



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

NICOLE MAJESKI  
SECRETARY

June 10, 2021

Mr. Alex Schmidt  
Century Engineering, Inc.  
550 Bay Road  
Dover, DE 19901

Dear Mr. Schmidt:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **Georgetown Convenience Store** (Tax Parcels 135-19.07-7.00, 7.01 and 7.02) development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. DelDOT accepts this letter and concurs with the recommendations. If you have any questions concerning this letter or the enclosed review letter, please contact me at (302) 760-2124.

Sincerely,

Claudy Joinville  
Project Engineer

CJ:km

Enclosures

cc with enclosures: Mr. Mike Willey, Silicato Development  
Mr. Dennis Silicato, Silicato Development  
Ms. David Edgell, Office of State Planning Coordination  
Ms. Jocelyn Godwin, Town of Georgetown  
Mr. Jamie Whitehouse, Sussex County Planning and Zoning  
Mr. Mir Wahed, Johnson, Mirmiran & Thompson, Inc.  
Ms. Joanne Arellano, Johnson, Mirmiran & Thompson, Inc.  
DelDOT Distribution

## DelDOT Distribution

Brad Eaby, Deputy Attorney General  
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Michael Simmons, Assistant Director, Project Development South, DOTS  
Todd Sammons, Assistant Director, Development Coordination  
T. William Brockenbrough, Jr., County Coordinator, Development Coordination  
Peter Haag, Chief Traffic Engineer, Traffic, DOTS  
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Derek Sapp, Sussex County Subdivision Manager, Development Coordination  
Mark Galipo, Traffic Engineer, Traffic, DOTS  
Troy Brestel, Project Engineer, Development Coordination  
Annamaria Furmato, Project Engineer, Development Coordination



June 10, 2021

Mr. Troy E. Brestel  
Project Engineer  
Delaware Department of Transportation  
Development Coordination, Division of Planning  
800 Bay Road  
Dover, DE 19901

RE: Agreement No. 1945F  
Project Number T202069012  
Traffic Impact Study Services  
Task 3-4A – Georgetown Convenience Store TIS

Dear Mr. Brestel:

Johnson, Mirmiran, and Thompson (JMT) has completed a review of the Traffic Impact Study (TIS) for the Georgetown Convenience Store, which was prepared by Century Engineering, dated March 2021. This review was assigned as Task Number 3-4A. The report is prepared in a manner generally consistent with DelDOT's *Development Coordination Manual*.

The October 5, 2020 DelDOT Scoping Meeting Memorandum states the proposed development will be comprised of a 5,589 square-foot super convenience store with gas pumps. However, the TIS as part of this review evaluates the impacts of a larger commercial development comprised of a 5,051 square-foot super convenience store with gas pumps, a 4,600 square-foot automated car wash, and a 6,815.5 square-foot automobile parts sales building.

The site is located on the northeast corner of US Route 113 (Sussex County Road 113) and Edward Street in the Town of Georgetown in Sussex County, Delaware. The subject property is on an approximately 3.61-acre assemblage of parcels. The subject land is currently zoned as HC (Highway Commercial) and the developer does not plan to rezone the land. Two access points are proposed: a full access on Edward Street and a rights-in/rights-out only access on northbound US Route 113. Construction for the development is anticipated to be completed in 2021.

DelDOT has relevant and ongoing projects within and adjacent to the study area including the *Corridor Capacity Preservation Program (CCPP)*, which aims to maintain the regional importance and preserve the intended function and capacity of existing designated transportation routes within the Program. The main objectives of the program are listed below:

- Prevent the need to build an entirely new road
- Minimize the transportation impacts of increased economic growth
- Maintain an existing road's ability to handle traffic efficiently and safely
- Preserve the ability to make future improvements
- Sort local and through traffic



US Route 113 is one of the highways included in the CCPP and the current corridor plan is summarized in the *US 113 North/South Study*. More information regarding the CCPP can be found at: [https://deldot.gov/Publications/manuals/corr\\_cap/index.shtml](https://deldot.gov/Publications/manuals/corr_cap/index.shtml).

The *US 113 North/South Study* is examining potential improvements throughout the entire length of US Route 113 in Delaware, from the Maryland state line in Selbyville to SR 1 north of Milford. The study is divided into four geographic areas, and the site falls into the Georgetown area. For each of these areas, environmental studies are required for potential improvements by the Federal Highway Administration (FHWA). The selected On-alignment Alternative consists of widening US Route 113 to provide one additional lane northbound and southbound, provide controlled access with grade separated interchanges at eight locations, eliminate all traffic signals and unsignalized crossovers along US Route 113, and widen existing shoulders to 15 feet. Additionally, the study identified the grade separated intersection at US Route 113 and Bridgeville Road to be the highest priority. The Georgetown Area Environmental Assessment of the On-alignment Alternative was completed in 2012. More information about the *US 113 North/South Study* can be found at: <https://deldot.gov/information/projects/us113/index.shtml>

The *US 113 @ SR 18/SR 404 (Georgetown) Grade Separated Intersection* project (DelDOT Contract No. T201412701) and the *US 113 @ US 9 Grade Separated Intersection* project are adjacent to the study area. More details regarding these projects are on page 10. Although these two ongoing DelDOT projects exist near the study area, per the DelDOT Scoping Meeting Memorandum dated October 5, 2020, the proposed development would send fewer than 50 weekly peak hour trips through those project intersections. As such, the developer would not be required to contribute to those projects.

