



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

NICOLE MAJESKI
SECRETARY

May 15, 2023

Mr. Eric Ostimchuk
Traffic Planning & Design, Inc.
111 E. Main Street, Suite A
Elkton, MD 21921

Dear Mr. Ostimchuk:

The enclosed Traffic Operational Analysis (TOA) review letter for the proposed **2701 Capitol Trail** (Tax Parcel: 08-049.30-379) mixed residential and commercial 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 TOA 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: Mr. Robert Sipple, Lighthouse Realty Fund
Mr. Colm Deascani, CDA Engineering, inc.
Mr. Alex Meitzler, Traffic, Planning, and Design, Inc.
Mr. Eric Kramer, Traffic, Planning, and Design, Inc.
Mr. Troy Brestel, Traffic, Planning, and Design, Inc.
Mr. David L. Edgell, Office of State Planning Coordination
Mr. Antoni Sekowski, New Castle County Department of Land Use
Mr. Bradford Shockley, New Castle County Department of Land Use
Mr. Owen C. Robatino, New Castle County Department of Land Use
Ms. Joanne M. Arellano, Johnson, Mirmiran, & Thompson, Inc.
Mr. Mir Wahed, Johnson, Mirmiran, & Thompson, Inc.
DelDOT Distribution

DelDOT Distribution

Brad Eaby, Deputy Attorney General
Shanté Hastings, Director, Deputy Secretary, Transportation Solutions (DOTS)
Pamela Steinebach, Director, Planning
Mark Luszcz, Deputy Director, Operations and Support, Traffic, DOTS
Peter Haag, Chief Traffic Engineer, Traffic, DOTS
Matthew Vincent, Chief of Project Development North, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, Traffic, DOTS
Todd Sammons, Assistant Director, Development Coordination, Planning
Wendy Polasko, Subdivision Engineer, Development Coordination, Planning
John Pietrobono, New Castle Review Coordinator, Development Coordination, Planning
Sireen Muhtaseb, TIS Group Manager, Development Coordination, Planning
Philip Lindsey, TIS Group Project Engineer, Development Coordination, Planning
John Andrescavage, New Castle County Subdivision Reviewer, Development Coordination, Planning
Brian Schilling, Canal District Engineer, Canal District
Nathan Draper, Canal District Public Works Engineer, Canal District
Jared Kauffman, Service Development Planner, Delaware Transit Corporation
Tremica Cherry, Service Development Planner, Delaware Transit Corporation
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning



May 15, 2023

Ms. Annamaria Furmato
Project Engineer
Delaware Department of Transportation
Development Coordination, Division of Planning
800 Bay Road
Dover, DE 19901

RE: Agreement No. 1945F
Project Number T202069012/PO#611882
Traffic Operational Analysis Services
Task 11-12A – 2701 Capitol Trail TOA

Dear Ms. Furmato:

Johnson, Mirmiran, and Thompson (JMT) has completed a review of the Traffic Operational Analysis (TOA) for the 2701 Capitol Trail mixed-use development, which was prepared by Traffic Planning and Design, Inc., dated January 31, 2023. This review was assigned as Task Number 11-12A. The report is prepared in a manner generally consistent with DelDOT's *Development Coordination Manual*.

The TOA evaluates the impacts of a proposed mixed-use development in New Castle County, Delaware. The proposed development would consist of 21,500 square feet of retail space and 179 mid-rise multi-family dwelling units to replace an existing 68,225 square foot office building on an approximately 12.36-acre parcel. The land is currently zoned as CR (Commercial Regional) and the developer does not plan to rezone the land.

The site is located on the northwest side of Capitol Trail (New Castle Road 11), approximately 380 feet northeast of the intersection with Meadowood Drive. One rights-in/rights-out access point is proposed on Capitol Trail and construction is expected to be complete in 2026.

DelDOT does not have any relevant and ongoing improvement projects within the study area.

