City of Little Rock FLAP Project Application Support Documentation

References and Endnotes

1) La Petite Roche is a National Park Service FLMA and an important landmark on the Trail of Tears https://www.nps.gov/trte/planyourvisit/places-to-go-in-arkansas.htm.

2) The Central High School National Historic Site is a National Park FLMA and is likely one of the two most significant historical features of Little Rock https://www.nps.gov/chsc/index.htm.

3) ALTA Planning. 2015. Southwest Trail Corridor and Economic Impact Study. https://www.littlerock.gov/media/1373/150724_southwest-trail_final-report.pdf

4) Hot Springs National Park is a National Park Service FLMA https://www.nps.gov/hosp/index.htm.

5) Ouachita National Forest is a U.S. Forest Service FLMA http://www.fs.usda.gov/ouachita.

6) The Arkansas River Trail Loop (ART) is a 15.6 mile bicycle and pedestrian recreational trail on both sides of the Arkansas River, connected by the Big Dam Bridge and the Clinton Presidential Bridge http://arkansasrivertrail.org/.

7) The "Medical Mile" refers to a bike/ped trail from Riverfront Park to the Union Pacific tracks. The Medical Mile west of Arch St. is not currently in use and typically fenced off because it dead-ends at the Union Pacific tracks at its western terminus (Phase 1 site). Phase 1 would stabilize part of the Medical Mile (Fig. 3) and create a ramp from the Union Pacific bike/ped bridge to the Medical Mile (Fig. 4). This project would allow the Central High Corridor and the Arkansas River Trail to use the entire Medical Mile (Fig. 2).

8) Mark Asher, P.E., Jacobs Engineering Group Inc. site survey and cost summary

9) The Clinton Presidential Library and Museum is a federal land administered by the National Archives and Records Administration, a federal agency.

10) Murray Lock and Dam is a US Army Corps of Engineers FLMA http://www.swl.usace.army.mil/.

11) The City of Little Rock is working to address Arkansas River Trail sections that do not meet AASHTO and ART minimum standards. Current projects include the west terminus https://www.littlerock.gov/for-residents/bikeped-little-rock/projects/art-west-terminus/, the east terminus https://www.littlerock.gov/for-residents/bikeped-little-rock/projects/art-east-terminus/, and Riverfront Drive. Every Arkansas River Trail improvement enhances user experience and increases use.

12) Little Rock Union Station is on the National Parks Service-managed National Register of Historic Places https://www.nps.gov/nr/

13) Metroplan's Pedestrian/Bicyclist Crash Analysis 2015. http://metroplan.org/files/53/2015Ped-BikeCrashAnalysis.pdf

14) The City of Little Rock's Master Street Plan plans for the Southwest Trail (and therefore the Corridor) https://www.littlerock.gov/!userfiles/editor/docs/planning/statistics/Master%20Street%20Plan%2012-2015.pdf.

15) Julie A. Ryan, Ph.D. Candidate, Western Michigan University personal communication

