

Rosser Avenue Communication Upgrades

Rosser Avenue (US 340) Corridor Study

Project Description

This improvement includes the upgrade of traffic signal controllers to current VDOT standard and signal communication equipment (broadband radio or fiber-optic). The City of Waynesboro and VDOT will negotiate a MOU for operations and maintenance of the traffic signals so they can function on one, interconnected system.

- Install D4 traffic signal controllers
- Install communication hardware to interconnect the traffic signals with functionality from the VDOT Traffic Operations Center

Planning Level Cost Estimate

Estimate	
Preliminary Engineering	\$30,000
ROW and Utility Relocation	\$0
Construction	\$190,000
Construction Engineering Inspection (15%)	\$30,000
Contingency (5%)	\$10,000
Maintenance of Traffic	\$10,000
Total Cost =	\$270,000

Note: Cost estimates reported in 2019 dollars

Conceptual Design Layout



Rosser Avenue and Town Center Dr

Rosser Avenue (US 340) Corridor Study

Planning Level Cost Estimate

Estimate	
Preliminary Engineering	\$12,500
ROW and Utility Relocation	\$0
Construction	\$16,000
Construction Engineering Inspection (15%)	\$5,000
Contingency (5%)	\$1,500
Maintenance of Traffic	\$15,000
Total Cost = \$50,000	

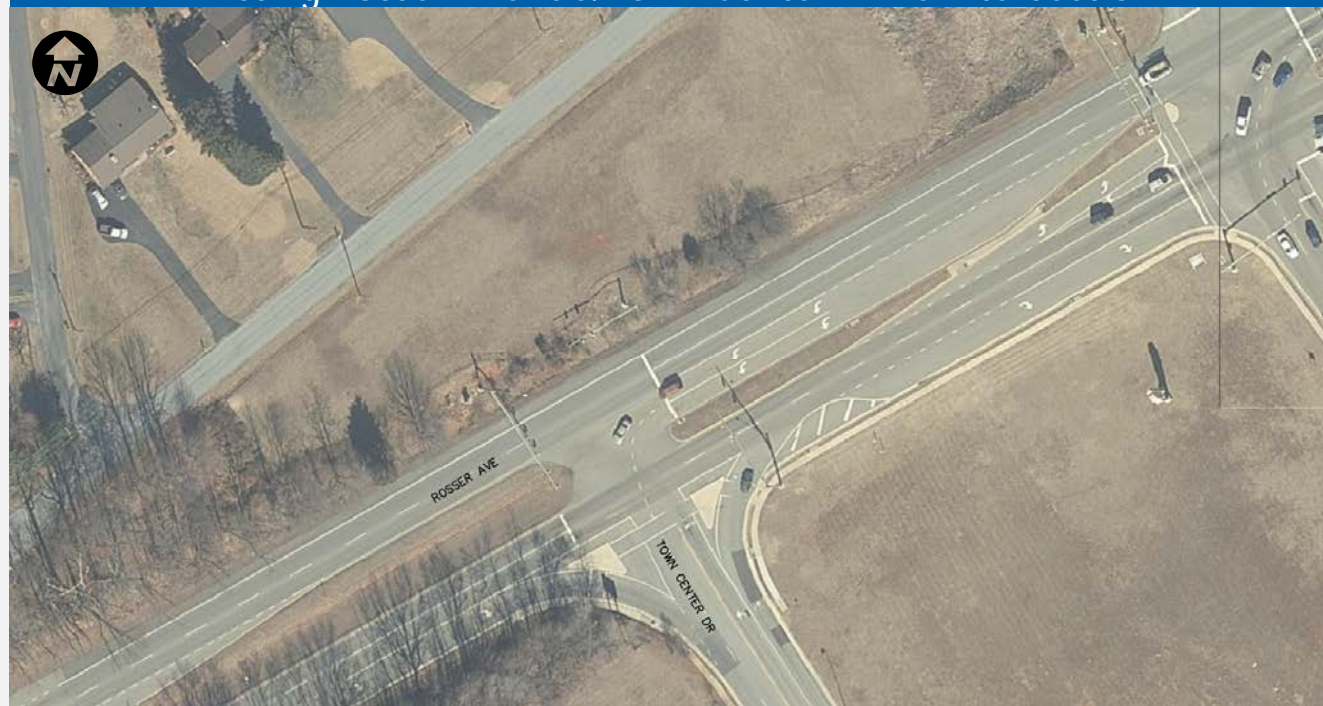
Note: Cost estimates reported in 2019 dollars