Consistent with community feedback, the TOA studied the extent of vehicles utilizing the streets within the Meadowood subdivision to travel between Capitol Trail and Pike Creek Road. The TOA compared the existing traffic entering and exiting the Meadowood subdivision from its three access points (the Capitol Trail intersection with Meadowood Drive, and the Pike Creek Road intersections with Larkspur Road and Forsythia Drive) to the expected traffic that would enter and exit the subdivision for the existing residential lots calculated using the 11th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. Based on this comparison, the TOA concluded that the existing traffic is comparable with the expected traffic and that there is not a significant amount of vehicles traveling along Capitol Trail utilizing the Meadowood subdivision streets as an alternative route to Pike Creek Road.



This review letter reviewed the Meadowood subdivision calculations provided in the TOA and found a similar conclusion. A review of the existing count data at each of the three access points also did not identify any significant traffic volumes that may be using the Meadowood subdivision streets as an alternative route to Pike Creek Road. In addition, DelDOT performed a traffic forecast for the proposed site using its regional forecasting model and projected that three vehicles accessing the site during each of the AM and PM peak hours would maneuver through the Meadowood subdivision from between Capitol Trail and Pike Creek Road. Furthermore, based on the traffic analysis conducted as part of this TOA, the Capitol Trail intersections with Meadowood Drive and Pike Creek Road as well as the Pike Creek Road intersections with Larkspur Road and Forsythia Drive do have adequate turn lanes to support the proposed development.

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

No intersections were found to exhibit level of service (LOS) deficiencies based on the existing configurations. As such, no physical roadway and/or traffic control improvements are recommended to be implemented from a LOS standpoint.

Should New Castle County approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan. 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 Capitol Trail within the limits of their frontage to meet DelDOT's standards for their Functional Classification as found in Section 1.1 of the *Development Coordination Manual* and elsewhere therein. 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 is defined in Section 1 of the *Development Coordination Manual*, which states "This length includes the length of roadway perpendicular to lines created by the projection of the outside parcel corners to the roadway." The developer should coordinate with DelDOT's Development Coordination Section during the site plan review to determine the improvements.
2. The developer should construct an unsignalized rights-in/rights-out access for the proposed 2701 Capitol Trail development along Capitol Trail, approximately 500 feet northeast of the intersection with Meadowood Drive. The intersection should be consistent with the lane configurations shown in the table below.



Approach	Current Configuration	Proposed Configuration
Eastbound Capitol Trail	Two through lanes	No Change
Westbound Capitol Trail	Two through lanes	Two through lanes and one channelized right turn lane
Southbound Site Entrance	One shared left turn/right turn lane*	One channelized right turn lane

*Existing Site Entrance will be shifted approximately 100 feet east from its existing location

Based on DelDOT’s *Development Coordination Manual*, the recommended minimum storage length (excluding taper) of the westbound right turn lane is 245 feet. However, due to the close proximity of the Orthodontist entrance to the proposed entrance, a storage length of only 100 feet (excluding taper) appears feasible for the westbound right turn lane and is recommended. The projected queues from the HCS analysis can be accommodated within the recommended storage length.

3. The developer should close the existing median opening along Capitol Trail at the westernmost site frontage limits. The developer should submit a plan to DelDOT Development Coordination Section depicting the design of the median closure.
4. The developer should enter into a traffic signal agreement with DelDOT for the intersection of Capitol Trail and Meadowood Drive or the developer may contribute to the Traffic Signal Revolving Fund (TSRF) in lieu of a traffic signal agreement. The amount of the TSRF contribution is \$7,768.00. The developer should coordinate with the DelDOT Subdivision Section to execute the traffic signal agreement or the TSRF agreement and pay the TSRF amount.
5. The developer should enter into a traffic signal agreement with DelDOT for the intersection of Capitol Trail and Pike Creek Road (New Castle Road 316) or the developer may contribute to the Traffic Signal Revolving Fund (TSRF) in lieu of a traffic signal agreement. The amount of the TSRF contribution is \$8,260.00. The developer should coordinate with the DelDOT Subdivision Section to execute the traffic signal agreement or the TSRF agreement and pay the TSRF amount.
6. The following bicycle, pedestrian, and transit improvements should be included:
 - a. A minimum of fifteen-foot wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT along the Capitol Trail site frontage. Within the easement, the developer should construct a five-foot wide sidewalk. The sidewalk should be designed to meet current AASHTO and ADA standards. A minimum five-foot setback should be maintained from the edge of the pavement to the sidewalk. If feasible, the sidewalk should be placed behind utility



poles and street trees should be provided within the buffer area. The developer should coordinate with DelDOT's Development Coordination Section during the plan review process to identify the exact location of the sidewalk.