Figures

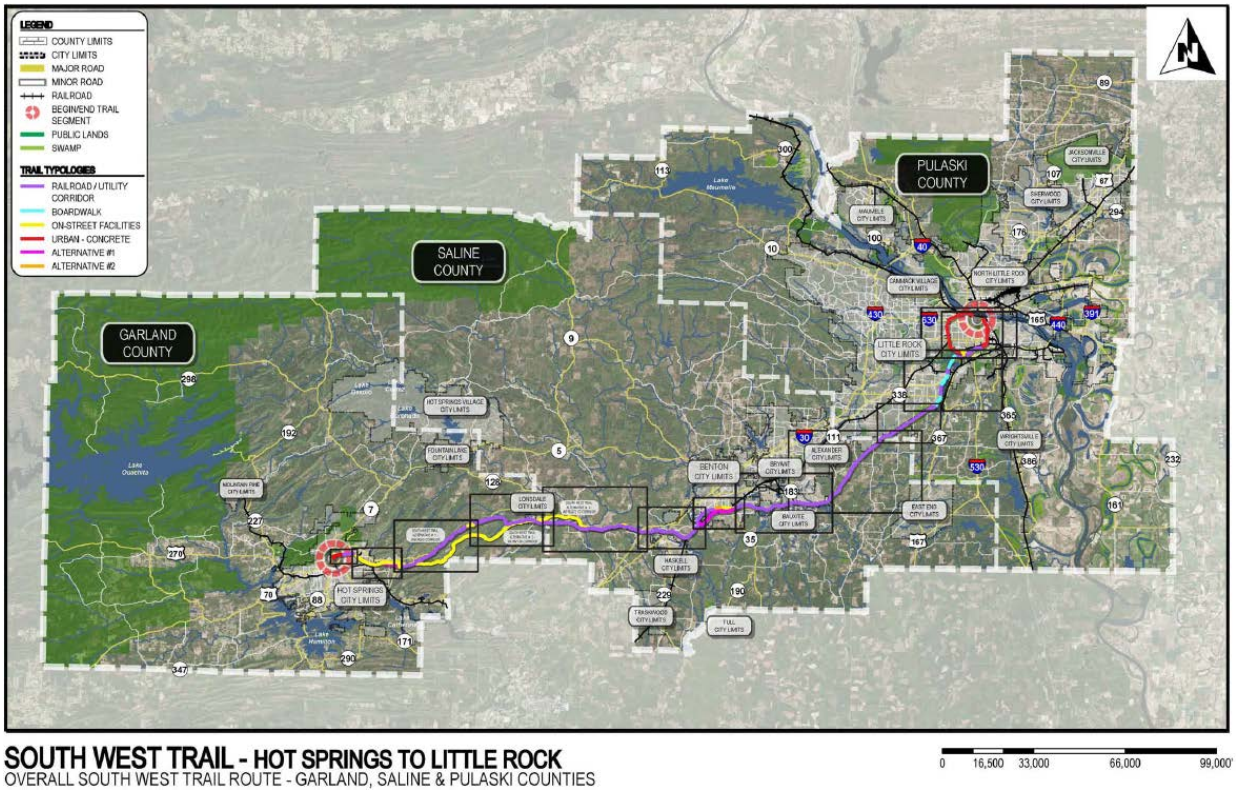

Figure 1. The proposed Southwest Trail route from Downtown Little Rock to Hot Springs National Park from ALTA Planning's Southwest Trail Corridor and Economic Impact Study (2015).

