



Transportation Alternatives / CMAQ Application for
FY 2018, 2019, and 2020 Projects

2020 Phoenix Pedestrian and Bicycle HAWK Crossing Project

Phoenix

**APPLICATIONS ARE DUE AT MAG OFFICES BY
Monday, September 21, 2015 at 10:00 a.m.**

(LATE AND/OR INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED)

Phoenix: 2020 Phoenix Pedestrian and Bicycle HAWK Signalized Crossing Program**PART A - CONTACT AND PROJECT DESCRIPTION****Contact Information**

1. Name of Sponsoring Agency	Phoenix
2. Agency Contact Name	Kerry Wilcoxon
3. Phone Number of Agency Contact	602-262-4613
4. E-Mail Address of Agency Contact	kerry.wilcoxon@phoenix.gov
5. Mailing Address of Agency Contact	City of Phoenix, Street Transportation Department, 200 W. Washington St., 6th Floor, Phoenix, AZ 85003

Project Description

6. Please provide the Project Title.	2020 Phoenix Pedestrian and Bicycle HAWK Signalized Crossing Program
7. Please provide a concise, specific description of the project (250 character limit):	<p>The City of Phoenix has for many years now been a federal focus city for pedestrian safety. Over the last ten years (2005-2014), the city has seen an average of 549 pedestrian and 473 bicycle crashes each year. A predominant crash mode has been pedestrians or bicyclists being hit while crossing arterial or collector streets. The intent of this project is to improve pedestrian and bicycle safety by providing positive traffic control at crossing sites of high volume arterial streets. To accomplish this, the city is requesting funding for six pedestrian hybrid beacons or HAWKs, a proven safety counter-measure, at sites throughout Phoenix with established pedestrian and bicycle traffic patterns. Most of the six crossing locations are currently operating as non-signalized, high-visibility crosswalks and four locations are operating as 15-mph school crossing zones to elementary or middle school sites as part of existing Safe Route to School walking and biking networks. The City of Phoenix estimates that the total adjusted cost of this project would be \$1,662,500. The City is requesting \$1,121,227 in federal funding and would provide \$541,273 in matching funds. If approved in full, the city would install all six HAWK signals in FFY20. The federal funding would be used for construction only with city matching funds being used for right-of-way acquisition, design and to supplement construction costs. The HAWK signals would be designed to current city, state and federal standards and once operational would be maintained by the City of Phoenix.</p>
8. Please provide the project limits:	Buckeye Road crossing (east leg) at 16th Avenue, Thomas Road crossing (east leg) at Dayton Street, 16th Street north of Indian School Road at the Phoenix Indian Medical Center Campus, 16th Street crossing (north leg) at Palm Lane, Greenway Road crossing (east leg) at 38th Street and Osborn Road crossing (west leg) at 13th Avenue

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PART B-DETAILED PROJECT DESCRIPTION

This part of the form identifies the current characteristics and proposed improvements for each project.

The purpose of Part B is to provide sufficient information to evaluate the cost estimate for the project and to provide assurance that the project will be capable of meeting the ADOT administered federal design review and clearance process. This process requires environmental, ROW and utilities clearances and a bid ready design prior to FHWA approval to encumber federal funding for construction.

NOTE: For Part B, Questions 14-20, the specified distance will vary (and update automatically) depending on the project type identified in Part B, Question 1. Pedestrian-only projects will use a distance of 1/4 mile, while bicycle and Shared-Use projects will use a distance of 1/2 mile.

1. Please select which funding source(s) this project is applying for. Check all that apply.

- Congestion Mitigation and Air Quality (CMAQ)
- Transportation Alternatives (TA)

2. What type of project is this? (Check all that apply)

- | | |
|--|---|
| <input type="checkbox"/> Bicycle Lane (4' min. w/o curb/gutter) | <input type="checkbox"/> Shoulder paving is within 4-miles of a PM-10 Monitor |
| <input type="checkbox"/> Bicycle Lane (5' min. with curb/gutter) | <input type="checkbox"/> Wide Sidewalk (8' min.) |
| <input type="checkbox"/> Buffered Bike Lane | <input type="checkbox"/> Detached Sidewalk with 4' min. buffer |
| <input type="checkbox"/> Protected Bike Lane | <input checked="" type="checkbox"/> Signalized Crossing |
| <input type="checkbox"/> Shared-use path (10' min.) | Other: |
| <input type="checkbox"/> Sidewalk (5' min.) | <input style="width: 400px; height: 20px;" type="text"/> |
| <input type="checkbox"/> Planning Study | |

3. What other major elements are included in this project? (Check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Bridge (overpass) | Other: |
| <input type="checkbox"/> Tunnel (underpass) | <input style="width: 400px; height: 20px;" type="text"/> |
| <input checked="" type="checkbox"/> Signalized midblock crossing/HAWK | |
| <input checked="" type="checkbox"/> Countdown Pedestrian Signal | |

4. What amenities are included in this project?

- | | |
|---|--|
| <input type="checkbox"/> Number of Bike racks/lockers | <input type="checkbox"/> Number of Seating/Rest Area(s) |
| <input type="checkbox"/> Number of Drinking Fountains | <input type="checkbox"/> Number of bicycle/pedestrian counting devices |
| <input type="checkbox"/> Number of Way-finding Signs | <input type="checkbox"/> Number of bicycle/pedestrian counting devices |
| <input type="checkbox"/> Number of Trash receptacles | Other: |
| <input type="checkbox"/> Number of Trees | <input style="width: 400px; height: 20px;" type="text"/> |
| <input type="checkbox"/> Number of new openings in street walls | |
| <input type="checkbox"/> Number of Shade Structures | |

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PART B-DETAILED PROJECT DESCRIPTION

5. Please describe the existing condition of the project site and any problem(s) being addressed.

All six crossing locations are being enhanced with HAWK signals to assist pedestrians crossing busy arterial or collector streets by improving pedestrian visibility to approaching drivers. Five of the six crossing locations are currently marked in one of three configurations. Three crossings (16th Street at Palm Lane, Greenway Rd at 38th St and Osborn Rd at 13th Ave) are standard yellow school crosswalks in existing 15-mph school zones. One additional crossing (Buckeye Rd at 3rd Ave) is a high visibility yellow ladder crosswalk in a 15-mph school zone and one crossing (16th Street north of Indian School Road at Phoenix Indian Medical Center) is a high visibility white crosswalk with rapid flashing beacons. The final crossing location, (Thomas Road at Dayton St at North High School) has not been marked or signed in any way, in a failed attempt to discourage pedestrian crossings.

6. Please describe the work being done and improvements being made as part of this project.

In all cases, the existing crossing location would be signalized with pedestrian hybrid beacons or HAWKs to provide positive traffic control to assist in the crossings. Where the existing crossing is located in a 15 mph school zone, the school zone and crossing guard would remain but the 15 mph speed limit would be removed.

7. What do you hope to achieve with this project?

By signalizing all six crossing locations, the city hopes to save the lives of pedestrians and bicyclists including school children, parents and teachers, crossing guards and members of the general public by providing positive, pedestrian activated traffic control at these locations.

8. Safety improvements to be included for this project: (Check all that apply)

- | | | |
|-------------------------------------|---|---|
| <input type="checkbox"/> | Medians with pedestrian crossing islands | Other
<input type="checkbox"/> Pedestrian activated hybrid crossing beacons or HAWKs |
| <input type="checkbox"/> | Roadway Reconfiguration (Road Diet) | |
| <input type="checkbox"/> | Striping/re-striping to narrow vehicle lanes | |
| <input type="checkbox"/> | Color pavement or similar treatment | |
| <input checked="" type="checkbox"/> | Lighting | |
| <input type="checkbox"/> | Landscape buffer between sidewalk and roadway | |
| <input type="checkbox"/> | Rectangular Rapid Flash Beacon (RRFB) | |
| <input type="checkbox"/> | Driver Feedback Sign | |

9. Does this project include a road safety education component?

- Yes
 No

Please Explain:
 Prior to activating any HAWK signals the city of Phoenix does and will conduct public outreach in the form of neighborhood meetings or school assemblies to describe the operation of the HAWK and pedestrian/bicyclist safety information

10. How does this project or planning study address safety?

By providing HAWK signals at these six crossing locations, the city hopes to provide positive, pedestrian activated traffic control to make crossing safer.

