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

SHANTÉ A. HASTINGS
SECRETARY

February 6, 2025
Revised: February 21, 2025

Mr. Ben Kulp
Verdantas
5400 Limestone Road,
Wilmington, DE 19808

Dear Mr. Kulp,

The enclosed Traffic Impact Study (TIS) review letter for the **2256 DuPont Parkway – Hyetts Corner** (Tax Parcels: 1300800027, 1301300083) 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 performed the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. The letter has been updated due to revising the ADT and PM peak hour trip generation in Table 1. 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 Review Engineer

DelDOT

AF:km
Enclosures
cc with enclosures: James Wittig, Hyett's Corner Associates, LLC
James Taylor, Verdantas
Brian Clarke, Verdantas
Shawn Tucker, Barnes and Thornburg LLP
David L. Edgell, Office of State Planning Coordination
Antoni Sekowski, New Castle County Department of Land Use
Bradford Shockley, New Castle County Department of Land Use
Owen C. Robatino, New Castle County Department of Land Use
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DelDOT Distribution

DelDOT Distribution

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Randhir Sharma, New Castle Review Coordinator, Development Coordination, Planning
Michael White New Castle Review Engineer, Development Coordination, Planning
Sireen Muhtaseb, TIS Engineer, Development Coordination, Planning
Ben Fisher, TIS Review Engineer, Development Coordination, Planning
Tijah Jones, TIS Review Engineer, Development Coordination, Planning

Revised February 21, 2025
February 6, 2025

Ms. Sireen Muhtaseb
TIS Group Manager
Delaware Department of Transportation
Development Coordination, Division of Planning
800 Bay Road
Dover, DE 19901

RE: Agreement No: 2098F
TIS Support Services – T202569002
Task Name: 4: 2256 Dupont Parkway – Hyett's Corner TIS
JMT No.: 23-02560-004

Dear Ms. Muhtaseb:

Johnson, Mirmiran, and Thompson (JMT) has completed the Traffic Impact Study (TIS) for the 2256 Dupont Parkway development. This TIS was assigned as Task Number 4. The report is prepared in a manner generally consistent with DelDOT's *Development Coordination Manual* and other Department standards.

The TIS evaluates the impacts of a proposed mixed-use development consisting of 5,585 square feet convenience store with 16 vehicle fueling positions, 9,372 square feet strip retail plaza, and 4,979 square feet drive-in bank space on an assemble of parcels totaling approximately 9.7496 acres (Tax Parcels: 13-008.00-060 and 13-013.00-083) in New Castle County, Delaware. The proposed development is located on the southeast corner of the US Route 13 (DuPont Parkway/New Castle Road 22) intersection with Hyett's Corner Road (New Castle Road 413). The land is currently zoned as CN (Commercial Neighborhood), and the developer does not plan to rezone the land.

Three access points are proposed along US Route 13, two rights-in/rights-out along northbound US Route 13 and one full access that would be the easterly leg at the Hyett's Corner Road signalized intersection. Construction is anticipated to be complete in 2027, however, DelDOT has received correspondence from New Castle County that an expedited timeline to finish in 2025 is realistic.

Relevant and On-Going Projects and Studies

The *Boyds Corner Road, Cedar Lane Road to US Route 13* Project (DelDOT Project No. T200712002) will improve Boyds Corner Road to four lanes with a median, shoulders, and a multi-use path on each side of the roadway. The area of New Castle County just below the C & D Canal is expected to experience added congestion and safety issues. This project is part of a Master Plan for improvements in this growing area. The project is currently in the design phase with construction tentatively scheduled to begin in Fiscal Year 2028. As part of the design, multilane roundabouts are proposed at four intersections including the study intersection of Boyds Corner

Road and Shallcross Lake Road/Milford Drive. More information regarding the project can be found at the following website:
https://deldot.gov/projects/index.shtml?dc=details&projectNumber=T200712002.

The St. George's Bridge Closure and Rehabilitation Project included improvements to the structural condition and travel lanes of the bridge. The St. Georges Bridge along the C & D Canal was closed for construction in April of 2023 and reopened in mid-October of 2024. As it was anticipated that drivers would gradually return to their pre-closure travel patterns and traffic volumes would take a few weeks to return to their typical values prior to the bridge closure, JMT utilized historical traffic count data from previous TIS reports, the Southern New Castle County TID, and other DelDOT projects in the study area to develop traffic volumes used for the 2256 Dupont Parkway – Hyett's Corner TIS.

The proposed development is located east of the boundary of the Southern New Castle County (SNCC) and Hyett's Corner Transportation Improvement Districts (TID). The Hyetts Corner TID is bounded by US Route 301 in the north and west, Delaware Route 1 in the east, and the Bayberry North and Asbury Chase subdivisions in the south. The SNCC TID project area encompasses approximately 18 square miles and is bordered to the north by the C&D Canal, to the east by US Route 13 and Delaware Route 1, to the west by US Route 301/Delaware Route 71, and to the south by Marl Pit Road. The SNCC TID analyzed and recommended improvements at 17 intersections with significant development expected over the next 20 years within the project area. More details of the TIDs are available on the DelDOT website at the following link: https://deldot.gov/Programs/transportation-improvement-districts/index.shtml.

Summary of Analysis Results

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

The New Castle County Level of Service (LOS) Standards as stated in Section 40.11.210 of the Unified Development Code (UDC) apply to all signalized, all-way-stop, and roundabout intersections. Based on an evaluation of the signalized intersections, one of them exhibits LOS deficiencies and will require the implementation of physical roadway and/or traffic control improvements. Additionally, separate from the UDC but based on the LOS evaluation criteria as stated in DelDOT's Development Coordination Manual, one of the unsignalized study intersections exhibit LOS deficiencies. The following table summarizes the study intersections identified to have LOS deficiencies:

Intersection	LOS Deficiencies Occur		Case
	AM	PM	
4 - US Route 13 (DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15)	-	X	Case 2 – 2025 without development
	-	X	Case 3 – 2025 with development
5 - Boyds Corner Road / Shallcross Lake Road (New Castle Road 428) / Milford Drive	X	X	Case 1 – 2024 Existing
	X	X	Case 2 – 2025 without development
	X	X	Case 3 – 2025 with development

4 - US Route 13 (DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15) (See Table 5, Page 26)

The US Route 13 signalized intersection with Pole Bridge Road and Boyds Corner Road is not a Southern New Castle County (SNCC) TID intersection under the current TID agreement but is being contemplated to be added as per the 2022 proposed TID update, and exhibits LOS deficiencies during the PM peak hour future conditions, with or without the proposed development. Under Case 3 conditions, the signalized intersection would operate at LOS F with 143 seconds of delay per vehicle in the PM peak hour and a calculated 95th percentile queue length along the northbound US Route 13 left turn of approximately 763 feet.

The deficiencies at the US Route 13 intersection with Pole Bridge Road and Boyds Corner Road could be mitigated by implementing the improvements recommended along US Route 13 as part of the SNCC TID. Consistent with the TID recommendations, the northbound US Route 13 approach would provide three left turn lanes, three through lanes, and one right turn lane and the southbound US Route 13 approach would provide two left turn lanes, four through lanes, and one right turn lane. The eastbound and westbound approaches would maintain the existing lane configurations. Specifically, the Boyds Corner Road approach would provide two left turn lanes, two through lanes, and one right turn lane, and the westbound Pole Bridge Road approach would provide one left turn lane, one shared left turn/through lane, one through lane, and one right turn lane.

