

Agency:	Gilbert		Title of Project:	San Tan Vista Trail at Ray Road HAWK		
Date:	10/7/2020					
Contact Name and Title:		Phone:		E-Mail:		
Aaron Pinkerton		(480) 229-1249		aaron.pinkerton@gilbertaz.gov		
Roadway Safety Program (RSP) Project Scope						
1.	Describe your safety improvement project in detail: (50 words or less)					
1a.	The proposed project includes installing a pedestrian hybrid beacon (HAWK) on Ray Rd at the San Tan Vista Trail crossing to provide a safe crossing for pedestrians and bicyclists using the trail. Number 10 on Town's list of Top Unsignalized Trail Crossings for Safety Improvements.					
2.	Describe the project location, include pertinent demographic and land development information:					
2a.	The HAWK will be located on Ray Road, approximately 1,100 feet east of Val Vista Drive.					
3	For projects on State System (ADOT):	BMP: (Begin Milepost)		EMP: (End Milepost)		
4.	What network screening method was used to identify this project?			<input type="checkbox"/> MAG	<input type="checkbox"/> ADOT	<input checked="" type="checkbox"/> Other (Below)
4a	The Town's Safety Evaluation of Trail Crossings study.					
5.	Was this project identified as a recommendation in a study? If so, what kind? (check all that apply)					
5a	<input type="checkbox"/> RSA <input type="checkbox"/> PA <input type="checkbox"/> SRTS Study <input type="checkbox"/> LASS Study <input checked="" type="checkbox"/> Other					
6.	Was the project identified using an agency adopted predictive safety analysis?			<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO	
7.	What is the safety justification for the proposed project?					
7a	The CMF Clearinghouse gives a 55% percent reduction in pedestrian crashes and 29% reduction in all crashes after installation of a HAWK. While this location has fortunately not experienced any fatal or injury pedestrian or bike crashes, it is the site of a fatal motorcycle crash. Trail users must cross 6 lanes of high speed traffic (45 mph speed limit) on Ray Road with no traffic control.					
8.	Is Public outreach required for your project? If "yes" Provide what was done, the date(s) and outcomes. (Attach documentation if applicable)					
8a	No					
9.	What safety related public education will your agency be providing before placing the safety improvement in service, if applicable?					
9a	The Town can post information on the proper use of HAWKS.					
10.	Equity: Input the largest percent for each element for the one-mile radius or offset (Click on the hyperlinks in the text to open maps. See directions on side on maps):					
	65 yrs and Older	Minority Groups	No Vehicle Households	Disabled	Living in Poverty	
10a	11%	37%	20%	8.90%	10.00%	
11.	Avg Daily Traffic (ADT) Volume:		23,800	Year Collected:		2019
12.	Total Crash Frequency:		2	Crash Rate (MVM or MEV) (Insert from "Crash Rate" Work Sheet):		0.05
13.	What is the posted speed limit?		45	Benefit/Cost:		11.2

PROJECT COST ESTIMATE WORKSHEET

(Cost Estimates Are Required Regardless of Programming)

PROCUREMENT	REQUESTED PROGRAMMING	Location Description	Ray Road, 1,100 feet east of Val Vista Drive			
		Work Description	Pedestrian Hybrid Beacon (HAWK)			
Funding Source		RSP				
Preferred Year to Program Work		2020				
COST ESTIMATE FOR PROCUREMENT		UNITS	QUANTITY	UNIT COST	TOTAL	
PROCUREMENT/INSTALL	Place for entering item #1	EA			\$ -	
	Place for entering item #2	EA			\$ -	
TOTAL – PROCUREMENT					\$ -	
DESIGN	REQUESTED PROGRAMMING (Complete if Item will be programmed in the MAG TIP)	Location Description	Ray Road, 1,100 feet east of Val Vista Drive			
		Work Description	Pedestrian Hybrid Beacon (HAWK)			
		Funding Source	Local			
		Preferred Year to Program Work	2020			
	COST ESTIMATE FOR DESIGN		UNITS	QUANTITY	UNIT COST	TOTAL
	PRELIMINARY ENGINEERING (15% plans) (Required for Budget)	Topographic Survey	LS	1		\$ -
		Design Concept Report (DCR)	LS	1		\$ -
		Federal Project Environmental Determination	LS	1		\$ -
		HAZMAT Assessment	LS	1		\$ -
		SUBTOTAL – PRELIMINARY ENGINEERING COSTS				
	FINAL DESIGN (30, 60, 95, 100% plans) (Required for Budget)	Plans, Specifications, Cost Estimates, Bidding	LS	1	30,000.00	\$ 30,000.00
		Geotechnical Report	LS	1		\$ -
		Drainage Report	LS	1		\$ -
		SWPPP	LS	1		\$ -
		SUBTOTAL – FINAL DESIGN COSTS				
TOTAL PRELIMINARY ENGINEERING AND DESIGN COST AVAILABLE FOR PROGRAMMING					\$ 30,000.00	

PROJECT COST ESTIMATE WORKSHEET

(Cost Estimates Are Required Regardless of Programming)

