

ATMP Capital Planning

City Council | 22 Jun 2021



Outline

- Prop 419 ped-bike projects
- Bikeways planning
- Petition request



Prop 419 ped-bike projects

- Sidewalks
- Bikeways
- FUTS trails
- Enhanced crossings
- Bridges and tunnels





Ped-bike project funding

Over 20 years...

- **\$29m** from Prop 419 – transportation sales tax
- **\$5.5m** from Mountain Line First/Last Mile grant

First five years...

- **\$10m** from Prop 419 (\$2m per year)
- **\$5.5m** from First/Last Mile



Project development/prioritization



- Prepare inventory of existing and planned
- Determine which will be built as part of other projects
- Prioritize remaining projects
- Prepare cost estimates



Process



- Community surveys, more than 10 direct or indirect
- Community open houses, presentations, tabling
- Discussion at PAC and BAC meetings
- Other sources, crash data, Strava heatmaps, ped/bike counts



Priority factors

Three common factors...

- Generators and attractors
- Social factors
- Need and functionality

Fourth factor unique to each...

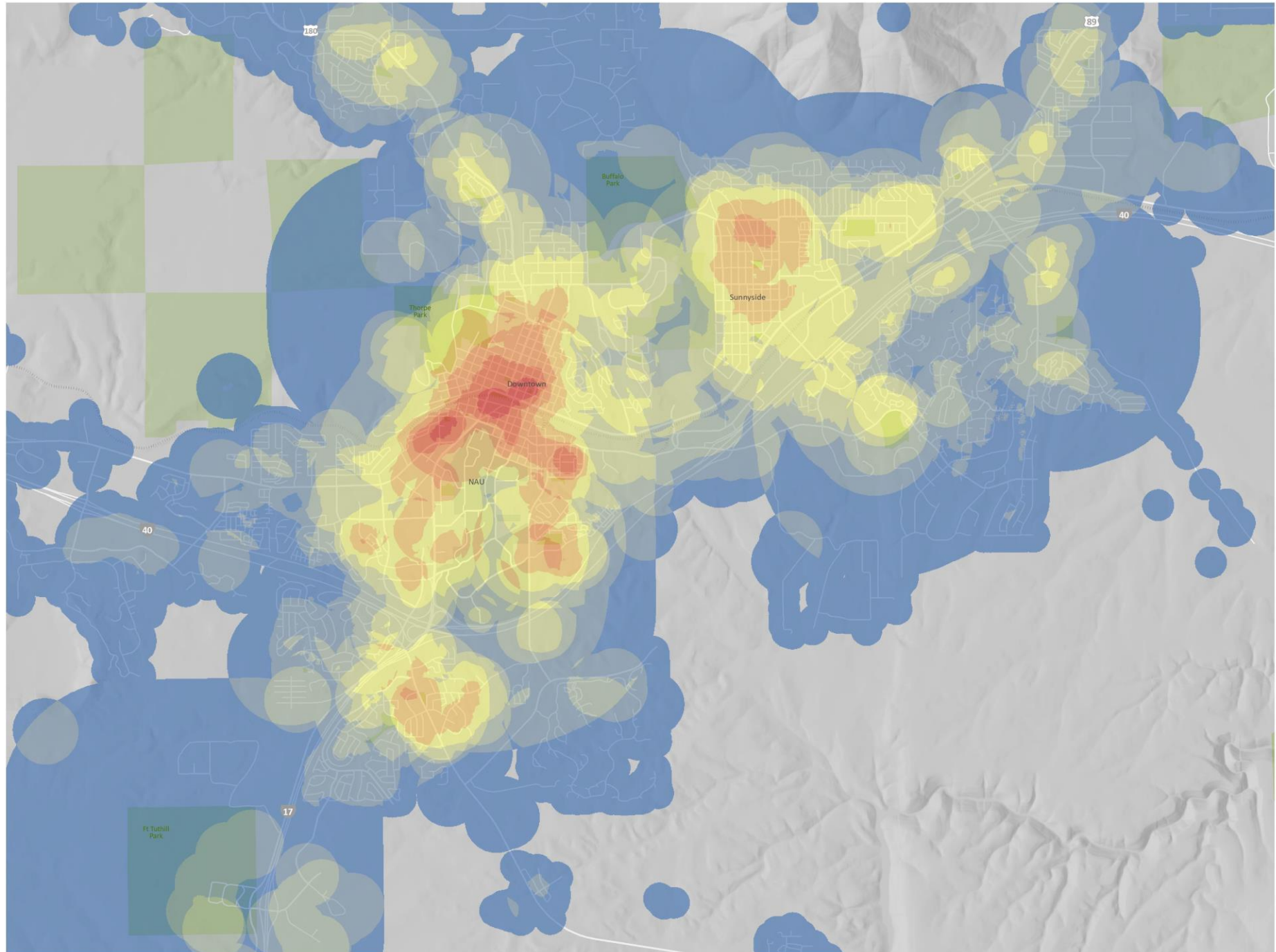
- Sidewalks: pedestrian comfort score for street
- Enhanced xings/bridges and tunnels: crossing comfort score
- FUTS: completion and connectivity



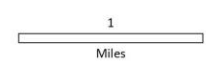
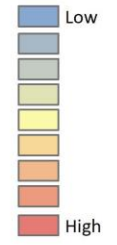
Attractors and generators

- Schools
- Parks
- Transit stops
- Residential neighborhoods
- Commercial areas
- Employment centers
- Institutions
- NAU and CCC campus

