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Project Background

- Gateway Plan development funded through the Thomas Jefferson Planning District Commission's Rural Transportation Work Program
- Technical consultants were retained through VDOT
- Study area defined by local government staff from both localities



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Gateway Plan Objectives

- Unified vision for Zion Crossroads area shared between Fluvanna and Louisa Counties
- Identify solutions to manage development pressure in area
- Establish Zion Crossroads as an area where people can:
 - Live
 - Work
 - Play
 - Shop

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Process for Gateway Plan Development

- Limited public engagement for the development of the gateway plan due to recent update of the Louisa County Comprehensive Plan when this process began
- Survey in Fluvanna County to receive similar feedback on desired development of area
- Review of previous plan development
- Existing conditions assessment
- Stakeholder group meetings with local staff to develop recommendations
- Specific transportation improvement recommendations developed by Kittelson & Associates, Inc.

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Area Goals

1. Establish Zion Crossroads as a mixed-use center that is an attractive gateway both between Fluvanna and Louisa Counties and for visitors traveling into the area.
2. Develop a framework to establish a unified sense of place for the Zion Crossroads Development Area that can be implemented by both localities.
3. Identify opportunities to develop a robust, integrated transportation network to support continued commercial development.
4. Create a walkable community by incorporating pedestrian- and bike-friendly design principles in both land use and transportation planning decisions.
5. Identify gaps in facilities and services that would enhance the sense of community.
6. Prevent growth from impeding the character of the Green Springs Historic District.

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Mixed-use Center and Gateway

- Establish the Louisa County portion of Zion Crossroads as an Urban Development Area
- Louisa County currently only eligible for SMART Scale projects that meet a safety need identified in the statewide transportation plan
- UDA establishment will increase the number of projects that would be eligible for SMART Scale funding
- This funding could support multi-modal infrastructure to implement desired growth goals



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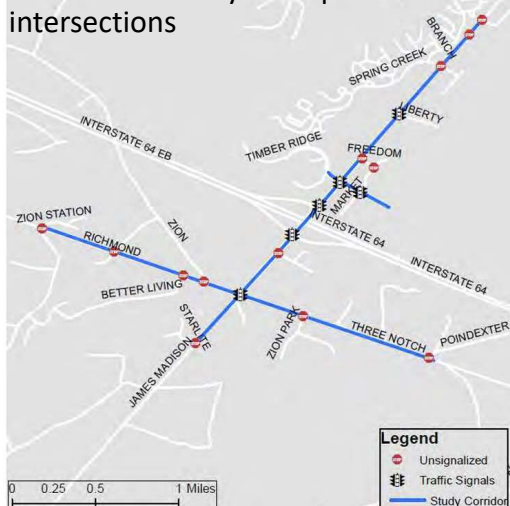
Transportation System Analysis

- Completed by Kittelson & Associates, Inc. under VDOT Contract
- Considered 19 intersections in defined Zion Crossroads area
- Public engagement included:
 - Virtual open house
 - Survey
 - Virtual webinar
 - Public meeting

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System Analysis Process

- Evaluation of existing system conditions
- No-build analysis to future year of 2040
- Considered safety and operations at 19 intersections



Intersection		Level of Service			# Crashes 2014-2018
		AM	PM	SAT	
Sommerfield Business Park/US 15	Existing	B	C	C	0
	2040 No-Build	C	D	D	
Spring Creek Parkway/Stonagate Drive/US 15	Existing	C	D	D	0
	2040 No-Build	F	F	F	
Liberty Trail/US 15	Existing	C	D	E	7
	2040 No-Build	E	E	F	
Freedom Trail/US 15	Existing	C	C	C	0
	2040 No-Build	C	D	D	
Freedom Drive/US 15	Existing	A	B	B	2
	2040 No-Build	B	B	B	
Spring Creek Parkway/Camp Creek Parkway/US 15	Existing	D	D	E	14
	2040 No-Build	F	F	F	
Spring Creek Parkway/Wood Ridge Terrace	Existing	B	B	A	2
	2040 No-Build	B	B	B	
Camp Creek Parkway/Market Street	Existing	C	D	C	6
	2040 No-Build	C	C	D	
North DDI Ramp Terminal/US 15	Existing	C	C	C	20
	2040 No-Build	C	D	D	
South DDI Ramp	Existing	C	C	B	10
	2040 No-Build	B	C	C	
Crossing Pointe Drive/US 15	Existing	D	E	F	12
	2040 No-Build	F	F	F	
US 250/US 15	Existing	C	C	C	21
	2040 No-Build	C	D	C	
Starlite Park/US 15	Existing	C	C	B	4
	2040 No-Build	C	D	C	
Troy Road/Zion Station Court/US 250	Existing	B	B	B	6
	2040 No-Build	B	B	B	
Hunters Branch Road/US 250/Edgecomb Road	Existing	B	B	B	0
	2040 No-Build	B	B	B	
Better Living Drive/US 250	Existing	B	B	A	0
	2040 No-Build	B	B	A	
Zion Road/US 250	Existing	B	B	B	3
	2040 No-Build	B	B	B	
Zion Park Road/US 250	Existing	B	B	B	2
	2040 No-Build	C	C	C	
Poindexter Road/US 250	Existing	B	B	B	3
	2040 No-Build	C	B	B	