Project Description

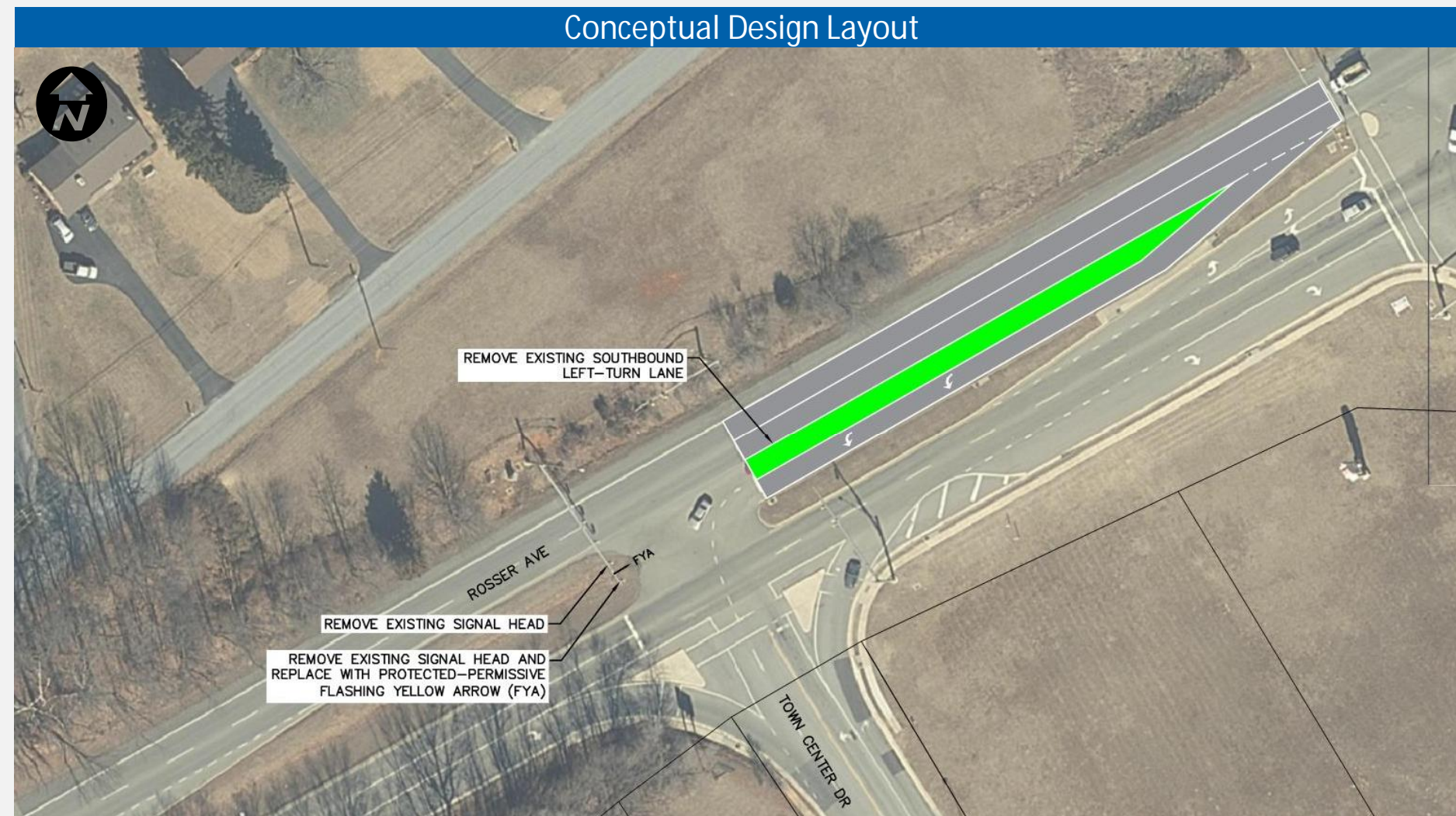
This improvement includes restriping the existing dual, southbound left-turn lanes into a single left-turn lane and modifying the signal phasing from protected only to protected-permissive with flashing yellow arrow (FYA) indication. The purpose of this improvement is to reduce delay for the left-turn movement.

