STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
P.O. BOX 778
DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

March 12, 2024

Ms. Teresa Lord, P.E.
Pennoni Associates, Inc.
121 Continental Drive, Suite 207
Newark, DE 19713

Dear Ms. Teresa Lord:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **Rt 9 and Fisher Road Commercial** (Tax Parcel: 235-30.00-51.00) multi-use development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. DelDOT accepts this letter and concurs with the recommendations. If you have any questions concerning this letter or the enclosed review letter, please contact me at Annamaria.Furmato@delaware.gov.

Sincerely,

Annamaria Furmato
TIS Group Project Engineer

AF:km
Enclosures
cc with enclosures: Petru Cornescu, Albari LLC
Alan Decktor, Pennoni Associates, Inc.
David L. Edgell, Office of State Planning Coordination
Jamie Whitehouse, Sussex County Planning & Zoning
Andrew J. Parker, McCormick Taylor, Inc.
Tucker Smith, McCormick Taylor, Inc.
DelDOT Distribution

DelDOT Distribution

Brad Eaby, Deputy Attorney General
Shanté Hastings, Deputy Secretary / Director of Transportation Solutions (DOTS)
Mark Luszcz, Deputy Director, DelDOT Traffic, DOTS
Michael Simmons, Assistant Director, Project Development South, DOTS
Peter Haag, Chief Traffic Engineer, DelDOT Traffic, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, DelDOT Traffic, DOTS
Sean Humphrey, Traffic Engineer, DelDOT Traffic, DOTS
Matt Schlitter, South District Public Works Engineer, Maintenance & Operations
Jared Kauffman, Service Development Planner, Delaware Transit Corporation
Tremica Cherry, Service Development Planner, Delaware Transit Corporation
Pamela Steinebach, Director, Planning
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
John Pietrobono, Acting Sussex County Review Coordinator, Development Coordination, Planning
Kevin Hickman, Sussex County Subdivision Reviewer, Development Coordination, Planning
Sireen Muhtaseb, TIS Group Manager, Development Coordination, Planning
Philip Lindsey, TIS Group Project Engineer, Development Coordination, Planning
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning, Planning
Steve Bayer, Regional Transportation Planner, Statewide & Regional Planning

March 6, 2024

Ms. Annamaria Furmato
Project Engineer
DelDOT Division of Planning
P.O. Box 778
Dover, DE 19903

RE: Agreement No. 1946F
Traffic Impact Study Services
Task No. 5A Subtask 03A – Rt 9 and Fisher Road Commercial

Dear Ms. Furmato:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the Rt 9 and Fisher Road Commercial development prepared by Pennoni, dated November 2023. Pennoni prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed Rt 9 and Fisher Road Commercial development to be located on the southwest corner of Lewes Georgetown Highway (US Route 9) and Fisher Road (SCR 262). in Sussex County, Delaware. The proposed development would consist of 14 multifamily low rise housing units, a 6,000 square-foot convenience store with 12 gas pumps, 10,000 square feet of retail, and a 4,525 square-foot fast food restaurant with drive through window. Site access is proposed via a full-movement driveway along Fisher Road, opposite the existing Dollar General Entrance, and a rights-in / rights-out driveway on US Route 9, west of Fisher Road. Construction is anticipated to be complete in 2026.

The subject land is located on an approximately 11.3-acre parcel. The land is currently zoned as C-2 (General Commercial) and the developer does not plan to rezone the land.

Currently, there are two DelDOT initiatives within the area of study.

The Statewide *Rail-to-Trail & Rail-with-Trail Facility Master Plan* includes the *Georgetown – Lewes, Shared Use Path (SUP)*. Project segments of the *Georgetown – Lewes SUP* have been completed and will traverse adjacent to this development. The goal of this project is to utilize the recently abandoned, inactive, and public owned active rail corridor to develop off-road facilities for bicyclists and pedestrians for both transportation and recreation. When complete, the Georgetown-Lewes Running Track Rail-to-Trail & Rail-with-Trail project would run from the Historic Georgetown Train Station to the entrance to the Cape Henlopen State Park in Lewes, and would measure approximately 16.7 miles in length.

Additionally, DelDOT's *Coastal Corridors Study* aims to study the east-west travel patterns in Sussex County including, but not limited to, Delaware Route 404, US Route 9, and Delaware Route 16. Initial efforts in the study will identify the east-west routes / corridors in northwestern Sussex County that are currently congested or are at risk for congestion based on anticipated growth in the area. The study will focus on a number of factors including longer trips from the Chesapeake Bay Bridge to the Delaware beaches and Ocean City, Maryland, regional traffic between Maryland's Eastern Shore and Sussex County, and local east-west traffic within the northwestern part of Sussex County.

Based on our review, we have the following comments and recommendations:

The following intersection exhibits level of service (LOS) deficiencies without the implementation of physical roadway and/or traffic control improvements:

Intersection	***Existing Traffic Control***	***Situations for which deficiencies occur***
1 - Fisher Road & Dollar General / Site Entrance A	Unsignalized	2026 with development PM (Case 3) 2026 with development AM & PM (Case 5)
3 - US Route 9 & Fisher Road / Hudson Road	Signal	2026 with development PM & SAT (Case 5)
4 - US Route 9 & Cool Spring Road	Unsignalized	2026 without development AM/PM/SAT (Case 4) 2026 with development AM/PM/SAT (Case 5)
5 - US Route 9 & Josephs Road	Unsignalized	2026 without development AM/PM/SAT (Case 4) 2026 with development AM/PM/SAT (Case 5)

<u>Fisher Road & Dollar General/Site Entrance A (Table 2, Page 18)</u>
This unsignalized intersection experiences LOS deficiencies during the PM peak in Cases 3 and the AM and PM peak in Case 5. In Case 3 during the PM peak hour, the eastbound site entrance driveway is expected to operate at LOS E with 45.0 seconds of delay and queues over 140 feet long. In Case 5 during the PM peak hour, the eastbound site entrance driveway is expected to operate at LOS F with 68.3 seconds of delay and queues over 183 feet long. The addition of dedicated turn lanes on the eastbound approach at this intersection would not alleviate the LOS deficiency. Additional traffic controls, such as all-way stop control, traffic signal, or roundabout, are not recommended at this location due to its proximity to the traffic signal at US Route 9 and Fisher Road/Hudson Road.

<u>US Route 9 & Fisher Road / Hudson Road (Table 4, Page 20)</u>
This signalized intersection experiences LOS deficiencies during the PM and Saturday peak in Case 5. During the PM peak hour, the intersection is expected to operate at LOS E with 60.6 seconds of delay. The highest delay is expected on the southbound approach with queues over 306

feet long. In Case 3, future with development and no Cool Springs development, the intersection is expected to operate at LOS D or better. In particular, the intersection is expected to operate at LOS C with 34.5 seconds of delay in the PM peak hour of Case 3. The developer is asked to make pedestrian improvements at this intersection, but due to the minimal impact this site has on operations, no additional mitigating improvements are recommended at this intersection.