Note, JMT updated the 2021 Future with Development volumes (Case 3) as the trips associated with the proposed car wash were not included in the future volume development contained within the TIS. Based on the updated volumes, the highest projected weekday peak hour trips traveling through the US Route 113 intersections with SR 18/SR 404 and US 9 would be 34. However, 52 peak hour trips are projected to travel through those intersections during the Summer Saturday. Although the 52 peak hour trips would surpass the 50 weekly peak hour trips mentioned in the DelDOT Scoping Meeting Memorandum, the additional traffic is anticipated to have minimal impact to those adjacent intersections.

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

The following intersections exhibit level of service (LOS) deficiencies without the implementation of physical roadway and/or traffic control improvements.



Intersection	LOS Deficiencies Occur			Case
	AM	PM	SAT	
Site Entrance A/US Route 113			X	Case 3 – 2021 with Development
US Route 113/Edward Street			X	Case 1 – 2020 Existing
			X	Case 2 – 2021 without Development
	X	X	X	Case 3 – 2021 with Development

As part of the development, a rights-in/rights-out entrance (Site Entrance A) along northbound US Route 113 would be located at a centralized location between Edward Street and Alfred Street. With the full build of the development, the Site Entrance A intersection with northbound US Route 113 would exhibit LOS deficiencies during the Summer Saturday peak hour under future conditions. The deficiency occurs along the westbound Site Entrance A approach and with delays of 60.4 seconds per vehicle. The LOS deficiency could be mitigated by the provision of a signal. However, due to the proximity of this intersection with adjacent unsignalized intersections, a signal may not be feasible. Additionally, the projected LOS failures only exist along the westbound Site Entrance A approach to the intersection. Therefore, we recommend that the developer provide an unsignalized rights-in/rights-out access along northbound US Route 113. It should be noted that the calculated 95<sup>th</sup> percentile queue length along the westbound Site Entrance A approach is approximately 110 feet and would obstruct vehicles utilizing the aisle located adjacent to the car wash and the rights-in/rights-out entrance. As such, to minimize operational on-site impacts due to queues at Site Entrance A, the aisle should be located approximately 110 feet east of the rights-in/rights-out entrance.

The existing unsignalized US Route 113 intersection with Edward Street exhibits LOS deficiencies during the Summer Saturday peak hour under existing and future conditions, with or without the proposed development and during the AM and PM peak hours under future conditions with the development. These LOS deficiencies occur along the westbound Edward Street approach, the northbound US Route 113 U-turn, and the southbound US Route 113 left turn with delays of over 1,000 seconds, 53.4 seconds and 265.9 seconds per vehicle, respectively. The LOS deficiencies could be mitigated by the provision of a signal.

As the provision of a signal is not consistent with the *Corridor Capacity Preservation Program* (CCPP) two additional unsignalized scenarios were evaluated. Both scenarios would mitigate the LOS deficiencies during the weekday AM and PM peak hours under Case 3 conditions. However, the LOS deficiencies during the Summer Saturday peak hour would not be mitigated.

Improvement Scenario 1 incorporates the restriction of left turn movements along the westbound Edward Street approach. With the restriction of this movement, under Case 3 conditions, the intersection would exhibit LOS deficiencies during the Summer Saturday peak hour. These LOS deficiencies would occur along the westbound Edward Street approach, the northbound US Route 113 U-turn, and the southbound US Route 113 left turn with delays of 99.2 seconds, 68.0 seconds and over 1,000 seconds per vehicle, respectively. Additionally, the calculated 95<sup>th</sup> percentile queue



length along the westbound Edward Street approach, the northbound US Route 113 U-turn and the southbound US Route 113 left turn would be approximately 170 feet, 25 feet, and 440 feet, respectively.

