CHANDLER arizona
Community of Innovation

Protected Bike Lane Feasibility Study

Results

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Conducted in Partnership With

MARICOPA ASSOCIATION of GOVERNMENTS | Y2K ENGINEERING, LLC.

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Presentation

1. Review Study Approach
2. Prioritization Results

Protected Bike Lane (PBL) Feasibility Study

Project Background

Protected Bike Lane (PBL) Feasibility Study

Project Goal: Building from previous plans, mobility objectives, and public input - ***Increase the number of protected bike lanes***

Project Outcome

- Protected bike lane design guidelines
  - *Quicker to build & lower cost*
- Feasibility of converting existing and planned bike lanes to protected bike lanes (arterials & collectors)
- Develop a prioritized list of roadway locations for implementation.

Protected Bike Lane (PBL) Feasibility Study

Scope of Work

Scope of Work

Task 1: Community Engagement

Task 2: Protected Bike Lane Design Guidelines

Task 3: Data Collection & Analysis

Task 4: Protected Bike Lane Feasibility Analysis

Task 5: Study Report & Implementation

Task 4 – Evaluation for Prioritization

Results from Task 3: 53 Miles of Feasible Locations for PBLs

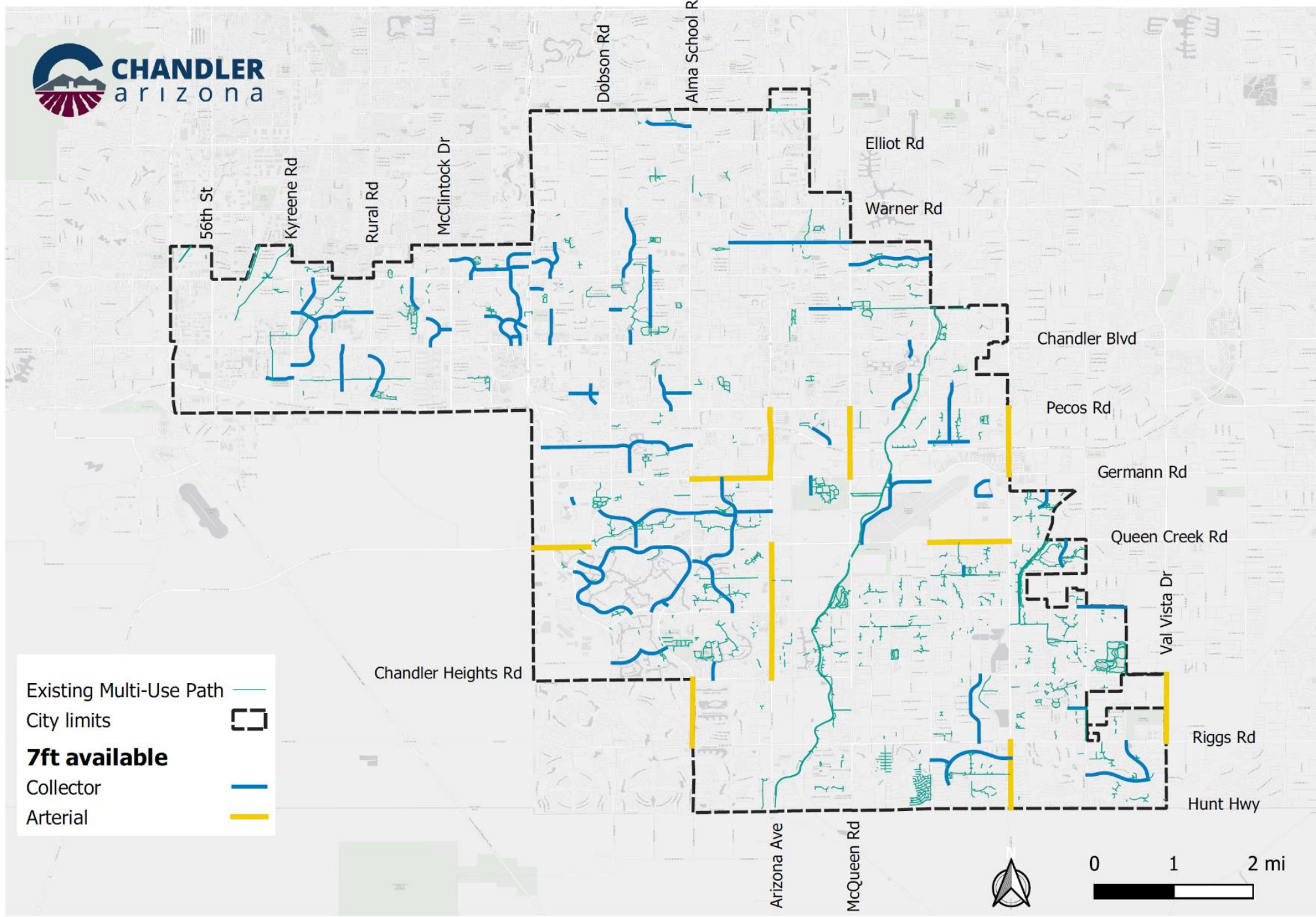
Task 4: Prioritize corridors for PBL, *considerations:*

- Connection to schools, parks and activity or employment centers
- Connection to off street paths/canals
- Connected and length of connected protected bike lane
- Bicycle activity (Strava)
- Bicycle crash data

Prioritized into Tiers – groups of locations for flexibility of implementation

Roads that are Feasible for a 7 ft Protected Bike Lane

- 53 Miles
- 107 Locations



Prioritization Approach
Priorities and Data Factors

5 Categories

9 Data Factors

Category	Data Factors
Safety Needs	Pedestrian and/or Bicycle Crashes
	Fatal and/or severely injured (KSI) Crashes
Land Use Connectivity	Park Access
	School Access
	Activity or Employment Centers Access
Bike Connectivity	Canal or Trail Access
	Potential for Connected PBL
High Amount of Current Bike Activity	Current High Bike Activity
Disadvantaged Areas	Federally Defined Transportation Disadvantaged Census Block Group

Prioritization Approach
Points

Category	Data Factors	Data Factor Points	Category Points
Safety Needs	Pedestrian and/or Bicycle Crashes	0 to 2	4
	Fatal and/or severely injured (KSI) Crashes	0 to 2	
Land Use Connectivity	Park Access	0 or 1	3
	School Access	0 or 1	
	Activity and Employment Centers	0 or 1	
Bike Connectivity	Canal or Trail Access	0 or 1	4
	Potential for Connected PBL	0 to 3	
High Amount of Current Bike Activity	Bike Activity	0 or 2	2
Disadvantaged Areas	Federally defined Transportation Disadvantaged Census Block Group	0 or 1	1
		Total Points	**14**