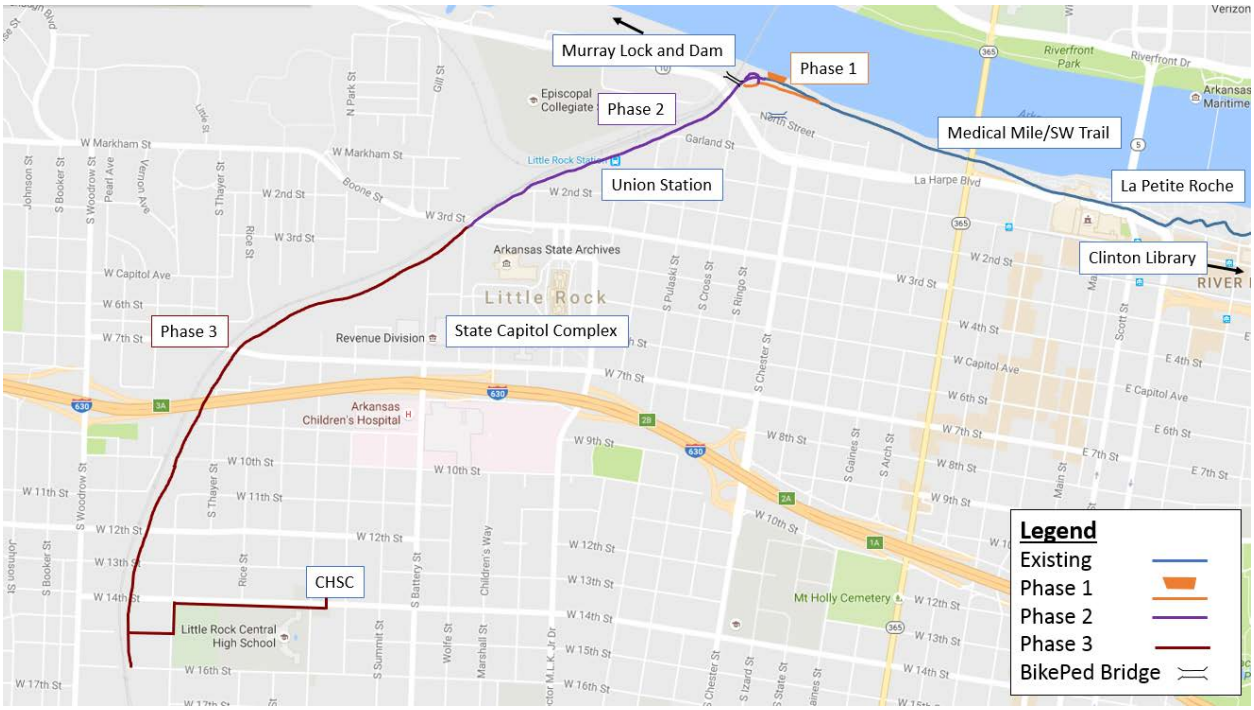

Figure 2. Overview of the proposed project, the Central High Corridor, its FLMAs, and its phases.

Figure 3. Phase 1 would stabilize the portion of the riverbank currently sliding into the Arkansas River.