Attractors and generators



Concentration



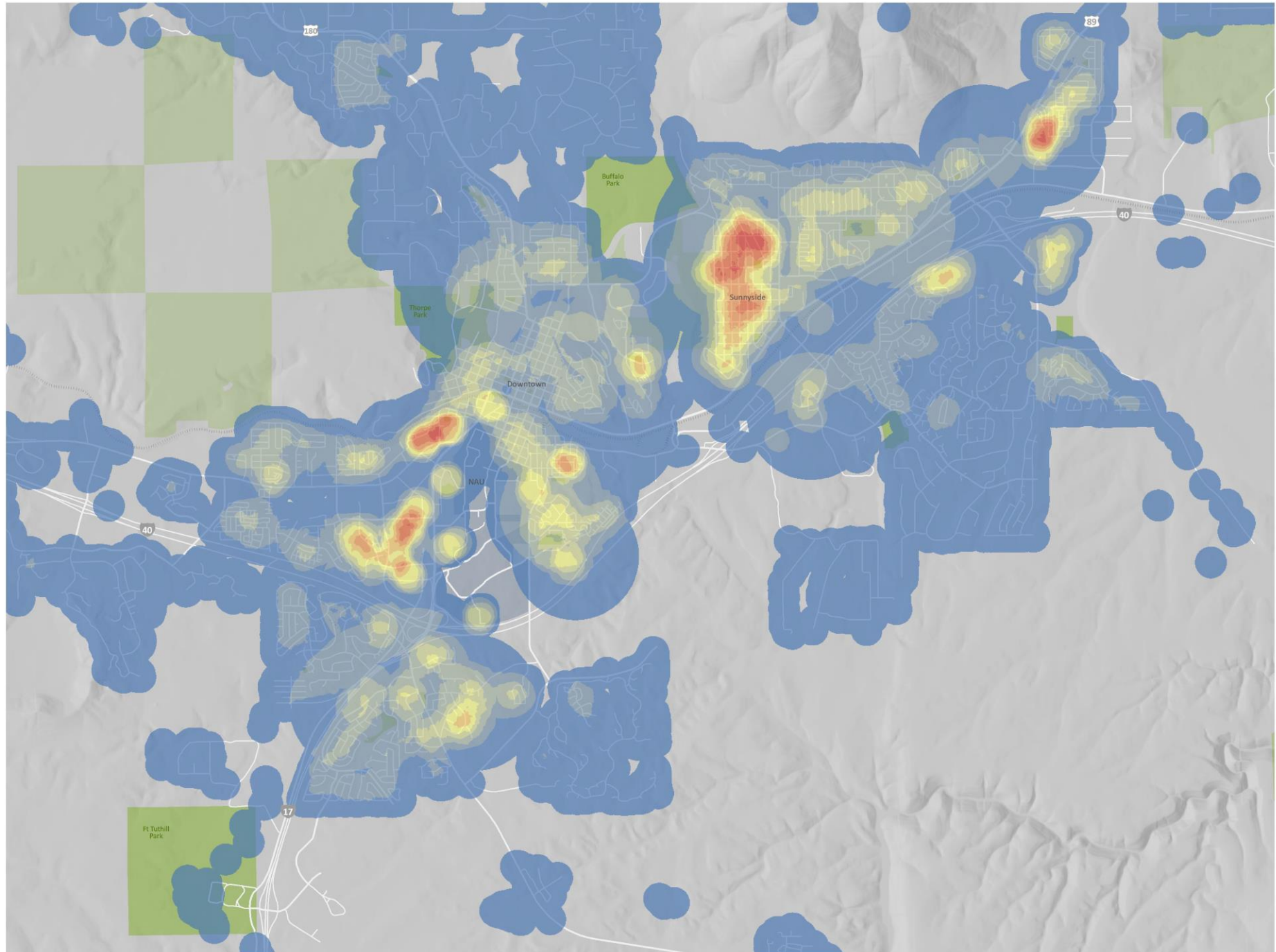


Social factors

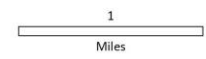
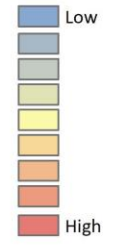


- Elderly populations aged 65 and over
- Children under 18
- Persons with disabilities
- Non-white populations
- Household poverty status
- Households without access to a vehicle
- Affordable and assisted housing locations
- Human service facilities

Social factors



Concentration





Total infrastructure needs

- Sidewalks: 58 miles @ \$21.7m
- FUTS trails: 77 miles @ \$29.4m
- Enhanced crossings: 59 locations @ \$18.9m
- Bridges and tunnels: 47 locations @ \$68.0m



First priority infrastructure

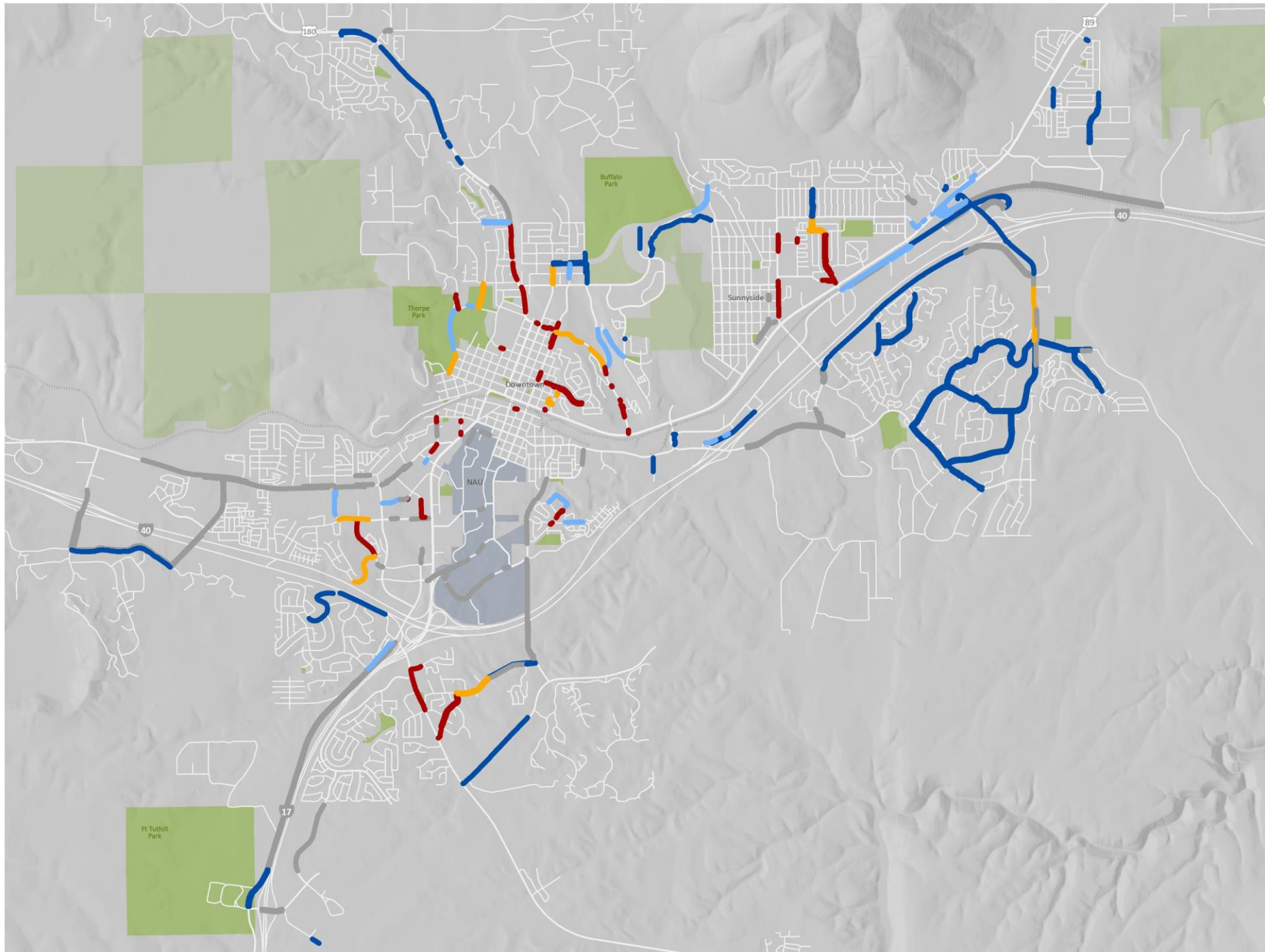
- Sidewalks: 4.9 miles @ \$3.1m
- FUTS trails: 4.6 miles @ \$4.9m
- Enhanced crossings: 8 locations @ \$3.6m
- Bridges and tunnels: 4 locations @ \$15.0m



Ped-bike in 419 roadway projects

- Sidewalks: 5.4 miles
- FUTS trails: 5.5 miles
- Enhanced crossings: 4 locations
- Bridges and tunnels: 8 locations