- b. At least one internal connection of a sidewalk or SUP in the vicinity of the site entrance from the sidewalk along Capitol Trail should be provided.
- c. The internal pedestrian connection to the neighboring shopping center to the west should be maintained.
- d. Internal bicycle racks should be provided.
- e. ADA compliant curb ramps and marked crosswalks should be provided along the site entrance.
- f. Minimum five-foot wide bicycle lane should be incorporated in the right turn lane and shoulder along the Capitol Trail approach to the site entrance.
- g. Utility covers should be moved outside of any designated bicycle lanes and any proposed sidewalks/SUP or should be flush with the pavement.
- h. The existing bus stop west of the Capitol Trail and Pike Creek Road intersection (ID 1145) should be constructed as a type 2 17'x8' shelter pad.

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 Plan Review process.

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

Additional details on our review of the TOA are attached. Please contact me at (302) 266-9600 if you have any questions concerning this review.

Sincerely,
Johnson, Mirmiran, and Thompson, Inc.

A handwritten signature in black ink, appearing to read 'Joanne M. Arellano', is written over a light blue horizontal line.

Joanne M. Arellano, P.E., PTOE

cc: Mir Wahed, P.E., PTOE
Nate Rahaim, P.E., PTOE

Enclosure

2701 Capitol Trail TOA

May 15, 2023
Page 4

General Information

Report date: January 31, 2023

Prepared by: Traffic Planning and Design, Inc.

Prepared for: BKS Associates, L.L.C.

Tax Parcel: 08-049.30-379

Generally consistent with DelDOT's *Development Coordination Manual (DCM)*: Yes

Project Description and Background

Description: The proposed residential and commercial development consists of 179 mid-rise multi-family housing units and 21,500 square feet of retail space and would replace an existing 68,225 square foot office building.

Location: The development would be located on the northwest side of Capitol Trail (New Castle Road 11), approximately 380 feet northeast of the intersection with Meadowood Drive, in New Castle County, Delaware.

Amount of Land to be developed: An approximately 12.36-acre parcel.

Land Use approval(s) needed: Entrance Plan.

Proposed completion date: 2026.