With these lane configurations along US Route 13 and the assumption of no pedestrian activation of the southerly signalized pedestrian crossing, the intersection would operate at LOS E under Case 3 conditions with 58 seconds of delay per vehicle during the PM peak hour. Additionally, the calculated 95th percentile queue length along the northbound US Route 13 left turn would reduce to approximately 318 feet. Note, the existing traffic counts did not record any pedestrians crossing any legs of the intersection during the peak periods.

With assuming pedestrian activation of the southerly signalized pedestrian crossing during every signal cycle, the intersection would operate at LOS E with 78 seconds of delay per vehicle during the PM peak hour. Although the intersection would operate at LOS E with pedestrian activation, the occurrence of pedestrian activation during every signal cycle is anticipated to be minimal.

Moreover, another potential mitigation could be to modify the signalized intersection to have concurrent phasing along the Boyds Corner Road and Pole Bridge Road approaches. Under this mitigation, the US Route 13 and Boyds Corner Road approaches would be consistent with the recommendations from the SNCC TID. Specifically, the northbound US Route 13 approach would provide three left turn lanes, three through lanes, and one right turn lane, the southbound US Route 13 approach would provide two left turn lanes, four through lanes, and one right turn lane, and the eastbound Boyds Corner Road approach would provide two left turn lanes, two through lanes, and one right turn lane. The westbound Pole Bridge Road approach would be widened to provide two left turn lanes, two through lanes, and one right turn lane. With these improvements and no pedestrian activation, the intersection would operate at LOS D with 41 seconds of delay per vehicle. However, the determination of if concurrent phasing and the lane configurations should be implemented at the intersection should be evaluated as part of the SNCC TID to take into account all the future development proposed within the TID.

Although the study intersection is not under the current TID agreement, it is being contemplated to be added based on the recommendations contained within the 2022 TID update. Therefore, it is not recommended that the developer implement any improvements at this intersection.

5 - Boyds Corner Road / Shallcross Lake Road (New Castle Road 428) / Milford Drive (See Table 6, Page 30), Development Improvement #6

The two-way stop-controlled intersection of Boyds Corner Road with Shallcross Lake Road and Milford Drive exhibits LOS deficiencies along the northbound approach during the AM peak hour under existing conditions and along the northbound and southbound approaches during the PM peak hour under existing and future conditions with and without the proposed developments. LOS deficiencies would also occur along the northbound and southbound approaches during the AM peak hour under future conditions with and without the proposed development. Specifically, under Case 3 conditions during both the AM and PM peak hours, the northbound Shallcross Lake Road approach and the southbound Milford Drive approach would operate at LOS F with delays exceeding 1,000 seconds and calculated 95th percentile queues lengths of over approximately 180 feet.

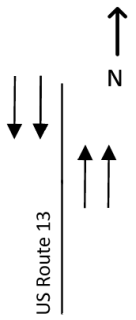
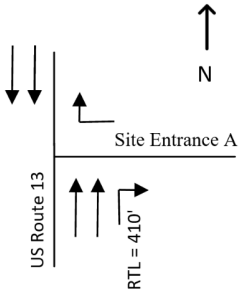
As part of the *Boyds Corner Road, Cedar Lane Road to US Route 13* Project (DelDOT Project No. T200712002), a multilane roundabout is proposed at the study intersection of Boyds Corner Road and Shallcross Lake Road/Milford Drive. The deficiencies would be mitigated with the installation of the multi-lane roundabout. Specifically, the LOS would improve to operate at LOS C (20 seconds of delay per vehicle) or better and the 95th percentile queue lengths along the northbound and southbound Shallcross Lake Road and Milford Drive approaches would reduce to approximately 50 feet. The configuration of the roundabout would include one shared left turn/through/right turn lane along the northbound Shallcross Lake Road and southbound Milford Drive approaches and a shared left turn/through lane and a shared through/right turn lane along the eastbound and westbound Boyds Corner Road approaches. As the improvements would mitigate the LOS deficiencies, it is recommended that the developer make an equitable contribution to the *Boyds Corner Road, Cedar Lane Road to US Route 13* Project.

Development Improvements

Should New Castle County approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan, unless a Design Deviation is requested and approved by the Department. 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. The following items should be implemented at the same time as site construction once all agency approvals and permits are secured and completed in accordance with DelDOT's Standards and Specifications.

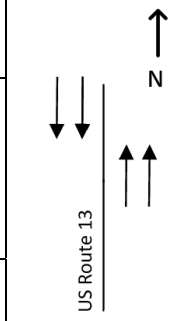
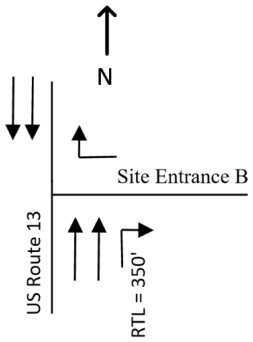
1. The developer shall improve the State-maintained roads on which they front (US Route 13 (DuPont Parkway)), within the limits of their frontage. The improvements shall include both directions of travel, regardless of whether the developer's lands are on one or both sides of the road. "Frontage" means 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 an unsignalized Site Entrance A rights-in/rights-out along northbound US Route 13 (DuPont Parkway) approximately 1,200 feet south of the Hyetts Corner Road intersection. The entrance should be designed with a raised concrete island along US Route 13 and be consistent with the lane configurations indicated in the table below:

Approach	Current Configuration		Approach	Proposed Configuration	
Westbound Site Entrance A	Approach does not exist		Westbound Site Entrance A	One right turn lane	
Northbound US Route 13	Two through lanes		Northbound US Route 13	Two through lanes and one right turn lane	
Southbound US Route 13	Two through lanes		Southbound US Route 13	No change	

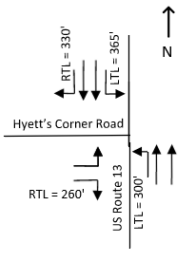
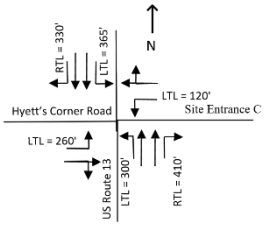
Based on DelDOT's *Development Coordination Manual*, the recommended minimum storage length (excluding taper) of the northbound right turn lane is 410 feet. The projected queues from the traffic analysis can be accommodated within the recommended storage lengths. Note, the design should take into consideration the existing lane drop along northbound US Route 13, north of the Boyds Corner Road intersection. The developer should coordinate with DelDOT's Development Coordination Section during the Entrance Plan review process to determine the exact design of the intersection.