Active Transportation
Master Plan
Sidewalks



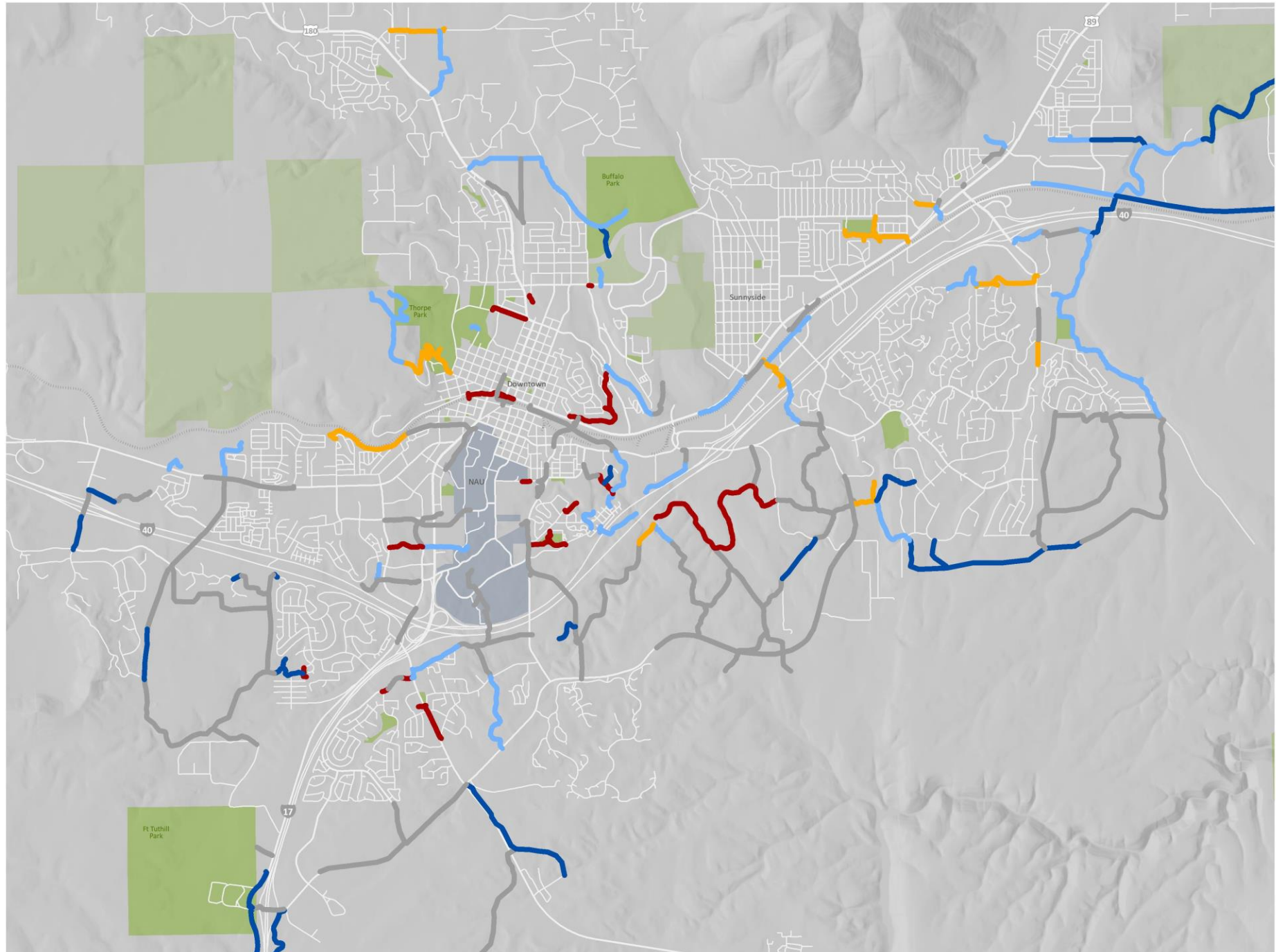
- Priority**
- - 1 First
 - 2 Second
 - 3 Third
 - 4 Fourth

1
Miles



City of Flagstaff
June 2021

Active Transportation
Master Plan
FUTS trails



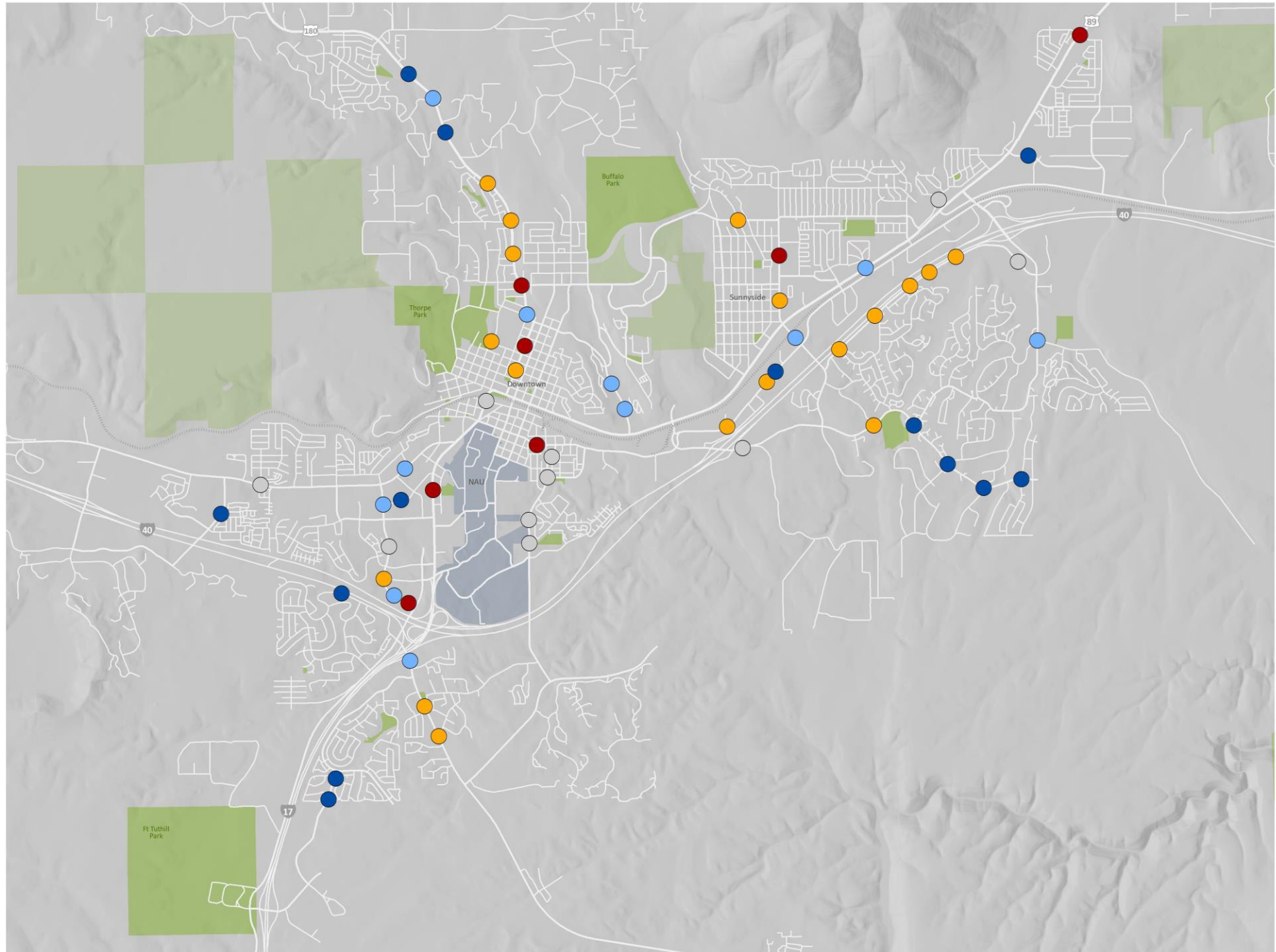
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1
Miles