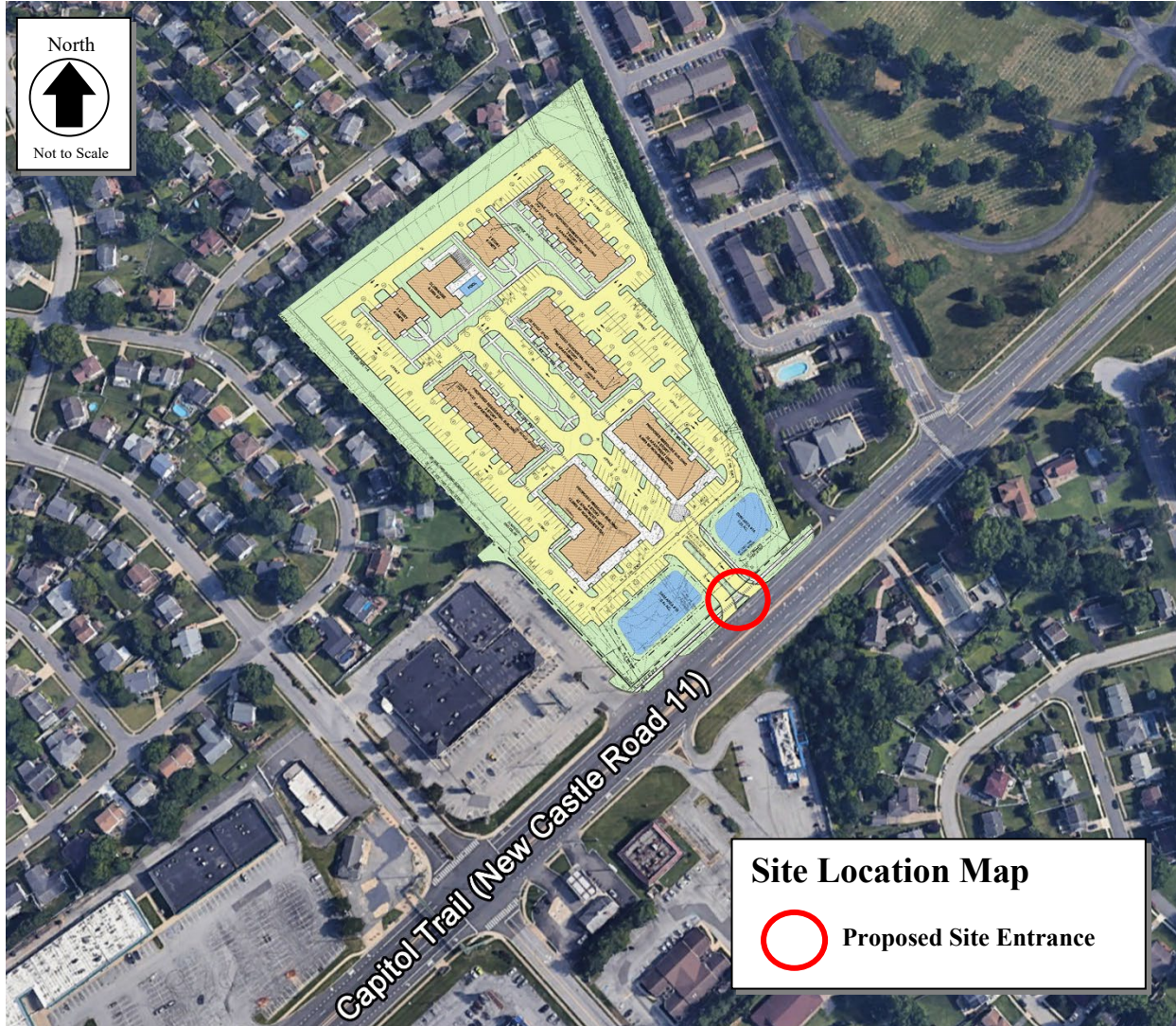
Proposed access location: One rights-in / rights-out access point on Capitol Trail.

Daily Traffic Volumes:

- 2022 Average Annual Daily Traffic on Capitol Trail: 27,140 vehicles per day

*AADT is sourced from ATR data provided by the TOA report. Data taken from four full days starting on January 12, 2022.

Site Map



**Graphic is an approximation based on the Figure 2 Site Plan from the January 31, 2023 2701 Capitol Trail Transportation Operational Analysis prepared by Traffic Planning and Design, Inc.*

Relevant and On-going Projects

DelDOT does not have any relevant and ongoing improvement projects within the study area.

Livable Delaware

(Source: Delaware Strategies for State Policies and Spending, 2020)

Location with respect to the Strategies for State Policies and Spending Map of Delaware:

The proposed development is located within Investment Level 1.

Investment Level 1

These areas are often municipalities, towns, or urban/urbanizing places in counties where density is generally higher than in surrounding areas. In Investment Level 1 Areas, state investments and policies should support and encourage a wide range of uses and densities, promote a variety of transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity. Overall, it is the state's intent to use its spending and management tools to maintain and enhance community character, and to promote well-designed and efficient new growth in Investment Level 1 Areas.

In Level 1 Areas the state's first priority will be for preserving existing facilities and making safety improvements. Level 1 areas will also be the highest priority for context sensitive transportation system capacity enhancements, transit-system enhancements, ADA accessibility, and for closing gaps in the pedestrian system, including the Safe Routes to School projects. Investment Level 1 Areas are ideal locations for Transportation Improvement Districts as well as Complete Community Enterprise Districts. Further, Level 1 areas are the priority for planning projects and studies, bicycle facilities, signal-system enhancements, and the promotion of interconnectivity of neighborhoods and public facilities.

