



MEMORANDUM
RESPONSE TO COMMISSION/BOARD REQUEST

DATE: June 6, 2013

SUBJECT: **OFFICE OF SUSTAINABILITY REPORT TO MEASURE J COMMISSION IN RESPONSE TO REQUEST FOR FUNDING RECOMMENDATIONS FOR THE PALM SPRINGS NON-MOTORIZED TRANSPORTATION PLAN.**

FROM: Office of Sustainability, Michele Mician, Manager

*BOOK
6/4/13*

ON BEHALF OF: City of Palm Springs Sustainability Commission

SUMMARY:

The Measure J Commission requested that staff review funding priorities of the City of Palm Springs Non-Motorized Transportation Plan (NMTP) adopted by City Council on October 5, 2011. Funding of the NMTP would require up to \$3,000,000 annually over a three year term for a comprehensive program that implements both construction and support facilities and service elements of the NMTP. This is inclusive of existing bike lane improvements and new bike lane construction, and facilities including community outreach and education, signage, kiosks, and bicycle parking including; corrals; single bicycle hitches; multiple bicycle hitches; bicycle trees and bike lockers.

BACKGROUND:

The Coachella Valley Association of Government (CVAG) NMTP planning process began with public workshops, stakeholder meetings, surveys, fieldwork, meetings with local jurisdictions and a review of existing transportation plans and policies that affect transportation. The purpose of the plan was to update the Non-Motorized Transportation for bikeways and trails each jurisdiction as well as revisions to plans for hiking and equestrian trails.¹

The individual bicycle plans for each jurisdiction had to be designed to comply with California Streets and Highways Code 891.2 that specifies what must go into a bicycle plan to be eligible for Bicycle Transportation Account funds. The new plan ensured that each city was eligible for Bicycle Transportation Account funds, and allowed for the City of Palm Springs to be more competitive when applying for other funds. In addition, by planning for existing and future bike lane improvements and construction on the Plan,

¹ CVAG Non-Motorized Transportation Plan Update, 2011, p.7

the City can guide developers more clearly to construct these bicycle lanes when changes are being made to roadways. The Coachella Valley Non-Motorized Transportation Plan was adopted by the Palm Springs City Council on October 5, 2011 as Appendix F of the 2007 General Plan.

Since the adoption of the plan by the City Council, policy makers and community groups have requested that the City of Palm Springs take a more dynamic approach in planning and constructing of bikeways and trails. As a result the City's Sustainability Commission has formed an NMTP subcommittee. In addition, a local group of bike advocates have formed a bicycling advocacy group and roundtable which meets monthly.

STAFF ANALYSIS:

Based on the *City of Palm Springs Bikeways Map* as adopted by City Council on October 5, 2011 there are 49.85 miles of bikeway improvements that are eligible for construction or improvements if funding is made available. Projects that have not been included in the total number of bikeway miles are: 1) bikeways that are currently scheduled to be striped, 2) projects that have been completed, 3) projects that are not under the jurisdiction of the City of Palm Springs, 4) projects that were not shown on the map adopted by City Council and 5) project areas that fall under CVAG's 1e11 Pathway. The breakdown based on the project priority is indicated below along with costs associated with all of the various elements that are part of a comprehensive NMTP.

Table 1

Priority Level as Referred to in the Adopted NMTP	Total Miles*
1 st Priority Bike Lane Construction and Improvement Projects	21.75 Miles
2 nd Priority Projects	19.6 Miles
3 rd Priority Projects	8.5 Miles
Total Miles	49.85

Priority Level	Miles Class II*	Miles Class III*
Top Priority	15.3	5.35
Second Priority	17.3	2.1
Third Priority	7.5	2.3
*NOTE: All numbers are approximate and bid proposals are necessary for exact costs of each segment proposed in the plan.	40.1	9.75
Total Costs Estimated Based on Recent City of Palm Springs Bid Responses:	\$1,002,500*	\$48,750*
Total Costs Estimated Based on Review of Plans Nationwide Including CVAG NMTP: Estimates (see Table 2 Below)	\$3,809,000*	\$146,250*

The costs to construct or improve a bike lane to meet the criteria of a Class I, II or III bike lane differ and depend on several factors. The following factors may influence the costs of segments within each route:

- Available Land - Public versus Private
- Geometry/Traffic - Safety Factors
- Accessibility/Connectivity
- Compatibility - Local/Regional/State Goals
- Construction Costs/Market costs at time of bidding
- Grades
- Aesthetic/Visual - Bicycling Environment & Enhancements
- Environmental/Historic Impacts

Table 2 below provides a summary of cost comparisons and averages the costs per mile of various classes of bike lane. This includes comparisons from the adopted City Non-Motorized Transportation Plan, City of Placerville, City of Lafayette and City of Fresno.