Prioritization Approach
Results

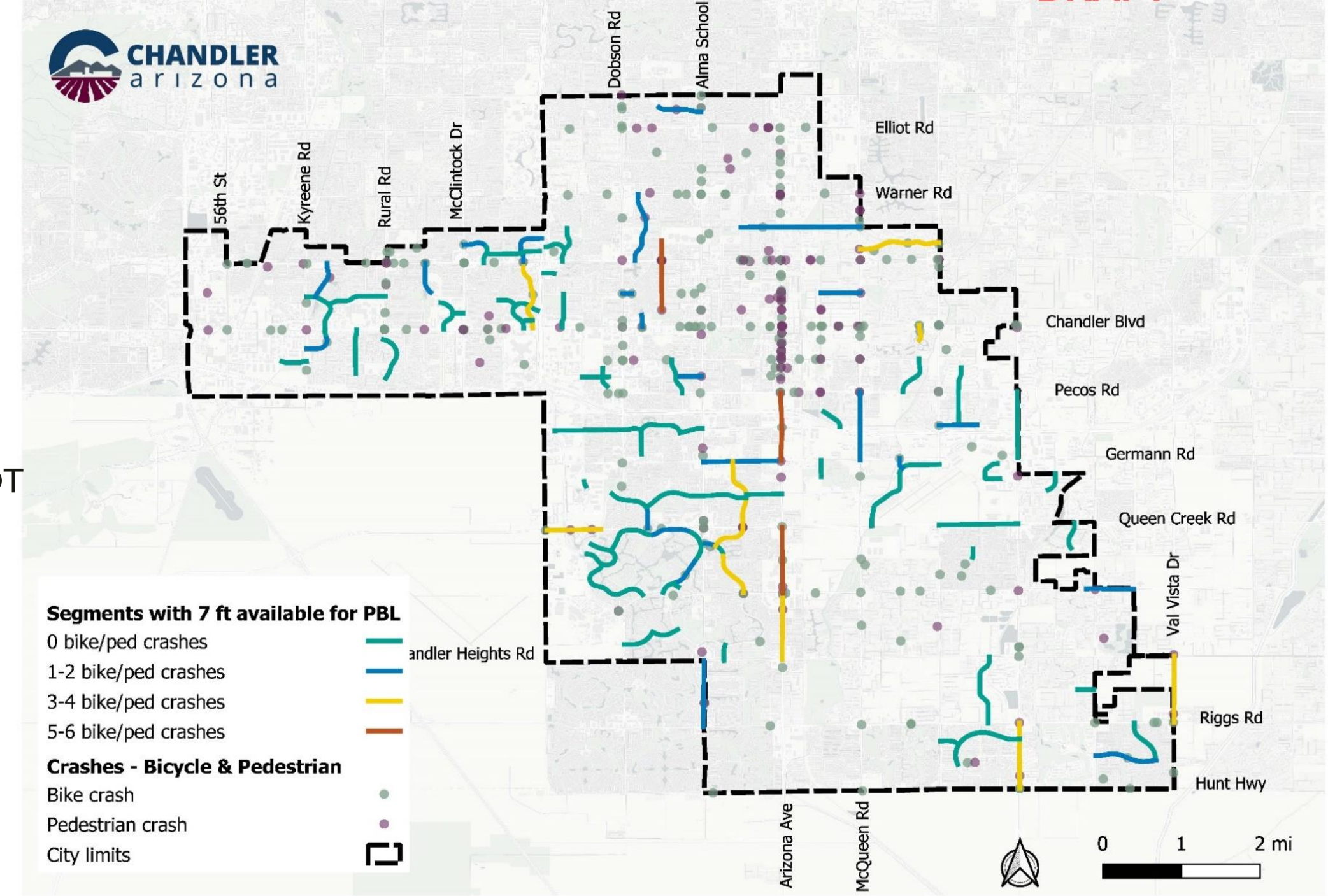
The highest amount of points from the data analysis, was 9 points (2 locations).
The lowest amount of points from the data analysis was 0 points (11 locations).

Tier	Amount of Total Points	Number of Feasible Locations for PBL	Number of Miles
1	7 to 9	20	12.6
2	5 to 6	29	16.9
3	3 to 4	21	10.5
4	1 to 2	26	9.5
5	0	11	2.8

Safety Needs

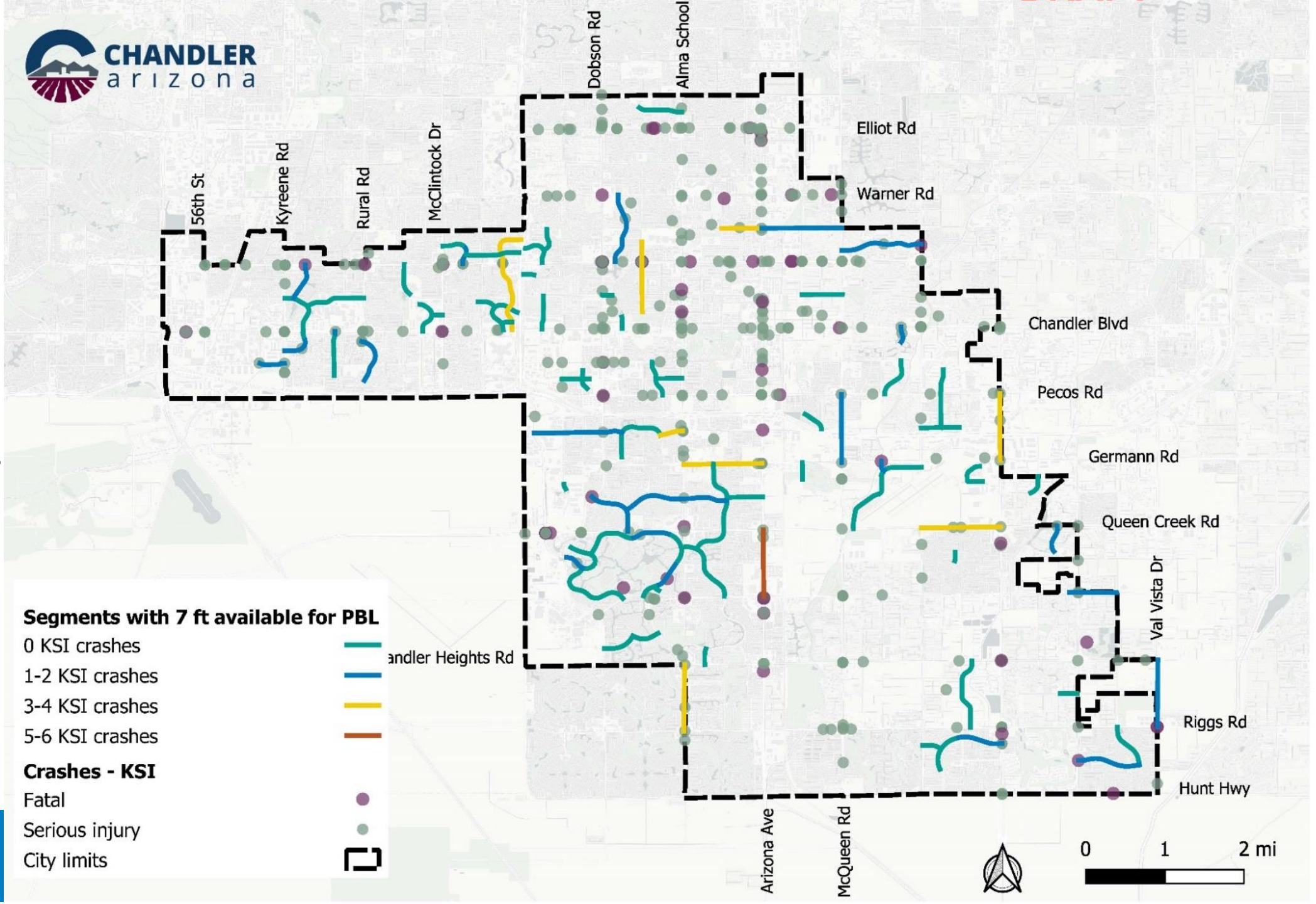
Feasible PBL Locations with Bike/ Pedestrian Crashes