- Perform a left-turn phasing evaluation consistent with VDOT guidance to confirm safety and operations associated with phasing change
- Eradicate existing outside left-turn lane
- Restripe the inside lane (closest to median) as a single, left-turn lane
- Remove both three-section, left-turn arrow signal indications and replace with a single four-section signal head with FYA indication

Existing Rosser Avenue/Town Center Drive Intersection



Conceptual Design Layout



Rosser Avenue and I-64 Ramps

Rosser Avenue (US 340) Corridor Study

Project Description

This improvement includes converting the existing protected-only left-turn phasing to protected-permissive with flashing yellow arrow (FYA) indication for the Rosser Avenue northbound left-turn onto I-64 WB and the Rosser Avenue southbound left-turn onto I-64 EB. The purpose of this improvement is to reduce delay and queuing for the left-turn movement by allowing a permissive phase. Additionally, improvements include installation of advance queue detection equipment along the I-64 WB Off-Ramp to reduce the occurrence of spillback onto mainline I-64.

- Perform a left-turn phasing evaluation consistent with VDOT guidance to confirm safety and operations associated with phasing change
- Remove the three-section, left-turn arrow signal indication and replace with a single four-section signal head with FYA indication
- Install advanced loop detectors along the westbound off-ramp. Detection zone should be configured with a delay and enter a preemption phase once delay is exceeded.

Planning Level Cost Estimate – EB Ramp

Estimate	
Preliminary Engineering	\$25,000
Construction	\$6,000
Construction Engineering Inspection (15%)	\$2,000
Contingency (5%)	\$500
Maintenance of Traffic	\$5,000
Total Cost =	\$38,500

Note: Cost estimates reported in 2019 dollars

Planning Level Cost Estimate – WB Ramp

Estimate	
Preliminary Engineering	\$25,000
Construction	\$23,000
Construction Engineering Inspection (15%)	\$5,000
Contingency (5%)	\$1,500
Maintenance of Traffic	\$5,000
Total Cost =	\$59,500

Note: Cost estimates reported in 2019 dollars

Conceptual Design Layout at I-64 EB Off-Ramp



Conceptual Design Layout at I-64 WB Off-Ramp



Rosser Avenue and Lew Dewitt Boulevard

Rosser Avenue (US 340) Corridor Study

Planning Level Cost Estimate

Estimate	
Preliminary Engineering	\$20,000
ROW and Utility Relocation	\$0
Construction	\$55,000
Construction Engineering Inspection (15%)	\$10,000
Contingency (5%)	\$3,500
Maintenance of Traffic	\$10,000
Total Cost =	\$98,500