Table 2

Bike Lane Improvement and Construction	Qty.	Costs/Mile²	Location/Comments
Class I Bike Lanes	Per Mile	Est. \$400,000 to \$792,000 per mile	Note: CVAG Estimates are \$550,000 per mile of Priority Bike Lane. However, after City of Palm Springs Engineering and Special Projects review of NMTP Map it was determined there are no proposed Class I bike lanes under City jurisdiction.
Class II Bike Lanes	Per Mile	Est. \$25,000 - \$210,000 Average approx.: \$95,000 per mile	Note: City of Palm Springs Engineering and Bid Estimates for Class II range from approximately \$97,203 per mile for Engineering Estimate to between \$17,600 and \$37,570 for bid estimates received. (See Figure 5)
Class III Bike Lanes	Per Mile	Est. \$5,000 - \$25,000	Est. \$5,150 ³ is lowest bid estimate from most

² Estimates Based on those in Figures 1-4 attached

		Average \$15,000	recent City of Palm Springs bid proposal project 12-08.
--	--	------------------	---

Due to the large number of community requests for funding considerations to implement non-motorized transportation projects the Measure J Commission has requested input from City Staff as well as the Sustainability Commission regarding the costs of the adopted NMTP. In response to this request City staff, the Sustainability Commission NMTP subcommittee, bike advisory group and various stakeholders have suggested a number of improvements that enhance safety and improve accessibility. In addition, features that improve aesthetics, maneuverability and connectivity and inform educational opportunities were also recommended. Some of these include midblock crossings, parking, signage outreach plans and other innovative pilot projects that other cities may emulate. Images of potential projects are provided as attachments to this report.

Mid Block Crossing Examples:

Hybrid Pedestrian Beacon - A pedestrian hybrid beacon (sometime referred to as a HAWK) is a special type of beacon used to warn and control traffic at an un-signalized location and assist pedestrians in crossing a street at a marked crosswalk. As shown in the attached supplemental materials, they allow pedestrians to activate the beacon to stop conflicting traffic; the beacon remains dark during other times to maximize vehicle capacity.⁴

Rapid Rectangular Flash Beacon - Studies (FHWA-SA-09-009) have shown that Rectangular Rapid Flash Beacons (RRFB) can enhance safety by reducing crashes between vehicles and pedestrians at un-signalized intersections and mid-block pedestrian crossings by increasing driver awareness of potential pedestrian conflicts. RRFBs can be lower cost alternatives to traffic signals and hybrid signals and increase driver yielding behavior at crosswalks significantly when supplementing standard pedestrian crossing warning signs and markings. They are allowed by FHWA as an experimental treatment in approved locations.

Bicycle Parking Examples:

Bicycle parking may serve both a utilitarian purpose and provides an aesthetic enhancement to public facilities, neighborhoods and business districts. Recently, the City of Palm Springs Public Arts Commission and Sustainability Commission funded a call for artists to produce several bicycle racks that would become a part of the City’s public art collection. Each artist receives an award of \$5,000.00 for their work. A request for funding of additional bike racks of this nature is incorporated into this proposal. Other bicycle parking options are also presented below and accompanying images are attached.

³ CHRISP COMPANY Bid estimate Received for City Project 12-08 is an unusually low cost bid received for Class III
⁴ See Supplemental Material Packet p. 15

Signage and Outreach:

When there is improper signage or sign pollution the end user may find it difficult to navigate the various bicycle, hiking and pedestrian paths within the City. The lack of accurate signage and lack of uniformity of signage was a common complaint found on surveys and in stakeholder meetings throughout the NMTP planning process and after in bicycle advisory group meetings. By conducting a wayfinding study and creating an inventory of signage the City can provide a higher level of service and improve the non-motorized transportation system. Wayfinding refers to directional signs, distance markers, posted maps, banners, information kiosks and other aides for getting people places. Wayfinding systems help pedestrians as well as bicyclists find their way in a city. A City may develop a wayfinding sign system that will include uniform geographically oriented maps, signs, and kiosks designed to serve all modes of non-motorized transportation.

The City of Palm Springs Sustainability Commission has hired a consultant to identify and assist in the formation of Bike Friendly Business Districts (BFBD). BFBD's show an overall community benefit; reduced crime, enhanced curbside appeal and improved economic climate. Should a BFBD plan and districts form they would benefit greatly from a wayfinding program. The table below details costs for projects proposed during the first year of Measure J funding for the NMTP.

Table 3

Year One Proposed Pilot Projects and Facilities – Est. \$400,000			
Project as Suggested via Stakeholder Input	Qty.	Costs⁵	Location/Comments
Green Shared Lane	26,000 square feet	\$1.00/sq. foot	Estimated costs are \$30,000 annually per mile of green shared lanes. ⁶ A proposed pilot program of ½ miles of green lane in two areas estimated total is \$90,000 for the first three years.
Thermoplast Green Lanes ⁷	Pilot Project - 2 or More- Average 4' X	\$4,000-\$5,000 per area	Thermoplastic materials are usually one or two per intersection. Usually

⁵ All Costs are estimates and are subject to City of Palm Springs Purchasing Department Bidding and Purchasing Requirements

⁶ Interview on 6/3/2013 with Simon Blenski of City of Minneapolis Planning Department, simon.blenski@minneapolismn.gov

⁷ Interview on 6/3/2013 with Simon Blenski of City of Minneapolis Planning Department, simon.blenski@minneapolismn.gov