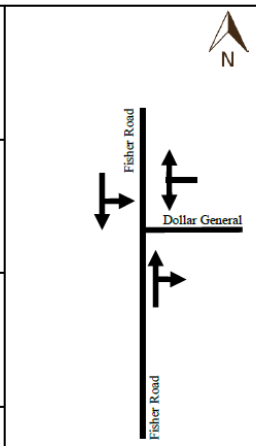
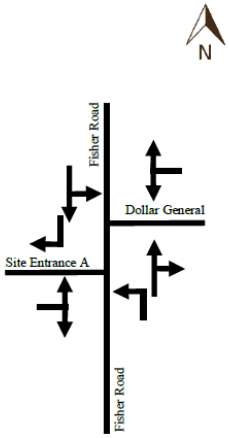
US Route 9 & Cool Spring Road (Table 5, Pages 21-22)
This unsignalized intersection experiences LOS deficiencies during the AM, PM, and Saturday peaks in Cases 4 and 5. During the PM peak hour in Case 5, the northbound approach is expected to operate at LOS F with 5569.5 seconds of delay and queues over 600 feet long. It should be noted that there are no LOS deficiencies at this intersection without the addition of background traffic volume from the Cool Springs Development. The TIS modeled this intersection with a traffic signal which mitigates all of the LOS deficiencies. Additionally, the developer has proposed a Signal Agreement or contribution to the Traffic Signal Revolving Fund (TSRF) for the potential future installation of a traffic signal at the intersection.

US Route 9 & Josephs Road (Table 6, Page 23)
This unsignalized intersection experiences LOS deficiencies during the AM, PM, and Saturday peaks in Cases 4 and 5. During the AM peak hour in Case 5, the northbound approach is expected to operate at LOS F with 51.4 seconds of delay and queues less than one vehicle length. It should be noted that there are no LOS deficiencies at this intersection without the addition of background traffic volume from the Cool Springs Development. Considering these factors and the minimal delay that the proposed Rt 9 and Fisher Road Commercial development will add to this intersection, no mitigating improvements are recommended at this intersection.

Should Sussex County choose to approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan by note or illustration. All applicable agreements (i.e., letter agreements for off-site improvements and traffic signal agreements) should be executed prior to entrance plan approval for the proposed development.

1. The developer shall improve the State-maintained Roads on which they front (US Route 9 and Fisher Road), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. "Frontage" means the length along the state right-of-way of a single property tract where an entrance is proposed or required. If a single property tract has frontage along multiple roadways, any segment of roadway including an entrance shall be improved to meet DelDOT's Functional Classification criteria as found in Section 1.1 of the Development Coordination Manual and elsewhere therein, and/or improvements established in the Traffic Operational Analysis and/or Traffic Impact Study. "Secondary Frontage" means the length along the state right-of-way of a single property tract where no entrance is proposed or required. The segment of roadway may be upgraded by improving the pavement condition of the existing roadway width. The Pavement Management Section and Subdivision Section will determine the requirements to improve the pavement condition.

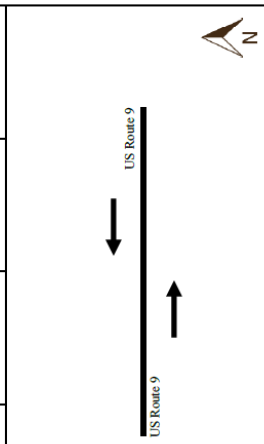
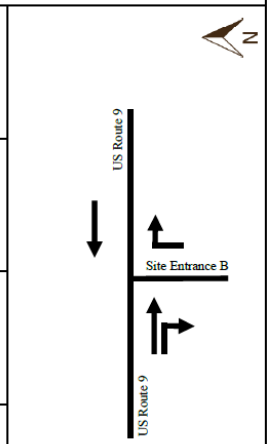
2. The developer should construct the full-movement Site Entrance on Fisher Road. The proposed configuration is shown in the table below.

Approach	Current Configuration		Approach	Proposed Configuration	
Eastbound	Approach does not exist		Eastbound Site Entrance A	One shared left / right turn lane. Stop Control.	
Westbound Dollar General	One shared left / right turn lane. Stop Control.		Westbound Dollar General	No Change	
Northbound Fisher Road	One shared through / right turn lane.		Northbound Fisher Road	One left turn lane and one shared through / right turn lane.	
Southbound Fisher Road	One shared through / left turn lane.		Southbound Fisher Road	One shared left / through lane and one right turn lane.	

At the proposed Site Entrance A intersection, separate left-turn and right-turn lanes are warranted on the Fisher Road approaches based on DelDOT's Auxiliary Lane Worksheet. Initial recommended minimum turn lane lengths (excluding tapers) include a 95-foot left-turn lane on northbound Fisher Road and a 190-foot right-turn lane on southbound Fisher Road. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane lengths and other design details during the site plan review.

Coordinate design and construction of the northbound left-turn lane with the *Georgetown –Lewes, Shared Use Path (SUP)* Project. DelDOT is expected to construct a median refuge island on Fisher Road at the Georgetown-Lewes Trail crossing in Spring 2025.

3. The developer should construct the rights-in / rights-out Site Entrance B on US Route 9. The proposed configuration is shown in the table below.

Approach	Current Configuration		Approach	Proposed Configuration	
Eastbound US 9	One through lane		Eastbound US 9	One through lane and one right turn lane	
Westbound US 9	One through lane		Westbound US 9	No Change	
Northbound	Approach does not exist		Northbound Site Entrance B	One right turn lane. Stop Control.	
Southbound	Approach does not exist		Southbound	Approach does not exist	

At the proposed Site Entrance B intersection, a right-turn lane is warranted along US Route 9 based on DelDOT's Auxiliary Lane Worksheet. Initial recommended minimum turn lane length (excluding taper) is a 350-foot right-turn lane on eastbound US Route 9. The recommended turn lane length will extend through the adjacent parcel's access and right turn lane along US Route 9. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane lengths and other design details during the site plan review.

4. The developer should enter into a traffic signal agreement with DelDOT to cover the physical improvements noted below in Item No. 6.h. at the intersection of US Route 9 and Fisher Road / Hudson Road.

5. The developer should contribute to the Traffic Signal Revolving Fund (TSRF) for a future signal at the intersection of US Route 9 and Cool Springs Road. The amount of the TSRF contribution, as determined by DelDOT's Development Coordination Section, is $10,641.00.