(2017 – 2021, Excluding ADOT Right Of Way)



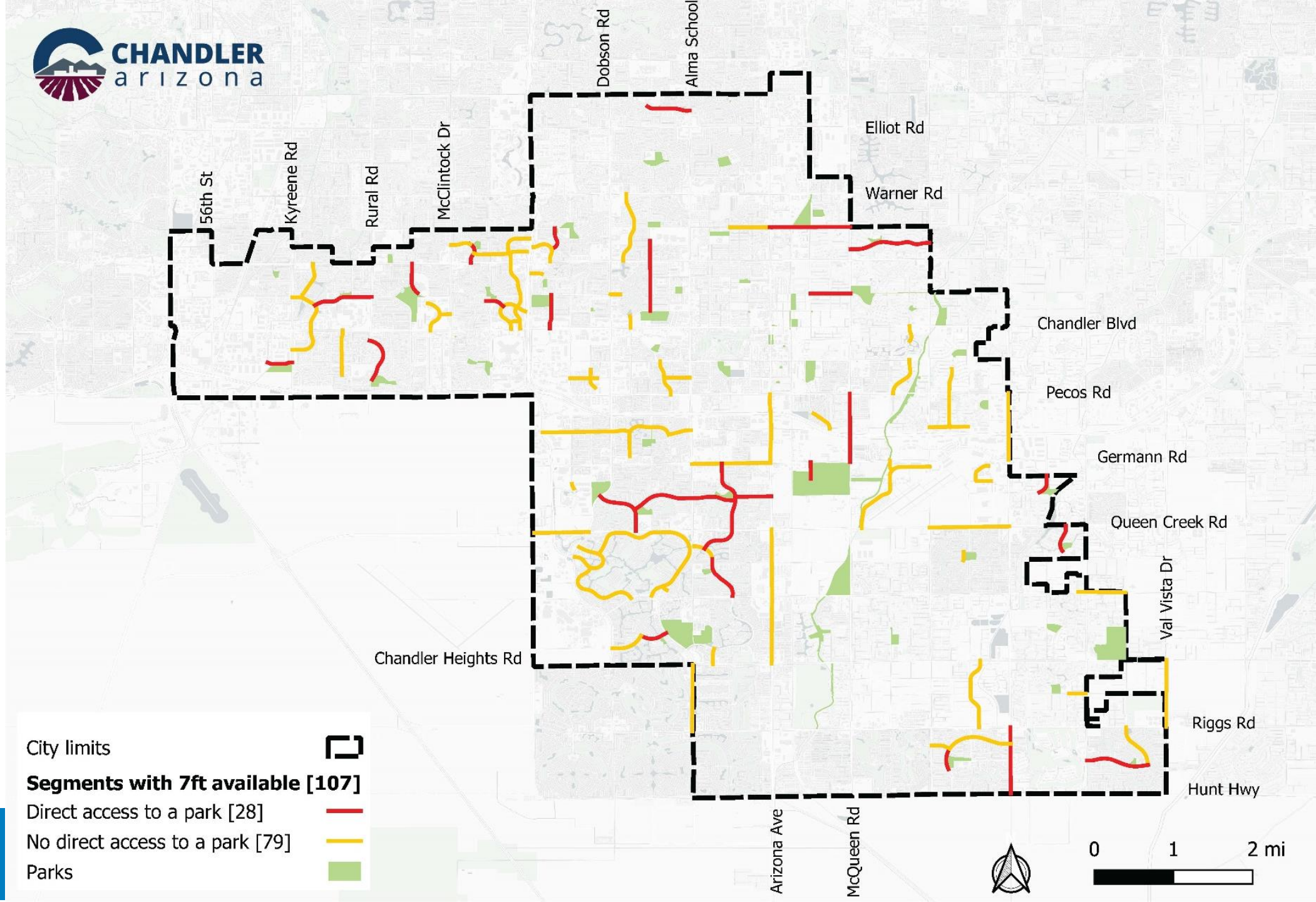
Feasible PBL Locations With Killed Or Seriously Injured Crashes

(2017 – 2021, Excluding ADOT Right Of Way)

