



Appalachian Application of Complete Streets

Translating Walk Audits into
Implementable Safety
Improvements

Study Purpose

- › Corridors were car-oriented with minimal pedestrian infrastructure
- › Many corridors had difficult terrain and constrained ROW
- › Known pedestrian activity on corridors
- › Need to balance:
 - Safety
 - Feasibility
 - Stakeholder priorities
 - Funding reality



Study Corridors

- 8 corridors
- 4- Steubenville, 2- Wintersville, 2- Jefferson County
- Major destinations
 - Franciscan University
 - Indian Creek High School
 - Mobile home communities
 - Mall
 - Library
 - Transit routes

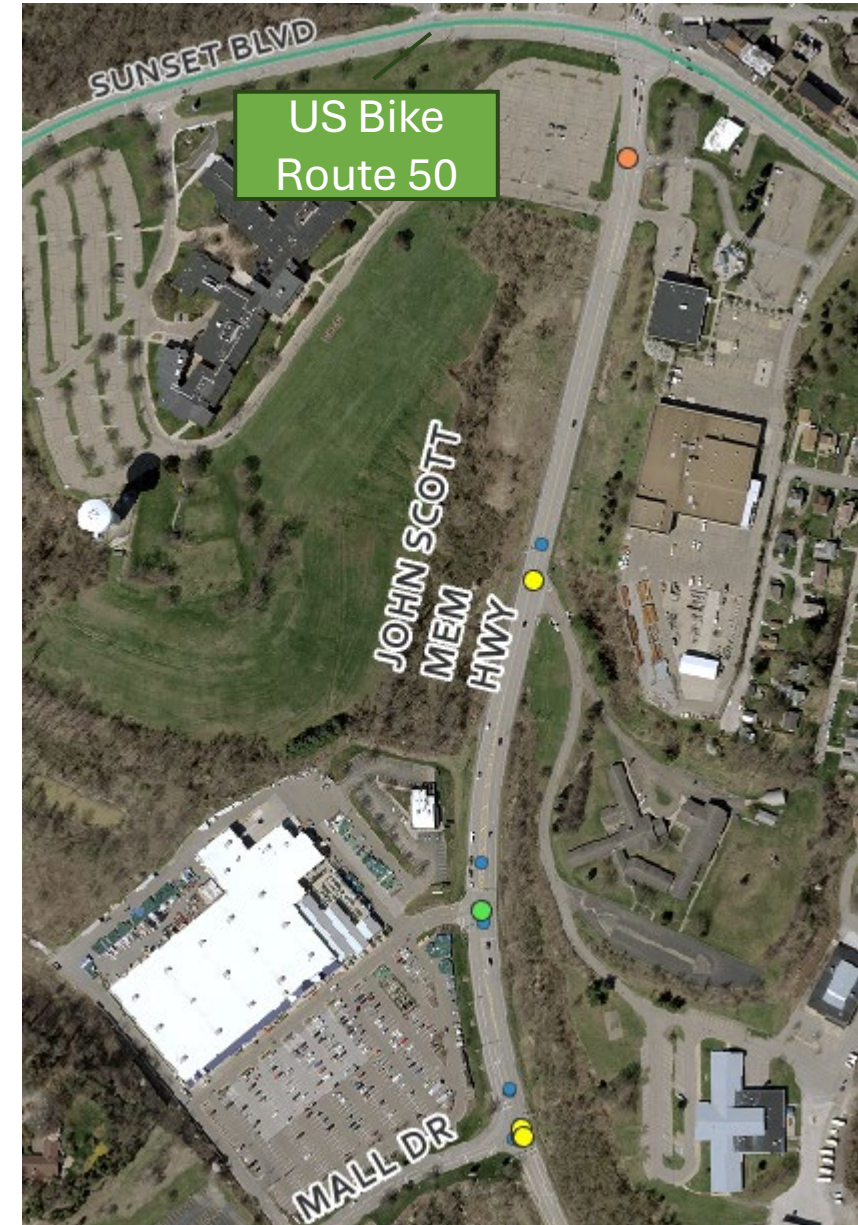
University Blvd and Wellesley Ave



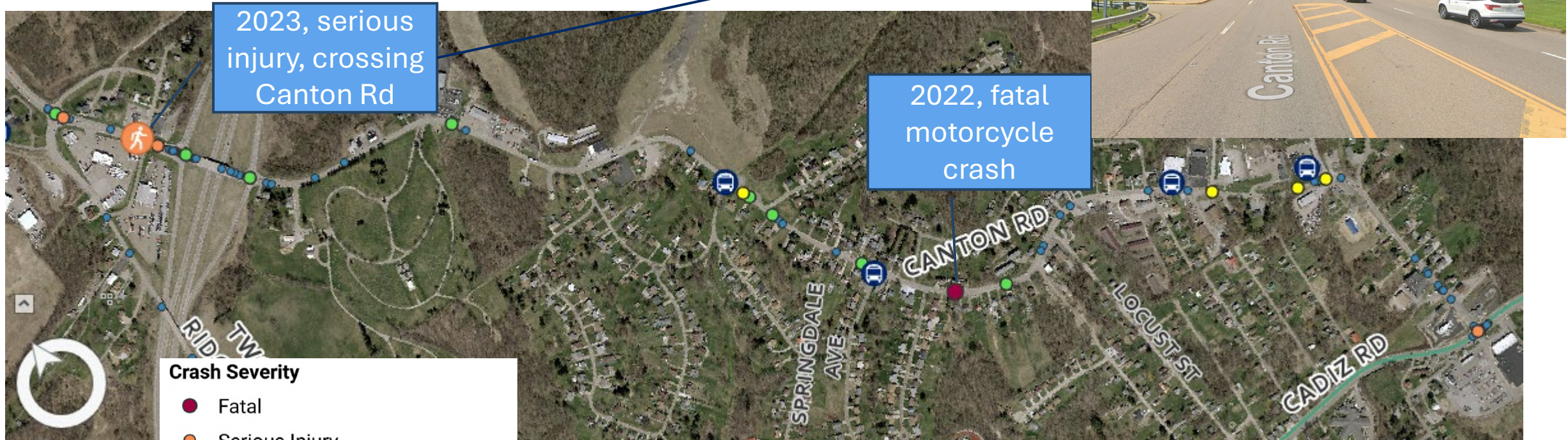
Mall Drive and John Scott Highway

Crash Severity

- Fatal
 - Serious Injury
 - Minor Injury
 - Injury Suspected
 - Property Damage Only
 - Bicycle or Pedestrian Crash
 - Transit Stops