Proposed Development's Compatibility with Livable Delaware:

The proposed site is located within Investment Level 1. Investment Level 1 areas are a priority for job creation and support growth and economic development activities. The proposed development will create jobs and support the growth of the area. Therefore, the proposed development is consistent with the 2020 update of the Livable Delaware "Strategies for State Policies and Spending."

Comprehensive Plan

(Source: New Castle County Comprehensive Plan, 2022)

New Castle County Comprehensive Plan:

Per the *New Castle County Comprehensive Plan Existing Land Uses Map*, the proposed development appears to be currently zoned as Commercial Regional. Per the *New Castle County Comprehensive Plan Future Land Use Map*, the proposed development is in an area designated as Type 1 – Commercial Corridor Development.

Proposed Development's Compatibility with the New Castle County Comprehensive Plan:

The *New Castle County Comprehensive Plan* states that Type 1 – Commercial Corridor Development areas are permitted for a tight integration of jobs and services with adjacent residential neighborhoods. Therefore, the proposed development is generally consistent with the *New Castle County Comprehensive Plan*.

Trip Generation

The trip generation for the proposed development was determined by using the comparable land use and rates/equations contained in the 10th Edition of the ITE *Trip Generation Manual*, published

by the Institute of Transportation Engineers (ITE) for ITE Land Use Code 221 (Mid-Rise Multifamily Housing) and ITE Land Use Code 820 (Shopping Center). Trips for the existing office building were gathered from the manual traffic counts performed. Trip generation was reviewed by DeDOT as part of the Preliminary TOA (PTOA) submission.

Table 1
2701 Capitol Trail Trip Generation

Land Use	ADT	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
179 Units - Mid-Rise Multifamily Housing (ITE – 221)	974	16	45	61	47	30	77
21,500 SF – Retail (ITE – 820)	812	12	8	20	39	43	82
Existing Office Building (Manual Counts)	-65	-6	-1	-7	-1	-5	-6
Internal Capture		0	0	0	-15	-15	-30
Total Net External Trips	1721	22	52	74	70	53	123
Pass-by Trips - Retail		0	0	0	-11	-11	-22
Total New Trips	1721	22	52	74	59	42	101

Overview of TOA

Intersections examined:

1. Site Entrance / Capitol Trail (New Castle Road 11) – Rights-in / rights-out
2. Capitol Trail / Meadowood Drive
3. Capitol Trail / Pike Creek Road (New Castle Road 316)
4. Pike Creek Road / Larkspur Road
5. Pike Creek Road / Forsythia Drive

Conditions examined:

1. Case 1 – 2022 existing

2. Case 2 – 2026 without development
3. Case 3 – 2026 with development

Committed Developments considered:

1. Astro Plaza
 - a. 40,350 square feet shopping center
 - b. 3,400 square feet fast-food restaurant with drive-through window
 - c. 5,620 square feet convenience store
2. DuPont Kalrez (102,910 square feet warehouse addition)
3. YMCA Kirkwood Highway (unbuilt additions totaling 26,887 square feet (existing 54,912 SF health/fitness club))
4. Delaware Park (unbuilt 46,793 square feet addition)
5. Harmony Industrial Site; Lot 13-B-1 (unbuilt additions totaling 41,000 square feet (existing 52,975 square feet of warehousing))
6. Harmony Industrial Site; Parcel 30 (unbuilt 8,000 square feet office addition to an existing 25,000 square feet warehouse/office building)
7. 150 Red Mill Road (unbuilt 90,728 square feet medical office building)
8. Milltown Square (unbuilt 42,000 square feet medical office building)

*Note: Committed development information provided in the Final TOA supersedes the information provided in the October 7, 2022, DelDOT Scoping Meeting Memorandum.

Peak hours evaluated: Weekday morning and weekday evening.

Intersection Descriptions

1. Site Entrance / Capitol Trail (New Castle Road 11)

Type of Control: Existing two-way stop-controlled intersection (T-intersection).