6. The following bicycle and pedestrian improvements should be included:

   a. Per the DelDOT Development Coordination Manual section 5.2.9.2, bicycle lanes are required where right-turn lanes are being installed.

   b. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities and turn lanes within the project limits.

c. Utility covers should be made flush with the pavement.

d. A minimum 15-foot-wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontages along US Route 9 and Fisher Road. Within the easement, a minimum of a 10-foot wide shared-use path should be constructed. The shared-use path should meet AASHTO and ADA standards and should have a minimum of a five-foot buffer from the roadway. At the property boundaries, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Shared-Use Path and/or Sidewalk Termination Reference Guide dated August 1, 2018. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at or before both boundaries of the property. The developer should coordinate the connection to the Georgetown to Lewes Trail with Anthony Aglio of DelDOT in reference to the project *T202400902 - Georgetown to Lewes Trail, Fisher Road to Airport Road.* The project is currently in Semi-final design.

e. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings, including all site entrances. Type 3 curb ramps are discouraged.

f. Internal sidewalks for pedestrian safety and to promote walking as a viable transportation alternative should be constructed within the development. These sidewalks should each be a minimum of five-feet wide (with a minimum of a five-foot buffer from the roadway) and should meet current AASHTO and ADA standards. Internal sidewalks in the development should connect to the proposed shared-use path along the site frontages.

g. Provide bicycle parking with racks near building entrances. Provide a covered bicycle rack/shelter for the apartment complex (Building 4).

h. Design and construct a signalized pedestrian crossing between the southwest corner and the northwest corner at the intersection of US Route 9 and Fisher Road / Hudson Road. This crossing should include a channelizing island on the southwest corner of the intersection.

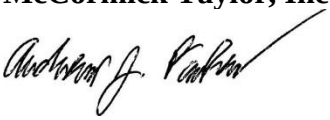
Improvements in this TIS may be considered "significant" under DelDOT's *Work Zone Safety and Mobility Procedures and Guidelines*. These guidelines are available on DelDOT's website at http://deldot.gov/Publications/manuals/de_mutcd/index.shtml.

Please note that this review generally focuses on capacity and level of service issues; additional safety and operational issues will be further addressed through DelDOT's site plan review process.

Additional details on our review of this TIS are attached. Please contact me at (610) 640-3500 or through e-mail at ajparker@mccormicktaylor.com if you have any questions concerning this review.

Sincerely,

McCormick Taylor, Inc.



Andrew J. Parker, PE, PTOE
Project Manager

Enclosure


Scope of Improvements Figure
Route 9 and Fisher Road Commercial TIS
Proposed Site Entrance - Frontage improvements and turn lanes as described in the review letter.
S
Contribution Towards Traffic Signal
Study Intersection - No Improvements
N
Log Cabin Hill Road
Carpenter Road
Cool Spring Road
Martin Branch
Hudson Road
US Route 9
US Route 9
Josephs Road
S
S
Route 9 and Fisher Road Commercial
Fisher Road
Cool Spring Road
Fisher Road

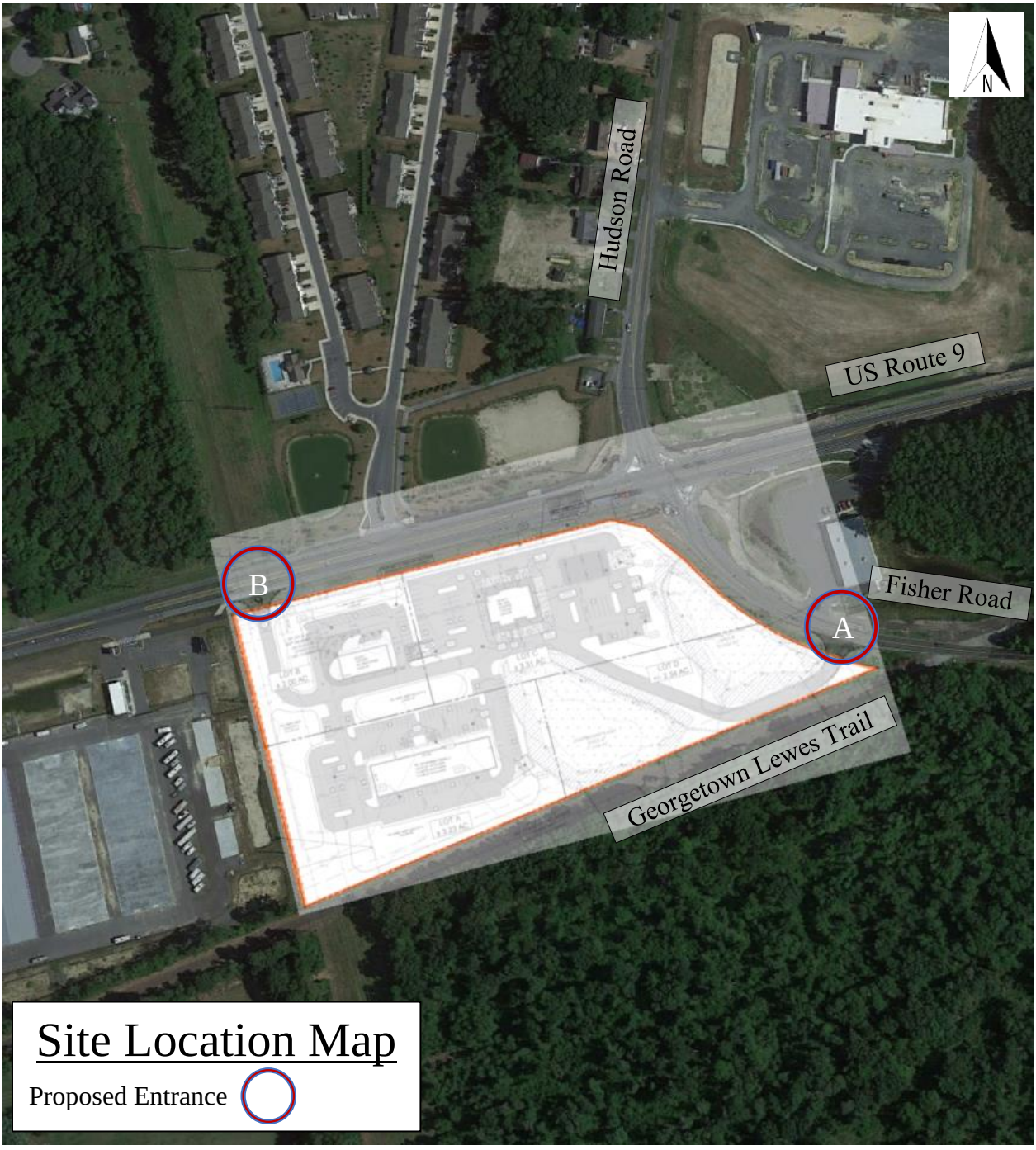
General Information

Report date: November 2023
Prepared by: Pennoni Associates, Inc.
Prepared for: Albari, LLC
Tax parcels: 235-30.00-51.00
Generally consistent with DelDOT's Development Coordination Manual: Yes