City of Flagstaff
June 2021

Enhanced crossings

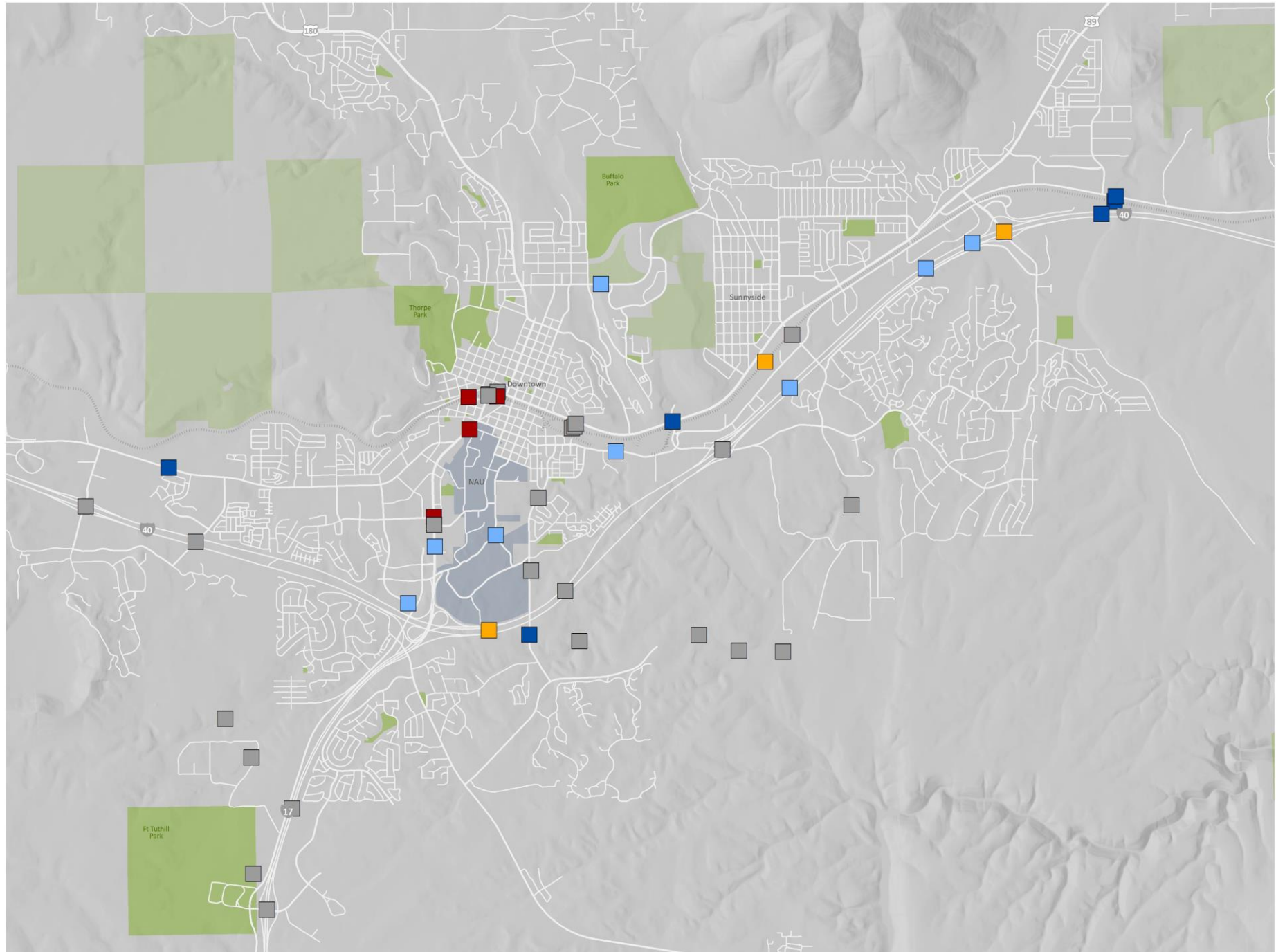


- Priority**
- --
 - 1 First
 - 2 Second
 - 3 Third
 - 4 Fourth

1
Miles



Bridges and tunnels



- Priority
- - 1 First
 - 2 Second
 - 3 Third
 - 4 Fourth

1
Miles





Project lists



Sidewalks					
ID	Project	Miles	Cost	Score	
SW-107	Fourth St - Felice to Dortha	0.11	81,000	80	
SW-108	Fourth St - Route 66 to Sixth	0.28	186,000	74	
SW-142	San Francisco St - Hunt to Dasilva	0.21	199,000	54	
SW-146	Lakin Dr/Steves Blvd - Route 66 to Lewis	0.30	209,000	54	
SW-106	Forest Meadows St - Highland Mesa to University	0.32	141,000	65	
SW-034	Fort Valley Rd - Beale to Meade	0.39	316,000	54	
SW-076	Aspen Ave - Verde to Elden	0.10	74,000	53	
SW-033	Fort Valley Rd - Navajo to Forest	0.20	100,000	52	
SW-149	Switzer Canyon Dr - Route 66 to Turquoise	0.22	158,000	48	
SW-133	Patterson Blvd - Elder to Lockett	0.18	141,000	65	
SW-102	Elder Dr - Steves to Kyle	0.26	217,000	61	
SW-053	Lake Mary Rd - High Country to Cochise	0.24	198,000	60	
SW-147	Steves Blvd - Lewis to Elder	0.53	406,000	59	
SW-081	Beaver St - Forest to Cedar	0.23	246,000	51	
SW-090	Cherry Ave - Agassiz to Elden	0.11	74,000	51	
SW-101	Elden St - Birch to Cherry	0.06	49,000	48	
SW-134	Patterson Blvd - Lockett to Linda Vista	0.39	350,000	60	
SW-111	Highway 89 - Route 66 to Cummings	0.42	212,000	59	
SW-086	Calle Contenta - Paseo del Rio to Maricopa	0.22	259,000	57	
SW-110	Highland Mesa Rd - Forest Meadows to Nada	0.32	152,000	55	
SW-161	Walapai Dr - Zuni to Lake Mary	0.64	454,000	55	
SW-156	University Ave - Woodlands Village to Thompson	0.22	121,000	52	
SW-165	Zuni Dr - Leupp to Walapai	0.53	471,000	52	
SW-080	Beal Rd - Fort Valley to Aztec	0.38	273,000	51	
SW-116	Kaspar Dr/Lockett Rd - Route 66 to Fanning	0.08	55,000	51	
SW-130	Navajo Rd - Fort Valley to Hopi	0.39	316,000	51	
SW-099	Route 66 - Highway 89 to Country Club	0.41	328,000	50	
SW-127	Metz Walk - Riordan to shopping center	0.03	16,000	50	
SW-164	Yale St - University to Plaza	0.16	94,000	50	