CONSTRUCTION	REQUESTED PROGRAMMING (Complete only if Construction will be programmed in the MAG TIP)	Location Description	Ray Road, 1,100 feet east of Val Vista Drive			
		Work Description	Pedestrian Hybrid Beacon (HAWK)			
		Funding Source	RSP			
		Preferred Year to Program Work	2021			
COST ESTIMATE FOR CONSTRUCTION			UNITS	QUANTITY	UNIT COST	TOTAL
UTILITY RELOCATIONS (Required for Budget, May be 0 if no Utilities) The cost of minor utility relocation for the safety improvement project are eligible if the costs/activities involved are directly related to the safety project. Generally, burying overhead utilities is cost prohibitive		Relocate 69 kv (+) Poles	EA	1		\$ -
		Relocate/Underground 12 kv lines	LF			\$ -
		Relocate/Underground Irrigation Canal	LF			\$ -
		SWG Relocations	LS	1		\$ -
		Telephone/Cable TV Relocations	LS	1		\$ -
		Upgrade Railroad Crossings	LS	1		\$ -
	SUBTOTAL - UTILITY RELOCATION COSTS					
CONSTRUCTION (Required for Budget)		CONSTRUCTION SURVEY AND LAYOUT	LS	1	5,000.00	\$ 5,000.00
		SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK	SF	500	10.00	\$ 5,000.00
		OBLITERATE PAVEMENT MARKINGS	LF	500	3.00	\$ 1,500.00
		CONSTRUCT NEW CONCRETE CURB RAMP (MAG STD DTL 238)	EA	2	8,000.00	\$ 16,000.00
		12" SOLID TRANSVERSE WHITE LINE (90 MIL ALKYD THERMOPLASTIC)	LF	300	10.00	\$ 3,000.00
		INSTALL WARNING, MARKER, OR REGULATORY SIGN PANEL	SF	48	40.00	\$ 1,920.00
		PULL BOX (NO. 7 WITH 8" EXTENSION) (PE-087-1)	EA	2	1,000.00	\$ 2,000.00
		POLE FOUNDATION (TYPE R)	EA	2	3,500.00	\$ 7,000.00
		PEDESTRIAN PUSH BUTTON	EA	2	600.00	\$ 1,200.00
		POLE (TYPE R)	EA	2	8,000.00	\$ 16,000.00
		MAST ARM (45 FT.)	EA	2	4,500.00	\$ 9,000.00
		TRAFFIC SIGNAL FACE, TYPE T	EA	8	800.00	\$ 6,400.00
		PEDESTRIAN SIGNAL (COMPLETE COUNTDOWN SIGNAL)	EA	2	800.00	\$ 1,600.00
		LUMINAIRE (GE LED) (ERL2 0 23 C3 30 D DARK BRONZE)	EA	2	1,200.00	\$ 2,400.00
		LUMINAIRE MAST ARM (20 FT.) (TAPERED)	EA	2	2,000.00	\$ 4,000.00
		INTERNALLY ILLUMINATED STREET NAME SIGN	EA	2	7,000.00	\$ 14,000.00
		ELECTRICAL CONDUIT (2-4 INCH) (DIRECTIONAL DRILL)	LF	175	75.00	\$ 13,125.00
		ELECTRICAL CONDUIT (TRENCH)	LF	240	150.00	\$ 36,000.00
		CONDUCTORS	LS	1	8,500.00	\$ 8,500.00
		CONTROL CABINET	EA	1	31,000.00	\$ 31,000.00
		CONTROL CABINET FOUNDATION (ADOT TS2-4)	EA	1	3,000.00	\$ 3,000.00
		METER PEDESTAL CABINET	EA	1	4,000.00	\$ 4,000.00
		METER PEDESTAL FOUNDATION	EA	1	1,500.00	\$ 1,500.00
		INSTALL CONCRETE EQUIPMENT ACCESS PAD	SF	50	25.00	\$ 1,250.00
		PROVIDE ELECTRICAL SERVICE	LS	1	5,000.00	\$ 5,000.00
		CCTV CAMERA	EA	1	8,000.00	\$ 8,000.00
		RADIO COMMUNICATION LINK	LS	1	8,000.00	\$ 8,000.00
	SUBTOTAL - CONSTRUCTION COST					
MOBILIZATION AND ADMINISTRATION COSTS		CONTRACTOR MOBILIZATION (Typically 8% of construction cost)			8%	\$ 17,231.60
		TRAFFIC CONTROL (0-8% of construction cost)			8%	\$ 17,231.60
		CONSTRUCTION CONTINGENCIES (Typically 5% of construction cost)			5%	\$ 10,769.75
		CONSTRUCTION ADMINISTRATION (Averaging 18% of construction cost)			18%	\$ 38,771.10
SUBTOTAL - MOBILIZATION & ADMINISTRATION COSTS						\$ 84,004.05
TOTAL UTILITIES, CONSTRUCTION AND MOBILIZATION FOR PROGRAMMING						\$ 299,399.05
TOTAL COST ESTIMATE						\$ 329,399

Budget and Signature Page

Please describe the agency programming of this project in the agency's CIP

Phase	Location Description	Work Description	Year to be Programmed	Funding Source	Amount
Design	Ray Road, 1,100 feet east of Val Vista Drive	Pedestrian Hybrid Beacon (HAWK)	2020	Local	\$ 30,000
Construction	Ray Road, 1,100 feet east of Val Vista Drive	Pedestrian Hybrid Beacon (HAWK)	2021	RSP	\$ 299,399
Total Cost					\$ 329,399

Signature: To be signed with printed hard copy that is sent to MAG

As the jurisdiction's manager/administrator or designated representative, I certify that the information contained in this application is accurate and complete and that the local funds for this project will be included in the Lead Agency's local current CIP/TIP or budget document if the project is selected for MAG Roadway Safety Program funding. I also certify the Lead Agency's commitment to maintain or operate the facility.