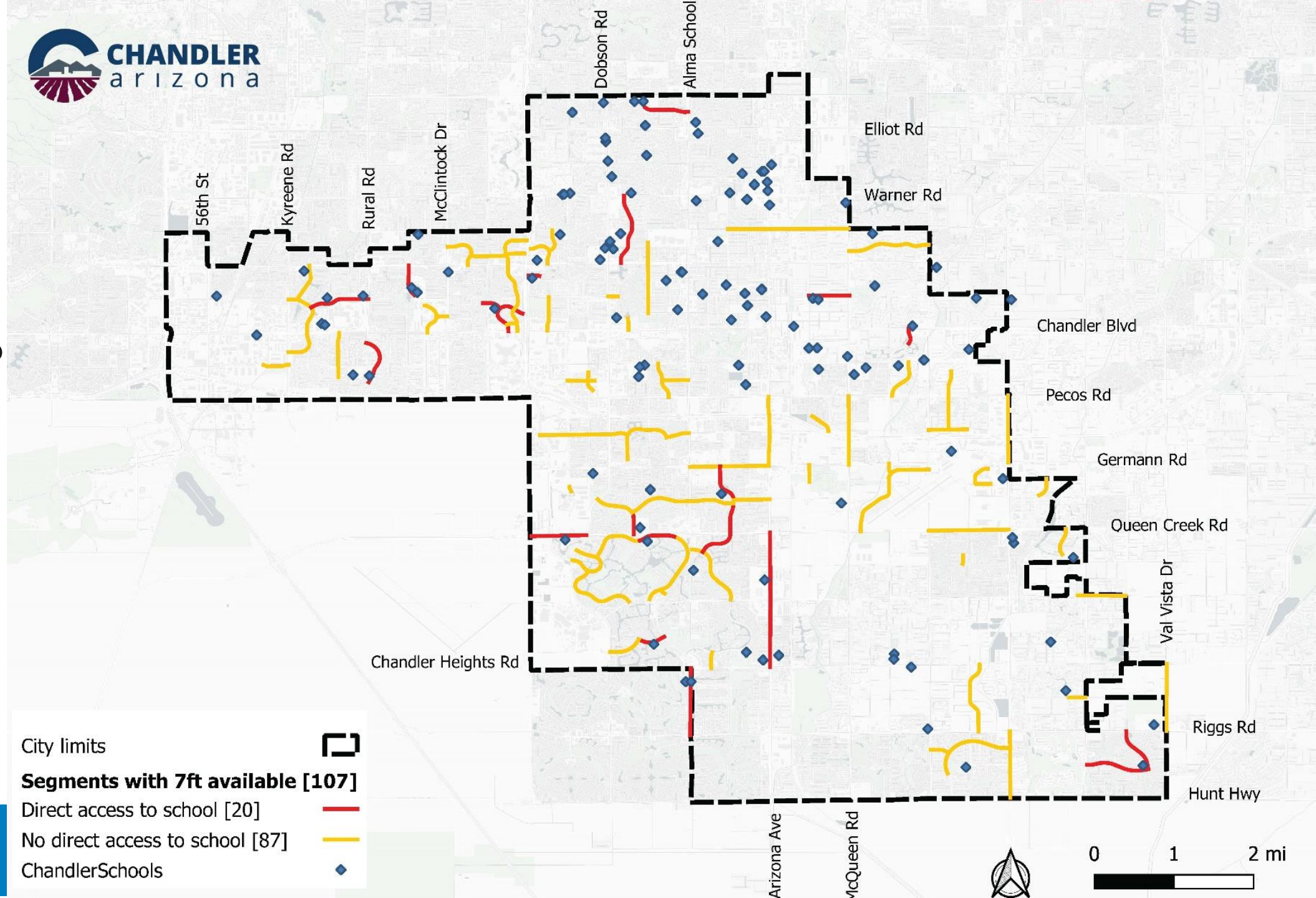


Connectivity – Land Uses

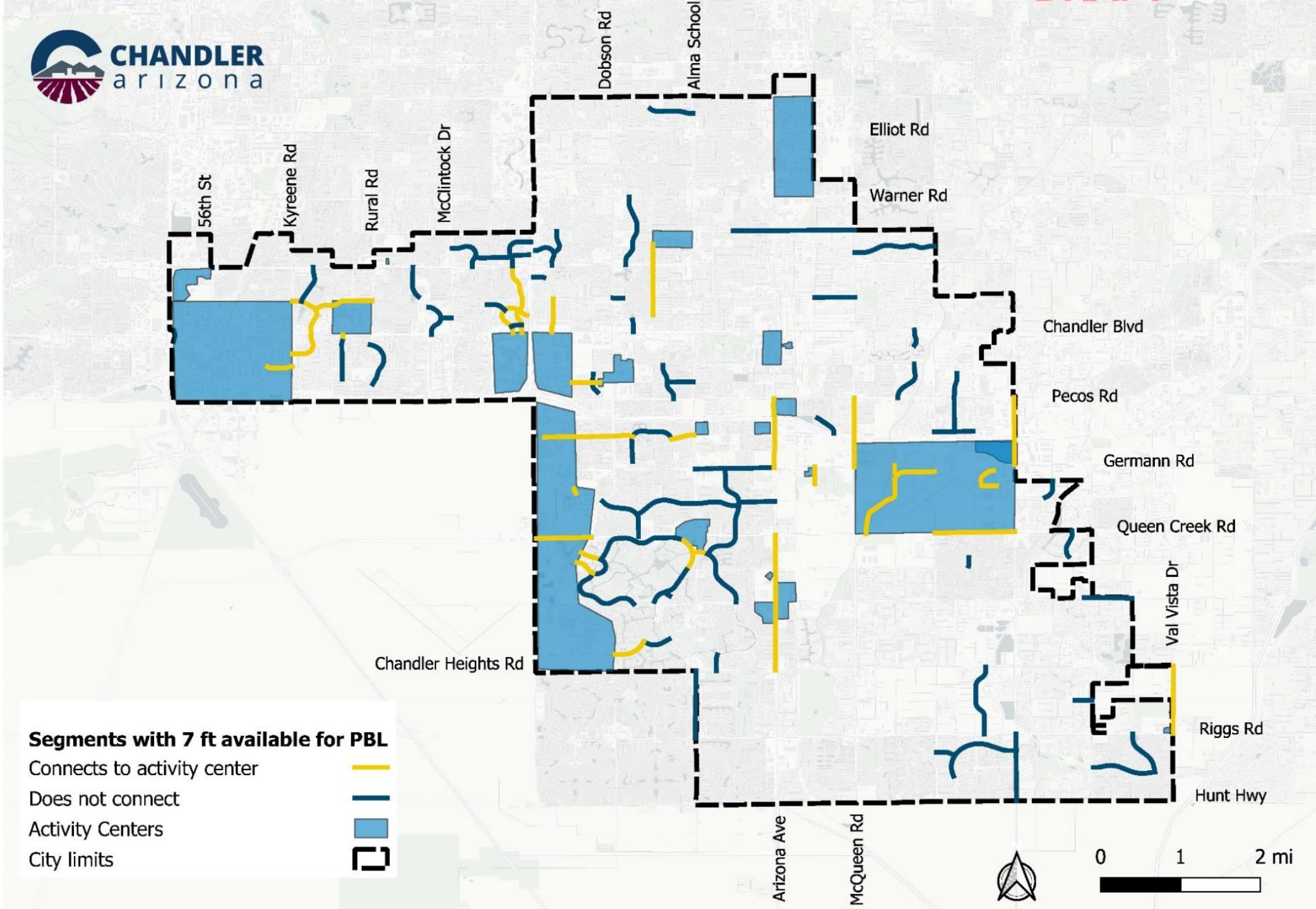
Feasible PBL Locations With Direct Access to Parks