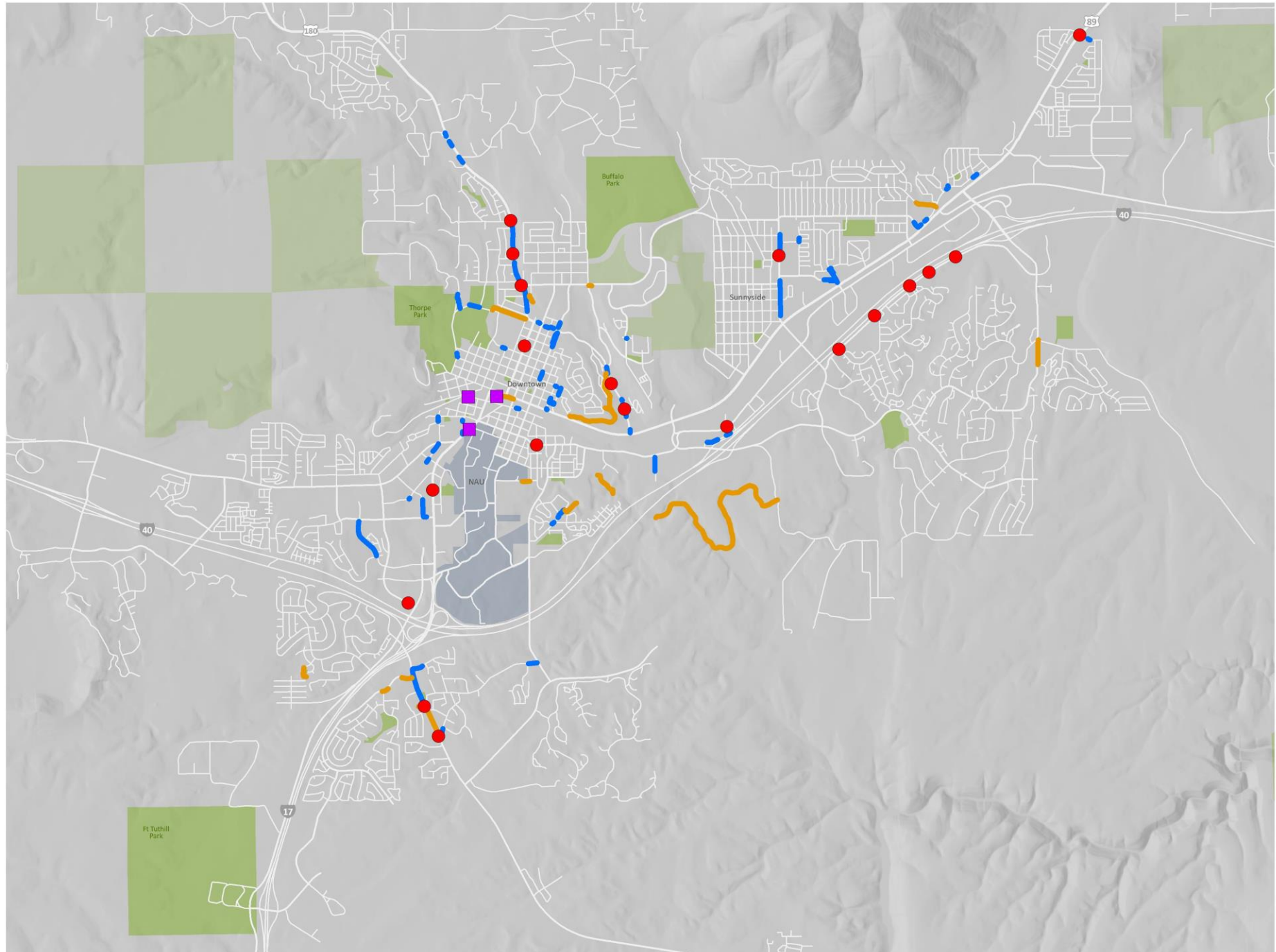


Project lists



Enhanced crossings				
ID	Project	Type	Cost	Score
X-027	Fort Valley Rd - Forest	Beacon	360000	56
X-016	Butler Ave - O'Leary	Enhanced	200000	50
X-105	Woodlands Village Blvd - FUTS	Beacon	360000	43
X-007	Butler Ave - Burger King	Beacon	360000	44
X-008	Butler Ave - Continental	Enhanced	200000	40
X-009	Butler Ave - Foxhill	Enhanced	200000	37
X-014	Butler Ave - Mt Pleasant	Enhanced	200000	38
X-015	Butler Ave - Mustang	Beacon	360000	38
X-019	Butler Ave - Skyview	Enhanced	200000	37
X-020	Cedar Ave - Main	Beacon	360000	37
X-025	Fort Valley Rd - Blue Willow	Enhanced	200000	42
X-026	Fort Valley Rd - Creekside	Enhanced	200000	44
X-028	Fort Valley Rd - Meade	Beacon	360000	41
X-023	Fort Valley Rd - Museum	Enhanced	200000	43
X-110	Fort Valley Rd - Sechrist School	Beacon	200000	0
X-034	Fourth St - Fourth	Beacon	360000	62
X-033	Fourth St - Rose	Beacon	360000	52
X-041	Humphreys St - Cherry	Enhanced	200000	54
X-042	Humphreys St - Elm	Beacon	360000	50
X-043	Humphreys St - Hunt	Enhanced	200000	49
X-047	Huntington Dr - Bronco	Enhanced	200000	36
X-048	Huntington Dr - Grant	Enhanced	200000	34
X-050	Kaspar Dr - FUTS	Enhanced	200000	21

Active Transportation
Master Plan
First projects



- Bridges/tunnels | first projects
- Crossings | first projects
- ~ FUTS | first projects
- ~ Sidewalks | first projects

1
Miles



City of Flagstaff
June 2021

Bikeways plan

Low stress bikeways network...

- **Bikeways** are linear transportation corridors intended for bicycle use
- **Network** is a continuous and connected system of bikeways throughout Flagstaff
- **Low stress** means that most people will feel comfortable on a bicycle, regardless of experience or ability





Separation principle

- **Low-volume/speed streets:** most bicyclists are comfortable riding in the street with no special facilities
- **Moderate-volume/speed streets:** bike lanes provide dedicated space for cyclists out of the vehicular travel lane
- **High-volume/speed streets:** bike lanes alone may not be sufficient for most cyclists to feel comfortable; separation should be considered



Types of cyclists

1%
LESS THAN 1%

STRONG AND FEARLESS

Riding is a strong part of my identity, and I am undeterred by traffic speed, volume, or other roadway conditions.



7%

ENTHUSED AND CONFIDENT

I am comfortable sharing the road with motor vehicles, but I prefer to use bike lanes and bike friendly streets.



60%

INTERESTED BUT CONCERNED

I like riding a bike, but I don't ride much. I would like to feel safer when I do ride, with less traffic and slower speeds.



33%

NO WAY NO HOW

I don't bike at all due to inability, fear for my safety, or simply a complete and utter lack of interest.



Source:
Fehr & Peers



Bicyclist preference

Four-lane commercial street, speeds of 35 mph...

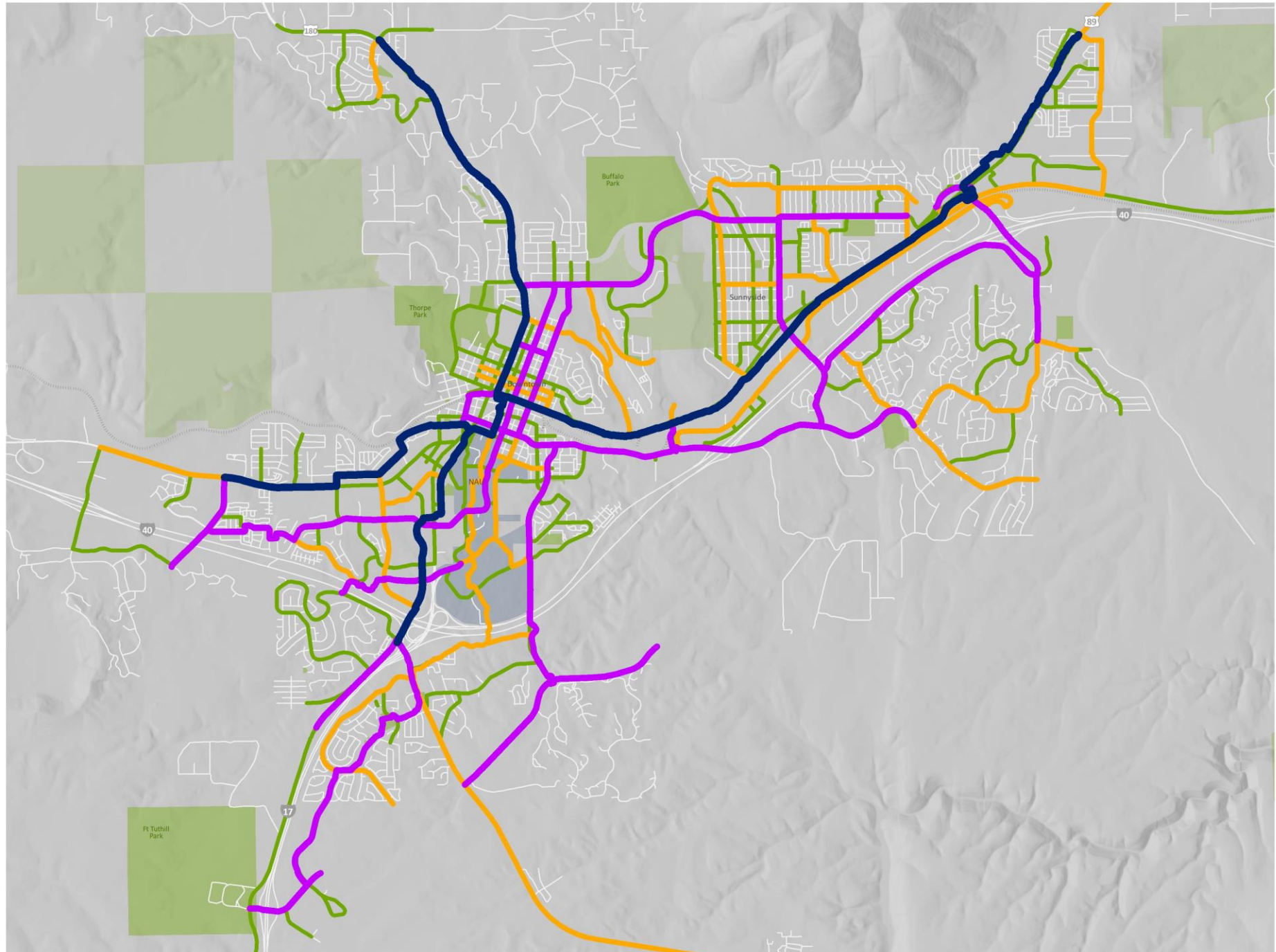
- **10%** very comfortable riding in a bike lane
- **58%** in a physically separated bike lane
- **83%** on a separated path