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PART B-DETAILED PROJECT DESCRIPTION

11. How does the project improve ADA facilities for persons with disabilities?

HAWK signals improve ADA facilities by providing the same types of positive, pedestrian activated traffic control as mentioned previously. HAWKs are typically adjusted to the 3.5 feet/second walking speed recommended in the MUTCD which allows disabled or handicapped pedestrians more time to cross and bigger gaps to cross the roads in.

12. Describe how this project will improve access from nearby neighborhoods and/or adjacent uses:

In all six cases, the roads being crossed and the traffic they support, act as a physical barrier to pedestrians and bicyclists with effectively prevents cross access. The HAWK signals provide for a legal break in traffic that allows free flow of pedestrians and bicyclists from one side of the street to the next.

13. How does the project create a sense of place?

Where ever HAWK signals are installed here in Phoenix, they create connections between and among neighborhoods and often encourage more residents are able and willing to explore their neighborhoods on foot or by bike.

14. Connectivity: (Check all that apply)

- Project fills a gap in the system
Explain:
All locations fill gaps in the walking and biking infrastructure by providing safe crossing locations
- Project connects to other local bikeways
List of connected bikeways:
All locations allow for improved mobility between existing bike lanes ore unmarked bike networks
- Multi Jurisdictional Project (please include letter of support (See Part C)
List of Participating Jurisdictions:

- Total length of bikeways directly connected by this project (in miles)

15. Number of transit stops this project will connect to. Do NOT count major transit facilities (park and rides, transit centers, etc.) in this question. List associated route(s) and their peak frequency, using Valley Metro as the source.

Within 1/4 mile

16. Number of transit routes serviced by the transit stops in question 15 that this project will connect to. List associated route(s) and their peak frequency, using Valley Metro as the source.

Within 1/4 mile
List routes and frequency:
Buckeye at 3rd Ave (Rt 13 - 58 t/d), Thomas at Dayton (Rt 29 - 162 t/d), 16th St at Palm and north of Indian School Rd (Rt 16 - 92 t/d), Greenway at 38th St (Rt 154 - 68 t/d), Osborn at 13th Ave (Rt 15 - 68 t/d)

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PART B-DETAILED PROJECT DESCRIPTION

17. Number of major transit facilities (park and rides, transit centers, etc.) served by this project:

Within 1/4 mile

List:

None

18. Number of non-commercial activity centers (parks, libraries, senior centers, recreational centers, etc.) this project will benefit:

Within 1/4 mile

List:

Park (2): Harmon Park, Madison Park Library (1): Harmon Branch Library Public Pool (3): Harmon Pool, Grant Pool, Madison Pool Community Center (2): Harmon Recreation Center, Friendly House Career Center

19. Number of commercial and employment destinations (malls, retail centers, business parks, etc.) this project will benefit (for example, a mall is ONE destination; do NOT count every store in a mall as a separate destination):

Within 1/4 mile

List:

Shopping Area (1): Indian Village Shopping Center

20. Number of K-8 public schools this project will benefit:

Within 1/4 mile

List:

Encanto School, Clarendon School, Arrowhead Elementary School, Whittier Elementary School, Lowell School

21. Number of other schools (charter schools, high schools, colleges, and universities) this project will benefit:

Within 1/4 mile

List:

High School (1): North High School

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PART B-DETAILED PROJECT DESCRIPTION

22 Number of activity centers for air quality cost effectiveness (i.e. bank, church, hospital, health care facility, light rail station, park-and-ride lot, office park, post office, public library, shopping area, grocery store, university or junior college):

10 Within 1/4 miles

List:

Hospital (2): Phoenix Indian Medical Center, Haven Senior Horizons Bank (1): Wells Fargo Health Care Facility (1): Touchstone Behavioral Health Shopping Area (1): Indian Village Shopping Center Church (5): All Nations Baptist Church Inc, Roman Catholic Church Diocese Of Phoenix, Jesus Faith Center Ministries, St Peter & Paul Eastern Orth Catholic Ch, St Anthony Roman Catholic Parish Phoenix

23 1/4 miles to 1/2 miles

List:

Shopping Area (2): Progress Plaza Shopping Center, Park North Shopping Center Health Care Facility (1): North Valley Endoscopy Center Grocery Store (1): Bashas' Church (19): 36th Street Missionary Bapt Ch, Iglesia Bautista El Sembrador, Roman Catholic Ch Of Diocese Of Phoenix, Diocese Of Az, Grace Temple Church Of God, Church Of God In Christ, Grace Temple Church Of God, Paradise Valley Evnglcl Luthrn Ch Inc, Grace Temple Church Of God, Good Shepherd Evangelical Luth Ch, Greater Shiloh Missionary Baptist Church, Phoenix Bible Missionary Church Inc, Sikh Dharma Of Phoenix, Az Conf Corp Seventh-Day Adv, Good Shepherd Evangelical Luth Ch, Greater Shiloh Missionary Baptist Church, Good Shepherd Evangelical Luth Ch, Resurrection Evag Lutheran Ch Of Phx, Equator Faith Mission Church, Roman Catholic Ch Of The Diocese Of Phx

23. What are the demographics of the area served:

[MAG Demographic Mapping](#)

2064 People Per Square Mile

16.3 % Families in Poverty

Use the MPO/COG Demographic Mapping link above. Zoom in to your project area. On the right-hand side of the screen, under "Reporting," select "Custom Summary." Next, select "Corridor of Interest." Left-click to begin drawing. Draw a line through all census block groups adjacent to your project, left-clicking where needed to change the direction of the line. Double-click to finish drawing the line. The selected census block groups will become highlighted in blue. A pop-up box will appear with "Results for Selected Block Groups." Select the "Summary Report" tab, and use the data found there. You may export the results to Excel (click the printer icon at the top-right side of the pop-up window) for your records.

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24. Please provide the following information on the facility on which the improvement will be located.

For a linear project, please enter the Facility Name, Starting Limit and Ending Limit:

NA

For a point project (e.g. an intersection or crossing), please enter a Facility Name and a Crossing Feature:

All proposed treatments are HAWK signal crossings of arterial or collector streets at collector or local street intersections

Federal Functional Classification of the Facility:

Principal Arterial

[Link to MAG webpage for Federal Functional Classification Map](#)

Type of Facility the Improvement will be located on:

Arterial Road

0 Length (in Miles)

45 Posted Speed Limit (MPH)

6 Number of Travel Lanes Before Project

6 Number of Travel Lanes After Project

25. Please provide an estimated traffic volume (ADT) on the nearest parallel arterial.

52,000 ADT Estimate

9/1/14 Date Counted

Name of road the traffic count was taken from

Various

Description of Methodology and Source used for the ADT Estimate

City traffic volume counts using pneumatic tubes and 24-hour weekday averages

26. Federal law requires that all federally funded projects comply with a federal environmental clearance. For projects that have a minimum ground disturbance, environmental surveys are required and an environmental document will need to be prepared, which typically requires 12 months to complete.

Describe any known cultural, historical and biological resources, hazardous materials or other environmental issues that could affect work on the segment.

There are no known cultural, historical or biological resources, hazardous material or other environmental issues that could affect work at any of these locations.

27. Current ROW: (Check all that apply)

- Agency owns all ROW Needed
- ROW to be acquired
- Owners will donate ROW

- Agency owns easement
- Agency has right-of-use (i.e. canal)
- Condemnation may be required

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PART B-DETAILED PROJECT DESCRIPTION

28. Please describe any right of way issues associated with the project.

Easements may be required on both sides of the street at six locations: Thomas Road at Dayton Street, 16th Street north of Indian School Road, Buckeye Road at 3rd Avenue, 16th Street at Palm Lane, Greenway Road at 38th Street and Osborn Road at 13th Avenue. These six locations are proposed for construction in 2020.