3. The developer should construct an unsignalized Site Entrance B rights-in/rights-out along northbound US Route 13 (DuPont Parkway) approximately 700 feet south of the Hyetts Corner Road intersection. The entrance should be designed with a raised concrete island along US Route 13 and be consistent with the lane configurations indicated in the table below:

Approach	Current Configuration		Approach	Proposed Configuration	
Westbound Site Entrance B	Approach does not exist		Westbound Site Entrance B	One right turn lane	
Northbound US Route 13	Two through lanes		Northbound US Route 13	Two through lanes and one right turn lane	
Southbound US Route 13	Two through lanes		Southbound US Route 13	No change	

Based on DelDOT's *Development Coordination Manual*, the recommended minimum storage length (excluding taper) of the northbound right turn lane is 350 feet. The projected queues from the traffic analysis can be accommodated within the recommended storage lengths. Note, the design should take into consideration the location of Site Entrance A. The developer should coordinate with DelDOT's Development Coordination Section during the Entrance Plan review process to determine the exact design of the intersection.

4. The developer should improve the signalized intersection of US Route 13 with Hyetts Corner Road to include Site Entrance C as the easterly leg. The eastbound and westbound approaches should operate with concurrent signal phasing and be consistent with the lane configurations indicated in the table below:

Approach	Current Configuration		Approach	Proposed Configuration	
Eastbound Hyetts Corner Road	One left turn lane and one right turn lane		Eastbound Hyetts Corner Road	One left turn lane and one shared through/right turn lane	
Westbound Site Entrance C	Approach does not exist		Westbound Site Entrance C	One left turn lane, one shared through/right turn lane	
Northbound US Route 13	One left turn lane and two through lanes		Northbound US Route 13	One left turn lane, two through lanes, and one right turn lane	
Southbound US Route 13	One left turn lane, two through lanes, and one right turn lane		Southbound US Route 13	No change	

Based on DelDOT's *Development Coordination Manual* and the results from the traffic analysis, the recommended minimum storage length (excluding taper) are shown in the following table:

Approach	Left Turn (Feet)	Right Turn (Feet)
Eastbound Hyetts Corner Road	260	N/A
Westbound Site Entrance C	120	N/A
Northbound US Route 13	300*	410
Southbound US Route 13	365*	330*

*Existing storage length that should be maintained

The developer should coordinate with DelDOT's Development Coordination Section during the Entrance Plan review process to determine the exact design of the intersection.

5. The developer should enter into a signal agreement for the signalized intersection of US Route 13 with Hyetts Corner Road and Site Entrance C.

6. The developer should provide DelDOT an equitable cost contribution towards the multilane roundabout proposed at the study intersection of Boyds Corner Road and Shallcross Lake

Road/Milford Drive as part of the *Boyds Corner Road, Cedar Lane Road to US Route 13* Project (DelDOT Project No. T200712002). The cost contribution is $16,170.00.

7. The following bicycle, pedestrian, and transit improvements should be included:

    a. A minimum fifteen-foot-wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT along the US Route 13 frontage. Along the frontage, the developer should construct a ten-foot-wide shared use path (SUP). The SUP 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 SUP/sidewalk. The developer should coordinate with DelDOT's Development Coordination Section during the plan review process to identify the exact location of the SUP.

    b. An internal sidewalk/SUP connection from the SUP along US Route 13 should be provided.

    c. ADA-compliant curb ramps and marked crosswalks should be provided along the site entrances.

    d. A signalized pedestrian crossing should be provided along the southerly leg of the US Route 13 intersection with Hyetts Corner Road.

    e. Minimum five-foot wide bicycle lanes should be incorporated along the US Route 13 site frontage.

    f. Internal bicycle racks should be provided at each building.

    g. Utility covers should be moved outside of any designated bicycle lanes and any proposed SUP/sidewalks or should be flush with the pavement.

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

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 https://www.deldot.gov/Publications/manuals/de_mutcd/index.shtml.

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

Sincerely,
Johnson, Mirmiran, and Thompson, Inc.

Joanne M. Arellano, P.E., PTOE

cc: Annamaria Furmato, EIT
Mir Wahed, P.E., PTOE
Hojjat Barati, EIT
Enclosure

Recommendations Map

General Information

Report date: November 2024
Prepared by: JMT
Prepared for: Hyetts Corner Associates, LLC
Tax parcel: Tax Parcels: 13-008.00-060, 13-013.00-083
Generally consistent with DelDOT's Development Coordination Manual (DCM): Yes

Project Description and Background

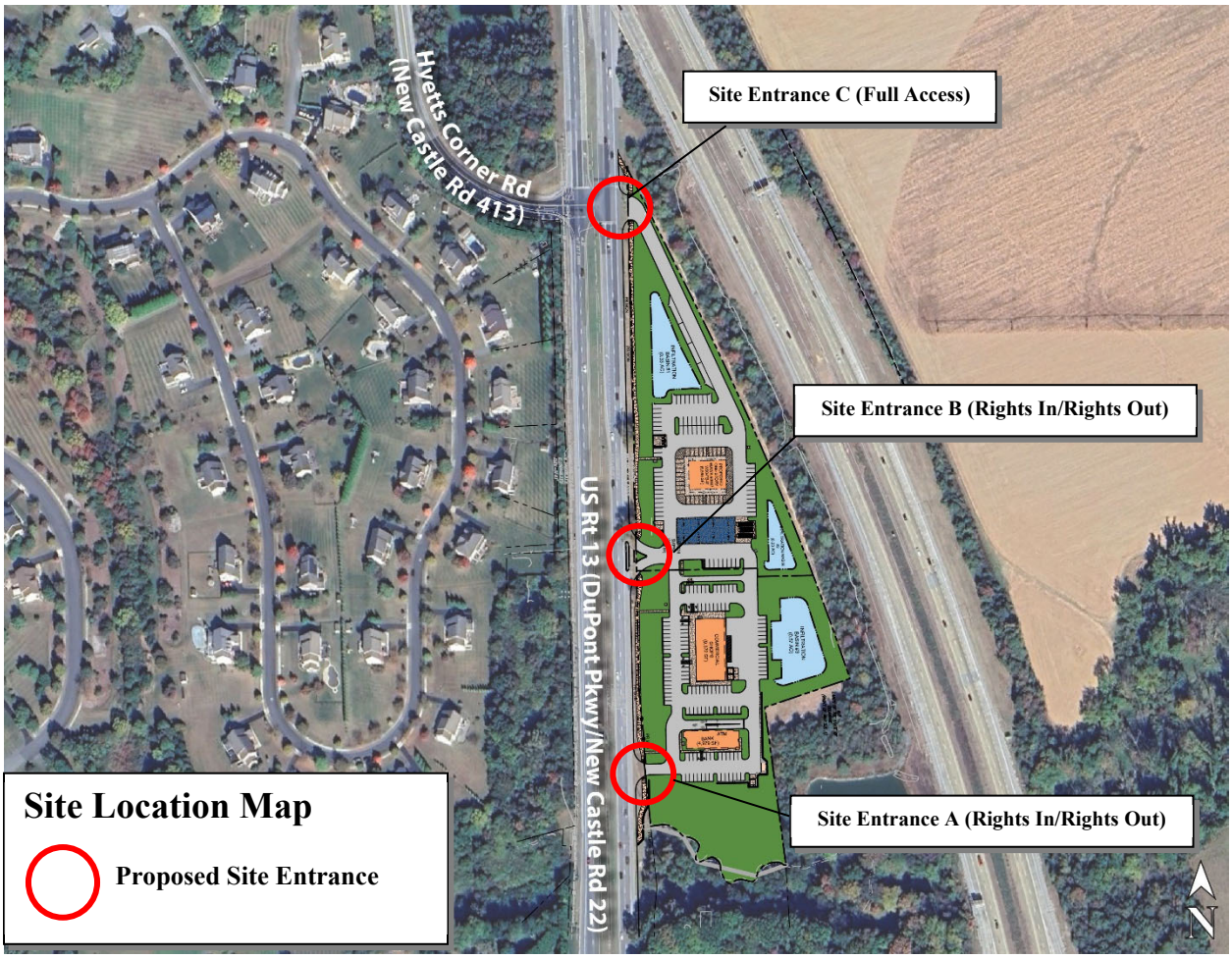
Description: The proposed development consists of a 5,585 square feet convenience store with 16 vehicle fueling positions, 9,372 square feet strip retail plaza, and 4,979 square feet drive-in bank.
Location: The land is located at the southeast corner of the US Route 13 (DuPont Parkway/New Castle Road 22) intersection with Hyetts Corner Road (New Castle Road 413), in New Castle County, Delaware.
Amount of land to be developed: An approximately 9.7496-acre assemblage of parcels.
Land use approval(s) needed: Entrance Plan.
Proposed completion date: 2025.
Proposed access locations: Three access points are proposed along US Route 13: two rights-in/rights-out along northbound US Route 13 and one full access that would be the easterly leg at the Hyetts Corner Road signalized intersection.