Signature: 

Name: Rob Bohr

Title: Director of Intergovernmental Affairs

Date: 9/30/2020

RSP Application Benefit-Cost Tabulation Sheet

Agency:	Gilbert	Title of Project:	San Tan Vista Trail at Ray Road HAWK
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Annual Benefit Tabulation

Severity	Annual Average	Estimated CRF* Reduction	Total Reduction	Unit Cost	Annual Benefit
Fatal	0.20	29%	0.06	\$9,515,371	\$551,892
Incapacitating Injury	0.00		0.00	\$550,499	\$0
Non-Incapacitating	0.00		0.00	\$149,132	\$0
Possible Injury	0.00		0.00	\$103,145	\$0
Total Annual Benefits					\$551,892

Costs

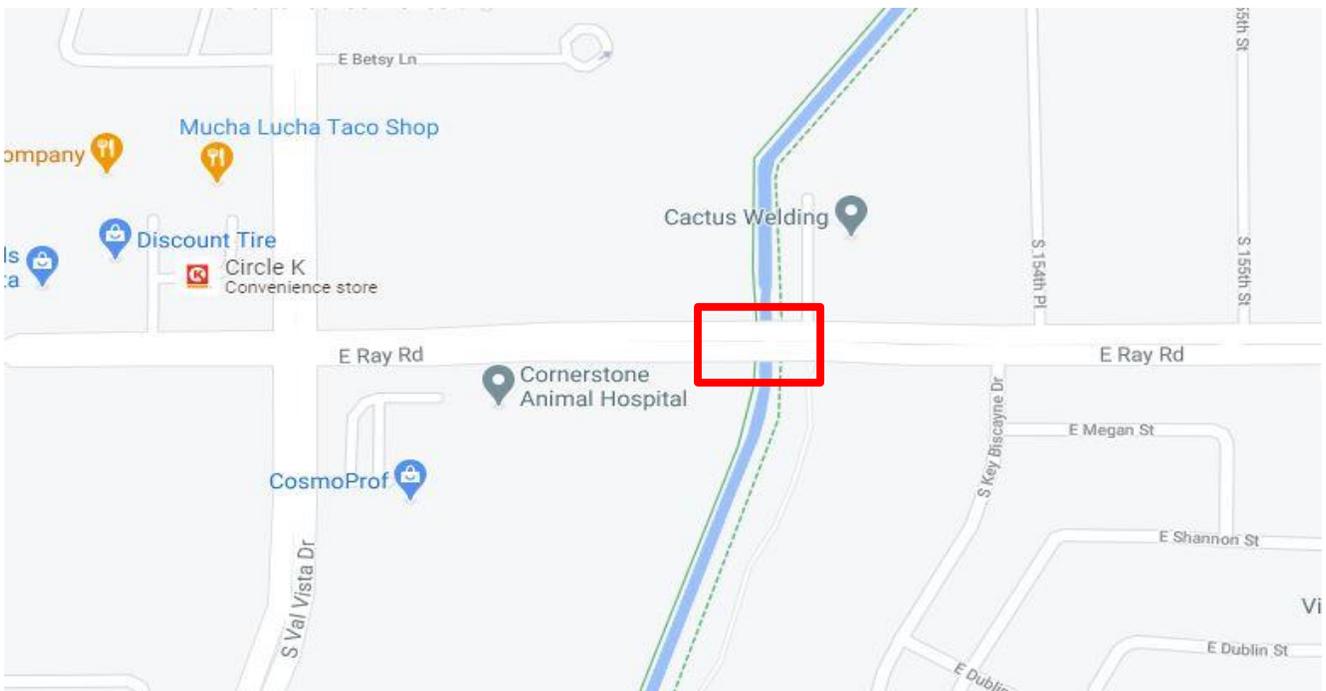
Total Project Cost	\$329,399	
Project Life (years)	10	
Interest Rate (%)	8%	
Capital Recovery Factor	0.1490	
Annual Construction Cost	\$49,090	
Annual Maintenance Cost	\$0.00	
Total Annual Costs		\$49,090

Benefit / Cost

Annual Benefit	Annual cost	Benefit / Cost Ratio
\$551,892	\$49,090	11.2

List CMF(s) Used in the field below and its associated countermeasure(s)

CMF 2911, Install a pedestrian hybrid beacon (PHB or HAWK); CRF = 29% for all crashes



 - Project Area