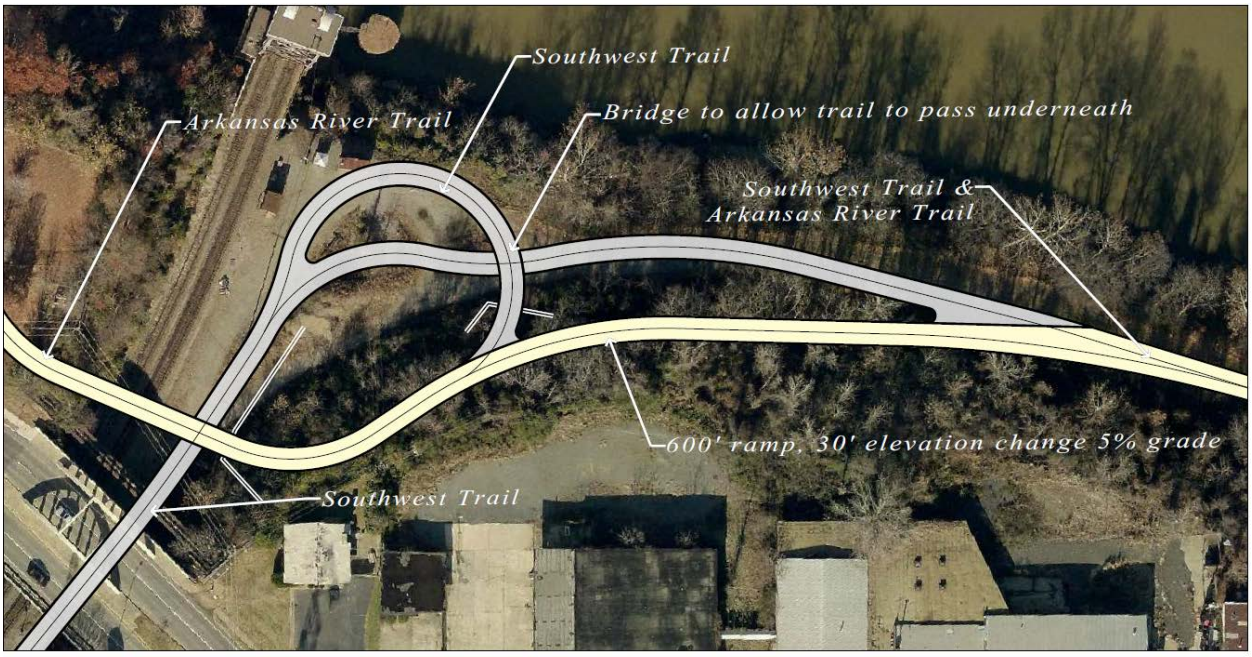

Figure 4. Phases 1 and 2 would create vital connections between the River Trail and the Corridor that will encourage cross-tourism. Phase 1 would make the ivory colored connection from the Union Pacific bridge to the Medical Mile. Phase 2 would make the gray connections. It would restore the Medical Mile broken from the current erosion to create an at-grade connection to new Corridor trail (~$24K). It would also create a ramp to connect to and from the Corridor southwest of this junction (~$300K). Phase 1's ramp was engineered by Jacobs Engineering and budgeted by Metroplan.

CONNECTION FROM PEDESTRIAN BRIDGE TO EXISTING MEDICAL MILE

ITEM	QUANTITY	UNIT	PRICE	COST
SLOPE STABILIZATION:				
40' NAILS	556	EACH	$3,000	$ 1,668,000.00
EMBANKMENT COST	20,000	SQ. FT.	$50,000	$ 50,000.00
RAMP FROM BRIDGE TO MEDICAL MILE:				
CONCRETE CURB (TYPE SPECIAL)	1491	LIN. FT.	$ 20	$ 29,820.80
36" REINFORCED CONCRETE PIPE CULVET	23	LIN. FT.	$ 85	$ 1,955.00
36" FLARED END SECTION FOR REINFORCED CONCRETE PIPE CULVERT	2	EACH	$ 1,200	$ 2,400.00
UNCLASSIFIED EXCAVATION	49	CU. YD.	$ 25	$ 1,225.00
COMPACTED EMBANKEMENT	16773	CU. YD.	$ 12	$ 201,276.00
CLEARING AND GRUBBING	7	STA.	$ 2,200	$ 16,401.44
CONCRETE DITCH PAVING (TYPE B)	150	SQ. YD.	$ 55	$ 8,250.00
LIME	2	TON	$ 110	$ 220.00
SEEDING	1	ACRE	$ 2,200	$ 2,200.00
MULCH COVER	1	ACRE	$ 2,200	$ 2,200.00
WATER	122.1	M. GAL.	$ 10	$ 1,221.00
TEMPORARY SEEDING	1	ACRE	$ 1,800	$ 1,800.00
SILT FENCE	1481	LIN. FT.	$ 3	$ 4,443.00
SAND BAG DITCH CHECK	110	BAG	$ 12	$ 1,320.00
SEDIMENT REMOVAL AND DISPOSAL	10	CU. YD.	$ 16	$ 160.00
ROCK DITCH CHECKS	36	CU. YD.	$ 45	$ 1,620.00
SECOND SEEDING APPPLICATION	1	ACRE	$ 600	$ 600.00
SOLID SODDING	34	SQ. YD.	$ 6	$ 204.00
AGGREGATE BASE COURSE (CLASS 7)	464	TON	$ 20	$ 9,281.72
MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	140	TON	$ 75	$ 10,496.92
ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	6	TON	$ 725	$ 4,227.93
QUANTITIES ESTIMATED.			SUB-TOTAL:	$2,019,323
LENGTH	10% CONTINGENCY (RAMP ONLY):			$ 30,132.28
STA. 59+76.48 TO STA. 67+22.00 = 745.22 LIN. FT.				
			TOTAL:	**$ 2,049,455.09**

Figure 5. Phase 1 budget.