	70' foot for most intersections		used where there are many right turns across a bike lane. Est. \$10,000
Bike corrals	4	\$3,000 ⁸	Palm Canyon - one parking spot every 4-5 blocks downtown/uptown. Total \$12,000
Custom Bike Racks	20	\$976.05	Total \$19,521
Bike Racks for City Facilities	10	\$976.05	Total \$9,760.50
Bike Stall	5	\$1045.00	Total \$5,225.00
Bike Hitches for Downtown Businesses	40	\$412.07	Total \$16,482.80
Bridge Crossings/Mid-Block Crossings and Existing Trail Improvements	TBD – 3 or greater	Ranges from \$40,000 to \$60,000	Costs depend on width of the street and the length of mast-arm poles. Total Est. \$180,000 Operation costs are estimated to be \$2,000 per year.
Support Services/Outreach	Quarterly	\$50,000	Bike Advisory Roundtable support, outreach and marketing, maps, community roundtables, consulting services.
Wayfinding Study specific to the NMTP, Signage Inventory, Web Based Interactive GIS based map, and Signage	Minimum Every 5 Years	TBD – Approx. \$250,000	See page 16- 19 Supplemental Materials Packet

FISCAL IMPACT:

The Sustainability Commission has budgeted funds to further the NMTP objectives in several accounts. This includes funding for contractual services such as grant writing, advertising, community input and surveys and marketing. Other sources of funding include cash and in-kind opportunities such as Bikes Belong Grants, League of American Bicyclists and local and regional partnerships. The City's Sustainability Commission has voted to allocate a minimum of \$50,000 from the Sustainability Budget

⁸ Costs based on City of Portland and Chicago corral costs and quotes provided from on-line vendors http://portlandafout.org/w/Bike_corral; <http://www.chicagobikes.org/bikecorrals.php>

Account Number 125-1270-58033 to NMTP projects for Fiscal Year 2013-14. At the May 21, 2013 regular meeting of the Sustainability Commission a motion unanimously passed to recommend to the Measure J Commission that funding up to \$3,000,000 per year over the course of three years for a total of up to \$9,000,000 be considered to further implement a comprehensive NMTP.



Michele Mician
Sustainability Manager

Attachments:

- A. Excerpts from Various City's NMTP or Equivalent Bikeway System Implementation Plan
- B. Supplemental Material, Examples of Bikeway Improvement Features
 - a. Photos of Bike Parking Options
 - b. Images of Greenway and Sharrows Designs
 - c. Crosswalk and other Mid-Block Crossing Tools

**Excerpts from Various City's NMTP or Equivalent Bikeway System
 Implementation Plan Re: Costs per Mile for Various Classes of Bike Lane**

- Figure 1 City of Placerville
- Figure 2 City of Lafayette
- Figure 3 City of Fresno
- Figure 4 CVAG NMTP Estimates
- Figure 5 City of Palm Springs Class II and III Recent Estimates and Bid Response

Figure 1

TABLE 18	
City of Placerville Bikeway Cost Estimates	
Facility Type	Estimated Cost Per Mile
CLASS I BIKE PATH <ul style="list-style-type: none"> • Cost to grade and pave an 8-foot wide surface with 2-foot graded shoulders on each side. (Does not include amenities such as landscaping, lighting, irrigation, phones etc.) 	\$400,000
CLASS II BIKE LANES <ul style="list-style-type: none"> • Signing and striping only with minor shoulder improvement: Cost to install pavement striping, markings, and signs on both sides of an existing 4-foot roadside shoulder • Signing and striping plus major shoulder improvement: Cost to install 4-foot strips of pavement, pavement striping, markings and signs on both sides of a roadway 	 \$25,000 \$300,000
CLASS III BIKE ROUTE <ul style="list-style-type: none"> • Signing only • Signing plus moderate shoulder improvement: Cost to install 2-3 foot strips of pavement, a 6-inch fog line and signs on both sides of the roadway 	 \$3,000 \$150,000

Figure 2

7. Cost Estimates and Funding

Table 7-1
Cost Summary of Proposed Bikeways

Bikeway Type	Miles	Estimated Cost
Class I	4.52	\$ 11,134,000
Class II	2.29	\$ 203,000
Bike Boulevard	2.99	\$ 703,000
Shared Lane	0.62	\$ 23,000
Class III	21.87	\$593,000
Total	32.29	\$ 12,656,000

*Note: Costs are in 2006 dollars.
 Class I refers to off-street bike paths, Class II refers to on-street bike lanes, Class III refers to signed on-street bike routes.*

Table 7-2
Cost Summary of Proposed High Priority Bikeways

Bikeway Type	Miles	Estimated Cost
Class I	2.54	\$1,305,000
Class II	0.26	\$12,000
Bike Boulevard	1.80	\$337,000
Shared Lane	.62	\$23,000
Class III	19.82	\$531,000
Total	25.04	\$2,208,000

*Note: Costs are in 2006 dollars.
 Class I refers to off-street bike paths, Class II refers to on-street bike lanes, Class III refers to signed on-street bike routes.
 Class I costs include \$75,000 for EBMUD Aqueduct ROW feasibility study between Walter Costa Trail and Brown Ave.*

Figure 3

CHAPTER 8

IMPLEMENTATION

Implementation of the proposed bikeway system will require funding from local, State, and Federal sources. To facilitate funding efforts, this section presents conceptual construction (capital) and ongoing operations and maintenance (O&M) cost estimates for the proposed system, along with a brief description of past expenditures for bikeway and pedestrian facilities.

