- \$247K CDBG reallocation

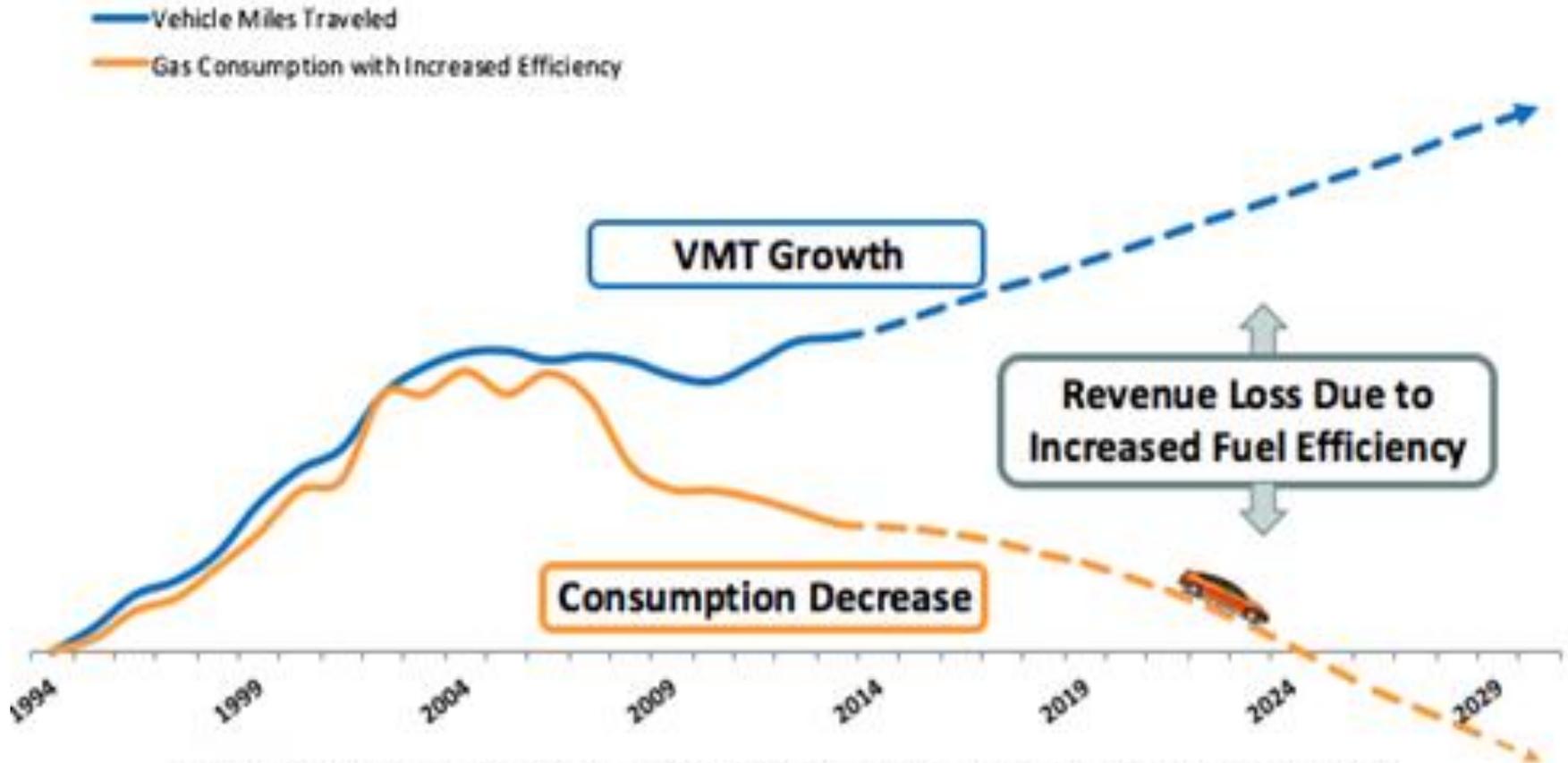


Funding Street Work

- SLOCOG Self-Help Sales Tax Initiative
 - Deferred Maintenance Shortfalls
 - \$79.3 Billion Funding CA Local Roads
 - \$59 Billion State Highway System
 - **Would add ~\$600,000 yrly for CMB Streets**
 - **\$1M for SR1/ MainSt @ SR41 Improvements**
 - **Morro Bay – Cayucos Bike Trail**
- Longer We Wait, the More it Costs
- Option: Borrow with Measure Q revenue



Funding Concerns



In this conceptual chart, Vehicle Miles Traveled and Fuel Consumption have been indexed to the same starting point in 1994 to enable comparison of the relative change of the two metrics over time



Real Cost to Taxpayers



Return on Investment



Source: a 2015 report to the FHWA from national research group TRIP found that for every \$1 spent on transportation, \$5.20 is returned back to the taxpayer when reduced vehicle maintenance costs, gas consumption, traffic delays/crashes and other ancillary benefits are considered.