Project Description and Background

Description: The Rt 9 and Fisher Road Commercial Development, consisting of 14 multifamily low rise housing units, a 6,000 square-foot convenience store with 12 gas pumps, 10,000 square feet of retail, and a 4,525 square-foot fast food restaurant with drive through window.
Location: to be located on the southwest corner of Lewes Georgetown Highway (US 9) and Fisher Road (SCR 262), in Sussex County, Delaware. A site location map is included on page 10.
Amount of land to be developed: an approximately 11.3-acre parcel.
Land use approval(s) needed: The land is currently zoned as C-2 (General Commercial) and the developer does not plan to rezone the land.
Proposed completion year: 2026
Proposed access locations: Site access is proposed via a full-movement driveway along Fisher Road (SCR 262), opposite the existing Dollar General Entrance, and a right-in / right-out driveway on US Route 9, west of Fisher Road (SCR 262).
Average Daily Traffic Volumes (per DelDOT Traffic Summary 2022):

- Fisher Road: 3,247 vehicles/day
- Route 9: 15,696 vehicles/day


N
Hudson Road
US Route 9
Fisher Road
Georgetown Lewes Trail
B
A
Site Location Map
Proposed Entrance

2020 Delaware Strategies for State Policies and Spending

Location with respect to the Strategies for State Policies and Spending Map of Delaware: The proposed Fisher Road residential development is located within Investment Level 4.

Investment Level 4
Investment Level 4 areas are predominantly rural or agricultural and contain much of Delaware's open space and natural areas. These areas are home to agribusiness activities, farm complexes, and small settlements/unincorporated communities that are often found at historic crossroads. Investment Level 4 areas may also have scattered single-family detached residential homes. Existing transportation facilities and services will be maintained by the state while they continue to manage the transportation system in a manner that will support the preservation of the natural environment and agricultural business. Construction of new homes is discouraged; housing policies will focus on maintenance and rehabilitation of existing homes and communities. In addition, the Department of Education does not support the construction of new educational facilities in Investment Level 4 areas. The educational needs of Investment Level 4 areas would likely need to be met through facilities located in Investment Level 1-3 areas.

In general, the state will limit its investments in public infrastructure systems; investments should address existing public health, safety, or environmental risks, preserve rural character and natural resources, and discourage further development that is unrelated to the area's needs.

Proposed Development's Compatibility with Strategies for State Policies and Spending:
The proposed Rt 9 and Fisher Road Commercial Development would consist of 14 multifamily low rise housing units, a 6,000 square-foot convenience store with 12 gas pumps, 10,000 square feet of retail, and a 4,525 square-foot fast food restaurant with drive through in an Investment Level 4 area. The state would be responsible for providing many public services to the residents of the development, such as school construction and transportation, police and fire/EMS services, and additional maintenance of the transportation system. Given the location of the development in an Investment Level 4 area, the state generally does not intend to make these significant investments. Rather, the state intends to support agricultural activities and protect the rural and natural character of these areas. Based on the 2020 Delaware Strategies for State Polices and Spending document, the proposed development does not appear to be compatible with an Investment Level 4 area and additional discussion is required.

Comprehensive Plan

Sussex County Comprehensive Plan:
(Source: Sussex County Comprehensive Plan, March 2019)

The Sussex County Comprehensive Plan 2045 Future Land Use Map indicates that the proposed development parcels are located almost entirely within the Low Density Area (categorized as a Rural Area). However, the Sussex County Zoning map, accessed online in December 2023 indicates that the parcel for the proposed development is zoned for Commercial Development. It appears that the Future Land Use Map is out of sync with the County's intended use for this land.

Proposed Development's Compatibility with Comprehensive Plan:
The proposed mixed-use development is not in-line with the Future Land Use map, but is compatible with the County Zoning map. It appears that the proposed Rt 9 and Fisher Road Commercial development fits within the intended land use for this location.

Relevant Projects in the DelDOT Capital Transportation Program

Currently, there are two DelDOT initiatives within the area of study.

The Statewide *Rail-to-Trail & Rail-with-Trail Facility Master Plan* includes the *Georgetown – Lewes, Shared Use Path (SUP)*. Project segments of the *Georgetown – Lewes SUP* have been completed and will traverse adjacent to this development. The goal of this project is to utilize the recently abandoned, inactive, and public owned active rail corridor to develop off-road facilities for bicyclists and pedestrians for both transportation and recreation. When complete, the Georgetown-Lewes Running Track Rail-to-Trail & Rail-with-Trail project would run from the Historic Georgetown Train Station to the entrance to the Cape Henlopen State Park in Lewes, and would measure approximately 16.7 miles in length.

Additionally, DelDOT's *Coastal Corridors Study* aims to study the east-west travel patterns in Sussex County including, but not limited to, Delaware Route 404, US Route 9, and Delaware Route 16. Initial efforts in the study will identify the east-west routes / corridors in northwestern Sussex County that are currently congested or are at risk for congestion based on anticipated growth in the area. The study will focus on several factors including longer trips from the Chesapeake Bay Bridge to the Delaware beaches and Ocean City, Maryland, regional traffic between Maryland's Eastern Shore and Sussex County, and local east-west traffic within the northwestern part of Sussex County.

Trip Generation

Trip generation for the proposed development was computed using comparable land uses and equations contained in Trip Generation, Eleventh Edition, published by the Institute of Transportation Engineers (ITE). The following land use was utilized to estimate the amount of new traffic generated for this development:

- Multifamily Housing (Low-rise) (Land Use Code 220)
- Convenience Store / Gas Station (Land Use Code 945)
- Strip Retail Plaza (<40k) (Land Use Code 822)

Rt 9 & Fisher Road Commercial Development Peak Hour Trip Generation

Land Use	Phase	Weekday AM Peak Hour			Weekday PM Peak Hour			Summer Saturday Peak Hour			Average Daily Trips (ADT)		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
LUC 220 LUC 945 LUC 822	Gross	291	285	576	285	276	561	356	351	707	3,531	3,531	7,062
	Pass-by	-181	-178	-359	-166	-161	-327	-182	-180	-362	-0	-0	-0
Total Trips		**110**	**107**	**217**	**119**	**115**	**234**	**174**	**171**	**345**	**3,531**	**3,531**	**7,062**

Overview of TIS

Intersections examined:

1) Fisher Road (SCR 262) & Dollar General/Site Entrance A
2) US Route 9 & Site Entrance B
3) US Route 9 & Fisher Road (SCR 262) / Hudson Road
4) US Route 9 & Cool Spring Road (SCR 290)
5) US Route 9 & Josephs Road (SCR 281)
6) Hudson Road & Carpenter Road
7) Hudson Road (SCR 258) & Log Cabin Hill Road (SCR 247)
8) Fisher Road & Martin Farm Road (SCR 291)
9) Fisher Road & Cool Spring Road

Conditions examined:

1) 2023 Existing (Case 1)
2) 2026 without development and without Cool Springs (Case 2)
3) 2026 with development and without Cool Springs (full access on Fisher Road and Right-in/Right-out access on Route 9*) (Case 3)
4) 2026 without development and with Cool Springs (Case 4)
5) 2026 with development and with Cool Springs (full access on Fisher Road and Right-in/Right-out access on Route 9*) (Case 5)

* With Log Cabin Hill Road realignment with Capenter Road

Peak hours evaluated: Weekday morning, weekday evening, and Summer Saturday peak hours.