COST ESTIMATES

Table 8.1 contains a unit cost summary for constructing the proposed bikeway facilities shown in the Recommended Network Maps in Chapter 5. These cost estimates are based on costs experienced in other California communities, recent cost estimates developed as part of traffic impact fee and mitigation analysis, and previous bikeway planning projects in the City of Fresno. The cost estimates include engineering, permitting, right-of-way, construction, and inspection costs. These cost estimates should be used only to develop generalized construction cost estimates and project prioritization. More detailed estimates can be developed after any feasibility analysis, preliminary engineering, and design.

TABLE 8.1 –
 GENERALIZED UNIT COSTS FOR BIKEWAY CONSTRUCTION

Facility Type	Cost	Units
Class I Bike Path	\$792,000	Per Mile
Class I Bike Path with Canal Decking	\$15.8 million	Per Mile
Class I Bike Path Crossings	\$1.1 – \$11.2 million	Each
Class II Bike Lane – Restriping Only	\$211,000	Per Mile
Class II Bike Lane – Additional Width Without Moving Curb or Gutter	\$739,000	Per Mile
Class II Bike Lane – Additional Width With Moving Curb and Gutter	\$3.17 million	Per Mile
Class III Bike Route – Signage and Pavement Stencils	\$5,300	Per Mile
Traffic Signal Cost (Signal Reconstruction)	\$100,000	Each
Traffic Signal Cost (Signal Modification)	\$12,000	Each

Source: Mark Thomas & Company, 2010

Figure 4

Past Expenditures for Bicycle Facilities

Palm Springs had one project funded with SB-821 funds in 1996. This project was for a Bike Lane and Signage Project for all City bikeways in the amount of \$79,000. In the early 1990s Palm Springs received \$383,000 from Measure A and SB-821 funds for a bicycle bridge over the Palm Canyon Wash.

Future Financial Needs

The City of Palm Springs has the following future financial needs:

- Top Priority Bikeways: 25.8 miles, \$14,166,000
- 2nd Priority Bikeways: 33.4, \$7,568,000
- 3rd Priority Bikeways: 21.9, \$3,012,000
- Total: 81 miles, \$24,746,000
- Bicycle Parking Program: \$25,000
- Total Capital Financial Need: \$24,771,000
- Annual Class I Bike Path Maintenance: 22.7 miles, \$71,914

Figure 5

ENGINEER'S ESTIMATE						
<u>BICYCLE LANES</u>						
Agency: City of Palm Springs						
Date of Estimate: February 25, 2013						
Prepared by: George F. Farago, P.E.						
AVENIDA CABALLEROS from Vista Chino to San Rafael Dr., 1 mi. and from Tamarisk Rd. to Alejo Rd., 1,300 ft.						
No.	Description	Quantity	Unit	Unit Price	Total	
1	Initial Mobilization	1	LS	\$6,100.00	\$6,100.00	
2	Traffic Control	1	LS	\$18,500.00	\$18,500.00	
3	Bike line (6" thermoplastic) (5,160+1,300) ft x 2	12,920	LF	\$2.25	\$29,070.00	
4	Bike line (4" thermoplastic)	12,920	LF	\$2.00	\$25,840.00	
5	Removal and replacement of existing traffic striping	1	LS	\$25,000.00	\$25,000.00	
6	Bike lane markings & legend	26	EA	\$550.00	\$14,300.00	
7	Bike lane sign	12	EA	\$275.00	\$3,300.00	
				Total Construction =	\$122,110.00	
				Contingency	\$12,211.00	
				TOTAL =	\$134,321.00	
VIA ESCUELA (from Indian Canyon Drive to Sunrise Way) 1 mi.						
No.	Description	Quantity	Unit	Unit Price	Total	
1	Initial Mobilization	1	LS	\$700.00	\$700.00	
2	Traffic Control	1	LS	\$2,000.00	\$2,000.00	
3	Bike lane markings (sharrows)	20	EA	\$400.00	\$8,000.00	
4	Bike lane sign	10	EA	\$275.00	\$2,750.00	
				Total Construction =	\$13,450.00	
				Contingency	\$1,345.00	
				TOTAL =	\$14,795.00	
BARISTO ROAD (from Avenida Caballeros to El Cielo Road) 1.5 mi.						
No.	Description	Quantity	Unit	Unit Price	Total	
1	Initial Mobilization	1	LS	\$6,600.00	\$6,600.00	
2	Traffic Control	1	LS	\$20,000.00	\$20,000.00	
3	Bike line (6" thermoplastic) 5,200 ft x 1.5 mi x 2	15,600	LF	\$2.25	\$35,100.00	
4	Bike line (4" thermoplastic)	15,600	LF	\$2.00	\$31,200.00	
5	Removal and replacement of existing traffic striping	1	LS	\$25,000.00	\$25,000.00	
6	Curb Paint (red)	2,000	LF	\$1.00	\$2,000.00	
5	Bike lane markings & legend	14	EA	\$550.00	\$7,700.00	
6	Bike lane sign	18	EA	\$275.00	\$4,950.00	
				Total Construction =	\$132,550.00	
				Contingency	\$13,255.00	
				TOTAL =	\$145,805.00	
				TOTAL =	\$294,921.00	
				TOTAL without contingency =	\$268,110.00	