- Color Corresponds to Severity
- Transit Stops

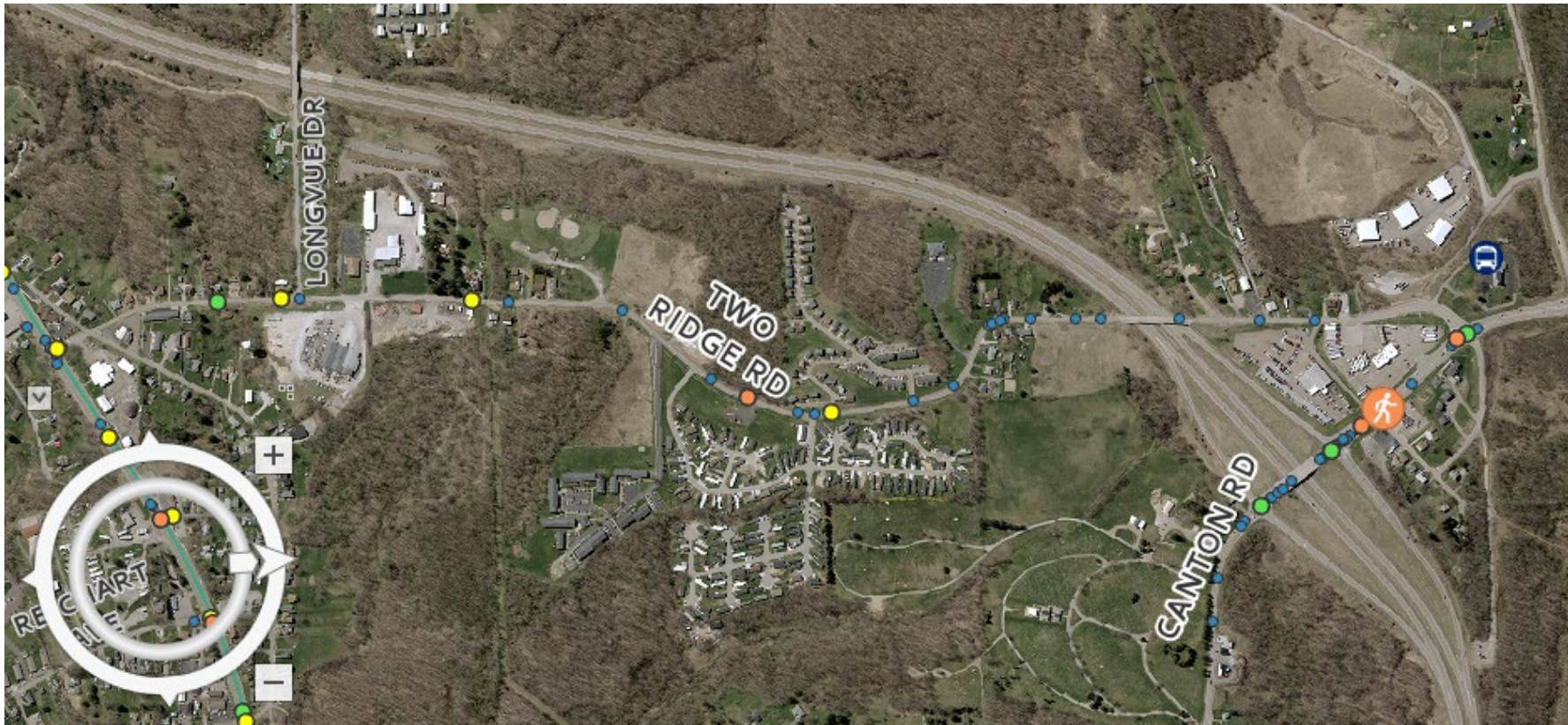


Canton Road



- › 2 lanes
- › No sidewalks
- › Bus route
- › 35 mph speed limit
- › Mix of single-family homes and businesses

Two Ridge Road



- › 2 lanes
- › 35 mph speed limit
- › No sidewalks

- › 2023 AADT: 4257
- › Mobile home community

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Cadiz Road

High school



Engagement Overview

› 2 Stakeholder Groups

- Steubenville
- Jefferson County and Wintersville

› Agencies and Organizations Represented

- City and County Engineering
- ODOT
- City Parks
- Local School District
- University Representative
- Health Authority
- Board of Developmental Disabilities
- Police

Walk Audits: Seeing the Corridors Firsthand

- Identified gaps not obvious in GIS or crash data
- Helped stakeholders experience conditions together
- Created shared understanding of corridor challenges