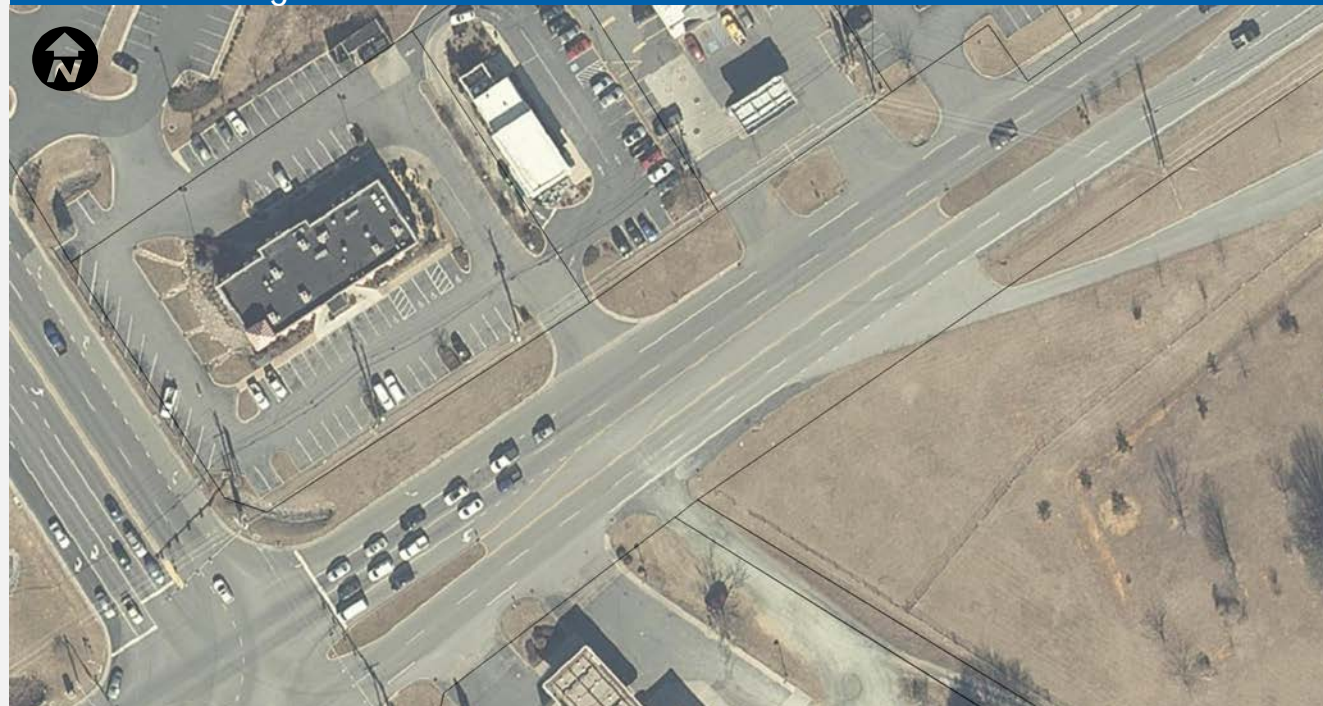
Note: Cost estimates reported in 2019 dollars