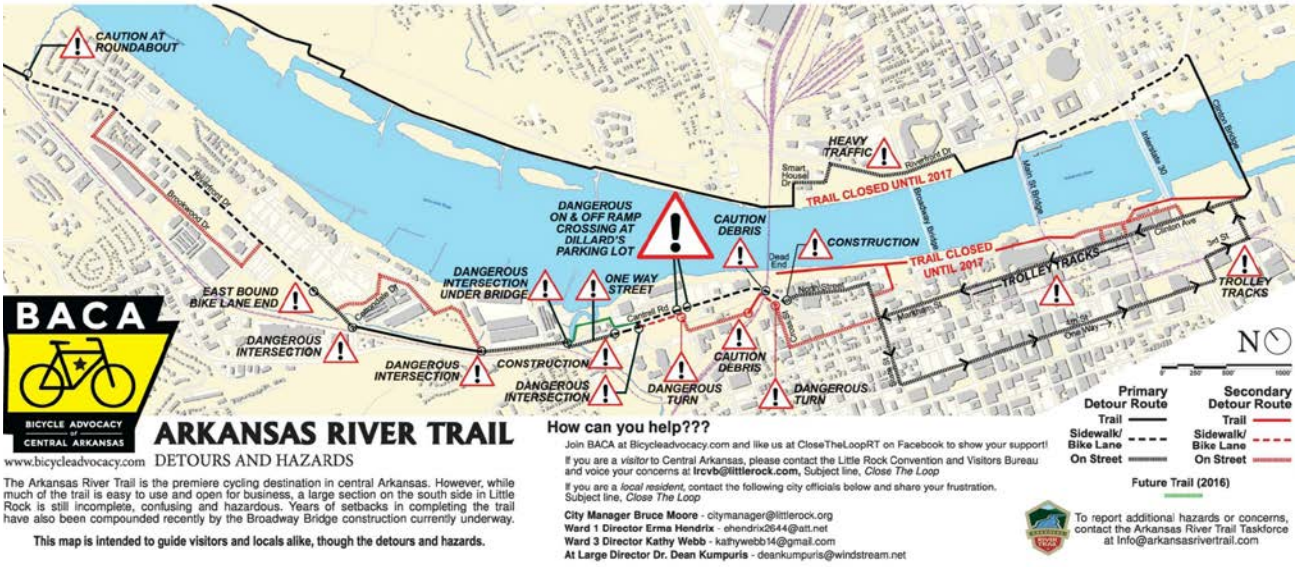

Figure 6. This River Trail map, published by our local bike advocacy organization, identifies hazards to users, located primarily on the Little Rock side of the river. Phase 1 would be a significant River Trail improvement, leading to greater use and increased visitation to FLMAs.