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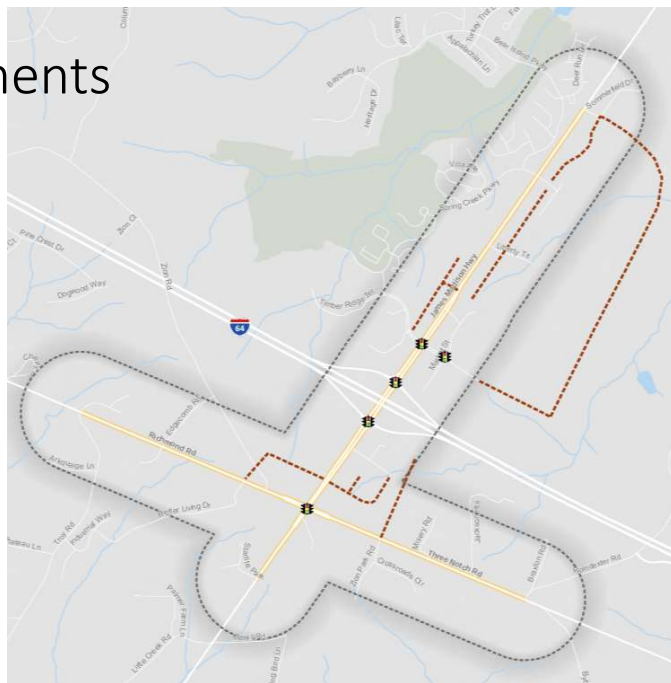
Intersection Improvement Needs

- High priority due to safety needs (eligible for SMART Scale funding):
 - US 250/US 15
 - Spring Creek Parkway/Stonegate Drive/US 15
- Mid-priority due to crash incidences and operational deficiencies:
 - Spring Creek Parkway/Stonegate Drive/US 15
 - Liberty Trail/US 15
 - Crossing Pointe Drive/US 15
 - Poindexter Road/US 250

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System-wide Improvements

- Multi-modal infrastructure
 - Shared use path along east side of US 15
 - Transit stops along Wood Ridge Terrace and Market Street
- New roadway connections
 - Help offload traffic from US 15
 - Desirable routes for bike/ped traffic



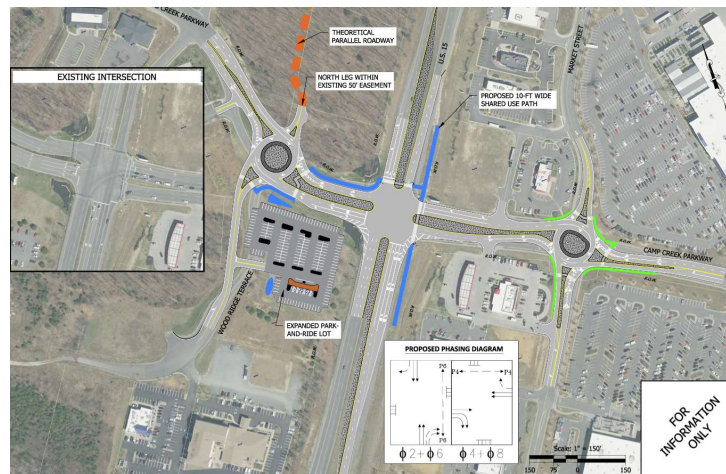
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Intersection Improvements: Alternatives Analysis