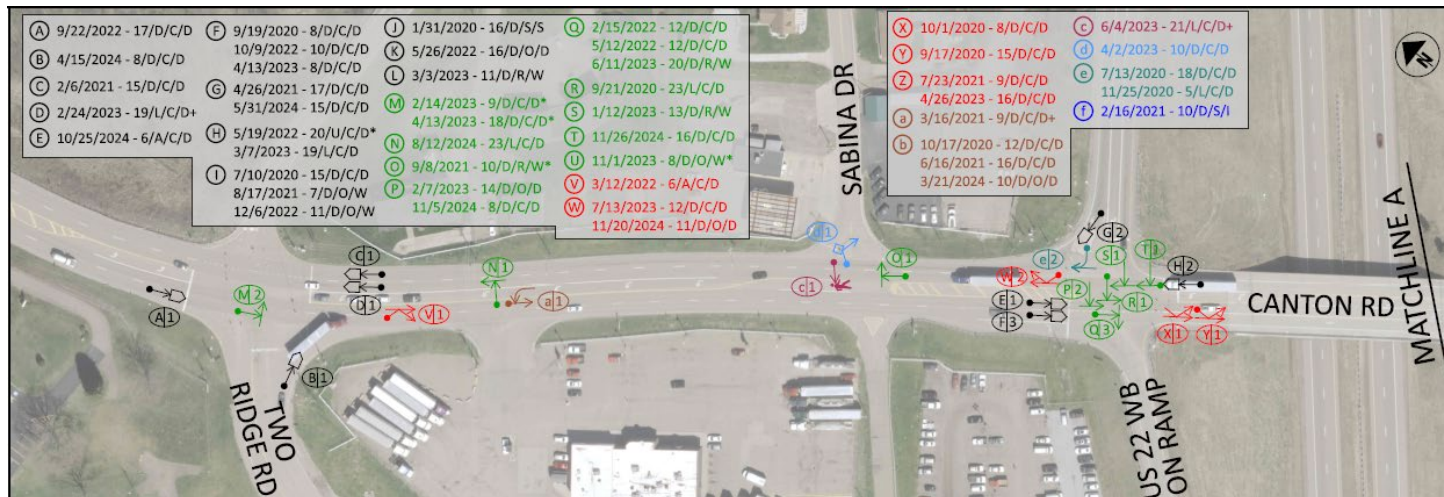
Analyses Conducted

► Traffic Analysis

- Traffic counts collected
- Capacity analysis

► Safety Analysis

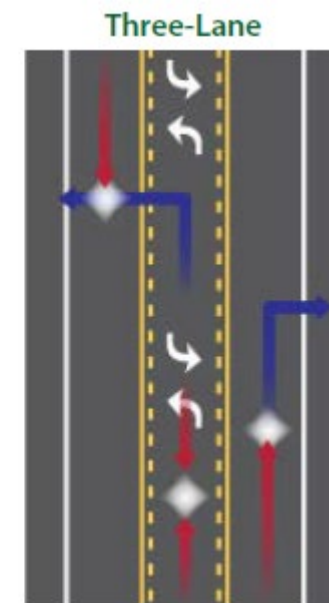
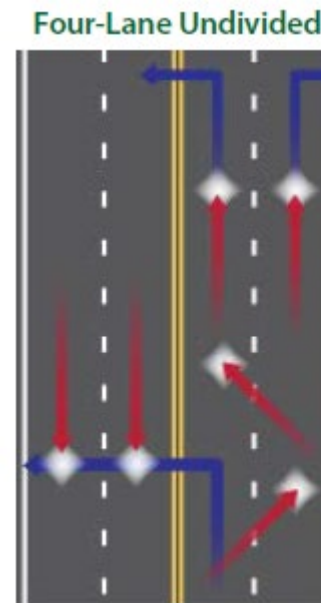
- Crash data analysis
- ODOT Economic Crash Analysis Tool (ECAT)
 - Determines Potential for Safety Improvement (PSI)



PM		Eastbound		Northbound		Southbound	
		Lowe's		John Scott Hwy		John Scott Hwy	
Existing		Signal					
Overall		LT	RT	LT	TH	TH	RT
LOS	B	D	D	A	A	B	B
Delay	12.2	39.9	37.7	6.6	5.3	10.5	10.3
v/c		0.38	0.11	0.04	0.16	0.31	0.32
QSR		0.13	0.03	0.07	0.17	0.14	0.17
95th %ile Queue		133'	32'	6'	64'	139'	173'
		D - 39.5		A - 5.4		B - 10.4	
No Build		Signal					
Overall		LT	RT	LT	TH	TH	RT
LOS	B	D	D	A	A	B	B
Delay	13.9	41.9	37.9	8.5	5.8	12.8	12.6
v/c		0.59	0.14	0.08	0.24	0.45	0.45
QSR		0.21	0.04	0.11	0.28	0.24	0.26
95th %ile Queue		214'	42'	10'	104'	244'	263'
		D - 41.2		A - 5.9		B - 12.7	
Build		Signal					
Overall		LT	RT	LT	TH	TH RT	
LOS	B	D	D	B	A	C	
Delay	19.7	47.5	42.9	15.4	7.6	21.3	
v/c		0.64	0.15	0.11	0.46	0.80	
QSR		0.23	0.05	0.17	0.67	0.65	
95th %ile Queue		235'	48'	15'	252'	651'	
		D - 46.7		A - 7.9		C - 21.3	

Why Road Diets Were Considered

- › Shorter crossing distance for pedestrians
- › Improve turning conflict management
- › Reduce vehicle speeds
- › Acceptable LOS maintained
- › Stakeholders hesitant