Committed developments considered:

1) Monarch Glen: 246 single family detached houses
2) Compass Point: 277 single family detached houses (partially constructed and occupied)
3) Cool Spring (Only included for Cases 4 and 5): 1,600 single family detached houses, 350 low rise multi-family housing, 450 units of mid-rise multi-family housing, 50 units of attached senior adult housing, 84 units of independent living developments, 80 beds of an assisted living facility, a 60,000 square-foot YMCA, a 600 student capacity school, a 75,000 square-foot educational institution, an 85,000 square-foot grocery store, a 6,000 square-foot restaurant with drive-through window, 3 fast casual restaurants without drive-through windows (totaling 20,000 square feet), a 6,500 square-foot super-convenience store, and a recreational/entertainment use

Intersection Descriptions

1) **Fisher Road (SCR 262) & Dollar General / Site Entrance A**
   Type of Control: proposed two-way stop
   Eastbound Approach: (Site Entrance A) proposed shared left/right-turn lane. Stop controlled.
   Westbound Approach: (Dollar General) existing shared left/right-turn lane. Stop controlled.
   Northbound Approach: (Fisher Rd) existing shared through/right-turn lane. Proposed left-turn lane and shared through/right-turn lane.
   Southbound Approach: (Fisher Rd) existing shared left/through-turn lane. Proposed shared left/through-turn lane and right-turn lane.

2) **US Route 9 / Site Entrance B**
   Type of Control: proposed one-way stop (T-intersection)
   Eastbound Approach: (US Route 9) existing through lane and proposed right-turn lane.
   Westbound Approach: (US Route 9): existing through lane
   Northbound Approach: (Site Entrance B) proposed right-turn lane. Stop controlled.

3) **US Route 9 & Fisher Road (SCR 262) / Hudson Road**
   Type of Control: signalized intersection
   Eastbound Approach: (US Route 9) one left-turn lane, one through lane, one bicycle lane, and one right-turn lane
   Westbound Approach: (US Route 9) one left-turn lane, one through lane, one bicycle lane, and one right-turn lane
   Northbound Approach: (Fisher Rd) one left-turn lane, one through lane, one bicycle lane, and one right-turn lane
   Southbound Approach: (Fisher Rd) one left-turn lane, one through lane, one bicycle lane, and one right-turn lane

4) **US Route 9 & Cool Spring Road (SCR 290)**
   Type of Control: existing two-way stop
   Eastbound Approach: (US Route 9) one shared left / through / right-turn lane

Westbound Approach: (US Route 9) one shared left / through / right-turn lane
Northbound Approach: (Cool Spring Road) one shared left / through / right-turn lane. Stop controlled.
Southbound Approach: (Cool Spring Road) one shared left / through / right-turn lane. Stop controlled.

5) **US Route 9 & Josephs Road (SCR 281)**
Type of Control: existing two-way stop
Eastbound Approach: (US Route 9) one shared left / through / right-turn lane
Westbound Approach: (US Route 9) one shared left / through / right-turn lane
Northbound Approach: (Josephs Road) one shared left / through / right-turn lane. Stop controlled.
Southbound Approach: (Josephs Road) one shared left / through / right-turn lane. Stop controlled.

6) **Hudson Road & Carpenter Road**
Type of Control: existing one-way stop (T-intersection)
Eastbound Approach: (Carpenter Road) one shared left-turn / right-turn lane. Stop controlled.
Northbound Approach: (Hudson Road) one shared left-turn / through lane
Southbound Approach: (Hudson Road) one shared through / right-turn lane

7) **Hudson Road (SCR 258) & Log Cabin Hill Road (SCR 247)**
Type of Control: existing one-way stop (T-intersection)
Westbound Approach: (Log Cabin Hill Road) one shared left-turn / right-turn lane. Stop controlled.
Northbound Approach: (Hudson Road) one shared through / right-turn lane
Southbound Approach: (Hudson Road) one shared left-turn / through lane

8) **Fisher Road & Martin Farm Road (SCR 291)**
Type of Control: existing one-way stop (T-intersection)
Eastbound Approach: (Fisher Road) one shared through / right-turn lane
Westbound Approach: (Fisher Road) one shared left-turn / through lane
Northbound Approach: (Martins Farm Road) one shared left-turn / right-turn lane. Stop controlled.

9) **Fisher Road & Cool Spring Road**
Type of Control: existing all-way stop
Eastbound Approach: (Fisher Road) one shared left / through / right-turn lane. Stop controlled.
Westbound Approach: (Fisher Road) one shared left / through / right-turn lane. Stop controlled.
Northbound Approach: (Cool Spring Road) one shared left / through / right-turn lane. Stop controlled.
Southbound Approach: (Cool Spring Road) one shared left / through / right-turn lane. Stop controlled.

Safety Evaluation

Crash Data: Delaware Crash Analysis Reporting System (CARS) data was provided in the TIS for the three-year period from July 12, 2020, to July 12, 2023. A total of 47 crashes occurred within the study area during the three-year period. Of those 47 collisions, 8 resulted in personal injury. The most common type of collision was front to rear (49 percent). It should be noted that crash data was only evaluated along US Route 9 and Fisher Road within the extents of the proposed development.

Sight Distance: The study area generally consists of relatively flat roadways and there are few visual obstructions. Sight distance appears adequate throughout the study area. No problematic sight distance issues have been reported or indicated by crash data. As always, the adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site accesses.

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operates a fixed-route transit bus service in the area of the proposed Fisher Road residential development. Route 206 runs along US Route 9 and has a stop in both directions at the intersection of US Route 9 and Fisher Road / Hudson Road.

Planned transit service: Based on coordination with DTC representatives, there are no additional transit amenities proposed at this time.

Existing bicycle and pedestrian facilities: According to DelDOT's Sussex County Bicycle Map, US Route 9 is a Regional Bicycle Routes with Bikeway and traffic volumes over 5,000 vehicles per day. US Route 9, east of Fisher Road, and Hudson Road are identified as an American Discovery Trail. The Georgetown to Lewes Trail is shown along Fisher Road adjacent to the proposed development and continuing east along the north side of US Route 9.

Planned bicycle and pedestrian facilities: A 5-foot-wide bicycle lane along US Route 9 and along Fisher Road at the site accesses and a 10-foot shared-use path is proposed along the US Route 9 along Fisher Road and the property frontage.

Previous Comments

The initial scoping memorandum between the developer and DelDOT was dated February 7, 2023. A revised scoping memorandum was prepared on March 9, 2023.

In a review letter dated April 13, 2023, DelDOT commented on the traffic counts and seasonally adjusted traffic volumes. The developer was asked to submit the required ATR count data, revise volume figures, and remove seasonal adjustments from the summer Saturday traffic counts.

In a second review dated June 15, 2023, DelDOT requested clarification on the ATR data, provided growth factors, and directed the developer to proceed with the Preliminary TIS.