Feasible PBL Locations With Direct Access to Schools

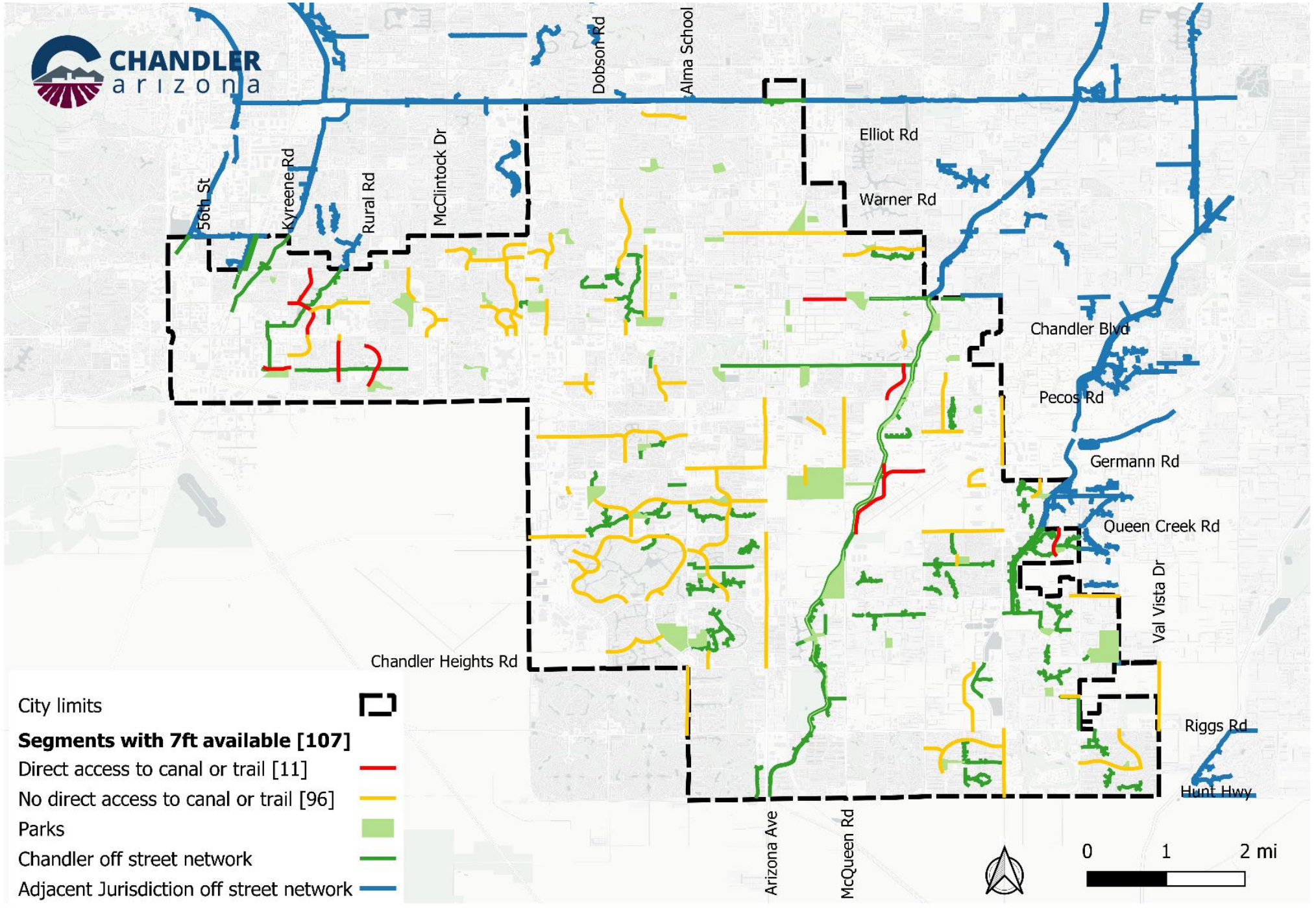


Feasible PBL Locations with Direct Access to Activity or Employment Centers

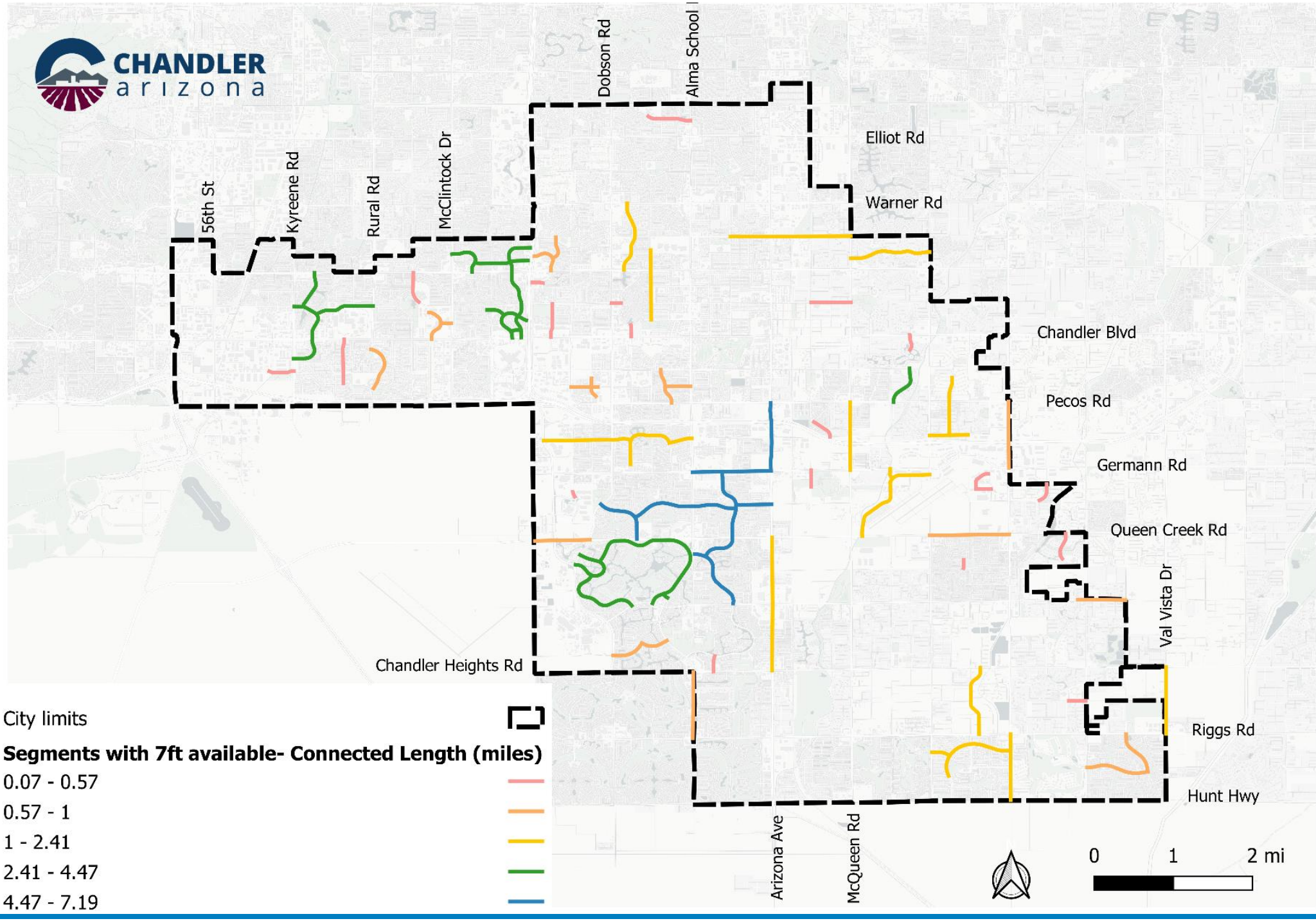


Bike Network Connectivity

Feasible PBL Locations with Direct Access to Canals or Trails

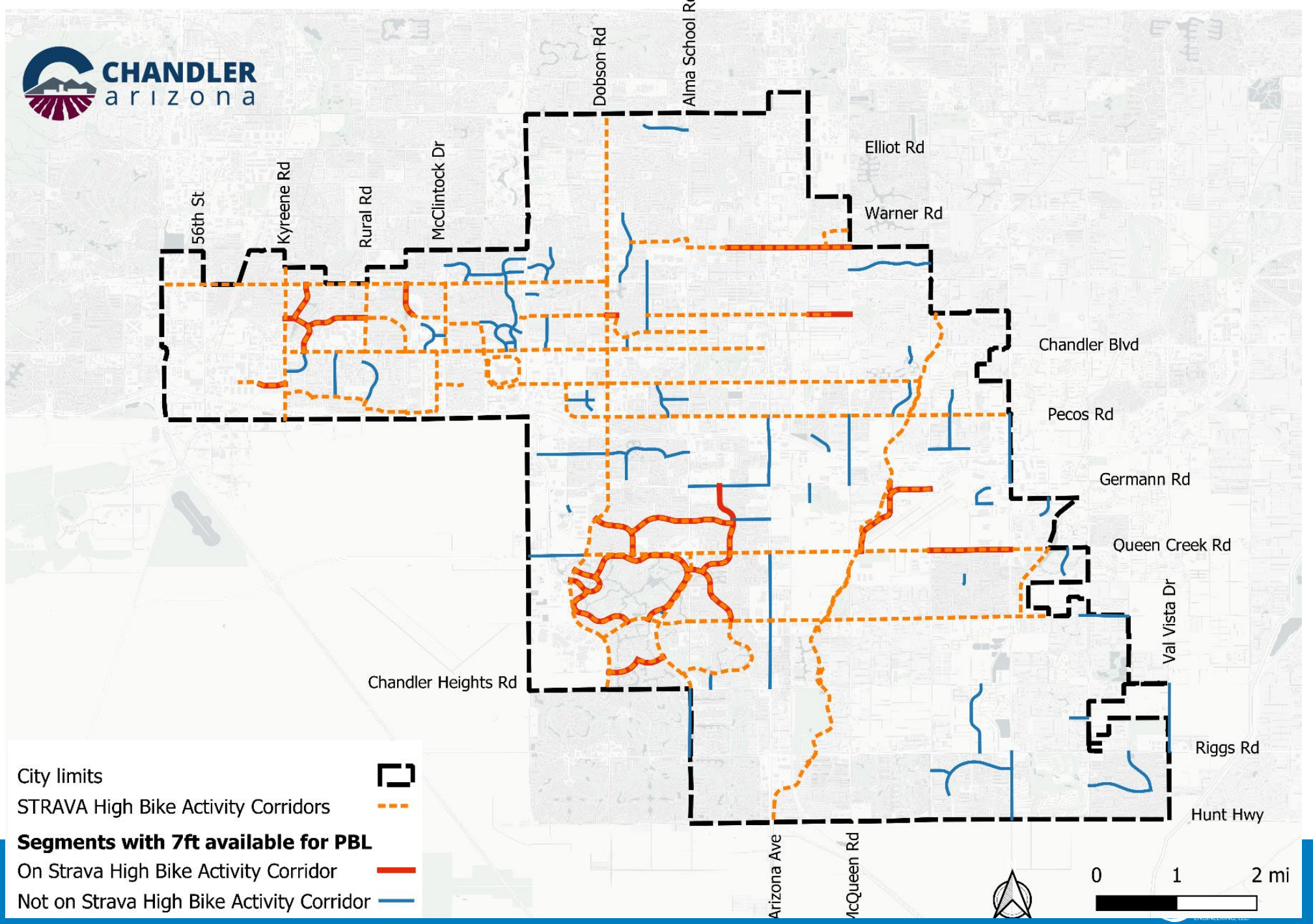