Safety Benefits:

4-Lane to 3-Lane, Road Diet Conversions

19-47%
reduction in total crashes.¹

University Blvd and Wellesley Ave

- › Pedestrian demand from university growth
- › Sidewalk gaps and difficult terrain
- › Two alternatives:
 - Retaining wall
 - Slope stabilization
- › **Currently programmed and scoped**
- › **Construction May 1, 2029**



University Boulevard

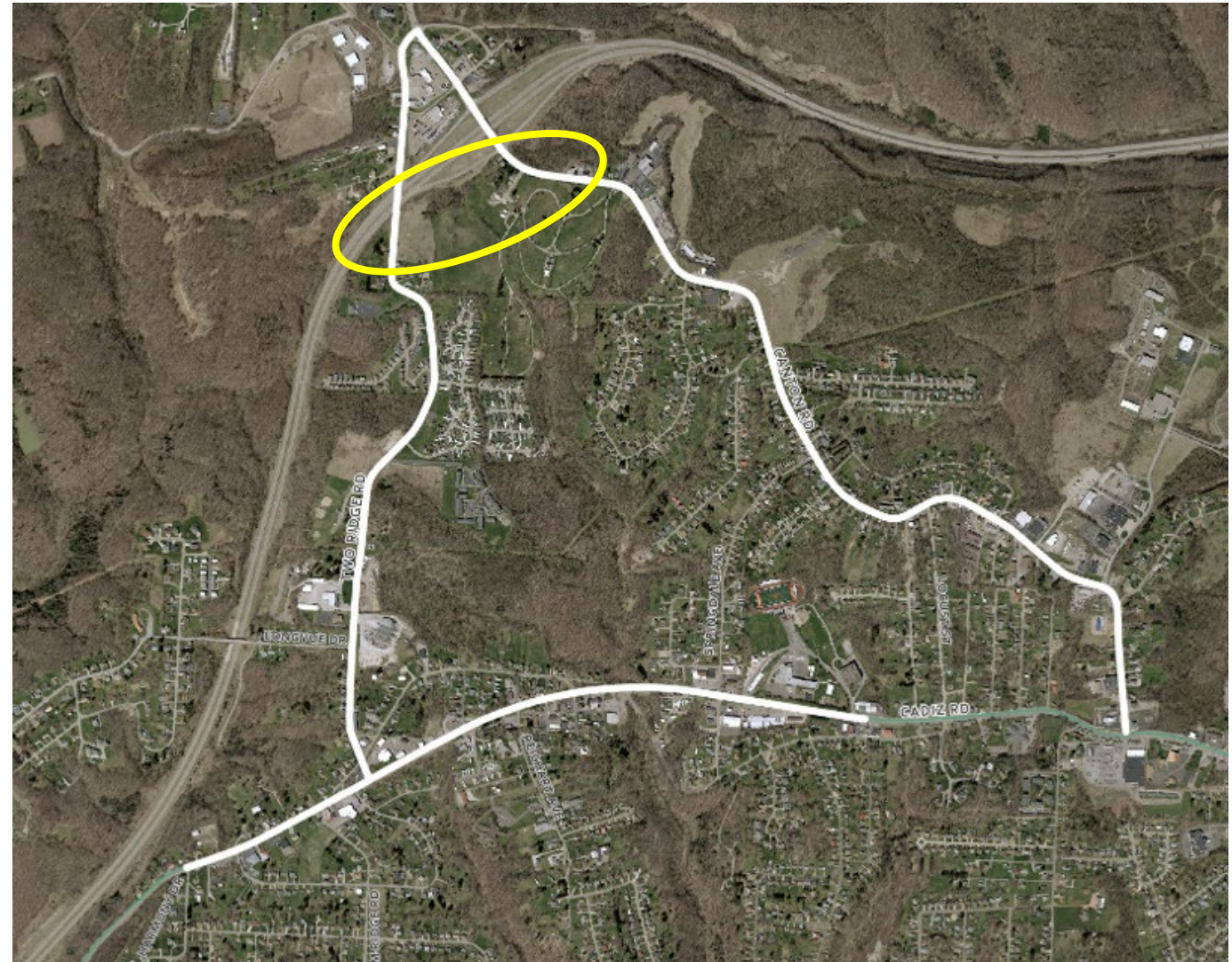


Wellesley Ave

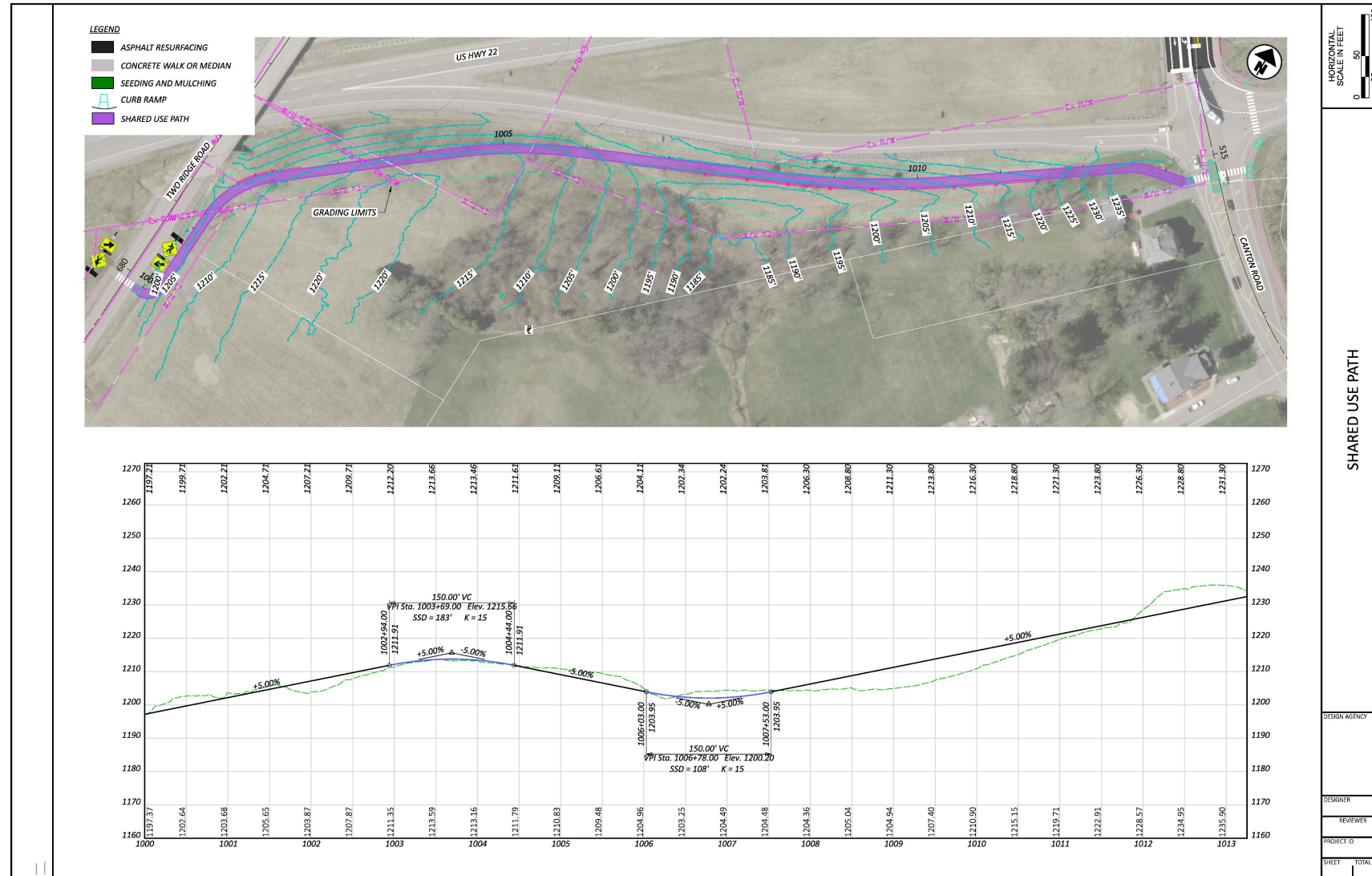


Shared-Use Path Connection

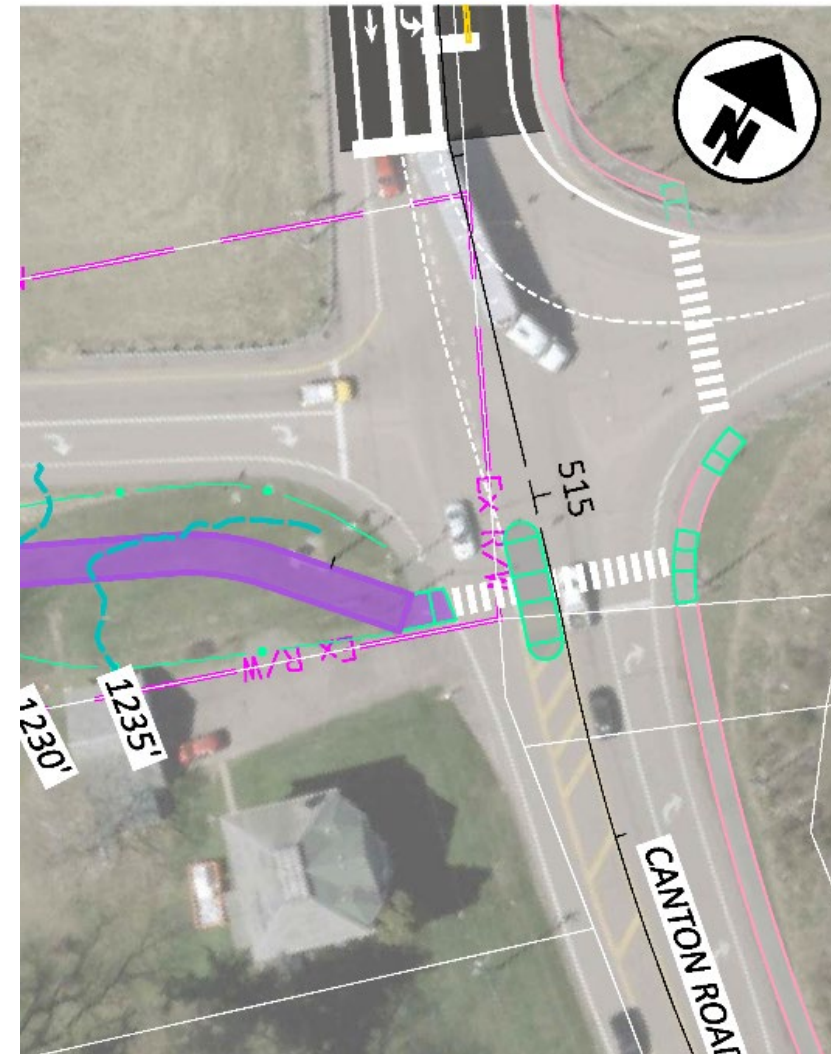
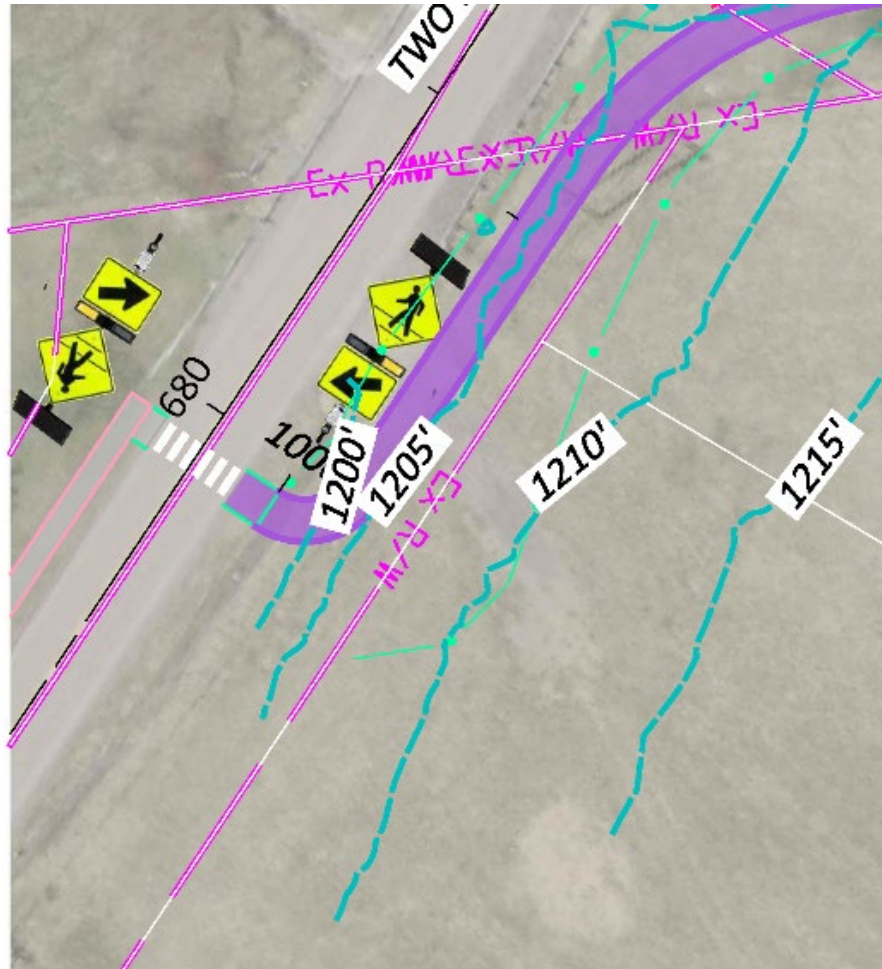
- › Canton Rd to Two Ridge Rd connection
- › Avoids dangerous highway overpass crossing
- › Uses existing ODOT ROW
- › Emerged from walk audit observations