Eastbound Approach: (Capitol Trail) Existing two through lanes.

Westbound Approach: (Capitol Trail) Existing two through lanes and one right turn lane.

Southbound Approach: (Site Entrance) Existing one right turn lane, stop-controlled.

2. Capitol Trail / Meadowood Drive

Type of Control: Existing signalized intersection (four-legged).

Eastbound Approach: (Capitol Trail) Existing one left turn lane, two through lanes, and one right turn lane.

Westbound Approach: (Capitol Trail) Existing one left turn lane, two through lanes, and one right turn lane.

Northbound Approach: (Meadowood Drive) Existing one left turn lane and one shared through/right turn lane.

Southbound Approach: (Meadowood Drive) Existing one shared left turn/through lane and one right turn lane.

3. Capitol Trail / Pike Creek Road (New Castle Road 316)

Type of Control: Existing signalized intersection (three-legged).

Eastbound Approach: (Capitol Trail) Existing one left turn lane and two through lanes.

Westbound Approach: (Capitol Trail) Existing one left turn lane, two through lanes, and one channelized right turn lane, yield controlled.

Southbound Approach: (Pike Creek Road) Existing two left turn lanes and one right turn lane.

4. Pike Creek Road / Larkspur Road

Type of Control: Existing two-way stop-controlled intersection (T-intersection).

Eastbound Approach: (Pike Creek Road) Existing one shared through/right turn lane.

Westbound Approach: (Pike Creek Road) Existing one shared left turn/through lane.

Northbound Approach: (Larkspur Road) Existing one shared left turn/right turn lane, stop-controlled.

5. Pike Creek Road / Forsythia Drive

Type of Control: Existing two-way stop-controlled intersection (T-intersection).

Eastbound Approach: (Pike Creek Road) Existing one shared through/right turn lane.

Westbound Approach: (Pike Creek Road) Existing one shared left turn/through lane.

Northbound Approach: (Forsythia Road) Existing one shared left turn/right turn lane, stop-controlled.

*A private driveway is located at the southbound leg of the intersection.

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Per DelDOT Gateway, DART Route 6 runs through the study area. DART Route 6 runs along Capitol Trail, passing through the study area at the intersections of Capitol Trail / Pike Creek Road, Capitol Trail / Site Entrance, and Capitol Trail / Meadowood Drive. Route 6 provides 47 round trips from 4:30 AM to 12:15 AM on weekdays, 28 round trips from 5:59 AM to 10:22 on Saturdays, and 13 round trips from 6:45 AM to 7:47 PM on Sundays. Bus stops exist within the study area on Capitol Trail.

Planned transit service: Per email correspondence on February 10, 2023, with Mr. Jared Kauffman, Fixed-Route Planner for DART, the existing stop west of the Capitol Trail and Pike Creek Road intersection (ID 1145) should be constructed as a type 2 17'x8' shelter pad. In addition, the internal pedestrian connection to the neighboring shopping center should be maintained.

Existing bicycle and pedestrian facilities: According to DelDOT's New Castle County Bicycle Map, Capitol Trail is considered a regional bicycle route with a bikeway.

Planned bicycle and pedestrian facilities: Email correspondence was sent on February 7, 2023 to Mr. Anthony Aglio, DelDOT's Bicycle and Pedestrian Coordinator and on March 3, 2023 to Mr. John Fiori, DelDOT's Bicycle Coordinator, and Ms. Linda Osiecki, DelDOT's Pedestrian

Coordinator. Any recommendations from DelDOT regarding bicycle and pedestrian facilities will be discussed at the pre-submittal meeting.