Alternate Funding Options

- Measure J
- Excess (>10%) Emergency Reserve
- Dedicate Additional General Fund to Streets, in-lieu of ???
- Year-end Budget Excess to Street Fund
- Citywide Parcel Tax
- Neighborhood Street Improvement Districts
- Coop Purchase with other Agencies



Other Streets Activities

- Street Sweeping
- Storm Drain Maintenance – Moving to Utilities Division
- Striping
- Signs
- Pedestrian Facilities
- Bicycle Facilities
- Street Tree Maintenance
- Traffic Calming



»QUESTIONS?



Neighborhood Traffic Calming

- “Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior, and improve conditions for non-motorized street users.”



Traffic Calming Guidelines

- Sound Traffic Engineering
- Public Involvement.
- Not divert traffic to other local or residential streets.
- Address Emergency vehicle access.
- minimize maintenance activities.
- Only State/Federal warning signs.
- Bicycle and pedestrian travel should be enhanced.



Not Traffic Calming

Stop Signs

- Assign Rights of Way where otherwise unclear
- Need to meet “Warrants” or State and Federal Specified Conditions
 - Volume – Pedestrian or Vehicle
 - Collision History – Generally five in last 12 months, not including impaired drivers
 - Physical Conditions
- Unwarranted Stop Signs (or any Traffic Control Devices) increase Liability to City
- Unintended consequences of unwarranted Stop Signs
 - Use of alternative routes
 - Noise
 - Air Quality

Arbitrary speed limits

- not allowed
- Based on Vehicle Code
 - School Zones, Central Business Districts, Residential Local Streets
- or Engineering Traffic Study
 - 85th Percentile
 - Enforceability
 - Restudied every 5-10 years



Neighborhood Traffic Calming Examples

Passive

- Police Enforcement
- Education
- High Viz-Crosswalks
- Radar Feedback
- Striping
- Turn Restrictions
- Truck Restrictions
- \$0-\$5,000

Active

- Speed Humps/Tables
- Raised Crosswalks(Alternative Pavement)
- Mini Roundabout/Intersection Circles
- Chockers: Mid Block, Bulbouts, Medians, Chicanes
- Full or Partial Street Closures
- \$15,000 and up



Traffic Calming – Next Steps

- Small Projects, such as Pacific and Main and San Jacinto and Main
- General Plan Update
 - Circulation Element



Complete Street Concept



Greenwood Avenue North of Elena - Parking on One-Side

Scale: 1/4"=1'-0"



Bike & Ped

- Master Plan Adopted February 28, 2012
- Community wide Participation
- Previously Required for the BTA Grant process
- Gap Closure and ADA projects
- Existing Facilities
 - Class I – 3.72 miles
 - Class II – 7.72 miles
 - Class III – The rest of the 54 miles of streets
- Some of the Recommendations
 - Harborwalk Extension and Bridge (Complete)
 - Embarcadero – High School Improvements (Awaiting grant results)
 - Quintana Main (funding)
 - Greenwood (Funding)
 - Other Connections (Funding)
 - Next Steps: General Plan – Complete Streets
- Unmet Needs
- Council Goal Setting and Budgeting



Stripes and Signs

- Bike Lanes
- Cross Walks
- Stop Bars and Legends
- Parking Tees
- Curbs
- Misc pavement Marking
- Replaced with Street improvements
 - Atascadero Road, plus green lanes
 - Main Street
 - Harbor Street
- Traffic Control
 - Stop
 - Yield
 - Warning
- Other Regulatory/Informational
 - Parking Control
 - Street Name

Periodic Maintenance

Maintenance Observation

Retro Reflectivity - FHWA

Service Requests

CityWorks for Inventory and scheduling



Street Sweeping

- Minimum Required by NPDES
- Once a year in most residential areas
- Schedule and Map on City's Web Page
 - [Public Works Page under "Services and Links"](#)
 - <http://www.morro-bay.ca.us/documentcenter/view/8609>



Storm Drain Maintenance

- Per the City's NPDES Stormwater Permit for Water Quality Issues
- Reactive Maintenance
- Most Corrugated Metal Pipe 40-60 Years Old