Shared-Use Path Connection



Shared-Use Path Connection

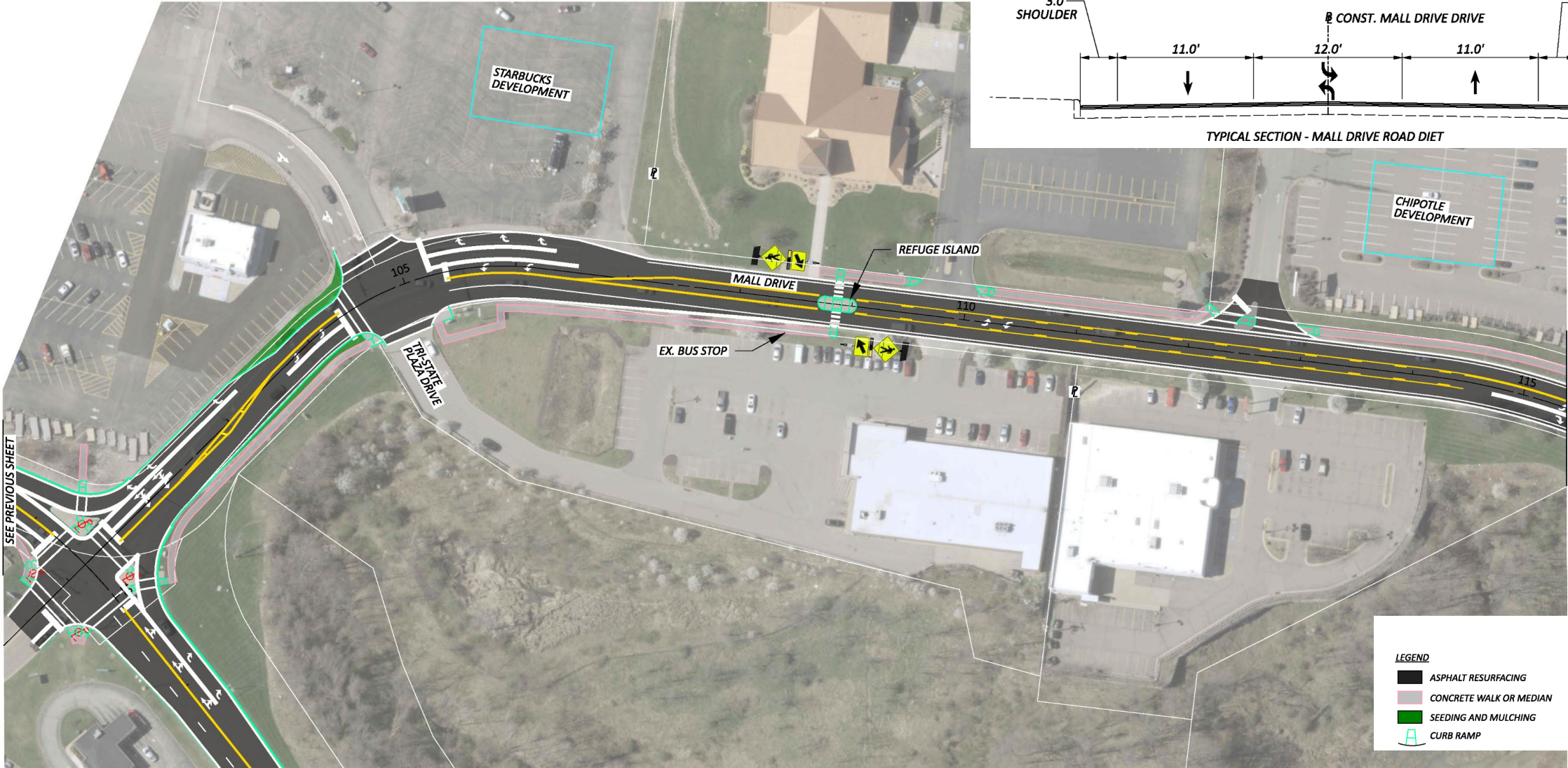
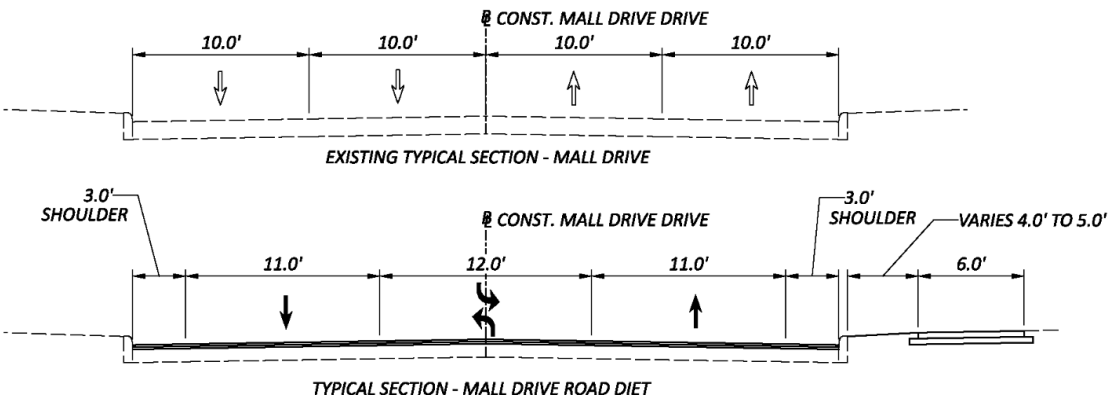


Mall Drive Road Diet

- › No sidewalks along corridor
- › Transit and retail destinations
- › Midblock crossing demand