Feasible PBL Locations and the Length of Potential Connected PBLs



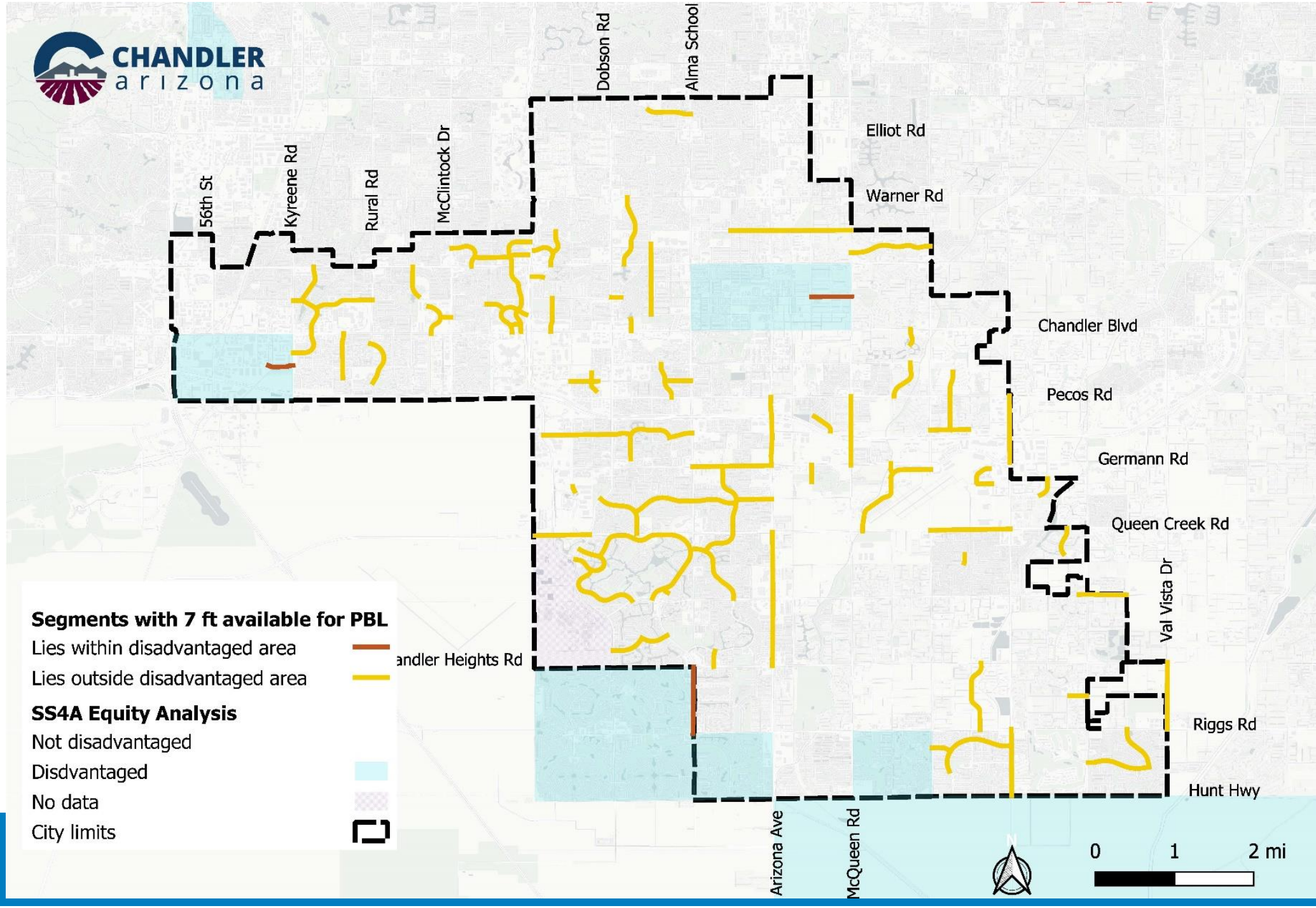
Current Bike Activity

Feasible PBL Locations with High Bike Activity from Strava Heatmap



Disadvantaged Areas

Feasible PBL Locations with Identified Disadvantaged Areas



Results of Prioritization Approach - *Points*