29. Please indicate whether all parcels for this project have been inventoried.

Yes No

30. Current Utilities in or abutting the alignment: (Check all that apply)

<input checked="" type="checkbox"/> No Utility in or abutting the alignment	<input type="checkbox"/> Private Structures
<input type="checkbox"/> Canals & Drainage	
<input checked="" type="checkbox"/> Power Lines & Cables	Other:
<input type="checkbox"/> Pipelines, Sewer and Water	<input type="text"/>

31. Please describe any utility conflicts that will need to be addressed.

Specific utility conflicts at any of the six locations is unknown at this point however, such conflicts are not unusual and when encountered staff develop ways to avoid the conflicts up to and including moving of the signal equipment to different legs of the intersection.

32. Guidelines used to develop project: (Check all that apply)

<input checked="" type="checkbox"/> AASHTO Guide for Bicycle Facilities	Other: <input type="text" value="Phoenix Bicycle Master Plan and Phoenix Complete Street Ordinance"/>
<input checked="" type="checkbox"/> MAG Pedestrian Policies and Design Guidelines	
<input checked="" type="checkbox"/> MAG Complete Streets Guide	
<input checked="" type="checkbox"/> MAG Designing Transit Accessible Communities	
<input type="checkbox"/> MAG Valley Path Brand & Wayfinding Signage Guidelines	
<input checked="" type="checkbox"/> NACTO Urban Bikeway Design Guide	
<input checked="" type="checkbox"/> RPTA Bus Stop Program and Standards	

33. Jurisdiction has the following policies for improved bicycle/shared use facilities:

With new development and capital improvement projects, bike lanes on arterial streets are:	<input type="text" value="Recommended"/>
With new development and capital improvement projects, bike lanes on collector streets are:	<input type="text" value="Required"/>
With pavement restoration or regular pavement maintenance on arterial streets, bike lanes are:	<input type="text" value="Recommended"/>
With new development or during development retrofits, shared-use paths are:	<input type="text" value="Recommended"/>
Bicycle program implemented, including bike education, safety events, and bike maps	<input type="text" value="Yes"/>
Complete Streets Policy	<input type="text" value="Yes"/>

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PART B-DETAILED PROJECT DESCRIPTION

34. The project is: (Check one)

- Identified in General Plan, council adopted policy, or Capital Improvements Program (provide source)
List:
- Consistent with general policy/practices, but not formally identified (provide source)
Explain:
- Not addressed by jurisdiction's plans, policies, or practices
Explain:

35. How will the applicant measure the success of this project?

Success will be measured in three ways, the first and most obvious will be reduced pedestrian and bicycle crashes at the crossing. The second will be increased pedestrian and bicycle activity as measured by activations of the signal and the third will be a decrease in unsafe crossing activity observed in the surrounding area.

36. Will bicycle/pedestrian count technology be incorporated? Will the devices broadcast automatic updates or require manual data collection? If manual, how will the agency identify staff resources to dedicate to collecting the data?

Activation data is automatically collected however, no equipment has been included to conduct counting of individual bicyclist or pedestrians using the HAWK

37. Will the project include an education/marketing component upon completion of construction, to publicize the project and increase citizen awareness of the project impact and benefits? If yes, please describe below.

Yes, all HAWK signals installed by the City of Phoenix include a public outreach component in the form of a school assembly or neighborhood meeting to advise users of the function of the HAWK, how to properly cross and watch of traffic and general pedestrian and bicycle safety

38. Will the project include wayfinding signage elements? If yes, please describe below.

No

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PART D - TRANSPORTATION ALTERNATIVES COST ESTIMATE FORM													
Please provide a detailed cost estimate for this project. The data entered in this cost estimate sheet will automatically transfer into the correct fields in Part E. Rows 1-9 will remain visible at the top of this page at all times.													
Sponsoring Agency:		Phoenix	Project Title:		2020 Phoenix Pedestrian and Bicycle HAWK Crossing Project		Application Date:		9/20/2015				
Part	Item Description				Unit	Quan.	Unit Price	Total	Federally Eligible	Federal Funds (94.3%)	Local Funds (5.7%)	Note(s)	
A. Scoping (15% Preliminary Engineering Design)	1. SITE TOPOGRAPHIC SURVEY				LS	1	\$0.00	\$0.00	No	\$0.00	\$0.00		
	2. PROJECT ASSESSMENT REPORT or DETAILED WORKPLAN				LS	1	\$20,000.00	\$20,000.00	No	\$0.00	\$20,000.00		
	3. ENVIRONMENTAL DETERMINATION (Infrastructure projects, including technical supporting documents)				LS	1	\$20,000.00	\$20,000.00	No	\$0.00	\$20,000.00		
	4. HAZMAT ASSESSMENT				LS	1	\$10,000.00	\$10,000.00	No	\$0.00	\$10,000.00		
	Subtotal Scoping (Part A)							\$50,000.00		\$0.00	\$50,000.00		
B. Final Preliminary Engineering Design - Stages II, III, IV And PS&E	1. Plans, Special Provisions or Bid Manual, Cost Estimate & Schedules.				LS	6	\$5,000.00	\$30,000.00	No	\$0.00	\$30,000.00		
	2. GEOTECHNICAL INVESTIGATION and Materials & Pavement Design Report				LS	1	\$0.00	\$0.00	No	\$0.00	\$0.00		
	3. DRAINAGE REPORT				LS	1	\$0.00	\$0.00	No	\$0.00	\$0.00		
	4. SWPPP				LS	1	\$0.00	\$0.00	No	\$0.00	\$0.00		
	Subtotal PE (Part B)							\$30,000.00		\$0.00	\$30,000.00		
Subtotal Preliminary Engineering (Part A + Part B)							\$80,000.00		\$0.00	\$80,000.00			
C. Right-of-Way Acquisition	1. Right-of-Way Acquisition				LS	6	\$60,000.00	\$360,000.00	No	\$0.00	\$360,000.00	Assumes ROW needed both sides of street	
Subtotal Right-of-Way Acquisition (Part C)							\$360,000.00		\$0.00	\$360,000.00			
D. Utility Relocation	1. Utility Relocation				LS	1	\$0.00	\$0.00	No	\$0.00	\$0.00		
Subtotal Utility Relocation (Part D)							\$0.00		\$0.00	\$0.00			
E. Construction Or Implementation [For Non-Infrastructure Projects (No Ground Disturbing Activities), Address Only Part 4]	1. Hardscape Construction			Installation Of SWPP Measures		LS	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Site Preparation		LS	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Demolition			Sawcut		LF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Remove Structures and Obstructions		LS	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Remove Fencing		LF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Remove Structural Concrete		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Remove Asphaltic Concrete Pavement		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Remove Concrete Sidewalks, Slabs		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Hazmat Abatement					LS	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Retaining Wall - Reinforced Concrete Cantilevered		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Earthwork			General Excavation		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Drainage Excavation		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Structural Excavation		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Structural Backfill		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Borrow (In Place)		CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Curb & Gutter					LF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Aggregate Base					CY	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Pathway Or Sidewalk Materials			Concrete		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Colored Concrete		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Stamped Color Concrete		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Precast Concrete Pavers		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Asphaltic Concrete		Ton	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Polymer or Resin Stabilized Surface					SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
	Crosswalk Enhancement			Concrete Pavers		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Stamped Asphalt		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Stamped Concrete		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
				Concrete		SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00	
Integral Color Concrete					SF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
Pedestrian ADA Ramp					SF	6	\$5,000.00	\$30,000.00	Yes	\$28,290.00	\$1,710.00	Assumes 2 new ramps/project	
Culvert Extensions					LF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
Pedestrian Lighting Including Conduit And Trenching					Each	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
Handrail			Standard		LF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
			Decorative		LF	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
Subtotal Hardscape Construction							0	\$30,000.00		\$28,290.00	\$1,710.00		

Phoenix: 2020 Phoenix Pedestrian and Bicycle HAWK Signalized Crossing Program

PART D - TRANSPORTATION ALTERNATIVES COST ESTIMATE FORM

Please provide a detailed cost estimate for this project. The data entered in this cost estimate sheet will automatically transfer into the correct fields in Part E. Rows 1-9 will remain visible at the top of this page at all times.