- › Stakeholder concern about traffic impacts
- › Traffic analysis supported feasibility
- › Corridor felt uncomfortable on foot despite low-speed classification

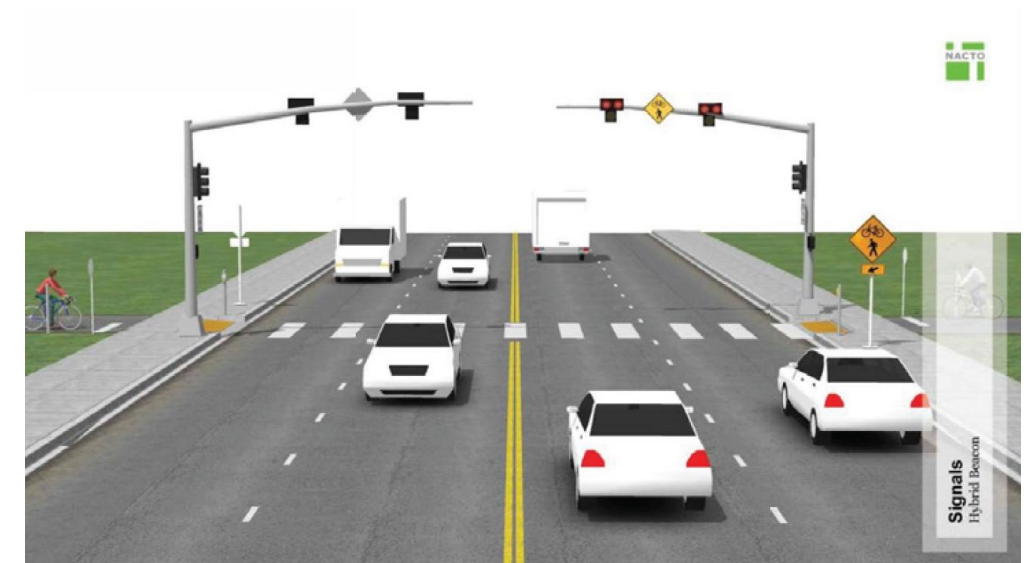
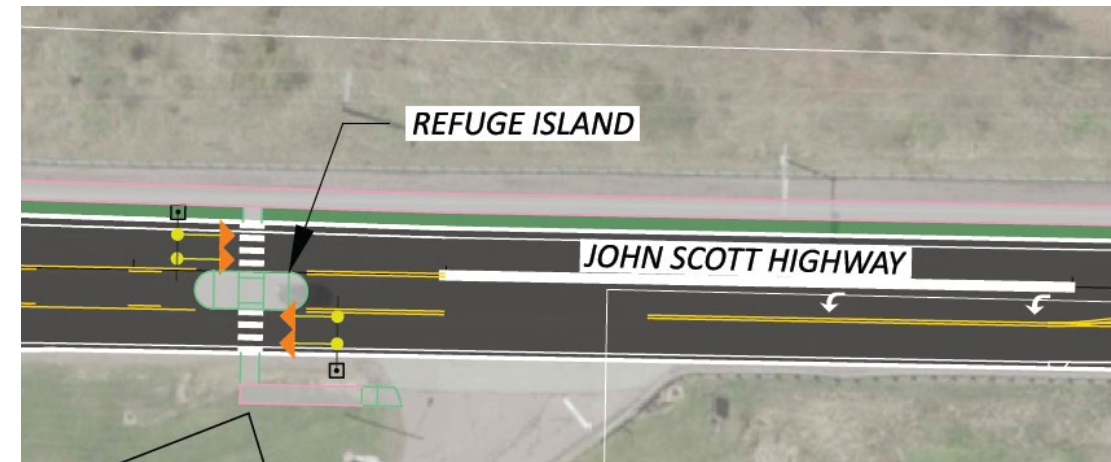