Bicycle Level of Traffic Stress in Delaware: Researchers with the Mineta Transportation Institute developed a framework to measure low-stress connectivity, which can be used to evaluate and guide bicycle network planning. Bicycle LTS analysis uses factors such as the speed of traffic, volume of traffic, and the number of lanes to rate each roadway segment on a scale of 1 to 4, where 1 is a low-stress place to ride and 4 is a high-stress place to ride. It analyzes the total connectivity of a network to evaluate how many destinations can be accessed using low-stress routes. Developed by planners at the Delaware Department of Transportation (DelDOT), the bicycle Level of Traffic Stress (LTS) model will be applied to bicycle system planning and evaluation throughout the state. The Bicycle LTS for the roadways under existing conditions along the site frontage are summarized below. The Bicycle LTS was determined utilizing the DelDOT Gateway:

- Capitol Trail LTS: 3-4

Crash Evaluation

Per the crash data included in the TOA from October 11, 2019, to October 1, 2022, provided by the Delaware Department of Transportation (DelDOT), a total of 32 crashes were reported within the study area along Capitol Trail. Of the 32 crashes reported, no fatalities occurred.

The Meadowood Drive and Capitol Trail intersection had 19 crashes reported including seven front to rear crashes, four front to front crashes, seven angle crashes, and one sideswipe, opposite direction crash. There were no fatalities at this intersection, and three crashes reported a personal injury.

The Pike Creek Road and Capitol Trail intersection had 11 crashes, with eight angle crashes, two front to rear crashes, and one front to front crash. There were no fatalities at this intersection, and four crashes reported a personal injury.

The remaining intersections each reported at most one incident within the three-year study period.

Previous Comments

All comments from the PTOA have been addressed in the Final TOA.

Sight Distance Evaluation

No sight distance constraints were noted at the proposed site entrance locations per a field visit conducted on February 16, 2023.

General HCS Analysis Comments

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

- 1) Both the TOA and JMT used HCM 6th edition methodologies using Synchro 11 software.
- 2) Per DelDOT's *Development Coordination Manual*, both JMT and the TOA utilized the existing PHF for the existing condition (Case 1).
- 3) Per DelDOT's *Development Coordination Manual*, JMT utilized the future intersection PHF of 0.80 for roadways with less than 500 vph, 0.88 for roadways between 500 and 1,000 vph, and 0.92 for roadways with more than 1,000 vph, or used the existing PHF if higher, whereas the TOA used different values.
- 4) JMT utilized the existing heavy vehicle percentage for each movement greater than 100 vph in the Case 1 existing scenario.
- 5) Per DelDOT's *Development Coordination Manual*, JMT used a heavy vehicle percentage of 3% for each movement greater than 100 vph in the Case 2 and Case 3 future scenario analysis, unless the existing heavy vehicle percentage was greater than 3% and there was no significant increase of vehicles along that movement, in which case the existing heavy vehicle percentage was used for the analysis of future scenarios, whereas the TOA used different values.
- 6) Per DelDOT's *Development Coordination Manual* and coordination with DelDOT Planning, JMT used a heavy vehicle percentage of 5% for each movement less than 100 vph along roadways in the analyses whereas the TIS utilized the existing heavy vehicle percentage.
- 7) JMT utilized an approach grade of 0% for all applicable minor approaches, whereas the TOA utilized various grade percentages.

Table 2
Peak Hour Levels Of Service (LOS)
Based on Transportation Operational Analysis for 2701 Capitol Trail
Report Dated: January 31, 2023
Prepared by: Traffic Planning and Design, Inc.

Unsignalized Intersection Two-Way Stop Control ¹ (T-Intersection)	LOS per TOA		LOS per JMT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Site Entrance/ Capitol Trail (DE Route 2)				
2022 Existing (Case 1)				
Southbound Site Driveway	B (12.2)	F (52.5)	B (12.5)	F (100.2)
2026 without Development (Case 2)				
Southbound Site Driveway	B (13.0)	F (105.5)	B (13.4)	F (161.6)
2026 with Development (Case 3) ²				
Southbound Site Entrance Approach	B (14.0)	C (19.0)	B (14.5)	C (20.0)

¹ For signalized and unsignalized analysis, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

² For the Case 3 scenario, the site entrance was configured as a right-in/right-out access point consistent with the site plan.

Table 3
Peak Hour Levels Of Service (LOS)
Based on Transportation Operational Analysis for 2701 Capitol Trail
Report Dated: January 31, 2023
Prepared by: Traffic Planning and Design, Inc.