Daily traffic volumes:

- 2023 Average Annual Daily Traffic on US Route 13 (DuPont Parkway/New Castle Road 22): 30,971 vehicles per day.

*AADT is sourced from data provided by DelDOT Gateway.

Site Map



** Graphic is an approximation based on the Record Minor Land Development Plan prepared by Duffield Associates for 2256 Dupont Parkway, dated February 4, 2024, and last revised on July 3, 2024.*

Relevant and On-going Projects

The *Boyds Corner Road, Cedar Lane Road to US Route 13* Project (DelDOT Project No. T200712002) will improve Boyds Corner Road to four lanes with a median, shoulders, and a multi-use path on each side of the roadway. The area of New Castle County just below the C & D Canal is expected to experience added congestion and safety issues. This project is part of a Master Plan for improvements in this growing area. The project is currently in the design phase with construction tentatively scheduled to begin in Fiscal Year 2028. As part of the design, multilane roundabouts are proposed at four intersections including the study intersection of Boyds Corner Road and Shallcross Lake Road/Milford Drive. More information regarding the project can be found at the following website:
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The proposed development is located east of the boundary of the Southern New Castle County (SNCC) and Hyett's Corner Transportation Improvement Districts (TID). The Hyetts Corner TID is bounded by US Route 301 in the north and west, Delaware Route 1 in the east, and the Bayberry North and Asbury Chase subdivisions in the south. The SNCC TID project area encompasses approximately 18 square miles and is bordered to the north by the C&D Canal, to the east by US Route 13 and Delaware Route 1, to the west by US Route 301/Delaware Route 71, and to the south by Marl Pit Road. The SNCC TID analyzed and recommended improvements at 17 intersections with significant development expected over the next 20 years within the project area. More details of the TIDs are available on the DelDOT website at the following link: https://deldot.gov/Programs/transportation-improvement-districts/index.shtml.

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 2.

Investment Level 2

These areas can be composed of less developed areas within municipalities, rapidly growing areas in the counties that have or will have public water and wastewater services and utilities, areas that are generally adjacent to or near Investment Level 1 Areas, smaller towns and rural villages that should grow consistently with their historic character, and suburban areas with public water, wastewater, and utility services. They serve as transition areas between Level 1 and the state's more open, less populated areas. They generally contain a limited variety of housing types, predominantly detached single-family dwellings.

In Investment Level 2 Areas, like Investment Level 1 Areas, state investments and policies should support and encourage a wide range of uses and densities, promote other transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity. Investments should encourage departure from the typical single-family-dwelling developments and promote a broader mix of housing types and commercial sites encouraging compact, mixed-use development where applicable. Overall, the State's intent is to use its spending and management tools to promote well-designed development in these areas. Such development provides for a variety of housing types, user-friendly transportation systems, essential open spaces and recreational facilities, other public facilities, and services to promote a sense of community.

Level 2 Areas share similar priorities as with the Level 1 Areas where the aim remains to: make context sensitive transportation system capacity enhancements, preserve existing facilities, make safety enhancements, make transportation system capacity improvements, create transit system enhancements, ensure ADA accessibility, and close gaps in the pedestrian system, including the Safe Routes to School projects. Investment Level 2 Areas are ideal locations for Transportation Improvement Districts and Complete Community Enterprise Districts. Other priorities for Level 2 Areas include: Corridor Capacity Preservation, off-alignment multi-use paths, interconnectivity of neighborhoods and public facilities, and signal-system enhancements.

Proposed development's compatibility with Livable Delaware:
The proposed development is located within Investment Level 2. Level 2 areas are the most favorable locations for increasing pedestrian accessibility, provide user-friendly transportation systems, essential open spaces and recreational facilities, other public facilities, and services to promote a sense of community. Additionally, Level 2 areas is the priority for job creation and retention. The proposed development consists of a 5,585 square feet convenience store with 16 vehicle fueling positions, 9,372 square feet strip retail plaza, and 4,979 square feet drive-in bank which would create jobs. Therefore, the proposed development is consistent with the 2020 update of *Livable Delaware Strategies for State Policies and Spending.*

Comprehensive Plan

(Source: New Castle County Comprehensive Plan, 2050)

New Castle County Comprehensive Plan:
Per the *New Castle County Existing Land Use Map*, the proposed development is currently zoned as Suburban. Per the *New Castle County Future Land Use Map*, the proposed development is designated as Business Flex.

Proposed development's compatibility with New Castle County Comprehensive Plan:
The Comprehensive Plan states that Business Flex are areas of potential nonresidential development. The land is currently zoned as CN (Commercial Neighborhood), the developer does not plan to rezone the land, and nonresidential uses are proposed as part of the 2256 DuPont Parkway-Hyetts Corner development. 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 *Trip Generation, 11th Edition: An ITE Informational Report*, published by the Institute of Transportation Engineers (ITE) for ITE Land Use Code 945 (Convenience Store/Gas Station), ITE Land Use Code 822 (Strip Retail Plaza), and ITE Land Use Code 912 (Drive-in Bank).