Sponsoring Agency:	Phoenix	Project Title:	2020 Phoenix Pedestrian and Bicycle HAWK Crossing Project	Application Date:	9/20/2015
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Part	Item Description	Unit	Quan.	Unit Price	Total	Federally Eligible	Federal Funds (94.3%)	Local Funds (5.7%)	Note(s)		
E. Construction Or Implementation [For Non-Infrastructure Projects (No Ground Disturbing Activities), Address Only Part 4]	2. Landscaping & Irrigation Items	Trees Above 15 Gallon In Size As Required Per Local Code Or Special Design Requirements	Each	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
		Trees (15 Gallon Size)	Each	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
		Trees (5 Gallon Size)	Each	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
		Shrubs (5 Gallon Size)	Each	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
		Shrubs (1 Gallon Size)	Each	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
		Cactus (5 Gallon Size)	Each	1	\$0.00	\$0.00	Yes	\$0.00	\$0.00		
		Mulch	Decomposed Granite	CY	1	\$0	\$0	Yes	\$0	\$0	
			Organic	CY	1	\$0	\$0	Yes	\$0	\$0	
		Topsoil		CY	1	\$0	\$0	Yes	\$0	\$0	
		Seeding		Acre	1	\$0	\$0	Yes	\$0	\$0	
		Turf Sod		SY	1	\$0	\$0	Yes	\$0	\$0	
		Boulders		Each	1	\$0	\$0	Yes	\$0	\$0	
		Irrigation System	Drip	SF	1	\$0	\$0	Yes	\$0	\$0	
			Turf	SF	1	\$0	\$0	Yes	\$0	\$0	
		Sleeving For Irrigation System	Directional Bore	LF	1	\$0	\$0	Yes	\$0	\$0	
	Cut and Patch		LF	1	\$0	\$0	Yes	\$0	\$0		
	Landscape Header Curb		LF	1	\$0	\$0	Yes	\$0	\$0		
	Landscape Establishment		LS	1	\$0	\$0	Yes	\$0	\$0		
	Subtotal Landscaping & Irrigation Items					\$0	\$0	\$0	\$0		
	3. Site Furnishings	Benches	Each	1	\$0	\$0	Yes	\$0	\$0		
		Seatwalls	LF	1	\$0	\$0	Yes	\$0	\$0		
		Bike Racks	Each	1	\$0	\$0	Yes	\$0	\$0		
		Trash Receptacles	Each	1	\$0	\$0	Yes	\$0	\$0		
		Drinking Fountains	Each	1	\$0	\$0	Yes	\$0	\$0		
		Signage (Standard Traffic Control)	Each	6	\$500	\$3,000	Yes	\$2,829	\$171		
		Signage (Wayfinding)	Each	1	\$0	\$0	Yes	\$0	\$0		
		Tree Grates	Each	1	\$0	\$0	Yes	\$0	\$0		
		Subtotal Site Furnishings					\$0	\$3,000	\$2,829	\$171	
	4. Other Construction Items. Also, Itemized Line Items For Non-Infrastructure Projects. (Insert Additional Rows If Necessary)	Sign Structure	Each	5	\$55,000	\$275,000	Yes	\$259,325	\$15,675	16th North of ISR has existing sign structure	
		Foundation	Each	5	\$32,000	\$160,000	Yes	\$150,880	\$9,120	16th north of ISR has existing foundation	
		Conduits & Conductors	LS	6	\$20,000	\$120,000	Yes	\$113,160	\$6,840		
		Power Pedestal	Each	6	\$45,000	\$270,000	Yes	\$254,610	\$15,390		
		Controller	Each	6	\$40,000	\$240,000	Yes	\$226,320	\$13,680		
					1		\$0	Yes	\$0	\$0	
					1		\$0	Yes	\$0	\$0	
				1		\$0	Yes	\$0	\$0		
				1		\$0	Yes	\$0	\$0		
				1		\$0	Yes	\$0	\$0		
Subtotal Other Construction					\$1,065,000	\$1,004,295	\$60,705				
5. Mobilization And Administration Costs	Contractor Mobilization	LS	1	\$23,500	\$23,500	No	\$0	\$23,500			
	Traffic Control	LS	1	\$19,000	\$19,000	Yes	\$17,917	\$1,083			
	Construction Survey & Layout	LS	1	\$2,000	\$2,000	Yes	\$1,886	\$114			
	Construction Contingencies	LS	1	\$40,000	\$40,000	Yes	\$37,720	\$2,280			
	Construction Administration	LS	1	\$30,000	\$30,000	Yes	\$28,290	\$1,710			
	Subtotal Mobilization & Administration Costs					\$114,500	\$85,813	\$28,687			
Subtotal Construction Or Implementation Cost (Part E)						\$1,212,500	\$1,121,227	\$91,273			
F. Total Scoping, PE, Right-of-Way Acquisition, Utility Relocation, and Construction (Part A, B, C, D, and E)						\$1,652,500	\$1,121,227	\$531,273			
G. Adot Fee Review Fee - \$10,000 for Certified Accepted agencies, otherwise \$30,000						\$10,000	No	\$0	\$10,000		
H. Total Project Cost Including ADOT Fees (Part F + Part G)						\$1,662,500	\$1,121,227	\$541,273			

Phoenix: 2020 Phoenix Pedestrian and Bicycle HAWK Signalized Crossing Program

PART E - TOTAL PROJECT SCHEDULE AND BUDGET

Please verify that the cost and programming estimates for the total project are correct below. The numeric values on this sheet (in GREY) are automatically populated from the cost estimate sheet (Part D) and cannot be modified. If there are any errors in the numeric values on this sheet, please verify and correct the numbers you have entered into the cost estimate sheet (Part D). You MUST fill in the GREEN portions of Part E manually.

The design for the project should be programmed at least 1 year, preferably 2 years, prior to construction. Utilities and right of way should be programmed at least 1 year prior to construction, but may occur in the same year as construction depending on utility and right of way concerns that are identified in questions 24-27 in Part B.

Cost Estimate for the Project Including ALL Segments	Cost	Additional Notes (if needed)
1. ADOT Fee	\$10,000	
2. Design	\$80,000	
3. Right of way	\$360,000	
4. Utilities	\$0	
5. Construction	\$1,172,500	
6. Contingency	\$40,000	No more than 20% of Construction Cost
7. Total Cost	\$1,662,500	