Results of Prioritization Approach Tiers

Tier	Amount of Total Points	Number of Feasible Locations for PBL	Number of Miles
1	7 to 9	20	12.6
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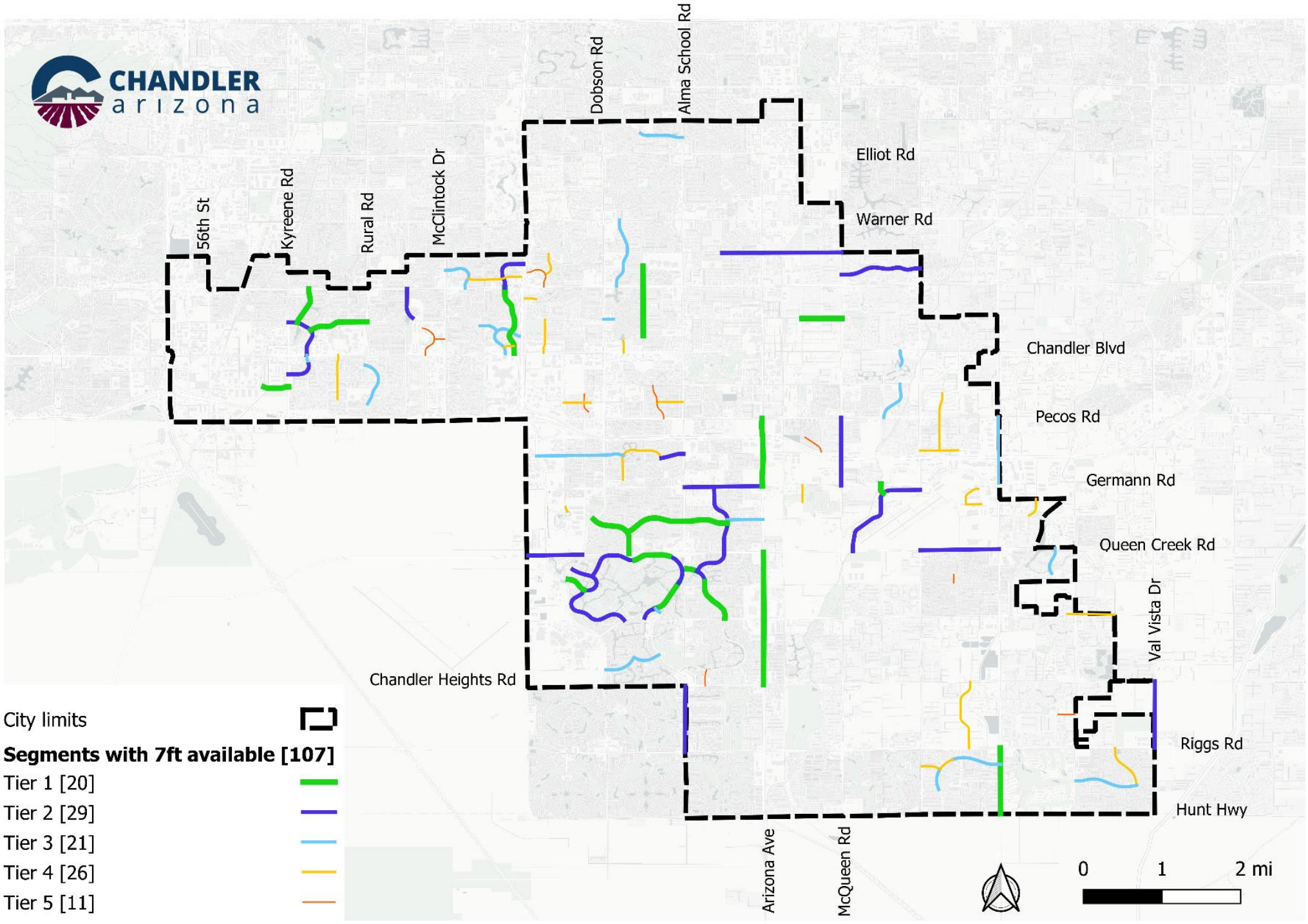
Tiered Prioritization Results of Feasible Locations for 7 Ft Protected Bike Lane