Table 1
2256 Dupont Parkway – Hyetts Corner Trip Generation

Land Use	ADT	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Convenience Store/Gas Station (ITE Code 945)	7174	255	256	511	221	220	441
Pass-by Trips		-194	-195	-389	-166	-165	-331
Strip Retail Plaza (ITE Code 822)	625	13	9	22	37	37	74
Pass-by Trips		0	0	0	0	0	0
Drive-in Bank (ITE Code 912)	500	29	21	50	52	53	105
Pass-by Trips		-8	-6	-14	-18	-19	-37
Total	**8299**	**95**	**85**	**180**	**126**	**126**	**252**

Overview of TIS

Intersections examined:

1. US Route 13 (DuPont Parkway/New Castle Road 22) / Site Entrance A
2. US Route 13 (DuPont Parkway) / Site Entrance B
3. US Route 13 (DuPont Parkway) / Site Entrance C / Hyetts Corner Road (New Castle Road 413)
4. US Route 13 (DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15)
5. Boyds Corner Road / Shallcross Lake Road (New Castle Road 428) / Milford Drive
6. US Route 13 (DuPont Parkway) / Greylag Road (New Castle Road 425) / Bayview Road (New Castle Road 423)

Conditions examined:

1. Case 1 – 2024 existing
2. Case 2 – 2025 without development
3. Case 3 – 2025 with development

Committed developments considered:

1. Baymont Farms (288 senior adult housing detached units).
2. Hubers Crossing (119,000 square-foot shopping center).
3. Boyd's Corner Farm (94,000 square-foot shopping center, 12,500 square foot general office building, 4,800 square foot bank with drive through, 113 single-family detached houses (77 units built).
4. Baker Farm (108 single-family detached houses (50 units built) and 74 units of low-rise multi-family houses (65 units built).

5. Shoppes of St. George (26,124 square feet of shopping center, 13,021 square feet unbuilt).
6. Village of Bayberry South (410 single-family detached houses (338 units built), 779 age-restricted single-family detached houses (613 units built)).
7. Winchelsea (194 senior adult single-family detached housing units and 142 senior adult single-family attached housing units).
8. The Grove (Residential East) at Bayberry (149 single-family detached houses, 27 single-family attached houses, and a 300-member clubhouse).
9. Bayberry Town Center (145 single-family attached houses, 248,655 square feet of retail/restaurant, and 31,000 square feet of office).
10. The Overlook at Bayberry (Residential West) (137 single family detached houses and 38 single family attached houses).
11. Pennfield (137 senior adult detached houses).
12. Scott Run Commerce Center (5,600 SF convenience store with fueling station and 1,462,450 square feet of warehouse).
13. LogistiCenter at New Castle (2,371,850 square feet of warehouse).

The committed development information contained within the TIS report supersedes the August 19, 2024, Scoping Meeting Memorandum.

Based on November 6, 2024 correspondence from New Castle County, Port St. Georges and Hyetts Landing were removed as those developments have not been recorded by the County at the time of the completion of the TIS.

Additionally, per correspondence with DelDOT on November 11, 2024, Bayberry North was also removed since the development has only one unbuilt unit left which was agreed upon to be accounted for in the future growth rate. Silver Maple Farm, Ashby's Place, Windsor South at Hyetts Corner, and Windsor Commons at Hyett's Corner committed developments are also removed as these sites are fully built.

Peak hours evaluated: Weekday AM and weekday PM.

Intersection Descriptions

1. **US Route 13 (DuPont Parkway/New Castle Road 22) / Site Entrance A**
   Type of Control: Proposed two-way stop-controlled intersection (T-intersection).
   Eastbound Approach: Approach does not exist.
   Westbound Approach: (Site Entrance) Proposed one right turn lane, stop-controlled.
   Northbound Approach: (US Route 13) Existing two through lanes. Proposed two through lanes and one right turn lane.
   Southbound Approach: (US Route 13) Existing two through lanes.

2. **US Route 13(DuPont Parkway) / Site Entrance B**
   Type of Control: Proposed two-way stop-controlled intersection (T-intersection).
   Eastbound Approach: Approach does not exist.
   Westbound Approach: (Site Entrance) Proposed one right turn lane, stop-controlled.

Northbound Approach: (US Route 13) Existing two through lanes. Proposed two through lanes and one right turn lane.
Southbound Approach: (US Route 13) Existing two through lanes.

3. **US Route 13(DuPont Parkway) / Site Entrance C/ Hyetts Corner Road (New Castle Road 413)**
   Type of Control: Existing signalized intersection (T-intersection). Proposed 4-legged intersection.
   Eastbound Approach: (Hyetts Corner Road) Existing one left turn lane and one right turn lane. Proposed one shared left turn/through lane and one right turn lane**.**
   Westbound Approach: (Site Entrance C) Proposed one shared left turn/through lane and one right turn lane**.**
   Northbound Approach: (US Route 13) Existing one left turn lane and two through lanes. Proposed one left turn lane, two through lanes, and one right turn lane.
   Southbound Approach: (US Route 13) Existing one left turn lane, two through lanes, and one right turn lane.

4. **US Route 13(DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15)**
   Type of Control: Existing signalized intersection.
   Eastbound Approach: (Boyds Corner Road) Existing two left turn lanes, two through lanes, and one right turn lane.
   Westbound Approach: (Pole Bridge Road) Existing one left turn lane, one shared left turn/through lane, one through lane, and one right turn lane.
   Northbound Approach: (US Route 13) Existing two left turn lanes, two through lanes, and one right turn lane. Proposed three left turn lanes, three through lanes, and one right turn lane.*
   Southbound Approach: (US Route 13) Existing two left turn lanes, three through lanes, and one right turn lane. Proposed two left turn lanes, four through lanes, and one right turn lane.*

   **Proposed configurations are improvements from the Southern New Castle County TID.*

5. **Boyds Corner Road / Shallcross Lake Road (New Castle Road 428) / Milford Drive**
   Type of Control: Existing two-way stop-controlled intersection. Proposed multi-lane roundabout.
   Eastbound Approach: (Boyds Corner Road) Existing one left turn lane, one through lane, and one right turn lane. Proposed one shared left turn/through lane, and one shared through/right turn lane.*
   Westbound Approach: (Boyds Corner Road) Existing one left turn lane, one through lane, and one right turn lane. Proposed one shared left turn /through lane, and one shared through/right turn lane.*
   Northbound Approach: (Shallcross Lake Road) Existing one shared left turn/through lane and one right turn lane. Proposed one shared left turn/through/right turn lane.*
   Southbound Approach: (Milford Drive) Existing one shared left turn/through/right turn lane.

**Proposed configurations are from the Boyds Corner Road, Cedar Lane Road to US Route 13 Project (DelDOT Project No. T200712002)*

6. **US Route 13(DuPont Parkway) / Greylag Road (New Castle Road 425) / Bayview Road (New Castle Road 423)**
   Type of Control: Existing signalized intersection.
   Eastbound Approach: (Greylag Road) Existing one left turn lane, one shared through/right turn lane.
   Westbound Approach: (Bayview Road) Existing one left turn lane, one shared left turn/through lane, and one right turn lane.
   Northbound Approach: (US Route 13) Existing one left turn lane, two through lanes, and one right turn lane.
   Southbound Approach: (US Route 13) Existing two left turn lanes, three through lanes, and one right turn lane.

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Per DelDOT Gateway, there are no bus routes that run through the study area.

Planned transit service: Per email correspondence from Jared Kauffman, DART's Fixed-Route Planner, on November 12, 2024, DART has no recommendations.