NON MOTORIZED TRANSPORTATION PLAN FUNDING REQUESTS

BICYCLE LANES											
CITY PROJECT 12-08											
BID SUMMARY										Bid Opening: April 2, 2013	
BID SCHEDULE A					ENG.	CHRISP COMPANY		J.P. STRIPING		P C I	
BID ITEM	ITEM DESCRIPTION	QUANT.	UNIT	UNIT P.	Estimate	UNIT PR.	TOTAL	UNIT PR.	TOTAL	UNIT PR.	TOTAL
1	Initial Mobilization	1	LS	\$7,000.00	\$7,000.00	\$1,200.00	\$1,200.00	\$1,080.00	\$1,080.00	\$3,000.00	\$3,000.00
2	Traffic Control	1	LS	\$18,500.00	\$18,500.00	\$1,400.00	\$1,400.00	\$3,800.00	\$3,800.00	\$5,000.00	\$5,000.00
3	Bike Lane Line (6" thermoplastic)	15,520	LF	\$2.25	\$34,920.00	\$0.45	\$6,984.00	\$0.45	\$6,984.00	\$0.95	\$14,744.00
4	Bike Lane Line (4" thermoplastic)	15,520	LF	\$2.00	\$31,040.00	\$0.38	\$5,897.60	\$0.35	\$5,432.00	\$0.85	\$13,192.00
5	Removal & Replace.of Exist. Str.	1	LS	\$30,000.00	\$30,000.00	\$6,800.00	\$6,800.00	\$13,723.25	\$13,723.25	\$6,000.00	\$6,000.00
6	Bike Lane Markings	30	EA	\$550.00	\$16,500.00	\$30.00	\$900.00	\$135.00	\$4,050.00	\$250.00	\$7,500.00
7	Bike Lane Signs	14	EA	\$275.00	\$3,850.00	\$215.00	\$3,010.00	\$235.00	\$3,290.00	\$450.00	\$6,300.00
				TOTAL	\$141,810.00	TOTAL	\$26,191.60	TOTAL	\$38,359.25	TOTAL	\$55,736.00
BID SCHEDULE B					ENG.	CHRISP COMPANY		J.P. STRIPING		P C I	
BID ITEM	ITEM DESCRIPTION	QUANT.	UNIT	UNIT P.	Estimate	UNIT PR.	TOTAL	UNIT PR.	TOTAL	UNIT PR.	TOTAL
1	Initial Mobilization	1	LS	\$700.00	\$700.00	\$1,000.00	\$1,000.00	\$450.00	\$450.00	\$1,500.00	\$1,500.00
2	Traffic Control	1	LS	\$2,000.00	\$2,000.00	\$800.00	\$800.00	\$1,100.00	\$1,100.00	\$3,000.00	\$3,000.00
3	Bike Shared Lane Markings	20	EA	\$400.00	\$8,000.00	\$60.00	\$1,200.00	\$82.50	\$1,650.00	\$350.00	\$7,000.00
4	Bike Route Signs	10	EA	\$275.00	\$2,750.00	\$215.00	\$2,150.00	\$245.00	\$2,450.00	\$450.00	\$4,500.00
				TOTAL	\$13,450.00	TOTAL	\$5,150.00	TOTAL	\$5,650.00	TOTAL	\$16,000.00
BID SCHEDULE C					ENG.	CHRISP COMPANY		J.P. STRIPING		P C I	
BID ITEM	ITEM DESCRIPTION	QUANT.	UNIT	UNIT P.	Estimate	UNIT PR.	TOTAL	UNIT PR.	TOTAL	UNIT PR.	TOTAL
1	Initial Mobilization	1	LS	6,600	\$6,600.00	\$1,200.00	\$1,200.00	\$950.00	\$950.00	\$3,000.00	\$3,000.00
2	Traffic Control	1	LS	20,000	\$20,000.00	\$1,400.00	\$1,400.00	\$3,250.00	\$3,250.00	\$5,000.00	\$5,000.00
3	Bike Lane Line (6" thermoplastic)	15,600	LF	\$2.25	\$35,100.00	\$0.45	\$7,020.00	\$0.45	\$7,020.00	\$0.95	\$14,820.00
4	Bike Lane Line (4" thermoplastic)	11,300	LF	\$2.00	\$22,600.00	\$0.38	\$4,294.00	\$0.35	\$3,955.00	\$0.85	\$9,605.00
5	Removal & Replace.of Exist. Str.	1	LS	\$25,000.00	\$25,000.00	\$6,200.00	\$6,200.00	\$23,458.75	\$23,458.75	\$9,630.00	\$9,630.00
6	Curb Painting (red)	2,000	LF	\$1.00	\$2,000.00	\$1.00	\$2,000.00	\$1.25	\$2,500.00	\$1.00	\$2,000.00
7	Bike Lane Markings	14	EA	\$550.00	\$7,700.00	\$30.00	\$420.00	\$135.00	\$1,890.00	\$300.00	\$4,200.00
8	Bike Lane Signs	18	EA	\$275.00	\$4,950.00	\$215.00	\$3,870.00	\$235.00	\$4,230.00	\$450.00	\$8,100.00
				TOTAL	\$117,350.00	TOTAL	\$26,404.00	TOTAL	\$47,253.75	TOTAL	\$56,355.00
				A+B+C=	\$272,610.00	A+B+C=	\$57,745.60	A+B+C=	\$91,263.00	A+B+C=	\$128,091.00



**Supplemental Information Presented by
City of Palm Springs Office of Sustainability
on Behalf of the Sustainability Commission
for Consideration by the Measure J Oversight Commission
At their June 6, 2013 Regular Meeting**

Re: Non Motorized Transportation Plan Implementation

Green Shared Lanes



Green shared lane markings are similar to regular shared lane markings or “sharrows” but also include a solid green background. Like regular shared lanes, green shared lanes are used to mark a designated bike route. Placed toward the center of the travel lane, they encourage bicyclists to ride in a safe position outside of the door zone (where driver’s side doors of parked cars open).