In a third review letter dated August 4, 2023, DelDOT commented on the Preliminary TIS and requested revisions to the traffic volume figures and directed the developer to resubmit the Preliminary TIS.

In a fourth review letter dated September 6, 2023, DelDOT requested revisions and clarification on a couple figures. DelDOT requested that the developer address these comments and proceed with the Final TIS.

It appears that all substantive comments from DelDOT's TIS Scoping Memorandum, Traffic Count Review, Preliminary TIS Review, and other correspondence were addressed in the Final TIS submission.

General HCS Analysis Comments

(see table footnotes on the following pages for specific comments)

1) The TIS used Highway Capacity Software (HCS) version 7.9.5 to complete the traffic analyses. McCormick Taylor used version 2023.

2) The TIS and McCormick Taylor generally used heavy vehicle percentages (HV%) from turning movement counts for existing and future conditions (as per DelDOT's Development Coordination Manual section 2.2.8.11.6.H). McCormick Taylor and the TIS assumed 3% HV at proposed site entrances in future conditions.

3) The TIS and McCormick Taylor determined overall intersection peak hour factors (PHF) for each intersection based on the turning movement counts. Future PHFs were determined as per the DelDOT Development Coordination Manual section 2.2.8.11.6.F where applicable.

4) For analyses of all intersections, McCormick Taylor and the TIS assumed 0% grade for all movements.

Table 2
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [1] Two-Way Stop-Controlled	**LOS per TIS**			**LOS per McCormick Taylor**		
1 - Fisher Road & Dollar General/Site Entrance A	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Westbound Dollar General Entrance	B (10.1)	B (10.4)	--	B (10.1)	B (10.4)	--
Southbound Fisher Rd – Left	A (7.8)	A (7.7)	--	A (7.8)	A (7.7)	--
2026 No Build & No Cool Springs Condition (Case 2)						
Westbound Dollar General Entrance	B (11.1)	B (11.5)	--	B (11.1)	B (11.5)	--
Southbound Fisher Rd – Left	A (8.1)	A (7.9)	--	A (8.1)	A (7.9)	--
2026 Build & No Cool Springs Condition (Case 3)						
Eastbound Dollar General Entrance	D (25.4)	E (39.8)	--	D (26.4)	E (45.0)	--
Westbound Dollar General Entrance	B (12.8)	B (13.8)	--	B (12.9)	B (13.9)	--
Northbound Fisher Rd – Left	A (8.2)	A (8.5)	--	A (8.2)	A (8.5)	--
Southbound Fisher Rd – Left	A (8.0)	A (7.8)	--	A (8.0)	A (7.8)	--
2026 No Build & With Cool Springs Condition (Case 4)						
Westbound Dollar General Entrance	B (11.6)	B (12.2)	--	B (11.6)	B (12.2)	--
Southbound Fisher Rd – Left	A (8.2)	A (8.0)	--	A (8.2)	A (8.0)	--
2026 Build & With Cool Springs Condition (Case 5)						
Eastbound Dollar General Entrance	D (33.6)	F (57.8)	--	E (35.8)	F (68.3)	--
Westbound Dollar General Entrance	B (13.8)	C (15.0)	--	B (13.9)	C (15.2)	--
Northbound Fisher Rd – Left	A (8.4)	A (8.7)	--	A (8.4)	A (8.7)	--
Southbound Fisher Rd – Left	A (8.1)	A (8.0)	--	A (8.1)	A (8.0)	--

[1] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 3
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [2] Two-Way Stop	**LOS per TIS**			**LOS per McCormick Taylor**		
2 - US Route 9 & Site Entrance B	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2026 Build & No Cool Springs Condition (Case 3)						
Northbound Site Entrance B	C (17.1)	C (15.3)	B (14.4)	C (17.1)	C (15.3)	B (14.4)
2026 Build & With Cool Springs Condition (Case 5)						
Northbound Site Entrance B	D (26.1)	D (27.0)	D (27.4)	D (26.1)	D (27.0)	D (27.4)

[2] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 4
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Signalized Intersection [3]	**LOS per TIS**			**LOS per McCormick Taylor**		
3 - US Route 9 & Fisher Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Overall	C (28.2)	C (30.3)	C (20.4)	C (26.1)	C (28.6)	B (19.7)
2026 No Build & No Cool Springs Condition (Case 2)						
Overall	C (34.0)	D (36.8)	C (23.2)	C (32.9)	D (38.8)	C (25.8)
2026 Build & No Cool Springs Condition (Case 3)						
Overall	D (37.9)	D (38.0)	C (28.6)	D (37.0)	C (34.5)	C (29.3)
2026 No Build & With Cool Springs Condition (Case 4)						
Overall	D (49.2)	D (46.9)	D (41.0)	D (50.8)	D (48.6)	D (43.6)
2026 Build & With Cool Springs Condition (Case 5)						
Overall	D (53.9)	E (59.2)	E (55.9)	D (54.3)	E (60.6)	E (58.1)

[3] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 5
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [4] Two-Way Stop-Controlled	**LOS per TIS**			**LOS per McCormick Taylor**		
4 - US Route 9 & Cool Spring Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Eastbound Rt 9 – Left	A (9.5)	A (8.7)	A (8.4)	A (9.5)	A (8.7)	A (8.4)
Westbound Rt 9 – Left	A (8.9)	A (8.5)	A (8.6)	A (8.9)	A (8.5)	A (8.6)
Northbound Cool Spring Rd	C (16.6)	C (18.0)	C (15.5)	C (16.2)	C (17.4)	C (15.1)
Southbound Cool Spring Rd	C (24.8)	C (18.4)	D (25.2)	C (23.7)	C (17.7)	D (24.3)
2026 No Build & No Cool Springs Condition (Case 2)						
Eastbound Rt 9 – Left	--	--	--	A (9.6)	A (8.9)	A (8.5)
Westbound Rt 9 – Left	--	--	--	A (9.1)	A (8.6)	A (8.7)
Northbound Cool Spring Rd	--	--	--	C (17.4)	C (19.2)	C (16.1)
Southbound Cool Spring Rd	--	--	--	D (26.2)	C (21.0)	D (27.6)
2026 Build & No Cool Springs Condition (Case 3)						
Eastbound Rt 9 – Left	--	--	--	A (9.8)	A (9.0)	A (8.7)
Westbound Rt 9 – Left	--	--	--	A (9.2)	A (8.7)	A (8.9)
Northbound Cool Spring Rd	--	--	--	C (18.3)	C (20.6)	C (17.5)
Southbound Cool Spring Rd	--	--	--	D (28.5)	C (22.5)	D (31.8)
2026 No Build & With Cool Springs Condition (Case 4)						
Eastbound Rt 9 – Left	--	--	--	A (9.1)	B (10.6)	B (10.3)
Westbound Rt 9 – Left	--	--	--	B (10.1)	A (9.3)	A (10.0)
Northbound Cool Spring Rd	--	--	--	F (2715.1)	F (3562.3)	F (17652.8)
Southbound Cool Spring Rd	--	--	--	F (974.2)	No HCS Calc.	No HCS Calc.
2026 Build & With Cool Springs Condition (Case 5)						
Eastbound Rt 9 – Left	--	--	--	A (9.2)	B (10.8)	B (10.5)
Westbound Rt 9 – Left	--	--	--	B (10.2)	A (9.4)	B (10.2)
Northbound Cool Spring Rd	--	--	--	F (4597.5)	F (5569.5)	No HCS Calc.
Southbound Cool Spring Rd	--	--	--	F (1180.4)	No HCS Calc.	No HCS Calc.