Signalized Intersection ¹	LOS per TOA		LOS per JMT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Meadowood Drive / Capitol Trail (DE Route 2)³				
2022 Existing (Case 1)	B (19.1)	C (22.3)	B (15.5)	B (15.8)
2026 without Development (Case 2)	C (22.6)	C (26.7)	B (17.9)	B (18.5)
2026 with Development (Case 3)	C (22.8)	C (27.1)	B (17.9)	C (18.8)

³ The TOA modeled the northbound Meadowood Drive approach as the lead phase and the southbound Meadowood Drive approach as the lag phase, whereas JMT modeled the southbound approach as the lead phase consistent with the DelDOT timing plan.

Table 4
Peak Hour Levels Of Service (LOS)
Based on Transportation Operational Analysis for 2701 Capitol Trail
Report Dated: January 31, 2023
Prepared by: Davis, Bowen & Friedel, Inc

Signalized Intersection¹	LOS per TOA		LOS per JMT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Pike Creek Road / Capitol Trail (DE Route 2)⁴				
2022 Existing (Case 1)	B (16.8)	B (11.6)	B (15.4)	B (11.8)
2026 without Development (Case 2)	B (17.2)	B (12.6)	B (15.7)	B (13.0)
2026 with Development (Case 3)	B (17.2)	B (12.8)	B (15.6)	B (13.1)

⁴ The TOA modeled the eastbound Capitol Trail left turn/U-turn and westbound Capitol Trail U-turn signal phases as protected only phasing during the AM and PM peak hours whereas JMT modeled these movements as protected-permissive phasing in the AM peak hour and protected only phasing during the PM peak hour, consistent with the restrictions posted in the field.

Table 5
Peak Hour Levels Of Service (LOS)
Based on Transportation Operational Analysis for 2701 Capitol Trail
Report Dated: January 31, 2023
Prepared by: Traffic Planning and Design, Inc.

Unsignalized Intersection Two-Way Stop Control ¹ (T-Intersection)	LOS per TOA		LOS per JMT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Pike Creek Road / Larkspur Road				
2022 Existing (Case 1)				
Westbound Pike Creek Road Left Turn	A (8.3)	A (7.6)	A (8.4)	A (7.7)
Northbound Larkspur Road Approach	B (12.2)	B (10.3)	B (12.3)	B (10.4)
2026 without Development (Case 2)				
Westbound Pike Creek Road Left Turn	A (8.4)	A (7.7)	A (8.2)	A (7.7)
Northbound Larkspur Road Approach	B (12.5)	B (10.5)	B (11.4)	B (10.6)
2026 with Development (Case 3)				
Westbound Pike Creek Road Left Turn	A (8.4)	A (7.7)	A (8.2)	A (7.7)
Northbound Larkspur Road Approach	B (12.5)	B (10.5)	B (11.4)	B (10.6)

Table 6
Peak Hour Levels Of Service (LOS)
Based on Transportation Operational Analysis for 2701 Capitol Trail
Report Dated: January 31, 2023
Prepared by: Traffic Planning and Design, Inc.

Unsignalized Intersection Two-Way Stop Control ¹ (T-Intersection)	LOS per TOA		LOS per JMT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Pike Creek Road / Forsythia Drive				
2022 Existing (Case 1)				
Westbound Pike Creek Road Left Turn	A (8.5)	A (7.8)	A (8.6)	A (7.9)
Northbound Forsythia Drive Road Approach	C (16.0)	B (12.8)	C (17.3)	B (13.5)
2026 without Development (Case 2)				
Westbound Pike Creek Road Left Turn	A (8.6)	A (7.9)	A (8.3)	A (7.9)
Northbound Forsythia Drive Road Approach	C (16.7)	B (13.2)	B (13.9)	B (14.0)
2026 with Development (Case 3)				
Westbound Pike Creek Road Left Turn	A (8.6)	A (7.9)	A (8.3)	A (7.9)
Northbound Forsythia Drive Road Approach	C (17.0)	B (13.3)	B (14.1)	B (14.1)