- Determine available solutions
- Use screening tools to estimate impacts of different improvements on intersection safety and operations (VJuST)
- Estimated impacts for potential improvements at each intersection are evaluated (based on 2040 traffic volume forecasts)
- Outputs from different scenarios are compared to determine most effective solutions
- Final recommendations consider land use and growth contexts

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Recommendation: Bowtie Intersection at Spring Creek Parkway/ Camp Creek Parkway/ US 15



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Recommendation: Roundabout at US 15/US 250



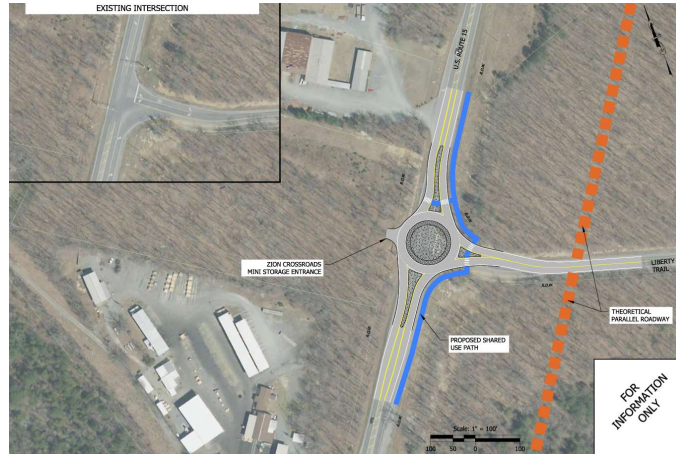
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Recommendation: Roundabout at Spring Creek Parkway/Stonegate Drive/US 15



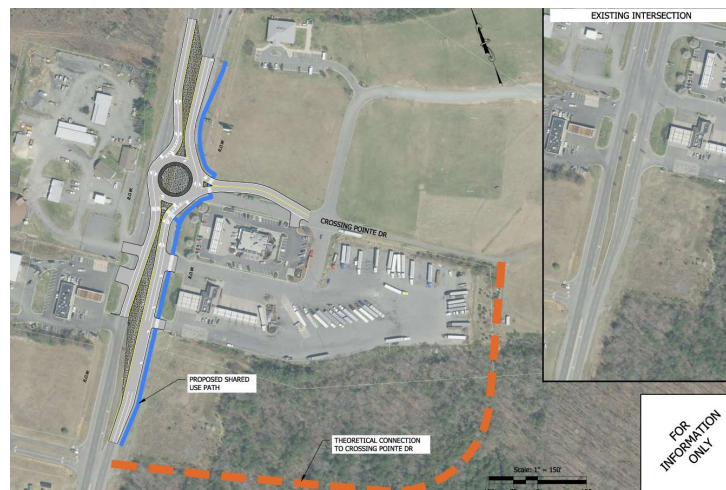
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Recommendation: Roundabout at Liberty Trail/US 15



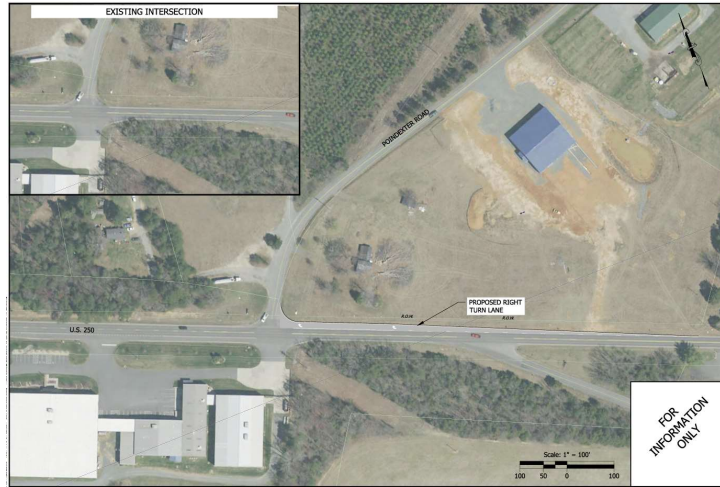
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Recommendation: Roundabout at Crossing Pointe Drive/US 15



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Recommendation:
Westbound Right-Turn Lane from
US 250 onto
Poindexter Road



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What now?

- Information for use by Fluvanna and Louisa County to inform decision-making around policy and funding application
 - SMART Scale applications
 - Comprehensive Planning
 - Designation of growth areas
 - Development of growth area goals
 - Evaluate policies to implement goals
 - Ordinance review

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