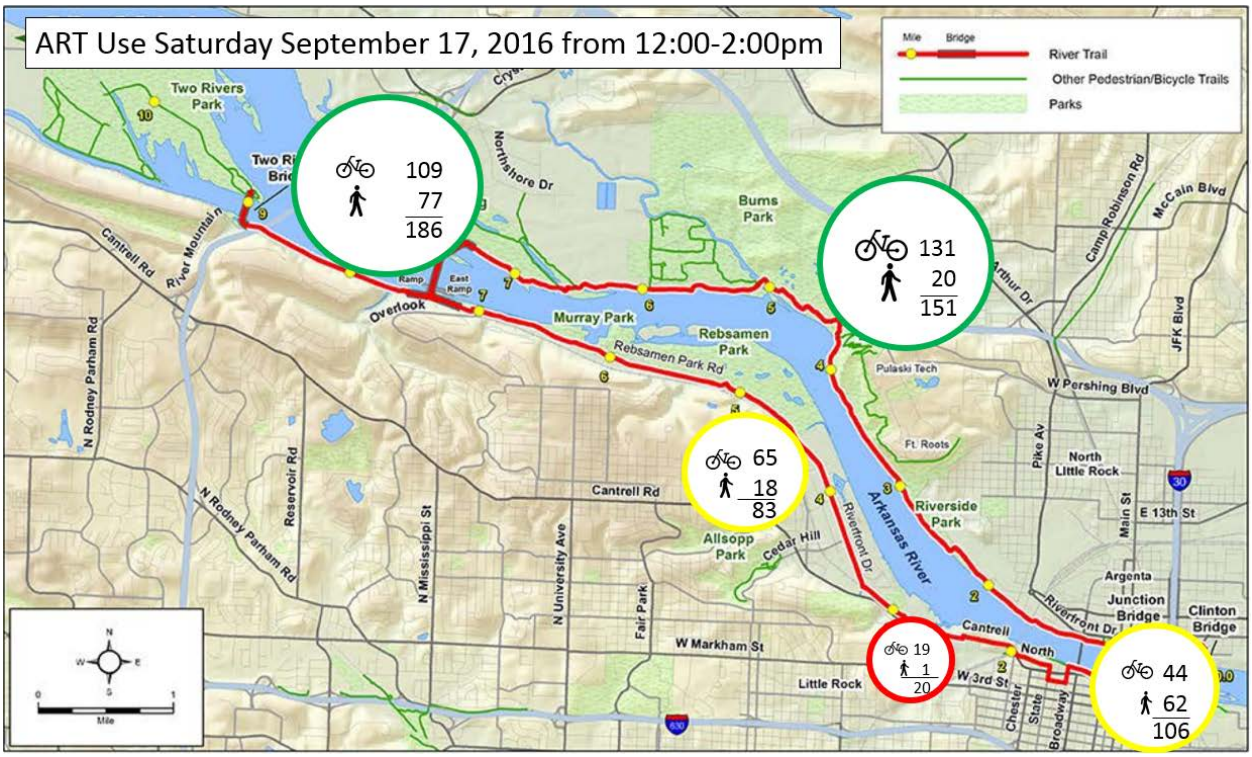

Figure 7. These are the most recent bike/ped count data on the River Trail. The Little Rock side of the River Trail (yellow and red circles) is used less due to its failures (Fig. 6). These failures are responsible for decreased use and FLMA visitation. This project would be an important step forward in making the ART a true recreational loop and useful transportation corridor.

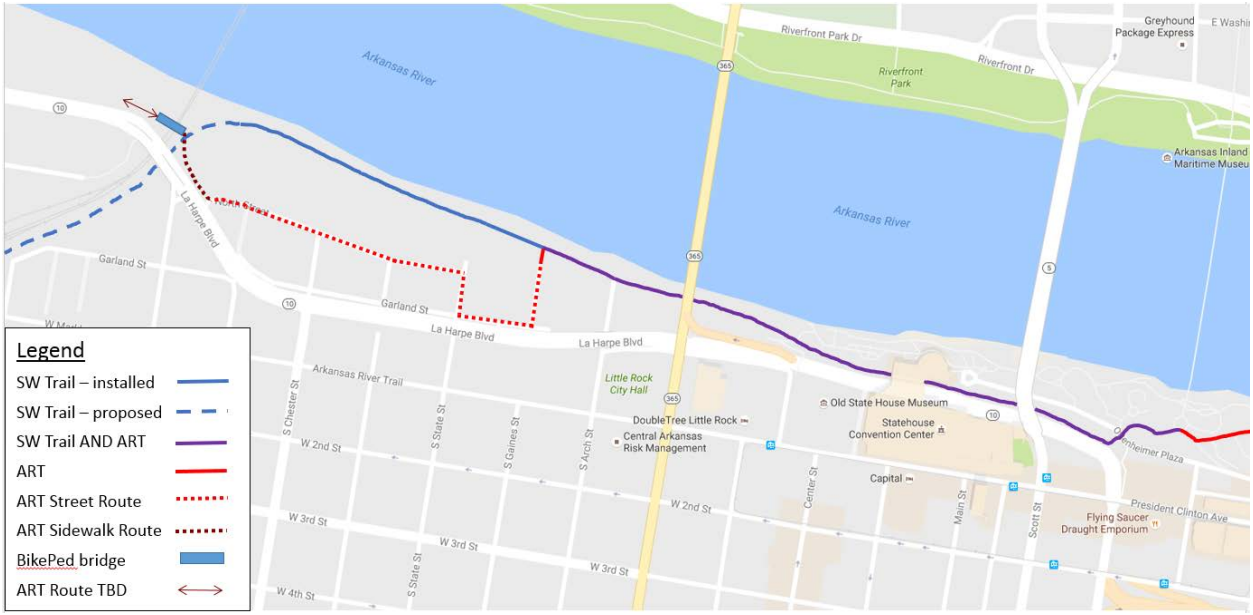

Figure 8. This is the River Trail route in Fall 2017 without Phase 1 FLAP funding. Arkansas River Trail users would be routed onto a narrow sidewalk along Cantrell/LaHarpe (Fig. 6) then onto North St., State St., Garland St., and N. Gaines St. before being routed back onto the Medical Mile (red dotted line).