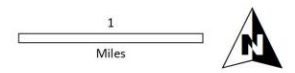
Bikeways hierarchy

- **Primary:** four main commuter routes into central area from N-S-E-W
- **Secondary:** other main routes for crosstown bicycle travel; 17 routes total
- **Third level:** bicycle connectivity between neighborhoods and districts
- **Fourth level:** travel within neighborhoods, local access, connectivity to higher level routes

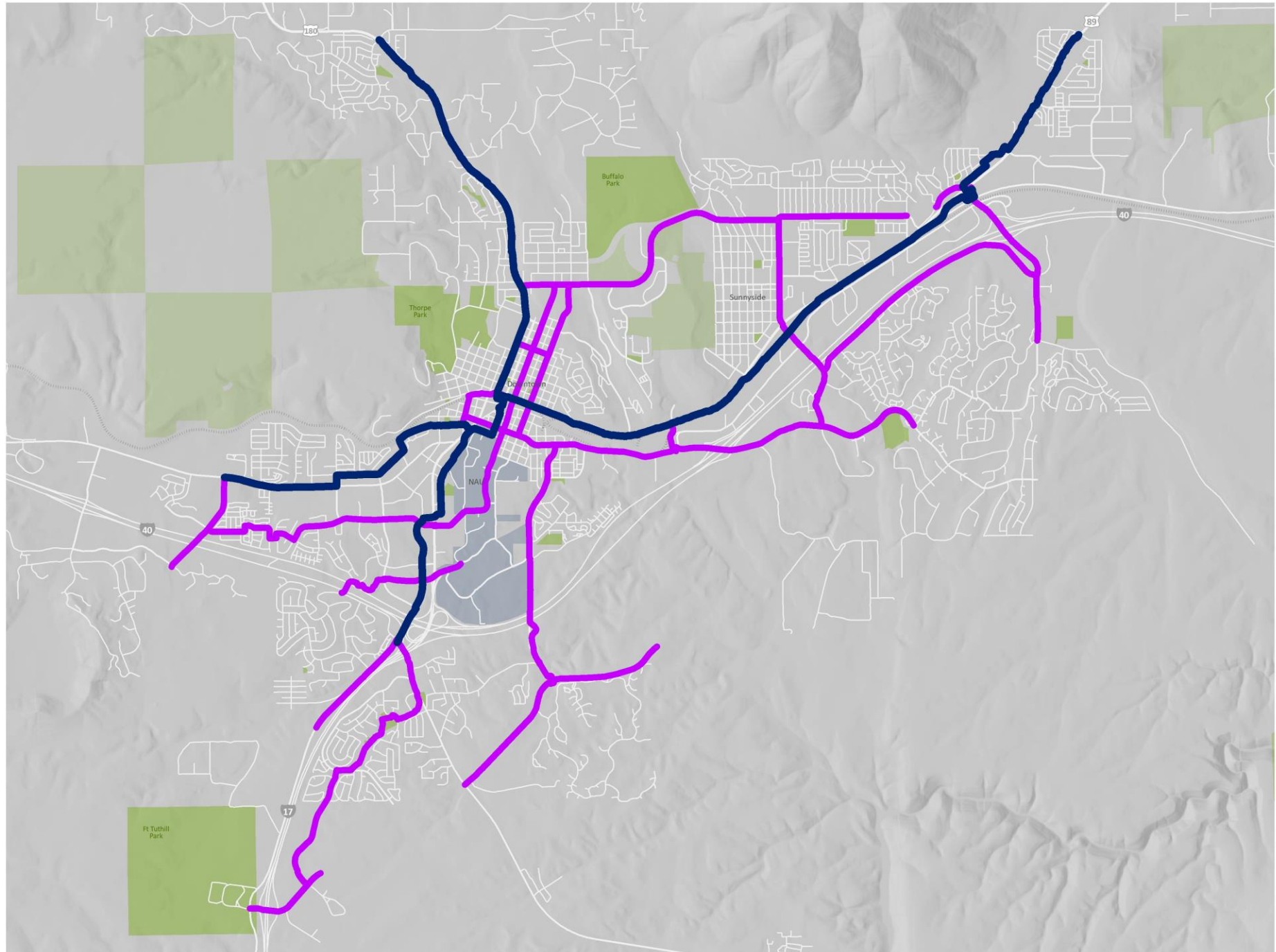
Active Transportation
Master Plan
**Bikeways
hierarchy**



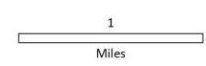
- Class**
- 1 Primary
 - 2 Secondary
 - 3 Third
 - 4 Fourth



Bikeways hierarchy



Class
1 Primary
2 Secondary





What it means



- Implementation/priorities
- Separated facilities
- Maintenance
- Closures and detours
- Wayfinding