Existing bicycle and pedestrian facilities: According to DelDOT's New Castle County Bicycle Map, several study roadways are considered bicycle routes. US Route 13, Boyds Corner Road and Pole Bridge Road are considered connector bicycle routes with bikeways. Pedestrian crosswalks exist at the Boyds Corner Road intersection with the Shallcross Lake Road and at the US Route 13 intersections with Boyds Corner Road and Greylag Road. A multi-use path exists in the eastbound direction of Boyds Corner Road from Shallcross Lake Road to the Boyds Farm Driveway. A multi-use path exists in the northbound and southbound directions of Shallcross Lake Road from Boyds Corner Farm to Greylag Road.

Planned bicycle and pedestrian facilities: Per email correspondence from John Fiori, DelDOT's Bicycle Coordinator, on October 29, 2024, DelDOT has the following recommendations:

- Referring to the State Strategies and Spending Map this site is within Level 2, where a 10' wide shared-use path (SUP) shall be required along the property frontage.
- The SUP angled termination at the southern entrance shall not be permitted to tie directly into the right turn lane.
- The crosswalk at the northern and southern entrances will need to be relocated closer to the roadway.
- Provide internal bicycle racks at each building (WAWA, Bank & Commercial Shop).
- An internal sidewalk/SUP connection from the SUP along US Route 13 is required.
- At this time Active Transportation & Community Connections (ATCC) has no bicycle/pedestrian improvement projects within the area of this project.

- The site shall dedicate right-of-way per the roadway classification and establish a 15' wide permanent easement along the property roadway frontage.
- All entrance, roadway and/or intersection improvements required shall incorporate bicycle and pedestrian facilities. Per the DCM, if the right turn lane is warranted, then a separate bike lane shall be incorporated along the right turn lane; if a left turn lane is required any roadway improvements shall include a shoulder matching the roadway functional classification or existing conditions (minimum 5-feet).
- There could be additional and/or revised comments once project is discussed at a pre-submittal meeting and/or plans are submitted for LONO/ENT review/approval.

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 DelDOT's Gateway.

- US Route 13 LTS: 3 and 4.

Crash Evaluation

Per the crash data included in the TIS from October 25, 2021, to November 25, 2024, provided by the Delaware Department of Transportation (DelDOT), a total of 112 crashes were reported within the study area. The number of fatal crashes is zero within the studied report period.

19 crashes were reported at the US Route 13 and Hyetts Corner Road intersection, including nine rear-end, one head-on, four angle, one sideswipe, and four not a collision between two vehicles.

51 crashes were reported at the US Route 13, Boyds Corner Road, and Pole Bridge Road intersection, including 29 rear-end, six angle, eight sideswipe, five not a collision between two vehicles, and three others.

Five crashes were reported at Boyds Corner Road, Shallcross Lake Road, and Milford Drive, including three angle and two not a collision between two vehicles.

37 crashes were reported at the US Route 13, Greylag Road, and Bayview Road intersection, including 16 rear-end, seven angle, three head-on, four sideswipe, and seven not a collision between two vehicles.

Previous Comments

No comments.

Sight Distance Evaluation

No sight distance constraints were noted at the proposed site entrances location per the field visit conducted on October 17, 2024.

General Synchro Analysis Comments

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

1) JMT used HCM 7th edition and Synchro software version 12 to complete the analysis.

2) Per DelDOT's *Development Coordination Manual*, JMT utilized the future intersection PHF of 0.80 for roadways with less than 500 vehicles per hour (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.

3) JMT utilized the existing heavy vehicle percentage for each movement greater than 100 vph in the Case 1 - Existing analysis.

4) 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.

5) JMT assumed a heavy vehicle percentage of 3% for site traffic.

6) Per DelDOT's *Development Coordination Manual*, JMT used a heavy vehicle percentage of 3% for each movement greater than 100 vph in 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.

7) JMT utilized a Saturation Flow Rate of 1,900 vehicles per hour per lane for the signalized analysis.

8) Analysis highlighted in gray are the recommended improvements.

Table 2
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Unsignalized Intersection Two-Way Stop Control (T-Intersection)[1]	**LOS per JMT**	
1 - US Route 13 (DuPont Parkway/New Castle Road 22) / Site Entrance A	Weekday AM	Weekday PM
Case 3 – 2025 with Development		
Westbound Site Entrance A Right Turn	D (26.4)	C (18.6)
Westbound Site Entrance A Right Turn 95th Percentile Queue Length	20.0’	13.0’

Table 3
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Unsignalized Intersection Two-Way Stop Control (T-Intersection)[1]	**LOS per JMT**	
2 - US Route 13 (DuPont Parkway) / Site Entrance B	Weekday AM	Weekday PM
Case 3 – 2025 with Development		
Westbound Site Entrance B Right Turn	D (27.1)	C (19.0)
Westbound Site Entrance B Right Turn 95th Percentile Queue Length	23.0’	15.0’

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

Table 4
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Signalized Intersection[1]	**LOS per JMT**	
3 - US Route 13 (DuPont Parkway) / Site Entrance C / Hyetts Corner Road (New Castle Road 413)	Weekday AM	Weekday PM
Case 1 – 2024 Existing *with DelDOT Timing*	B (15.5)	B (12.4)
Case 1 – 2024 Existing *with signal optimization*[2, 3]	B (15.5)	B (12.3)
Case 2 – 2025 without Development *with signal optimization*[2, 3]	B (17.4)	B (17.2)
Case 3 – 2025 with Development *with signal optimization*[2, 3, 4]	D (38.5)	D (46.7)
Case 3 – 2025 with Development *with signal optimization and Improvement Scenario 1*[2, 3, 5]	C (34.3)	D (36.6)
Case 3 – 2025 with Development *with signal optimization and Improvement Scenario 2*[2, 3, 6]	C (27.6)	C (31.4)
Eastbound Hyetts Corner Road Left Turn 95th Percentile Queue Length	225.0’	115.0’
Westbound Site Entrance C Shared Through/Right Turn 95th Percentile Queue Length	120.0’	128.0’
Northbound US Route 13 Through 95th Percentile Queue Length	665.0’	413.0’
Southbound US Route 13 Through 95th Percentile Queue Length	280.0’	775.0’

[2] JMT modeled the signal using a cycle length of 120 seconds in the AM peak hour and 120 seconds in the PM peak hour with US Route 13 northbound and southbound left turns and U-turns controlled by a protected permissive phase. The signal is along a coordinated corridor.

[3] Signal optimization scenario includes optimizing green split times while maintaining the existing cycle length.

[4] JMT analyzed the intersection as a signalized intersection with split phasing with one separate left turn lane, two through lanes, and one right turn lane along the US Route 13 northbound and southbound approaches, and a shared left turn/through lane and a right turn lane along eastbound Hyetts Corner Road and westbound Site Entrance C approaches.

[5] With Improvement Scenario 1, JMT analyzed the intersection as a signalized intersection with split phasing along the Hyetts Corner Road/Site Entrance C and protected permissive phasing along US Route 13. The intersection would provide one separate left turn lane, two through lanes, and one right turn lane along the US Route 13 northbound and southbound approaches, one shared left turn/through lane and one right turn lane along the eastbound Hyetts Corner Road approach, and one separate left turn lane, one shared left turn/through lane, and one separate right turn lane along the westbound Site Entrance C approach.