[4] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 5 (Continued)
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Signalized Intersection [5]	**LOS per TIS**			**LOS per McCormick Taylor** [6]		
4 - US Route 9 & Cool Spring Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2026 No Build & No Cool Springs Condition (Case 2) – Signalized						
Overall	A (7.3)	A (6.4)	A (4.2)	B (13.7)	B (10.5)	B (10.8)
2026 Build & No Cool Springs Condition (Case 3) – Signalized						
Overall	A (7.9)	A (5.9)	A (4.2)	B (14.4)	B (10.8)	B (11.1)
2026 No Build & With Cool Springs Condition (Case 4) – Signalized						
Overall	C (21.2)	B (17.2)	C (21.6)	D (35.7)	C (30.1)	D (41.4)
2026 Build & With Cool Springs Condition (Case 5) – Signalized						
Overall	C (21.6)	B (15.3)	C (20.2)	D (37.2)	C (26.7)	C (34.6)

[5] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[6] McCormic Taylor analysis uses intersection geometry that includes dedicated left and right-turn lanes on US Route 9 approaches and dedicated left-turn lanes on Cool Spring Road approaches. This geometry is expected by DelDOT in new signal design.

Table 6
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [7] Two-Way Stop-Controlled	**LOS per TIS**			**LOS per McCormick Taylor**		
5 - US Route 9 & Josephs Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Eastbound Rt 9 – Left	A (8.6)	A (8.8)	A (8.4)	A (8.6)	A (8.8)	A (8.4)
Westbound Rt 9 – Left	A (9.0)	A (8.4)	A (8.6)	A (9.0)	A (8.4)	A (8.6)
Northbound Josephs Rd – Left	C (21.7)	C (19.3)	C (18.4)	C (21.8)	C (19.3)	C (18.5)
Southbound Josephs Rd – Left	C (16.1)	C (19.5)	C (15.7)	C (16.1)	C (19.6)	C (15.7)
2026 No Build & No Cool Springs Condition (Case 2)						
Eastbound Rt 9 – Left	A (8.7)	A (9.0)	A (8.5)	A (8.7)	A (9.0)	A (8.5)
Westbound Rt 9 – Left	A (9.2)	A (8.5)	A (8.7)	A (9.2)	A (8.5)	A (8.7)
Northbound Josephs Rd – Left	C (24.0)	C (21.3)	C (20.3)	C (24.1)	C (21.3)	C (20.4)
Southbound Josephs Rd – Left	C (17.2)	C (21.6)	C (17.0)	C (17.2)	C (21.7)	C (17.0)
2026 Build & No Cool Springs Condition (Case 3)						
Eastbound Rt 9 – Left	A (8.8)	A (9.1)	A (8.7)	A (8.8)	A (9.1)	A (8.5)
Westbound Rt 9 – Left	A (9.4)	A (8.6)	A (8.9)	A (9.4)	A (8.6)	A (8.7)
Northbound Josephs Rd – Left	C (26.0)	C (22.9)	C (22.6)	C (26.1)	C (22.9)	C (20.4)
Southbound Josephs Rd – Left	C (18.3)	C (23.2)	C (18.6)	C (18.3)	C (23.4)	C (17.0)
2026 No Build & With Cool Springs Condition (Case 4)						
Eastbound Rt 9 – Left	A (9.5)	A (9.9)	A (9.6)	A (9.5)	A (9.9)	A (9.6)
Westbound Rt 9 – Left	B (10.3)	A (9.0)	A (9.7)	B (10.3)	A (9.0)	A (9.7)
Northbound Josephs Rd – Left	E (45.6)	E (33.4)	E (41.2)	E (46.2)	E (33.6)	E (41.9)
Southbound Josephs Rd – Left	D (28.3)	D (34.8)	D (31.1)	D (28.4)	D (35.3)	D (31.3)
2026 Build & With Cool Springs Condition (Case 5)						
Eastbound Rt 9 – Left	A (9.6)	B (10.0)	A (9.8)	A (9.6)	B (10.0)	A (9.8)
Westbound Rt 9 – Left	B (10.5)	A (9.1)	A (9.9)	B (10.5)	A (9.1)	A (9.9)
Northbound Josephs Rd – Left	F (50.6)	E (36.5)	E (48.1)	F (51.4)	E (36.8)	E (49.0)
Southbound Josephs Rd – Left	D (30.8)	E (38.1)	E (35.5)	D (31.0)	E (38.7)	E (35.8)

[7] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 7
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [8] **One-Way Stop (T-intersection)**	**LOS per TIS**			**LOS per McCormick Taylor**		
6 – Hudson Road & Carpenter Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Eastbound Carpenter Rd	B (11.3)	B (11.0)	--	B (11.3)	B (11.0)	--
Northbound Hudson Rd – Left	A (7.8)	A (7.8)	--	A (7.8)	A (7.8)	--
2026 No Build & No Cool Springs Condition (Case 2)						
Eastbound Carpenter Rd	B (12.6)	B (12.0)	--	B (12.6)	B (12.0)	--
Northbound Hudson Rd – Left	A (8.0)	A (8.0)	--	A (8.0)	A (8.0)	--
2026 Build & No Cool Springs Condition (Case 3)						
Eastbound Carpenter Rd	B (13.2)	B (12.4)	--	B (13.2)	B (12.4)	--
Northbound Hudson Rd – Left	A (8.1)	A (8.0)	--	A (8.1)	A (8.0)	--

[8] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 7 (continued)
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection Roundabout[9]	**LOS per TIS**			**LOS per McCormick Taylor**		
6 – Hudson Road & Carpenter Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2026 No Build & With Cool Springs Condition (Case 4)						
Eastbound Carpenter Rd	A (7.7)	A (7.7)	--	A (7.7)	A (7.7)	--
Westbound Carpenter Rd	A (7.9)	A (7.4)	--	A (7.9)	A (7.4)	--
Northbound Hudson Rd	A (7.3)	A (9.4)	--	A (7.3)	A (9.4)	--
Southbound Hudson Rd	A (9.7)	A (8.8)	--	A (9.7)	A (8.8)	--
Overall	A (8.3)	A (8.8)	--	A (8.3)	A (8.8)	--
2026 Build & With Cool Springs Condition (Case 5)						
Eastbound Carpenter Rd	A (8.1)	A (8.2)	--	A (8.1)	A (8.2)	--
Westbound Carpenter Rd	A (8.3)	A (7.7)	--	A (8.3)	A (7.7)	--
Northbound Hudson Rd	A (7.7)	A (9.9)	--	A (7.6)	A (9.9)	--
Southbound Hudson Rd	B (10.2)	A (9.3)	--	B (10.2)	A (9.3)	--
Overall	A (8.7)	A (9.2)	--	A (8.7)	A (9.2)	--