Project Description

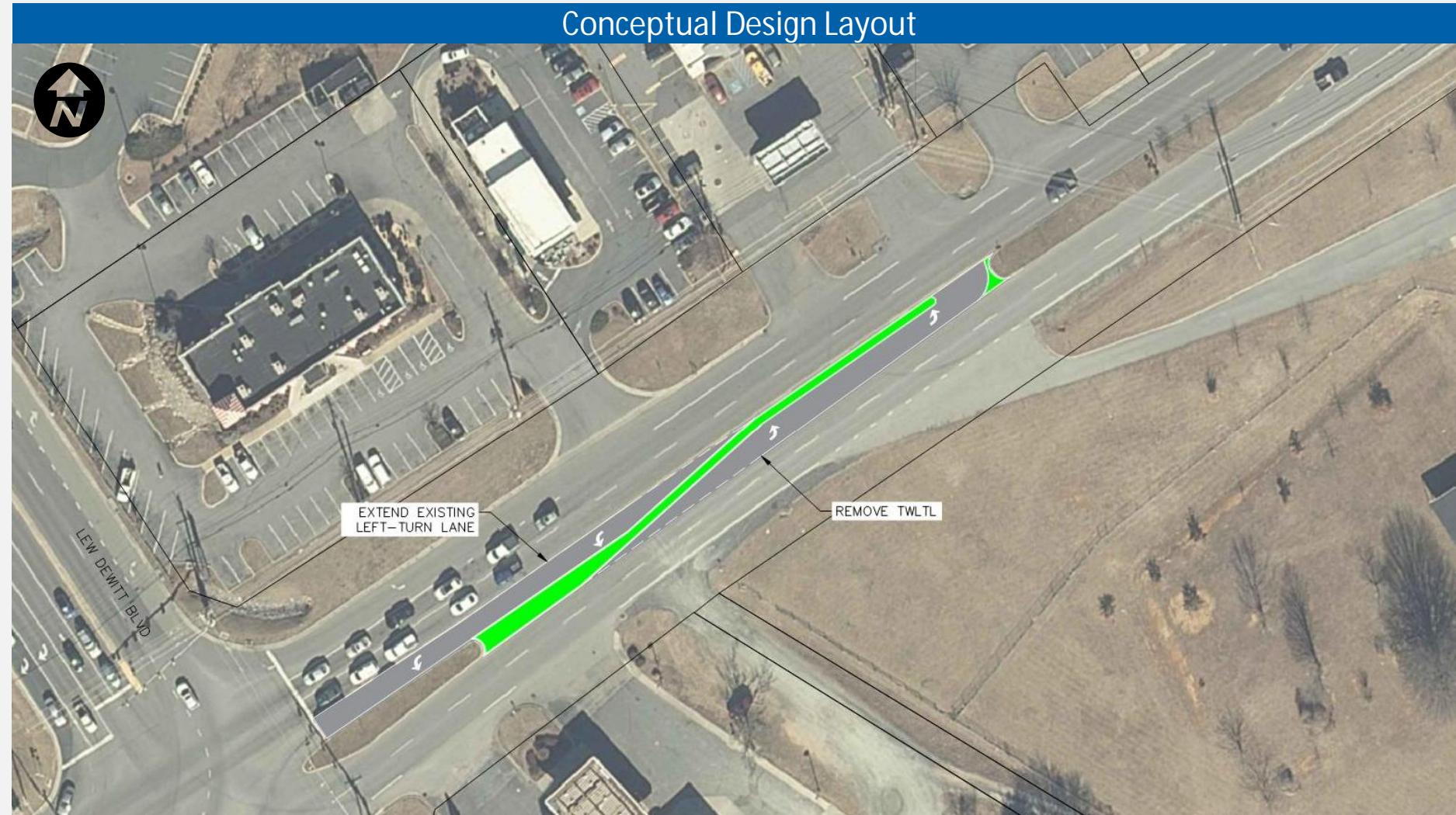
This improvement will address access management and safety by reducing the number of conflict points within the functional area of the Rosser Avenue/Lew Dewitt intersection. The improvements include a raised, landscaped/concrete median, extending the existing southbound left-turn lane at Lew Dewitt Boulevard, and constructing a northbound exclusive left-turn lane for U-turn access to the existing outparcels.

- Construct a raised median within the existing two-way left-turn lane to create back-to-back exclusive left-turn lanes for southbound Lew Dewitt Boulevard and northbound 7-Eleven northern most access

Existing Rosser Avenue/Lew Dewitt Boulevard Intersection



Conceptual Design Layout



Rosser Avenue and Lennox Place

Rosser Avenue (US 340) Corridor Study

Planning Level Cost Estimate

Estimate	
Preliminary Engineering	\$40,000
ROW and Utility Relocation	\$0
Construction	\$53,000
Construction Engineering Inspection (15%)	\$8,000
Contingency (5%)	\$3,000
Maintenance of Traffic	\$20,000
Total Cost = \$124,000	