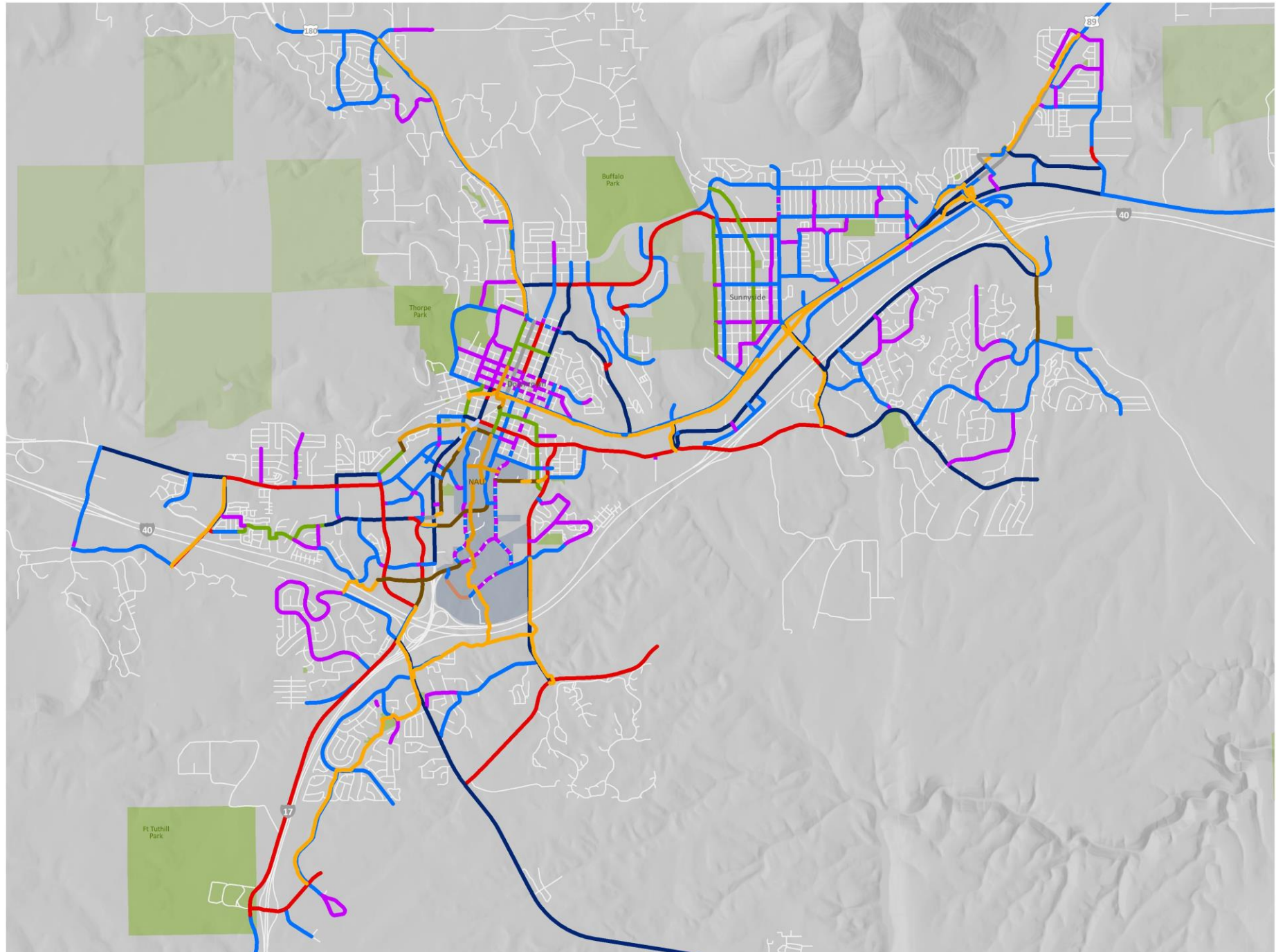


Facilities



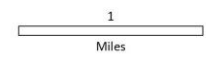
- **Shared:** bike routes, bike boulevards, shared lane markings
- **Dedicated:** bike lanes, buffered bike lanes
- **Separated:** separated bike lanes, cycletracks, FUTS

Bikeways facilities



Facilities

-
- Bike lanes
- Boulevard
- Buffered
- Bus/bike lane
- Cycletrack
- Divided FULTS
- FULTS
- Route
- Separated
- SLM/bike lane
- Shared lane markings
- Shoulders





Bike route

Bike boulevard





Bike lane

Buffered bike lane





Separated bike lanes





Cycletrack

FUTS trail



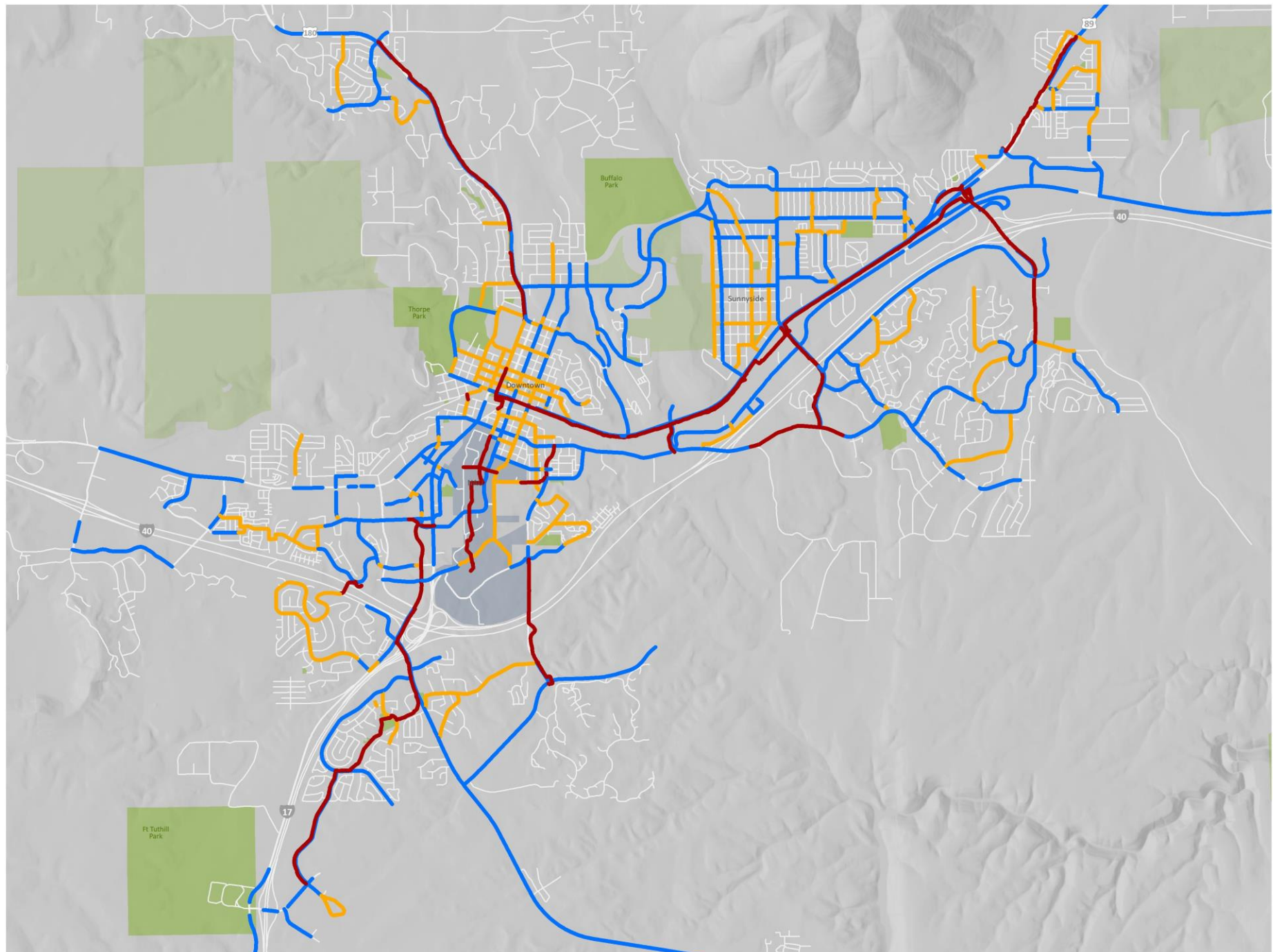


Intent

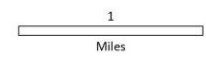


- Complete primary and secondary bikeways
- Build some high-visibility, impactful projects, including separated facilities
- Introduce other types of advanced facilities
- Implement important third and fourth level bikeways to create a robust overall system
- Pull the network together through a comprehensive system of signing and wayfinding