[6] With Improvement Scenario 2, JMT analyzed the intersection as a signalized intersection with concurrent protected permissive phasing along Hyetts Corner Road/Site Entrance C and protected permissive phasing along US Route 13. The intersection would provide one separate left turn lane, two through lanes, and one right turn lane along the US Route 13 northbound and southbound approaches as well as one separate left turn lane and one shared through/right turn lane along the eastbound Hyetts Corner Road and westbound Site Entrance C approaches.

Table 4 (Continued)
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Signalized Intersection[1]	**LOS per JMT**	
3 - US Route 13 (DuPont Parkway) / Site Entrance C / Hyetts Corner Road (New Castle Road 413)	Weekday AM	Weekday PM
Case 3 – 2025 with Development *with signal optimization and Improvement Scenario 3*[2, 3,7]	D (51.0)	E (64.5)
Eastbound Hyetts Corner Road Left Turn 95th Percentile Queue Length	438’	338’
Westbound Site Entrance C Shared Through/Right Turn 95th Percentile Queue Length	265’	293’
Northbound US Route 13 Through 95th Percentile Queue Length	918’	523’
Southbound US Route 13 Through 95th Percentile Queue Length	338’	1180’

[7]With Improvement Scenario 3, JMT analyzed the intersection as a signalized intersection with split phasing with one separate left turn lane, two through lanes, and one right turn lane along the US Route 13 northbound and southbound approaches, and a shared left turn/through lane and a right turn lane along eastbound Hyetts Corner Road approach, and a shared left turn/through/right turn lane along westbound Site Entrance C approach.

Table 5
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Signalized Intersection[1]	**LOS per JMT**	
4 - US Route 13 (DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15)	Weekday AM	Weekday PM
Case 1 – 2024 Existing *with DelDOT Timing*	D (45.6)	D (39.2)
Case 1 – 2024 Existing *with signal optimization*[3, 8]	C (31.1)	D (49.8)
Case 2 – 2025 without Development *with signal optimization*[3, 8]	D (37.5)	F (135.8)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	268.0’
Westbound Pole Bridge Road Left Turn 95th Percentile Queue Length	-	695.0’
Northbound US Route 13 Left Turn 95th Percentile Queue Length	-	783.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	885.0’
Case 3 – 2025 with Development *with signal optimization*[3, 8, 9]	D (38.4)	F (143.4)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	285.0’
Westbound Pole Bridge Road Left Turn 95th Percentile Queue Length	-	643.0’
Northbound US Route 13 Left Turn 95th Percentile Queue Length	-	763.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	1075.0’

[8] JMT modeled the signal using a cycle length of 120 seconds in the AM peak hour and 120 seconds in the PM peak hour with US Route 13 northbound and southbound left turns and U-turns controlled by a protected phase. The signal is along a coordinated corridor.

[9] JMT analyzed the intersection as a signalized intersection with split phasing along the Boyds Corner Road/Pole Bridge Road approaches and protected only left turn phasing along the US Route 13 approaches with existing lane configuration. The intersection would provide two separate left turn lanes, three through lanes, and one right turn lane along the US Route 13 northbound and southbound approaches, two separate left turn lanes, two through lanes, and one right turn lane along the eastbound Boyds Corner Road approach, and one separate left turn lane, one shared left turn/through lane, one separate through lane, and one separate right turn lane along the westbound Pole Bridge Road approach.

Table 5 (Continued)
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Signalized Intersection[1]	**LOS per JMT**	
4 - US Route 13 (DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15)	Weekday AM	Weekday PM
Case 3 – 2025 with Development *with signal optimization and Improvement Scenario 1*[3, 8, 10]	D (36.7)	F (114.3)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	285.0’
Westbound Pole Bridge Road left Turn 95th Percentile Queue Length	-	550.0’
Northbound US Route 13 Left Turn 95th Percentile Queue Length	-	388.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	1075.0’
Case 3 – 2025 with Development *with signal optimization and Improvement Scenario 2*[3, 8, 11]	D (52.5)	F (108.1)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	285.0’
Westbound Pole Bridge Road Through 95th Percentile Queue Length	-	643.0’
Northbound US Route 13 Left Turn 95th Percentile Queue Length	-	673.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	680.0’

[10] With Improvement Scenario 1, JMT analyzed the intersection as a signalized intersection with split phasing along the Boyds Corner Road/Pole Bridge Road approaches and protected only left turn phasing along the US Route 13 approaches. The intersection would provide three separate left turn lanes, three through lanes, and one right turn lane along the US Route 13 northbound and southbound approaches, two separate left turn lanes, two through lanes, and one right turn lane along the eastbound Boyds Corner Road approach, and one separate left turn lane, one shared left turn/through lane, one separate through lane, and one separate right turn lane along the westbound Pole Bridge Road approach.

[11] With Improvement Scenario 2, JMT analyzed the intersection as a signalized intersection with split phasing along the Boyds Corner Road/Pole Bridge Road approaches and protected only left turn phasing along the US Route 13 approaches. The intersection would provide two separate left turn lanes, three through lanes, and one right turn lane along the US Route 13 northbound approach, two separate left turn lanes, four through lanes, and one right turn lane along the US Route 13 southbound approach, two separate left turn lanes, two through lanes, and one right turn lane along the eastbound Boyds Corner Road approach, and one separate left turn lane, one shared left turn/through lane, one separate through lane, and one separate right turn lane along the westbound Pole Bridge Road approach.

Table 5 (Continued)
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Signalized Intersection[1]	**LOS per JMT**	
4 - US Route 13 (DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15)	Weekday AM	Weekday PM
Case 3 – 2025 with Development *with signal optimization TID Improvement and pedestrian activation*[3, 8, 12]	D (46.9)	E (77.9)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	285.0’
Westbound Pole Bridge Road Left Turn 95th Percentile Queue Length	-	550.0’
Northbound US Route 13 Left Turn 95th Percentile Queue Length	-	403.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	558.0’
Case 3 – 2025 with Development with signal optimization, TID Improvements and no pedestrian activation3, 8, 12, 13	D (41.5)	E (58.3)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	383.0’
Westbound Pole Bridge Road Left Turn 95th Percentile Queue Length	-	420.0’
Northbound US Route 13 Through 95th Percentile Queue Length	-	318.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	498.0’

[12] Consistent with the recommendations from the Southern New Castle County (SNCC) TID, JMT analyzed the intersection as a signalized intersection with split phasing along the Boyds Corner Road/Pole Bridge Road approaches and protected only left turn phasing along the US Route 13 approaches. The intersection would provide three separate left turn lanes, three through lanes, and one right turn lane along the US Route 13 northbound approach, two separate left turn lanes, four through lanes, and one right turn lane along the US Route 13 southbound approach. Along the Boyds Corner Road and Pole Bridge Road approaches, the existing lane configurations would remain. Specifically, two separate left turn lanes, two through lanes, and one right turn lane along the eastbound Boyds Corner Road approach, and one separate left turn lane, one shared left turn/through lane, one separate through lane, and one separate right turn lane along the westbound Pole Bridge Road approach.

[13] JMT analyzed the intersection without pedestrian activation due to no pedestrians utilizing the crossings during the traffic counts.