8. Will the agency maintain the improvement after it is completed?

9. Expected Annual Maintenance Cost

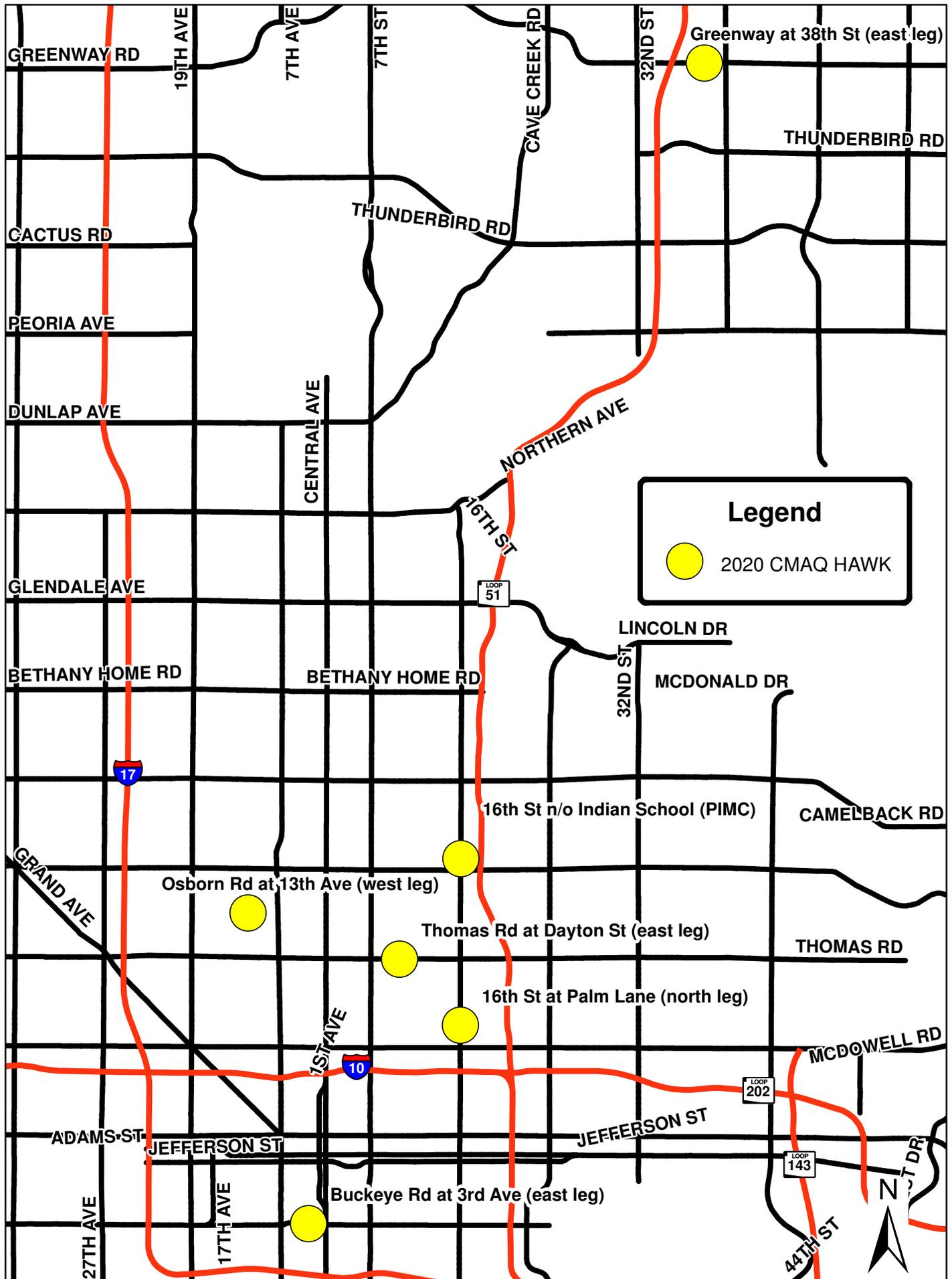
10. Identify Source of Maintenance Funds

Requested MAG Programming	Year	Short Work Description (E.g. Construct Multiuse Path)	Local Funding Source	Local Cost	Federal Cost	Total Cost	Local Share
11. Design (Optional)				\$80,000	Not Available	\$80,000	100.0%
12. Right of way (Optional)				\$360,000	Not Available	\$360,000	100.0%
13. Utilities (Optional)				\$0	Not Available	\$0	
14. Other (Optional)		ADOT review fee		\$10,000	Not Available	\$10,000	100.0%
15. Construction	2020			\$91,273	\$1,121,227	\$1,212,500	7.5%
16. Total Costs				\$541,273	\$1,121,227	\$1,662,500	32.6%

PART F - SIGNATURE AND CHECKLIST	
Checklist	
This checklist is included to facilitate applicant review and verification that all required fields in the form have been completed.	
COVER SHEET	Complete?
Cover Sheet is completely filled out	✓
PART A - Contacts and Project Description Fields	Complete?
Contact Information, fields 1 – 5 are complete	✓
Project Description, fields 6 - 8 are complete	✓
PART B - Project Description	Complete?
Fields 1 - 14 (Project Description) are complete	✓
Fields 15 - 17 (Transit) are complete	✓
Fields 18 – 22 (Attractors and Demographics) are complete	✓
Fields 23 – 30 (Traffic, Environmental, ROW, and Utilities) are complete	✓
Fields 31 – 33 (Guidelines, Policies, and Plans) are complete	✓
Fields 34 – 37 (Maintenance, Performance Measurement, and Wayfinding) are complete	✓
PART C - Required Attachments	Complete?
Field 1 - Map showing the general location of the proposed project in relation to the region, including a north arrow provided in the printed application and the PDF application.	✓
Field 2 - Map with streets labeled showing the detailed location(s) of the proposed project, including a north arrow provided in the printed application and the PDF application.	✓
Field 3 - Up to four (4) photos of existing conditions are provided in the printed application and the PDF application (two 4x6 per page).	✓
Field 4 - Simple diagram of the current typical cross section of the segment, that shows the right of way limits, widths, sidewalks and shoulders (if any), and the lanes of travel in the printed application and the PDF application.	✓
(OPTIONAL) - Up to two (2) photos/renderings of the completed project are provided in the printed application and the PDF application.	
(OPTIONAL) - Up to three (3) letters of support for the project are provided in the printed application and the PDF application.	
(OPTIONAL) - GIS coverage (shapefile or geodatabase) is provided on the CD with the application.	
PART D - Cost Estimate Worksheet	Complete?
Sponsoring Agency, Project Title, and Application Date are complete	✓
Part A - Scoping is complete	✓
Part B - Final Preliminary Engineering Design is complete	✓
Part C - Right-of-Way Acquisition is complete	✓
Part D - Utility Relocation is complete	✓
Part E - Construction or Implementation is complete	✓
Parts F, G, and H - Costs are complete and accurate	✓
PART E - Total Project Schedule and Budget Including All Segment Fields	Complete?
Fields 1 – 7 are complete and costs are accurate	✓
Field 8 - 10 are complete	✓
Fields 11 – 15 Years are complete	✓
Fields 11 – 15 Local Funding Sources are complete	✓
Fields 11 – 15 Local Costs are complete and accurate	✓
Field 11 - 15 Federal Costs are complete and accurate	✓
Field 16 Total Costs are complete and accurate	✓
PART F - Signature and Checklist	Complete?
Entire checklist is completed.	✓
Form is signed by MAG member agency's manager/administrator or designated representative.	✓
Name, title and date fields under the signature are completed.	✓

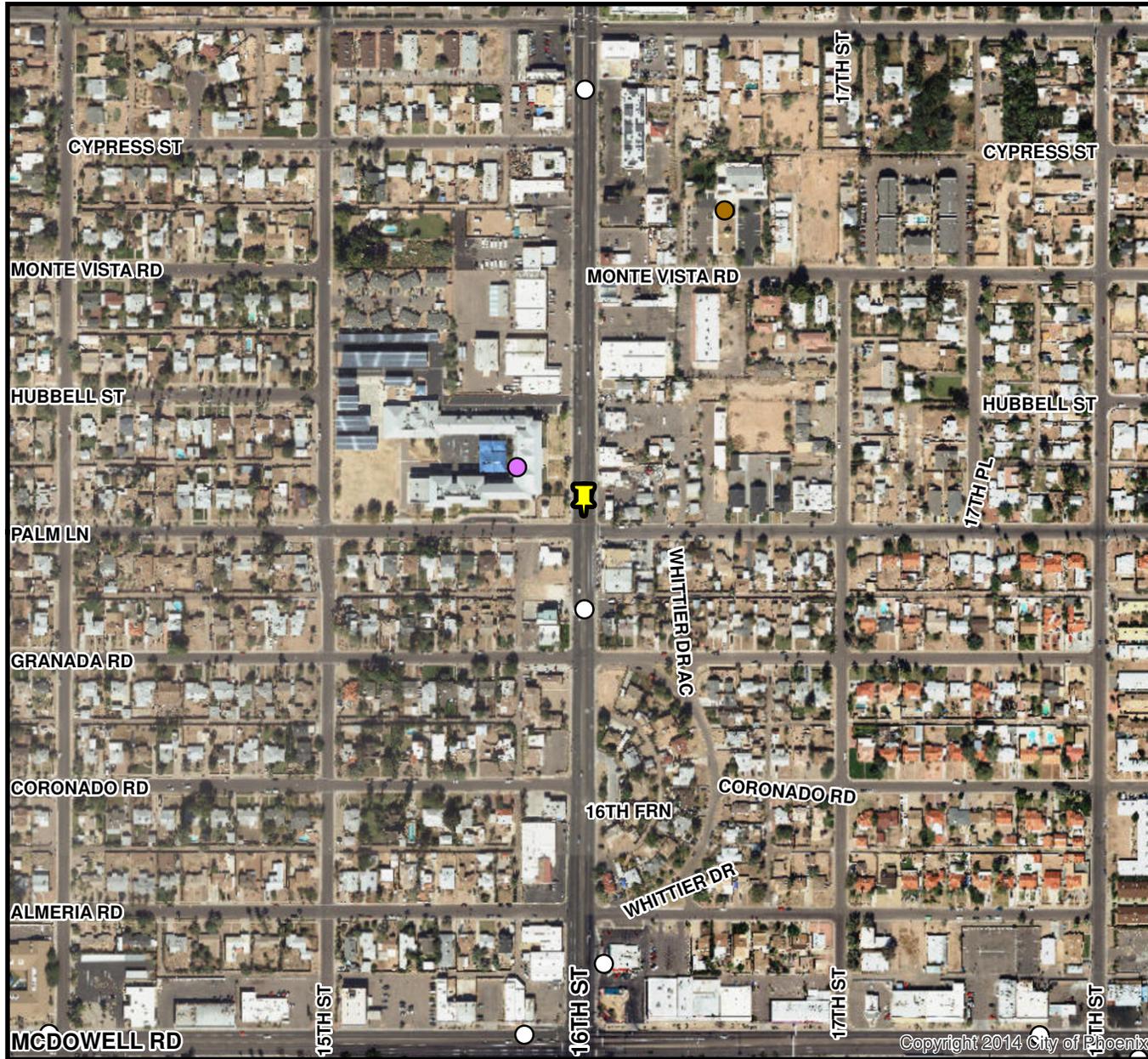
SIGNATURE(S):	
As the MAG member agency's <u>manager/administrator or designated representative</u> , I certify that this application is accurate and complete and that the project will be included in the sponsoring MAG member agency's local CIP/TIP if the project is selected for federal funding.	
Signature:	
Name:	Name: Ray Dovalina, P.E.
Title:	Title: Street Transportation Director
Date:	Date: September 16, 2015