[9] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 8
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [10] **One-Way Stop (T-intersection)**	**LOS per TIS**			**LOS per McCormick Taylor**		
7 – Hudson Road & Log Cabin Hill Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Westbound Log Cabin Hill Rd	B (10.1)	B (10.6)	--	B (10.1)	B (10.6)	--
Southbound Hudson Rd – Left	A (7.6)	A (7.6)	--	A (7.6)	A (7.6)	--
2026 No Build & No Cool Springs Condition (Case 2)						
Westbound Log Cabin Hill Rd	B (10.6)	B (11.5)	--	B (10.6)	B (11.5)	--
Southbound Hudson Rd – Left	A (7.7)	A (7.8)	--	A (7.7)	A (7.8)	--
2026 Build & No Cool Springs Condition (Case 3)						
Westbound Log Cabin Hill Rd	B (10.8)	B (11.8)	--	B (10.8)	B (11.8)	--
Southbound Hudson Rd – Left	A (7.8)	A (7.8)	--	A (7.8)	A (7.8)	--

[10] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 9
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [11] **One-Way Stop (T-intersection)**	**LOS per TIS**			**LOS per McCormick Taylor**		
8 –Fisher Road & Martin Farm Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Westbound Fisher Rd – Left	A (7.8)	A (7.7)	--	A (7.8)	A (7.7)	--
Northbound Martin Farm Rd	A (10.0)	B (10.0)	--	A (10.0)	B (10.0)	--
2026 No Build & No Cool Springs Condition (Case 2)						
Westbound Fisher Rd – Left	A (7.9)	A (7.7)	--	A (7.9)	A (7.7)	--
Northbound Martin Farm Rd	B (10.4)	B (10.4)	--	B (10.4)	B (10.4)	--
2026 Build & No Cool Springs Condition (Case 3)						
Westbound Fisher Rd – Left	A (8.0)	A (7.8)	--	A (8.0)	A (7.8)	--
Northbound Martin Farm Rd	A (10.9)	B (11.1)	--	A (10.9)	B (11.1)	--
2026 No Build & With Cool Springs Condition (Case 4)						
Westbound Fisher Rd – Left	A (8.0)	A (7.8)	--	A (7.9)	A (7.8)	--
Northbound Martin Farm Rd	B (11.2)	B (11.1)	--	B (10.4)	B (11.2)	--
2026 Build & With Cool Springs Condition (Case 5)						
Westbound Fisher Rd – Left	A (8.1)	A (7.9)	--	A (8.1)	A (7.9)	--
Northbound Martin Farm Rd	B (11.9)	B (12.0)	--	B (11.9)	B (12.0)	--

[11] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 10
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [12] All-Way Stop	**LOS per TIS**			**LOS per McCormick Taylor**		
9 –Fisher Road & Cool Spring Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2023 Existing Condition (Case 1)						
Eastbound Fisher Rd – Left	A (8.7)	A (8.4)	--	A (8.7)	A (8.4)	--
Westbound Fisher Rd – Left	A (8.5)	A (9.0)	--	A (8.5)	A (9.0)	--
Northbound Cool Spring Rd – Left	A (9.3)	A (8.3)	--	A (9.3)	A (8.3)	--
Southbound Cool Spring Rd – Left	A (8.0)	A (8.1)	--	A (8.0)	A (8.1)	--
Overall Intersection	A (8.8)	A (8.6)	--	A (8.8)	A (8.6)	--
2026 No Build & No Cool Springs Condition (Case 2)						
Eastbound Fisher Rd – Left	A (9.1)	A (8.7)	--	A (9.1)	A (8.7)	--
Westbound Fisher Rd – Left	A (8.7)	A (9.4)	--	A (8.7)	A (9.4)	--
Northbound Cool Spring Rd – Left	A (9.6)	A (8.9)	--	A (9.6)	A (8.9)	--
Southbound Cool Spring Rd – Left	A (8.1)	A (8.2)	--	A (8.1)	A (8.2)	--
Overall Intersection	A (9.1)	A (8.9)	--	A (9.1)	A (8.9)	--
2026 Build & No Cool Springs Condition (Case 3)						
Eastbound Fisher Rd – Left	A (9.6)	A (9.2)	--	A (9.6)	A (9.2)	--
Westbound Fisher Rd – Left	A (9.0)	A (9.8)	--	A (9.0)	A (9.8)	--
Northbound Cool Spring Rd – Left	B (10.1)	A (9.3)	--	B (10.1)	A (9.3)	--
Southbound Cool Spring Rd – Left	A (8.3)	A (8.4)	--	A (8.3)	A (8.4)	--
Overall Intersection	A (9.5)	A (9.3)	--	A (9.5)	A (9.3)	--
2026 No Build & With Cool Springs Condition (Case 4)						
Eastbound Fisher Rd – Left	B (11.8)	A (9.2)	--	B (11.8)	B (10.7)	--
Westbound Fisher Rd – Left	B (10.5)	A (9.8)	--	B (10.5)	B (11.6)	--
Northbound Cool Spring Rd – Left	B (12.6)	A (9.3)	--	B (12.6)	B (12.0)	--
Southbound Cool Spring Rd – Left	B (10.9)	A (8.4)	--	B (10.9)	B (10.2)	--
Overall Intersection	B (11.6)	B (11.3)	--	B (11.6)	B (11.3)	--

[12] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.

Table 10 (continued)
Peak Hour Levels of Service (LOS)
Based on Rt 9 and Fisher Road Commercial
Traffic Impact Study – November 2023
Prepared by Pennoni.

Unsignalized Intersection [13] All-Way Stop	**LOS per TIS**			**LOS per McCormick Taylor**		
9 –Fisher Road & Cool Spring Road	Weekday AM	Weekday PM	Saturday Mid-day	Weekday AM	Weekday PM	Saturday Mid-day
2026 Build & With Cool Springs Condition (Case 5)						
Eastbound Fisher Rd – Left	B (13.0)	B (11.6)	--	B (13.0)	B (11.6)	--
Westbound Fisher Rd – Left	B (11.2)	B (12.5)	--	B (11.2)	B (12.5)	--
Northbound Cool Spring Rd – Left	B (13.6)	B (12.9)	--	B (13.6)	B (12.9)	--
Southbound Cool Spring Rd – Left	B (11.5)	B (10.6)	--	B (11.5)	B (10.6)	--
Overall Intersection	B (12.5)	B (12.1)	--	B (12.5)	B (12.1)	--

[13] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.