<http://www.ci.minneapolis.mn.us/bicycles/bicycling101/green-shared-lane>

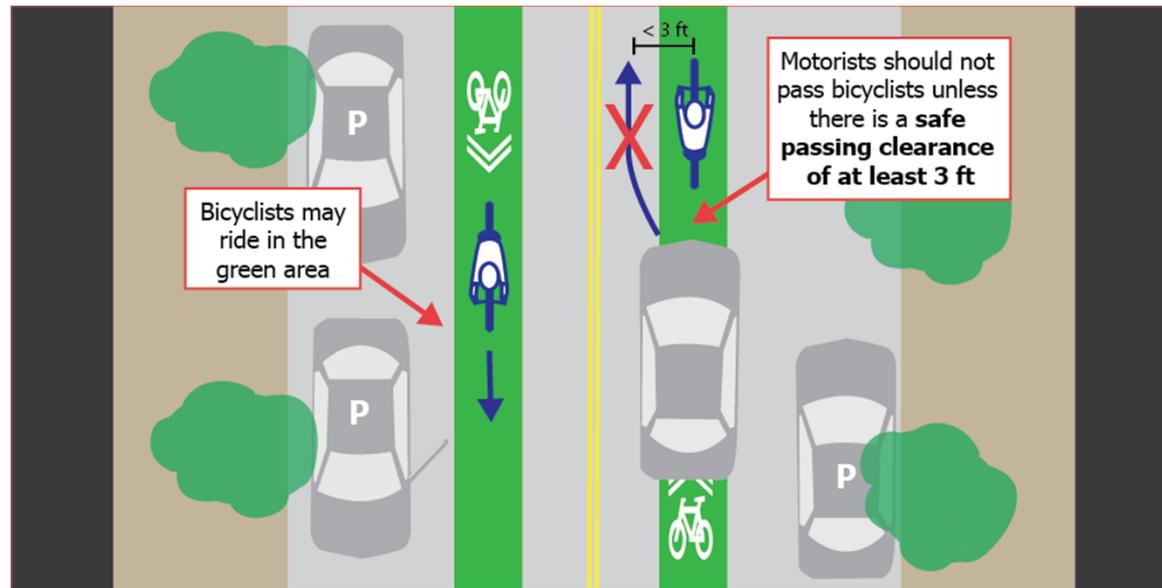
Green Shared Lanes



Green shared lanes do not designate any part of the roadway as either being exclusive to motorists or exclusive to bicyclists. Rather, the green background highlights that the travel lane is shared and that motorists should expect to see bicyclists.

Green Shared Lanes

Riding in the green area keeps cyclists out of the door zone and keeps them visible to motorists at cross streets.