Figure 9. 9A) Without FLAP Phase 1 funding, River Trail users would be routed onto a narrow sidewalk immediately adjacent to Cantrell/LaHarpe Arkansas State Highway 10 which services 28,000 cars per day. There is no barrier between bicycle and pedestrian traffic and high-speed automobile traffic. River Trail users would then travel on or along 0.4 miles of additional city streets (Fig. 8). 9B) With FLAP funding, River Trail and Corridor users would walk and ride along the scenic Arkansas River, safe from vehicular traffic. Phase 1 will immediately increase River Trail use and River Trail FLMA visitation.

Figure 10. In addition to the gray ramp in Fig. 4, Phase 2 would purchase all necessary easements for the Corridor (~$650K), remove and replace the ~300' of trail in the slide zone of Phase 1 (~$24K) and construct 0.7 miles of the Corridor from the Arkansas River, past Little Rock Union Station, to the Arkansas State Capitol Complex (~$690K, budgeted by ALTA Planning).

Figure 11. Phase 3 would complete the Corridor, building a new trail from the Arkansas State Capitol Complex to W. 16th St. and a connection to the Central High National Historic Site (~$1.5M).

Figure 12. Shown by this 1887 line drawing, the area of Phase 1 was once a railroad bridge over the Arkansas River. The railroad dumped rubble and railroad debris below the river to build up the "land area" that is now the Corridor/Southwest Trail corridor. This site history contributes to its instability.