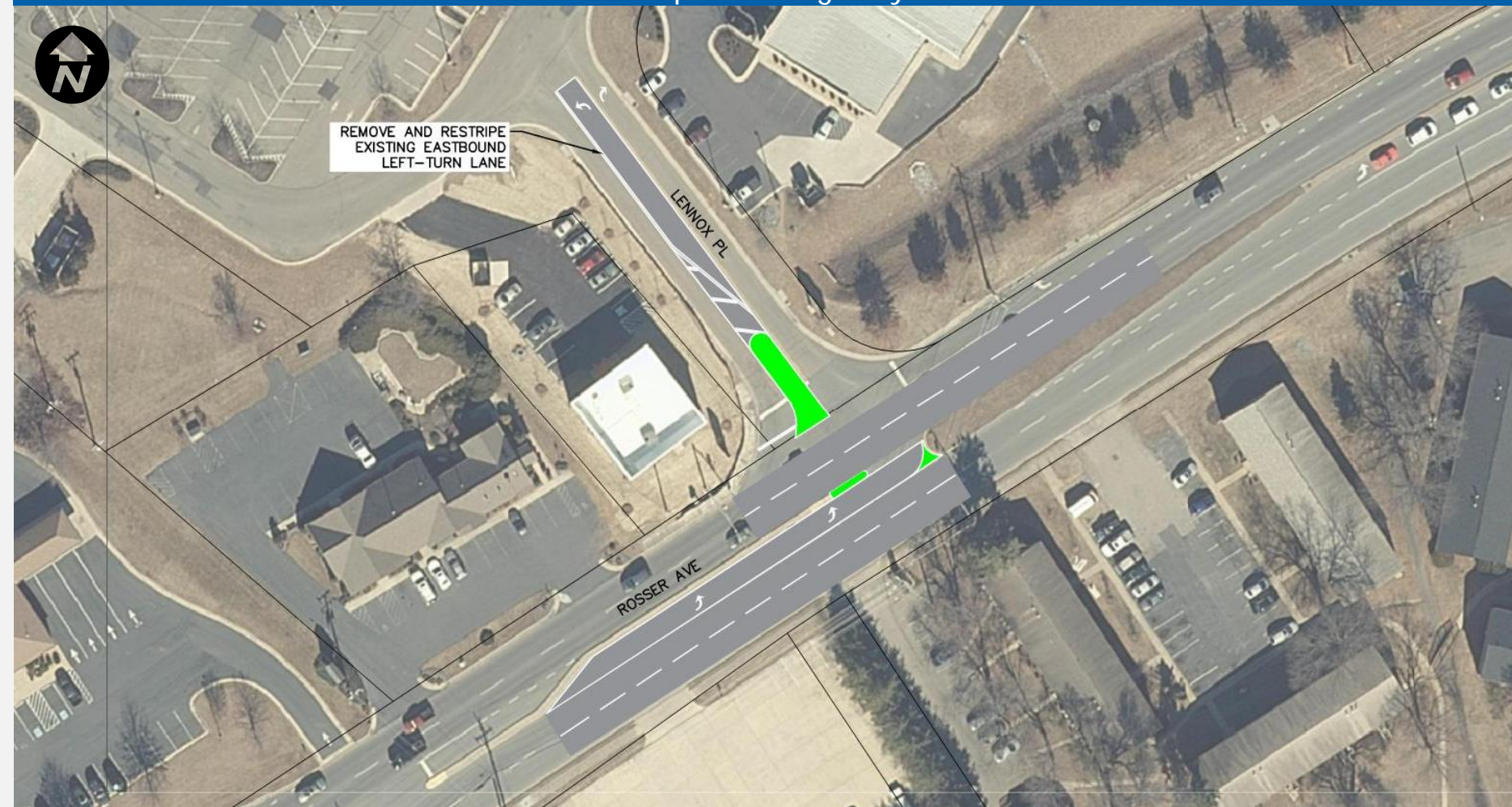
Note: Cost estimates reported in 2019 dollars