<http://www.ci.minneapolis.mn.us/bicycles/bicycling101/green-shared-lane>



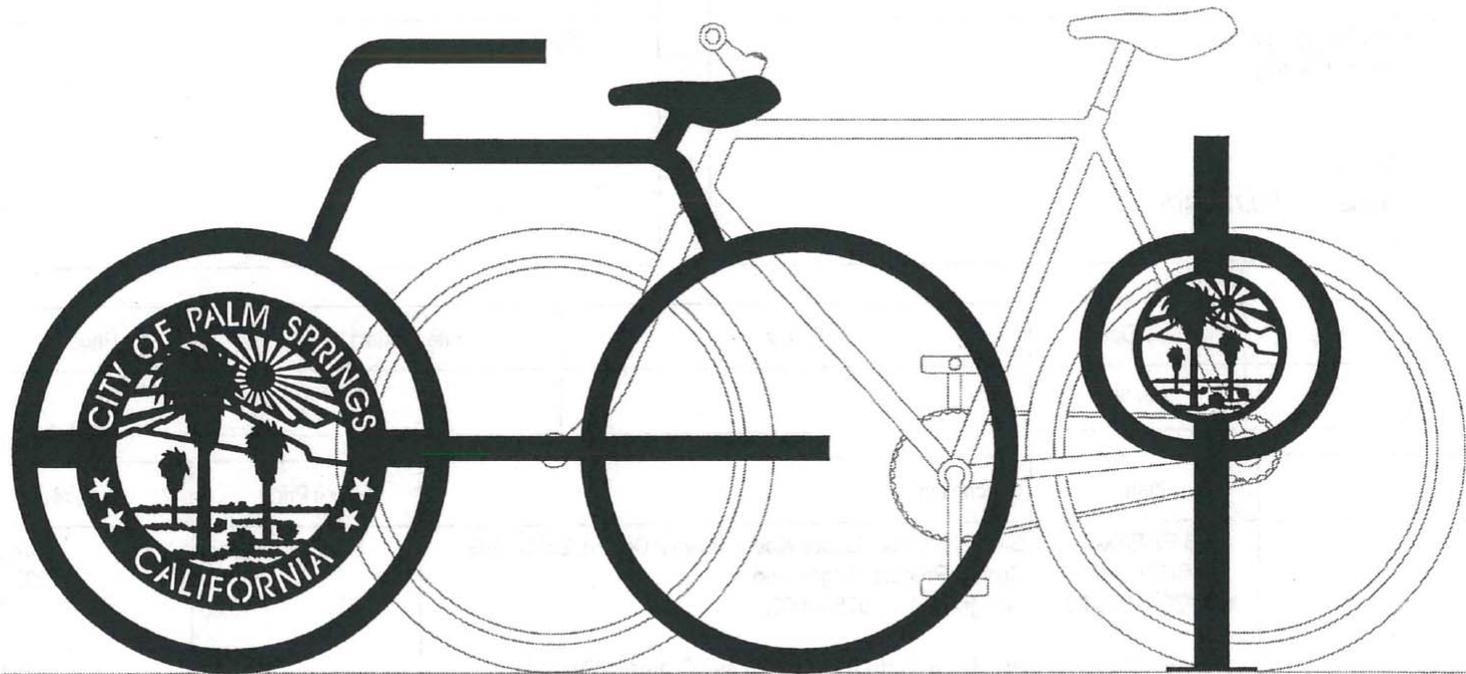
Bicycle Parking Options



Bike Racks as Art

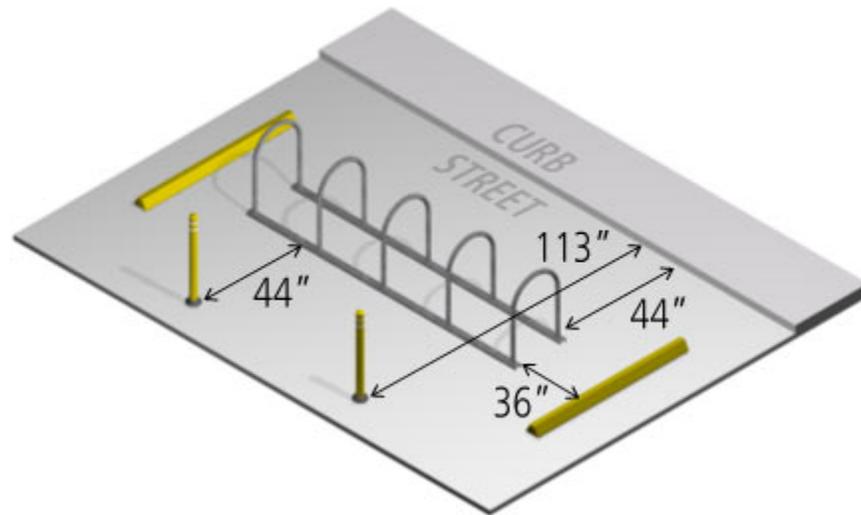


Approved Bike Rack and Hitch Designs 2013





Bike Corrals





Bike Corrals

Mid Block Crossing Examples



Electronic Enhancements In-Roadway Warning Lights

- Enhancement feature at marked crosswalks
- 2003 and 2009 MUTCD provide standard and guidance statements regarding use
 - Shall only be used at marked crosswalks accompanied with warning signs





***Smart Crosswalk™ Installation — Cisco System Campus, Petaluma California
Automatic Bollard Activation, LED Enhanced Pedestrian Crossing ActiveSign™***

Mid Block Crossing Examples

Electronic Enhancements Illumination at Crossings

- Addresses safety of pedestrians at night

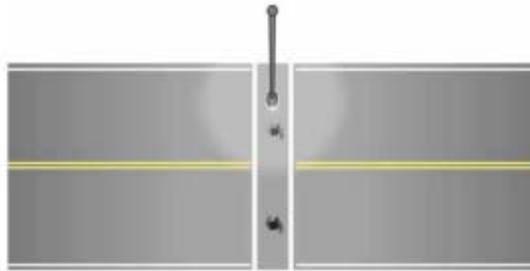


Figure 11. Drawing. Traditional midblock crosswalk lighting layout.

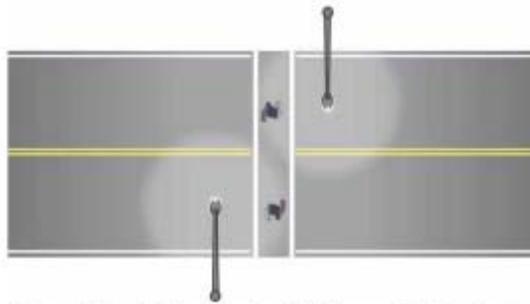


Figure 12. Drawing. New design for midblock crosswalk lighting layout.

Pedestrian Crossings | Kittelson & Associates, Inc.

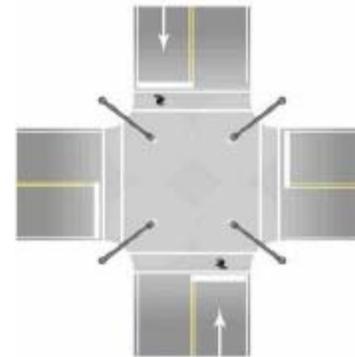


Figure 13. Drawing. Traditional intersection lighting layout.