2020 HAWK LOCATIONS



2020 HAWK LOCATION

16th Street at Palm Lane (North Leg)



Legend

-  2020 CMAQ HAWK
-  School Location P-8
-  Church
-  Bus Stops

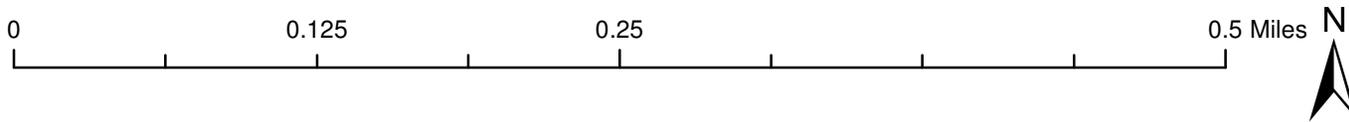
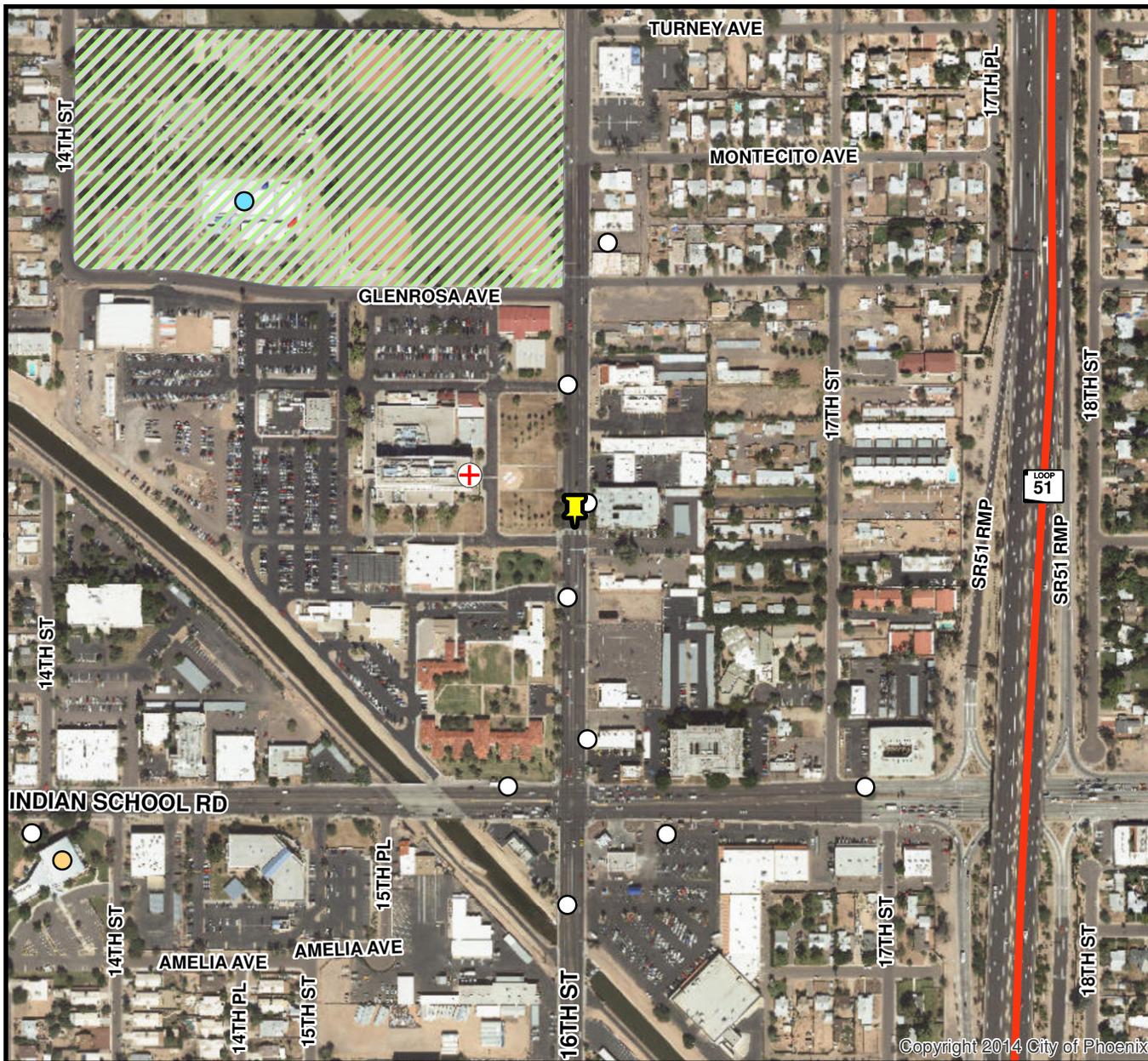
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2020 HAWK LOCATION

16th Street north of Indian School Road (PIMC)