Project Description

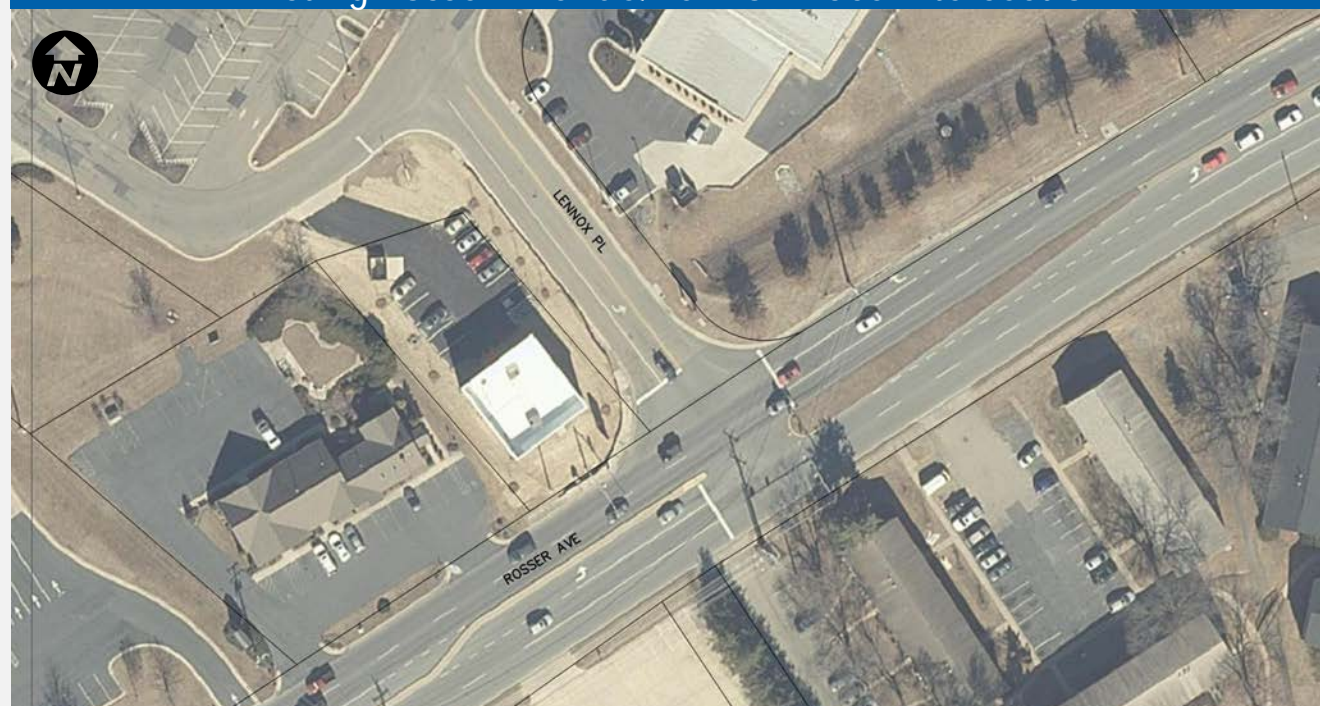
This improvement includes removal of the existing traffic signal and conversion to an unsignalized, channelized left-in/right-in/right-out intersection. Removal of the traffic signal will increase signal spacing and improve corridor operations, while still providing signalized access from three other locations.

- Remove the existing traffic signal
 - Redistribution of left-turn traffic will require the installation of a protected-permissive left-turn signal phase along the eastbound approach of Tiffany Drive
- Construct a raised channelizing median along the eastbound approach to prohibit the left-turn movement from Lennox Place
- Restripe Lennox Place to provide one inbound receiving lane and one exclusive right-turn lane

Conceptual Design Layout



Existing Rosser Avenue/Lennox Place Intersection



Rosser Avenue and Tiffany Drive

Rosser Avenue (US 340) Corridor Study

Planning Level Cost Estimate

Estimate	
Preliminary Engineering	\$20,000
ROW and Utility Relocation	\$0
Construction	\$41,000
Construction Engineering Inspection (15%)	\$9,000
Contingency (5%)	\$3,000
Maintenance of Traffic	\$15,000
Total Cost =	
	\$88,000

Note: Cost estimates reported in 2019 dollars

Project Description

This improvement includes construction ADA accessible curb ramps, pedestrian crosswalks and pedestrian signals along the east and south leg of the intersection. Sidewalk will be constructed to connect the intersection to the existing linear sidewalk along the frontage of the shopping center. Additionally, the northbound and southbound five-section signal heads will be replaced with four-section signal heads with flashing yellow arrow.

- Install ADA accessible curb ramps, pedestrian crosswalks and pedestrian signals along the east and south leg of the intersection
- Construct sidewalk approximately 60-linear feet of sidewalk to connect the intersection to the existing sidewalk
- Replace the northbound and southbound five-section signal heads with four-section signal heads with flashing yellow arrow

Conceptual Design Layout



Existing Rosser Avenue/Tiffany Drive Intersection