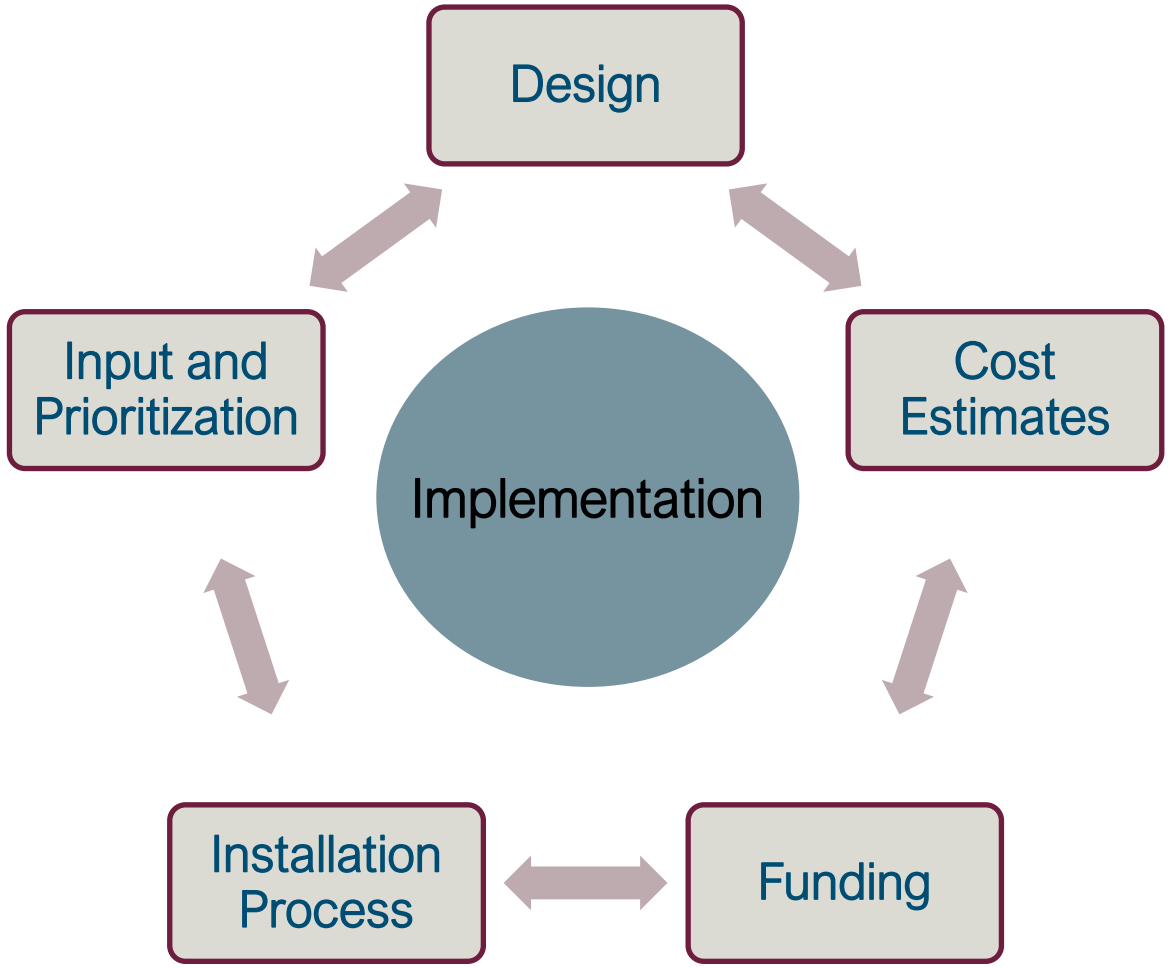
Tier 1 Results

Street On	Street From	Street To	Total Score (14 points possible)
Earl Blvd	Ryan Rd	Queen Creek Rd	9
Jacaranda Pkwy	Oleander Dr	Rosemary Dr	9
Arizona Ave	Germann Rd	Pecos Rd	8
Sandpiper Dr	Aster Dr	Ocotillo Rd	8
Arizona Ave	Chandler Heights Rd	Ocotillo Rd	7
Arizona Ave	Ocotillo Rd	Queen Creek Rd	7
Gilbert Rd	Hunt Hwy	Riggs Rd	7
N Arrowhead Dr	Jasper Dr	Andersen Blvd	7
Federal St	Ray Rd	Chandler Blvd	7
Chicago St	Kyrene Rd	Roosevelt Ave	7
W Galveston St	Rural Rd	North Gila Spring Blvd	7
E Galveston St	Hamilton St	McQueen Rd	7
W Ryan Rd	Earl Blvd	Alma School Rd	7
W Ryan Rd	Alma School Rd	Hartford St	7
Day St	Ray Rd	Gila Springs Blvd	7
Earl Blvd	Dobson Rd	Ryan Rd	7
Market Pl	Dobson Rd	Jacaranda Pkwy	7
Jacaranda Pkwy	Island Dr	Desert Gulf Dr	7
Sandpiper Dr	Alma School Rd	Bush Wy	7
Airport Blvd	Germann Rd	Aviation Dr	7

Implementation

The five interrelated factors for implementation of protected bike lanes are: design, cost estimates, funding, installation process, and review of community input and prioritization analysis.

These five factors should be considered together when moving forward with implementing protected bike lanes at feasible locations identified through this study.



Discussion, Questions & Feedback

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