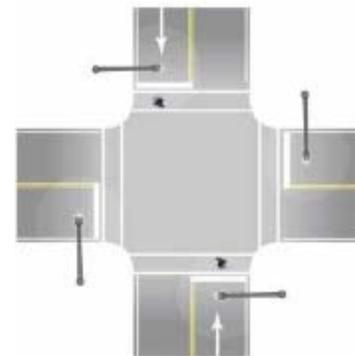


Figure 14. Drawing. New design for intersection lighting layout for crosswalks.

44

Mid Block Crossing Examples



In-roadway flashing lights are a relatively new device to help enhance crosswalk visibility

In Roadway Flashing Lights are intended to call extra attention to pedestrians in crosswalks where signage or other design treatments are deemed insufficient. The flashers can be activated passively with infra-red or microwave detectors, or actively by pedestrian pushbuttons.



HAWK Beacon in Tucson, AZ
Photo Credit: Michael Cynecki

Outreach and Education



Wayfinding



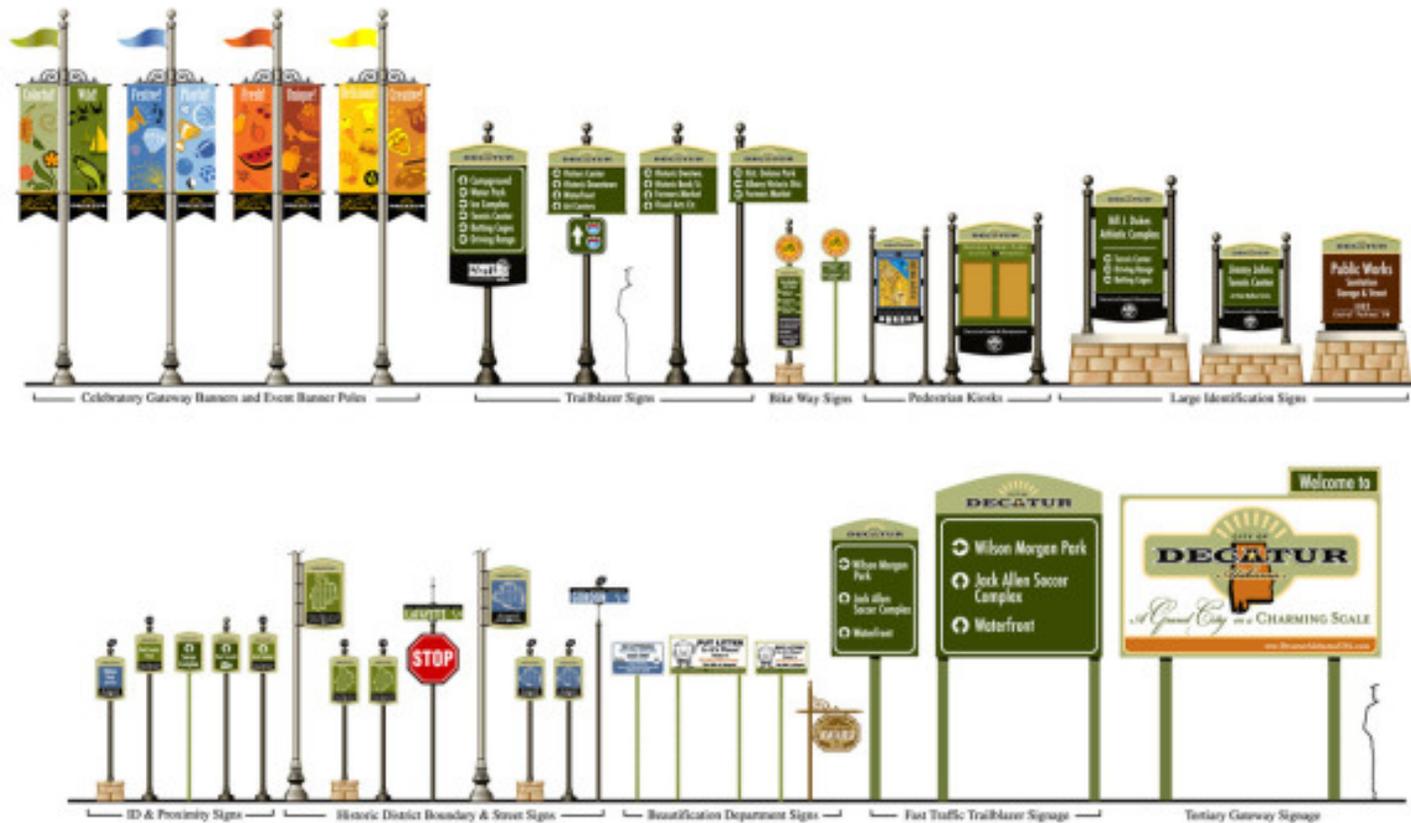
www.restreets.org/taxonomy/term/2



36commutingsolutions.org/us-36-projects/us-36-first-and-final-mile-study/

Wayfinding

CITY OF DECATUR, ALABAMA WAYFINDING SYSTEM



© 2008 McWhorter Communications, Inc.

Measure J NMTP Supplemental
Materials from Office of
Sustainability 6/4/2013

Wayfinding Signage



<http://northstarideas.blogspot.com/2011/09/cape-girardeau-branded-wayfinding.html>