



PROJECT PIPELINE NEEDS AND EXISTING CONDITIONS SUMMARY

Route 684 (Mine Road) from Exeter Lane to Juggins Road Connector
VDOT District: Fredericksburg / Locality: Stafford County

FR-25-05
Sheet 1 of 2



Study Purpose, Goals, and Objectives

To analyze the operational and safety issues identified along Route 684 (Mine Road), with a focus on providing enhanced pedestrian and bicycle access, safety improvements, transportation demand management, and transit access.

Study Facts

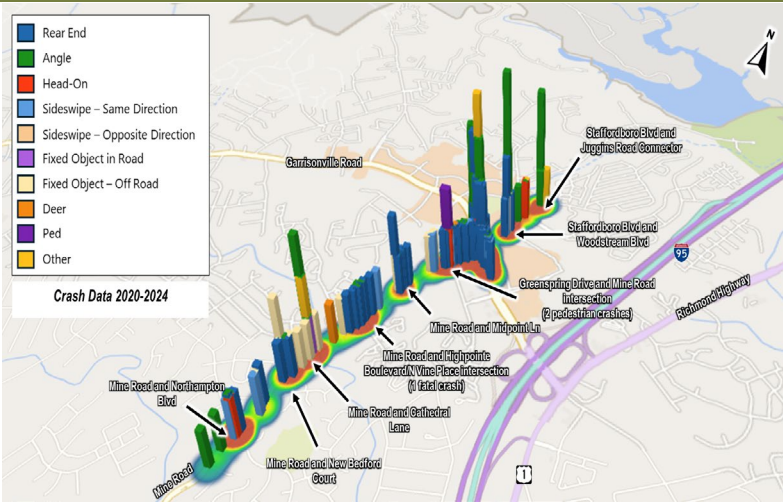
Major Study Intersections	13
Length of Study Area	1.6 miles
Classification	Major Collector
2023 Annual Average Daily Traffic	20,000
Speed Limit	25–40mph

VTrans Needs

Pedestrian Safety Improvement	Transit Access
Pedestrian Access	Transportation Demand Management
Bicycle Access	Safety Improvement

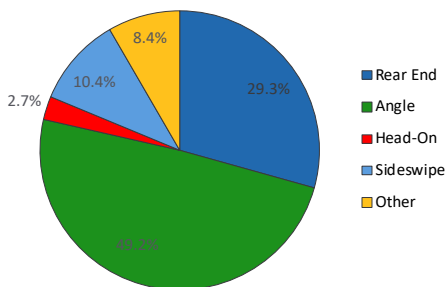
Safety Needs

- 218 total crashes have occurred within the five-year period between 2020 and 2024
- Most crashes were angle or rear-end collisions and property damage only
- Sixty-six crashes occurred due to signal confusion or noncompliance. These included running red lights, failing to yield, signal confusion, and right on red.
- One incapacitating and two non-incapacitating pedestrian injury crashes occurred at night on Greenspring Drive
- One fatal motorcycle crash occurred at the intersection of Mine Road and Highpointe Boulevard
- Most Crashes occurred at the intersection of Garrisonville Road and Mine Road



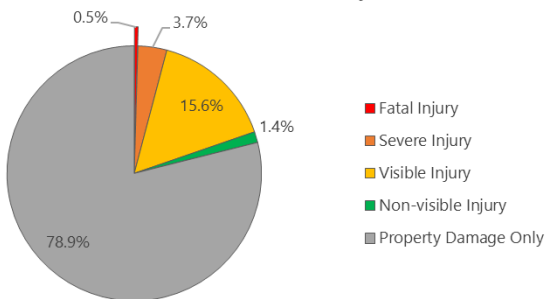
Crash Type

218 Total Crashes (2020 – 2024)



Crash Severity

218 Total Crashes (2020 – 2024)





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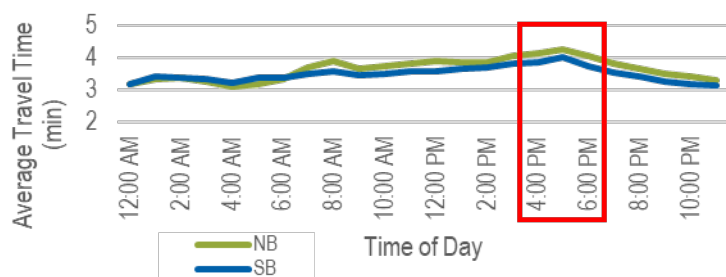
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Sheet 2 of 2

Operations Summary

- Heavy congestion at the intersection of Mine Road and Garrisonville Road occurs during the AM and PM peak periods
- During field observations conducted in May 2025, queues in each direction at Mine Road and Garrisonville Road extend to adjacent intersections
- Other intersections along Mine Road operate at an acceptable level of service
- Southbound right turns at Cathedral Lane are restricted from 3:00 PM to 6:00 PM to prevent cut through traffic

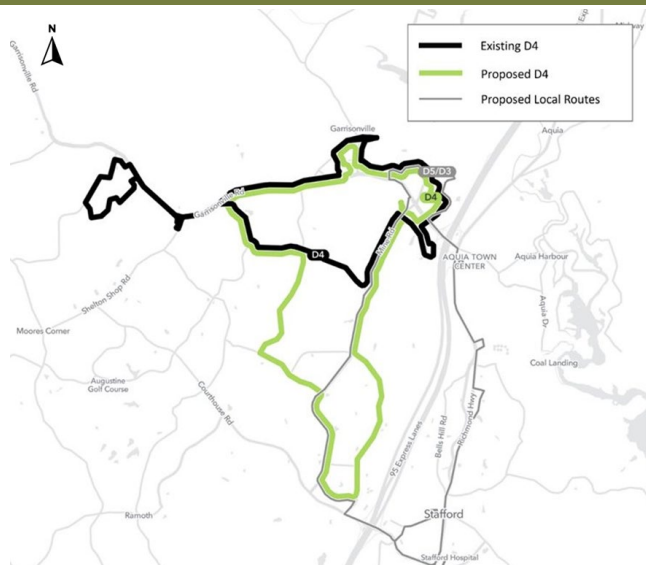
Travel Time—Weekday



Transit and TDM Needs

- Gaps in the existing transit network, particularly south of Highpointe Boulevard
- Need for expanded transit service along Mine Road in coordination with Mine Road extension projects
- FXBGO! route D4 is the main route serving the study area and is being altered based on recent TSP recommendations

FXBGO! Route D4



Bike and Pedestrian Access Needs

- High bike access priority along Mine Road and Staffordboro Boulevard
- Large gaps in pedestrian facilities along Mine Road, disconnecting residents from the businesses north of their homes
- Mine Road and Garrisonville Road are in the top 5% of VDOT Pedestrian Safety Action Plan (PSAP) priority corridors
- Woodstream Boulevard is in the top 1% of PSAP priority corridors
- Many facilities are in need of upgrades to meet public right of way accessibility guideline (PROWAG) requirements

Summary of Needs Identified Through Public Outreach

- Survey date: May 7–May 21, 2025
- Number of participants: 635
- Highest ranked needs: Pedestrian safety improvements, safety improvements, Pedestrian Access, Bicycle Access
- Mode(s) of travel: Personal vehicle (98%), walking (41%), cycling (21%)
- Lack of sidewalks/missing sidewalks and speeding/aggressive driving were identified by participants as the greatest safety issues in the study area

Proposed Solutions to Evaluate in Phase 2