Legend

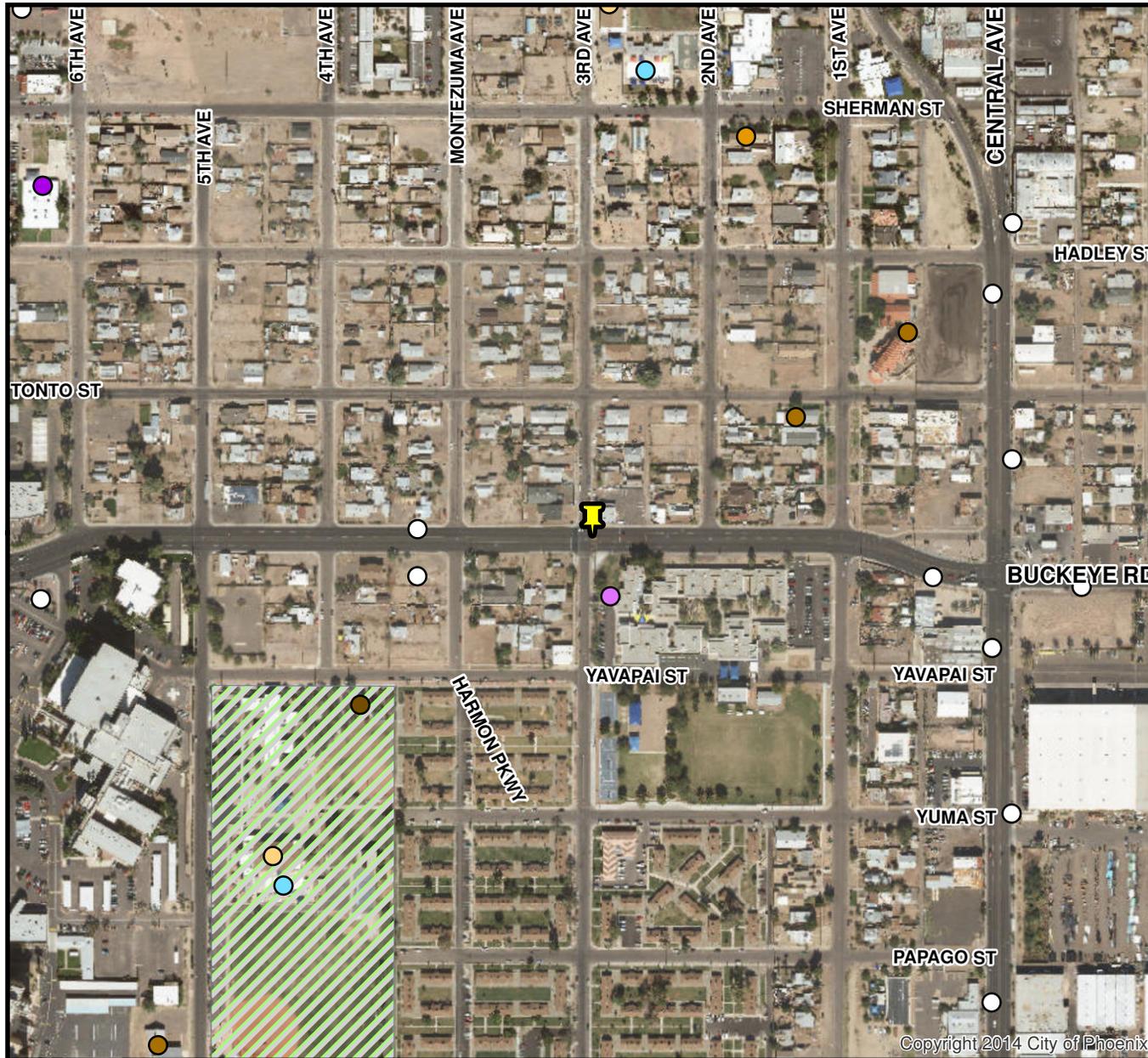
-  2020 CMAQ HAWK
-  Community Center
-  Public Pool
-  Parks
-  Bus Stops
-  Hospital



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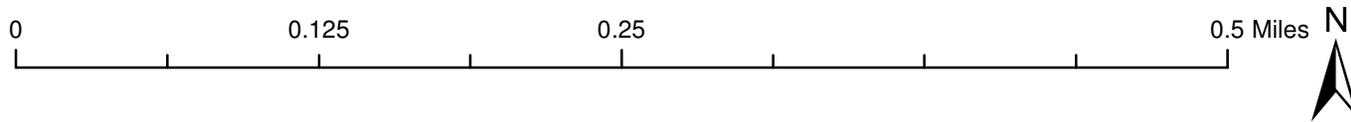
2020 HAWK LOCATION

Buckeye Road at 3rd Avenue (East Leg)



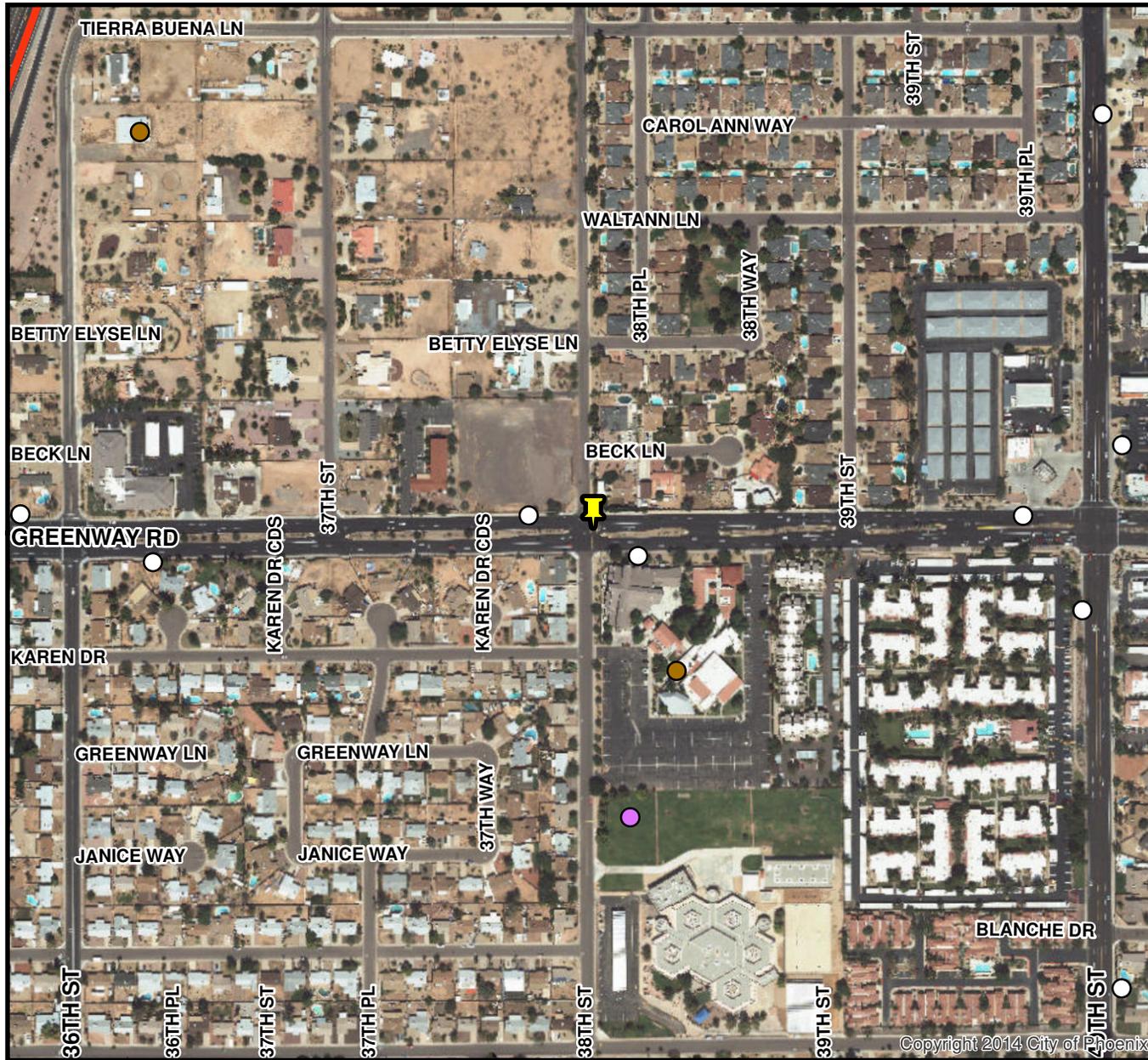
Legend

-  2020 CMAQ HAWK
-  School Location P-8
-  School Location Charter
-  Community Center
-  Career Center
-  Church
-  Public Library
-  Public Pool
-  Parks
-  Bus Stops



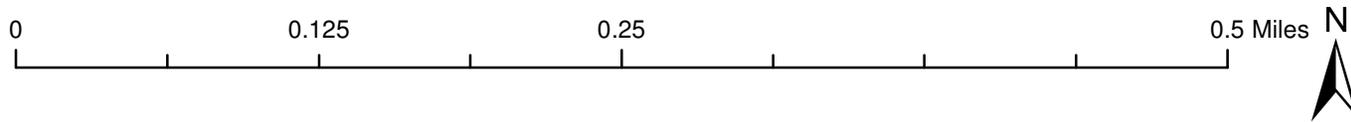
2020 HAWK LOCATION

Greenway Road at 38th Street (East Leg)