Mall Drive Road Diet



Crossings

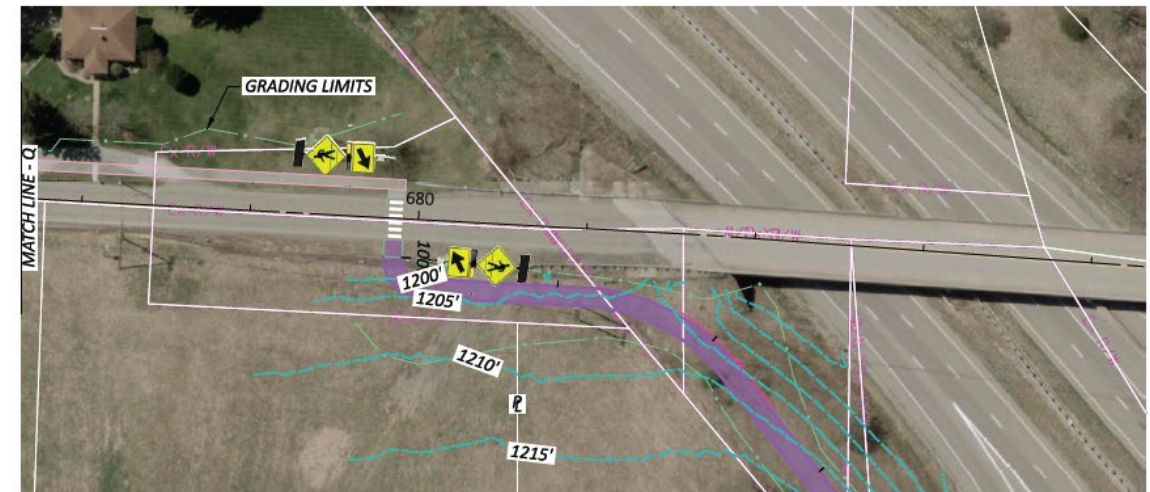
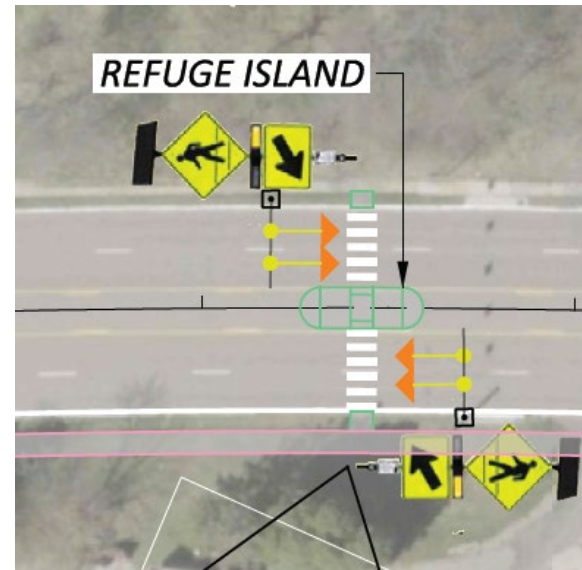
- › 8 RRFB Crossings Recommended
- › 1 PHB Crossing- John Scott Highway
- › 5 signals with pedestrian improvements



Crossings

► 8 RRFB Crossings Recommended

- High school
- University
- Library & grocery store at bus stop
- Long stretches without crossings
- Connections to recommended sidewalks



Multiple Iterations Built Consensus

› Progression:

- Initial observations from walk audits
- Early design concepts developed
- Stakeholder concerns addressed
- Revised concepts incorporating feedback
- Final recommendations

› Key Concerns Navigated:

- ROW constraints, public opinion, traffic operations, maintenance, driveway access, cost

Positioning Projects for Funding

- › Study focused on implementable projects
- › Cost estimates developed for each concept
- › Safety justification aligned with ODOT/FHWA priorities
- › Ready-to-advance concepts for grant applications
- › **Funding Alignment:**
 - Congestion Mitigation and Air Quality (CMAQ)
 - Safe Routes to School (SRTS)
 - Transportation Alternatives Program (TAP)
 - Highway Safety Improvement Program (HSIP)

Lessons Learned

- › Walk audits created shared understanding
- › Stakeholder buy-in improved project quality
- › Technical analysis strengthened difficult conversations
- › Appalachian contexts require flexible solutions
- › Practical implementation solutions matter



Questions?

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