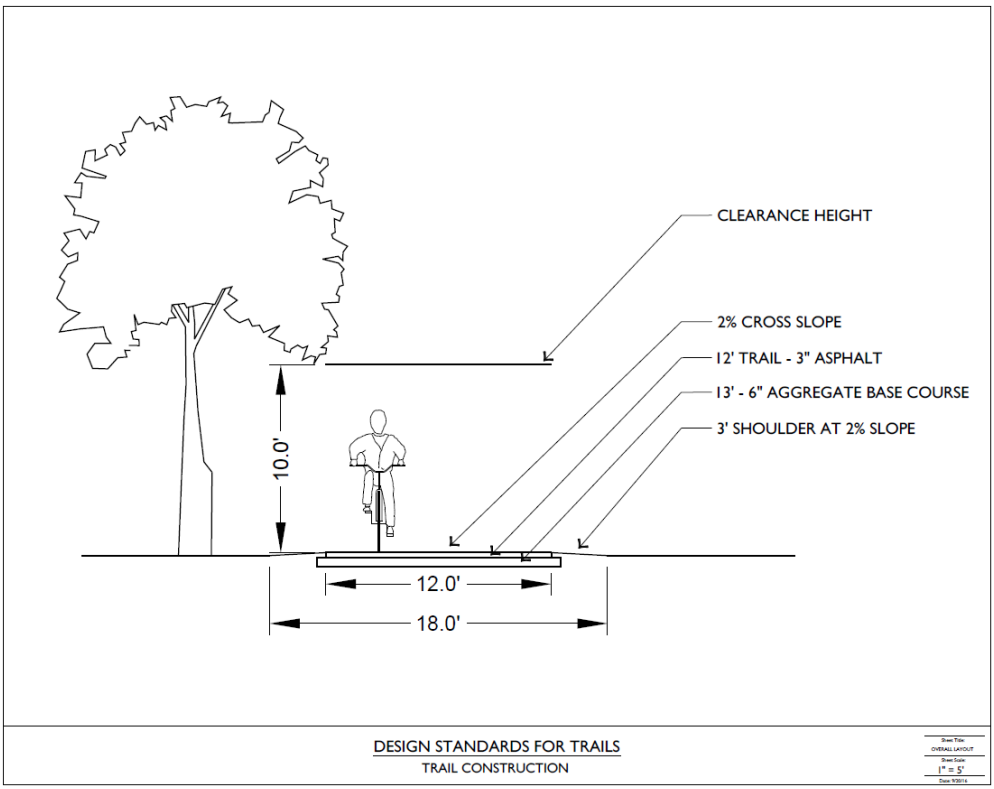

Figure 13. The Corridor would follow these AASHTO and Arkansas River Trail design standards.

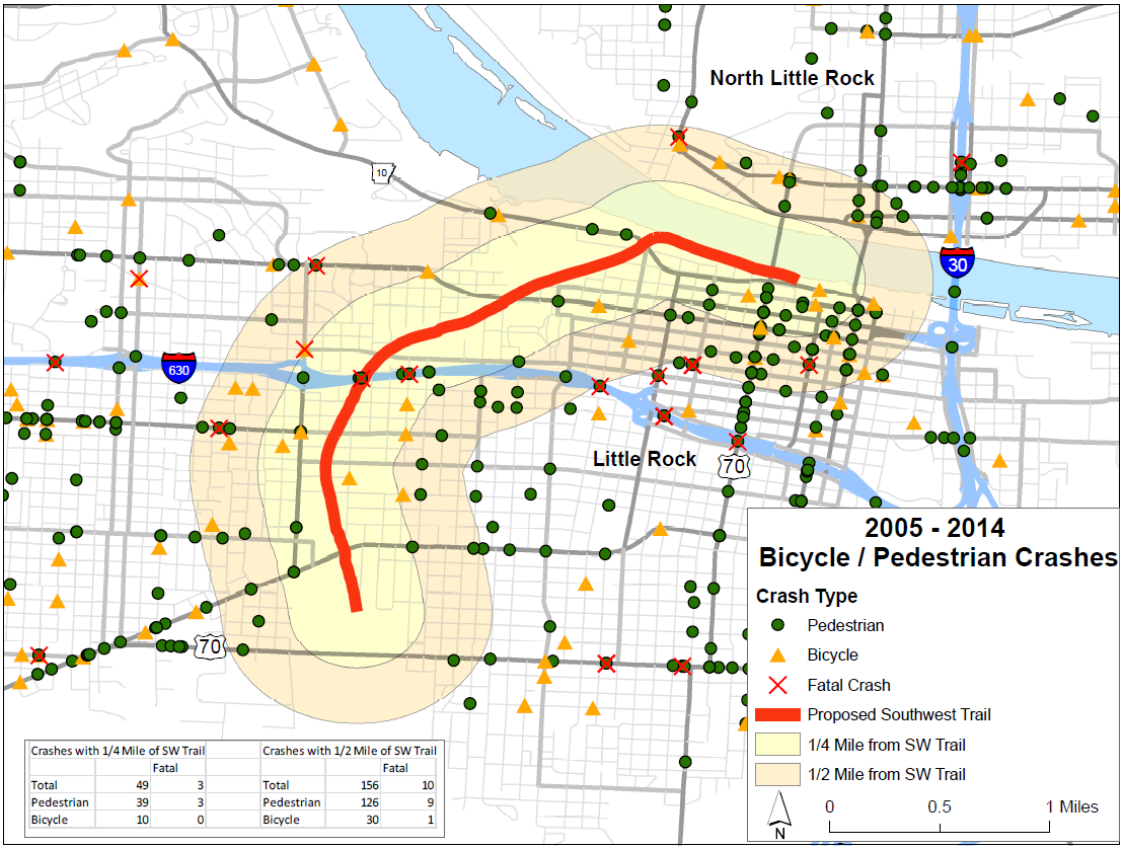

Figure 14. Summary of bicycle and pedestrian crashes in the Corridor from 2005-2014.