Table 5 (Continued)
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Signalized Intersection[1]	**LOS per JMT**	
4 - US Route 13 (DuPont Parkway) / Pole Bridge Road (New Castle Road 420) / Boyds Corner Road (New Castle Road 15)	Weekday AM	Weekday PM
Case 3 – 2025 with Development *with signal optimization and Improvement Scenario 3 and pedestrian activation*[3, 8, 14]	C (34.9)	D (41.7)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	358.0’
Westbound Pole Bridge Road Through 95th Percentile Queue Length	-	343.0’
Northbound US Route 13 Through 95th Percentile Queue Length	-	275.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	398.0’
Case 3 – 2025 with Development *with signal optimization and Improvement Scenario 3 and no pedestrian activation3*[, 8, 13, 14]	C (34.2)	D (41.2)
Eastbound Boyds Corner Road Left Turn 95th Percentile Queue Length	-	343.0’
Westbound Pole Bridge Road Through 95th Percentile Queue Length	-	395.0’
Northbound US Route 13 Left Turn 95th Percentile Queue Length	-	275.0’
Southbound US Route 13 Through 95th Percentile Queue Length	-	373.0’

[14]With Improvement Scenario 3, JMT analyzed the intersection as a signalized intersection with concurrent phasing along the Boyds Corner Road/Pole Bridge Road approaches and protected only left turn phasing along US Route 13. The intersection would provide three separate left turn lanes, three through lanes, and one right turn lane along the US Route 13 northbound approach, two separate left turn lanes, four through lanes, and one right turn lane along the US Route 13 southbound approach, two separate left turn lanes, two through lanes, and one right turn lane along the eastbound Boyds Corner Road and westbound Pole Bridge Road approaches.

Table 6
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Unsignalized Intersection Two-Way Stop Control[1]	**LOS per JMT**	
5 - Boyds Corner Road / Shallcross Lake Road (New Castle Road 428) / Milford Drive	Weekday AM	Weekday PM
Case 1 – 2024 Existing		
Eastbound Boyds Corner Road Left Turn	A (9.2)	B (10.2)
Westbound Boyds Corner Road Left Turn	A (9.7)	A (9.9)
Northbound Shallcross Lake Road Approach	F (77.7)	F (*)
Northbound Shallcross Lake Road Shared Left Turn/Through 95th Percentile Queue Length	25.0’	132.0’
Southbound Milford Drive Approach	F (74.3)	E (66.5)
Southbound Milford Drive Approach 95th Percentile Queue Length	105.0’	65.0’
Case 2 – 2025 without Development		
Eastbound Boyds Corner Road Left Turn	B (10.8)	B (14.9)
Westbound Boyds Corner Road Left Turn	B (12.8)	C (15.9)
Northbound Shallcross Lake Road Approach	F (*)	F (*)
Northbound Shallcross Lake Road Shared Left Turn/Through 95th Percentile Queue Length	180.0’	330.0’
Southbound Milford Drive Approach	F (*)	F (*)
Southbound Milford Drive Approach 95th Percentile Queue Length	418.0’	335.0’
Case 3 – 2025 with Development		
Eastbound Boyds Corner Road Left Turn	B (11.0)	C (15.3)
Westbound Boyds Corner Road Left Turn	B (13.1)	C (16.4)
Northbound Shallcross Lake Road Approach	F (*)	F (*)
Northbound Shallcross Lake Road Shared Left Turn/Through 95th Percentile Queue Length	183.0’	333.0’
Southbound Milford Drive Approach	F (*)	F (*)
Southbound Milford Drive Approach 95th Percentile Queue Length	433.0’	348.0’

*Delay exceeds 1,000 seconds.

Table 6 (Continued)
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Roundabout[1]	**LOS per JMT**	
5 - Boyds Corner Road / Shallcross Lake Road (New Castle Road 428) / Milford Drive	Weekday AM	Weekday PM
Case 3 – 2025 with Development *and Improvement Scenario 1*[15]		
Eastbound Boyds Corner Road Approach	F (139.4)	F (210.3)
Eastbound Boyds Corner Road Approach 95th Percentile Queue Length	1225.0’	1750.0’
Westbound Boyds Corner Road Approach	D (28.3)	F (228.2)
Westbound Boyds Corner Road Approach 95th Percentile Queue Length	-	1900.0’
Northbound Shallcross Lake Road Approach	D (27.3)	E (35.8)
Southbound Milford Drive Approach	C (15.4)	D (31.2)
Overall	F (84.9)	F (207.4)
Case 3 – 2025 with Development and Improvement Scenario 2[16]		
Eastbound Boyds Corner Road Approach	B (11.0)	B (13.3)
Eastbound Boyds Corner Road Shared Through/Right Turn 95th Percentile Queue Length	125.0’	175.0’
Westbound Boyds Corner Road Approach	A (7.6)	B (14.0)
Westbound Boyds Corner Road Approach Shared Through/Right Turn 95th Percentile Queue Length	75.0’	175.0’
Northbound Shallcross Lake Road Approach	C (17.2)	C (20.6)
Northbound Shallcross Lake Road Approach 95th Percentile Queue Length	25.0’	50.0’
Southbound Milford Drive Approach	B (11.2)	C (19.0)
Southbound Milford Drive Approach 95th Percentile Queue Length	25.0’	25.0’
Overall	A (9.9)	B (14.0)

[15] With Improvement Scenario 1, JMT analyzed the intersection as a single lane roundabout.

[16] With Improvement Scenario 2, JMT analyzed the intersection as a multi-lane roundabout consistent with the improvements proposed as part of the *Boyds Corner Road, Cedar Lane Road to US Route 13 Project (DelDOT Project No. T200712002)* with one shared left turn/through lane and one shared through/right turn lane along the eastbound and westbound approaches of Boyds Corner Road, and one shared left turn/through/right turn lane along the northbound Shallcross Lake Road and southbound Milford Drive approaches.

Table 7
Peak Hour Levels of Service (LOS)
Based on Traffic Impact Study for 2256 Dupont Parkway – Hyetts Corner
Report Dated: November 2024
Prepared by: JMT

Signalized Intersection[1]	**LOS per JMT**	
6 - US Route 13 (DuPont Parkway) / Greylag Road (New Castle Road 425) / Bayview Road (New Castle Road 423)	Weekday AM	Weekday PM
Case 1 – 2024 Existing *with DelDOT Timing*	C (27.0)	B (16.4)
Case 1 – 2024 Existing *with signal optimization*[3, 8]	C (23.1)	C (32.2)
Case 2 – 2025 without Development *with signal optimization*[3, 8]	D (41.7)	C (32.8)
Case 3 – 2025 with Development *with signal optimization*[3, 8, 17]	D (44.1)	C (32.7)

[17]JMT analyzed the intersection as a signalized intersection with split phasing along the Greylag Road/Bayview Road approaches and protected only left turn phasing along the US Route 13 approaches. Under existing conditions, the intersection provides one separate left turn lane, two through lanes, and one right turn lane along the northbound US Route 13 approach, two separate left turn lanes, three through lanes, and one right turn lane along the southbound US Route 13 approach, one separate left turn lane, one shared left turn/through lane, and one right turn lane along the westbound Bayview Road approach, and one separate left turn lane and one shared through/right turn lane along the eastbound Greylag Road approach.