First projects Bikeways



-  Shared
-  Dedicated
-  Separated



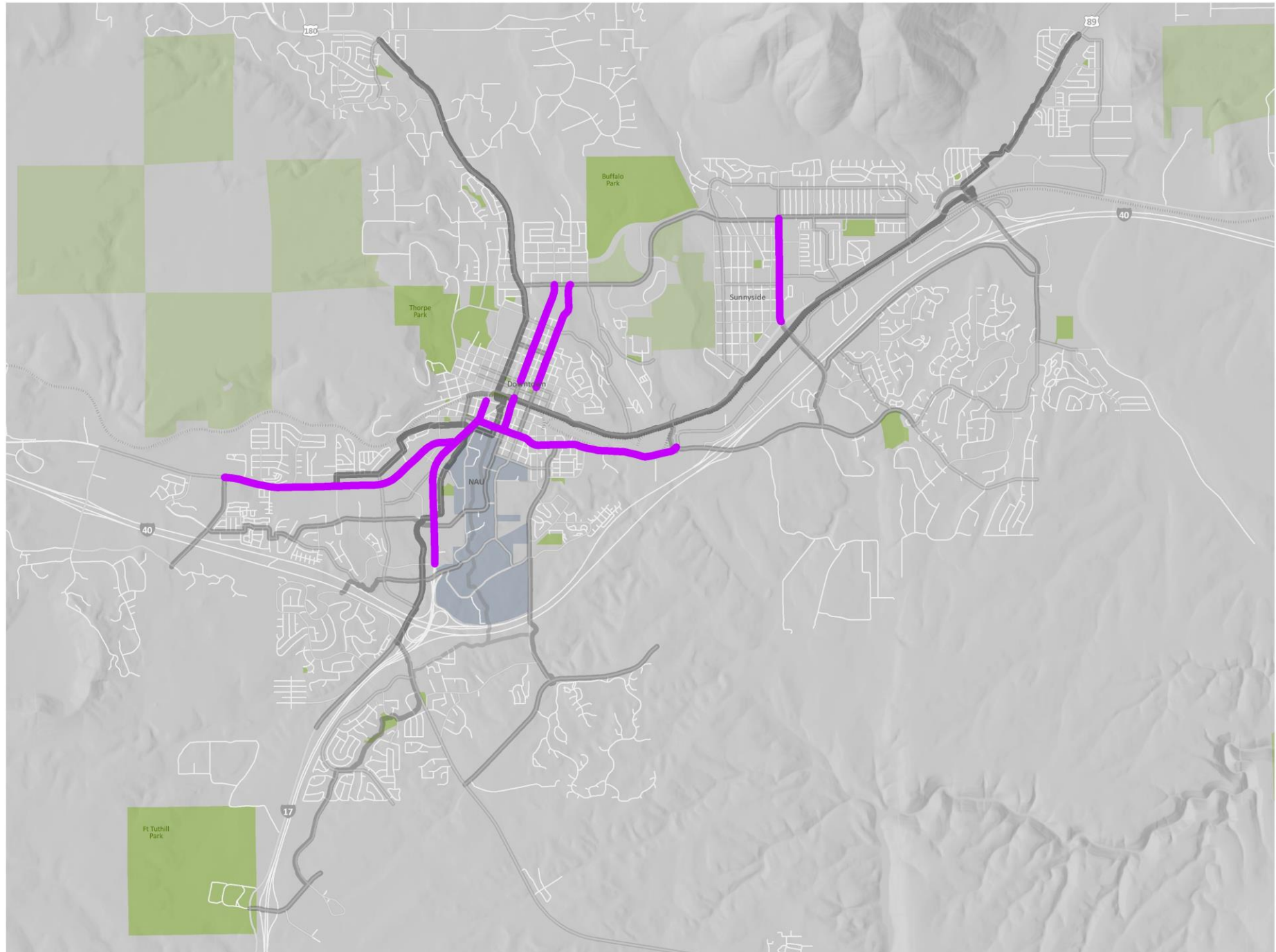
Citizen petition

Install protected bike lanes on...

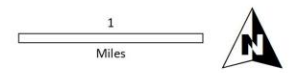
- Beaver St
- San Francisco St
- Butler Ave
- Fourth St
- Milton Rd
- W Route 66



Active Transportation
Master Plan
Petition



- Petition
- Class**
- 1 Primary
- 2 Secondary
- 3 Third
- 4 Fourth





Compare to bikeways plan

Hierarchy...

- All planned as secondary or primary bikeways, with the exception of Milton Rd

Facilities...

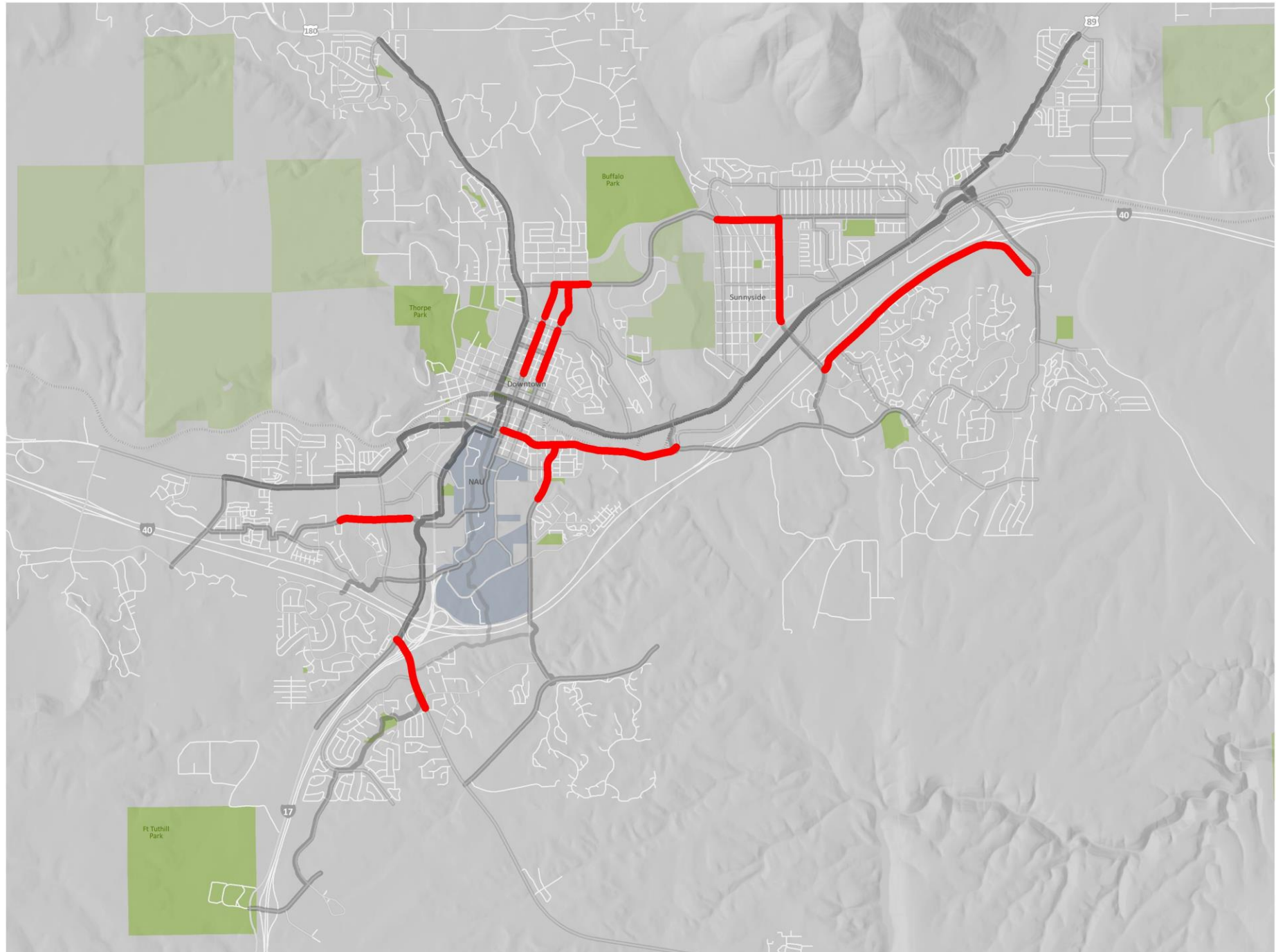
- All planned as buffered or separated bike lanes, with the exception of Fourth St








Other candidate streets

- Forest Ave
- Cedar Ave
- Soliere Ave
- University Ave
- Lake Mary Rd

Potential pilot streets



-  Pilot candidate
- Class**
-  1 Primary
-  2 Secondary
-  3 Third
-  4 Fourth