Legend

-  2020 CMAQ HAWK
-  School Location P-8
-  Church
-  Bus Stops



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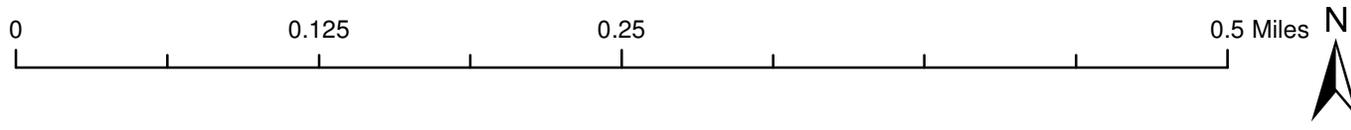
2020 HAWK LOCATION

Osborn Road at 13th Avenue (West Leg)



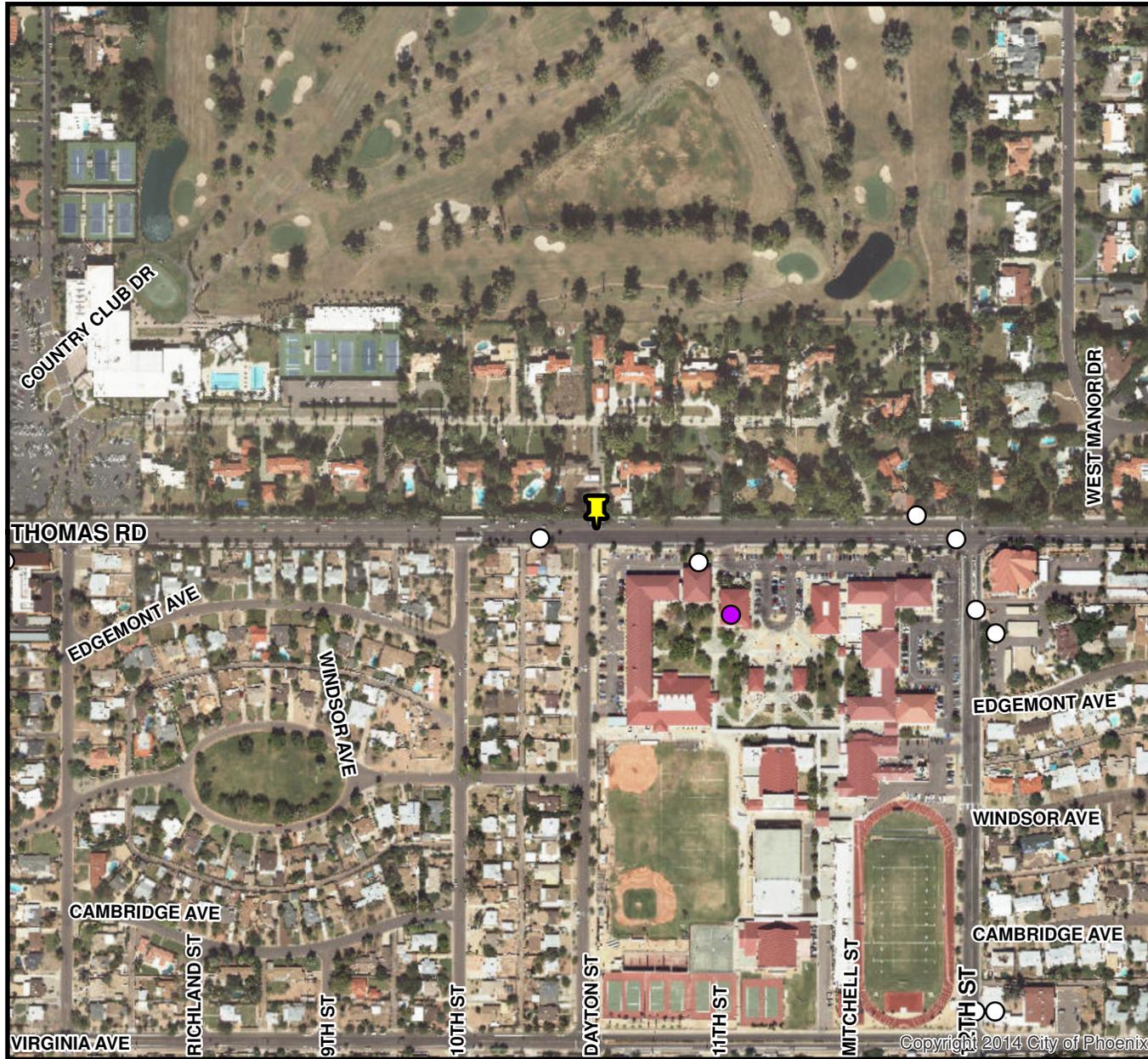
Legend

-  2020 CMAQ HAWK
-  School Location P-8
-  Church
-  Bus Stops



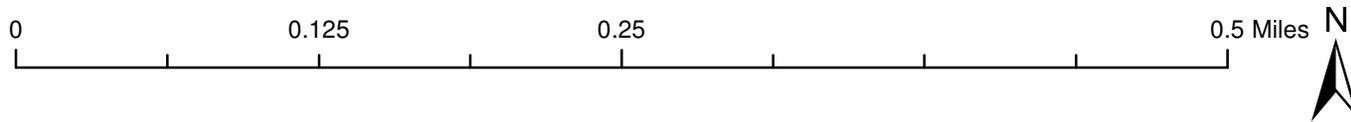
2020 HAWK LOCATION

Thomas Road at Dayton Street (East Leg)



Legend

-  2020 CMAQ HAWK
-  School Location 9-12
-  Bus Stops



2020 Phoenix Pedestrian and Bicycle HAWK Signalized Crossing Program Photographs



Figure 1. Buckeye Road at 3rd Ave - Existing high-visibility yellow (ladder) crosswalk in 15-mph school zone



Figure 2. Greenway Road at 38th Street - Existing standard yellow crosswalk in 15 mph school zone



Figure 3. 16th Street north of Indian School Road at Phoenix Indian Medical Center - Existing high-visibility white with supplemental rectangular rapid flashing beacons



Figure 4. 16th Street at Palm Lane - Existing standard yellow crosswalk in 15-mph school zone

16th Street north of Indian School Road (PIMC) R.O.W.
80'

Sidewalk/Buffer
10'

SB
12'

SB
10'

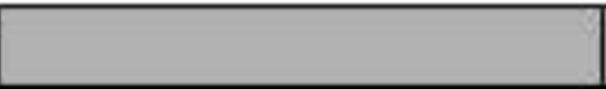
TLTL
10'

NB
10'

NB
10'

NB
12'

Sidewalk
6'



16th Street at Palm Lane (North Leg) R.O.W.
73'

Sidewalk
9'

SB
11'

SB
10'

LTL
10'

NB
10'

NB
17'

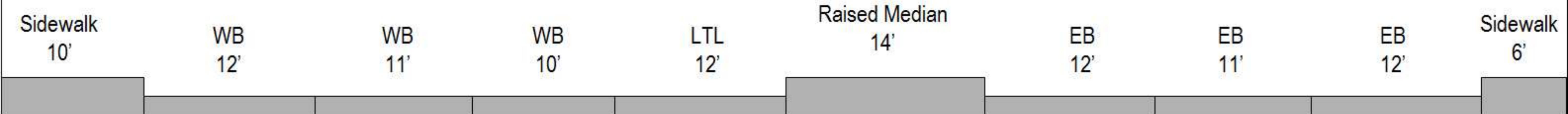
Sidewalk
6'



Buckeye Road at 3rd Avenue (East Leg) R.O.W.
75'



Greenway Road at 38th Street (East Leg) R.O.W.
110'



Osborn Road at 13th Avenue (West Leg) R.O.W.

60'

Sidewalk
6'

WB
14'

WB
11'

EB
11'

EB
12'

Sidewalk
6'



Thomas Road at Dayton Street (East Leg) R.O.W.

80'

Sidewalk
8'

WB
12'

WB
10'

TLTL
10'

EB
10'

EB
10'

EB
12'

Sidewalk
8'