Improvement Scenario 2 incorporates the restriction of left turn movements along the westbound Edward Street approach, as well as the provision of an acceleration lane along northbound US Route 113 for the right turning traffic from westbound Edward Street. To provide adequate acceleration length, the rights-in/rights-out Site Entrance A along US Route 113 would be eliminated, and the acceleration lane from Edward Street would become a lane drop onto Alfred Street. Alfred Street is approximately 600 feet north of Edward Street. With this scenario, under Case 3 conditions, the intersection would exhibit LOS deficiencies during the Summer Saturday peak hour. These LOS deficiencies would occur along the northbound US Route 113 U-turn and the southbound US Route 113 left turn with delays of 68.0 and 187.1 seconds per vehicle, respectively. Additionally, the calculated 95<sup>th</sup> percentile queue length along the northbound US Route 113 U-turn and the southbound US Route 113 left turn would be approximately 25 and 205 feet, respectively.

Per coordination with DelDOT, Improvement Scenario 1 is the preferred option to maintain consistency with the CCPP and provide a more direct access to the proposed convenience store with gas pumps use. As such, we recommend that the developer modify the unsignalized US Route 113 and Edward Street intersection to restrict left turning movements along the westbound Edward Street approach as well as construct an unsignalized rights-in/rights-out entrance along US Route 113.

Should the Town of Georgetown 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 US Route 113 within the limits of their frontage to meet DelDOT's standards for 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." Questions on or appeals of this requirement should be directed to the DelDOT Subdivision Review Coordinator in whose area the development is located.
2. The developer should construct a rights-in/rights-out site entrance (Site Entrance A) on northbound US Route 113 at a centralized location between Edward Street and Alfred Street, specifically a shared entrance at the property line serving Tax Parcels 135-19.07-7.00 and 7.01. A channelizing island should be provided to restrict left turning movements. The intersection should be consistent with the lane configurations shown in the table below.



<b>Approach</b>	<b>Current Configuration</b>	<b>Proposed Configuration</b>
Westbound Site Entrance	One right turn lane	No change
Northbound US Route 113	One through lane and one shared through/right turn lane	Two through lanes and one right turn lane

Based on DelDOT’s *Development Coordination Manual*, the recommended minimum storage length (excluding taper) of the northbound US Route 113 right turn lane is 350 feet. However, due to the adjacent Edward Street and Alfred Street intersections with US Route 113, this storage length is not feasible. As such, the developer should construct the northbound right turn lane to provide at least 195 feet of storage length. A design deviation should be submitted outlining any mitigation. It should indicate that any ingress access points off of the drive aisle should be located at least 110 feet east of Site Entrance A.

3. The developer should construct an unsignalized full access site entrance for the proposed Georgetown Convenience Store development on Edward Street, approximately 200 feet east of the northeast point of tangency of the intersection with US Route 113. Edward Street is under the jurisdiction of the Town of Georgetown and the entrance should be designed and constructed in accordance with local standards.
4. The developer should modify the US Route 113 and Edward Street intersection to restrict left turns along the westbound Edward Street approach. The intersection should be consistent with the lane configurations shown in the table below:

<b>Approach</b>	<b>Current Configuration</b>	<b>Proposed Configuration</b>
Westbound Edward Street	One shared left turn/right turn lane	One right turn lane
Northbound US Route 113	One U-turn lane, two through lanes, and one right turn lane	No change
Southbound US Route 113	One left turn lane and two through lanes	No change

A concrete channelizing island should be constructed to prevent left turns along the westbound Edward Street approach and a pedestrian crosswalk with curb ramps at either end should be provided along the easterly leg of the intersection. Prior to Entrance Plan approval, the developer should submit a plan to DelDOT to confirm the design of the intersection.

5. 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 US Route 113 and Edward





Street site frontages. Within the easement, 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. If feasible, the SUP 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 SUP.

- b. One internal connection of a sidewalk or a SUP is required from the SUP along US Route 113.
  - c. Where internal sidewalks are located alongside of parking spaces, a buffer, physical barrier, or signage should be added to eliminate vehicular overhang onto the sidewalk.
  - d. Internal bicycle racks should be provided.
  - e. Minimum five-foot wide bicycle lanes should be incorporated in the right turn lane and shoulder along the northbound US Route 113 approach to the site entrance and the westbound Edward Street approach to the site entrance.
  - f. Utility covers should be moved outside of any designated bicycle lanes and any proposed sidewalks/SUP or should be flush with the pavement.
6. Due to the proximity of the proposed development to the Delaware Coastal Airport, we recommend that deed restrictions be required similar to the attached Avigation Nuisance Easement and Non-Suit Covenant (pages 24 and 25). The applicant should contact Mr. Joshua Thomas at (302) 760-4834 at DelDOT's Statewide and Regional Planning Section to determine whether the proposed development is within the Runway Protection Zone. If so, restrictions may apply.

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 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](https://www.deldot.gov/Publications/manuals/de_mutcd/index.shtml). For any additional information regarding the work zone impact and mitigation procedures during construction, please contact Mr. Don Weber, Assistant Director for Traffic Operations and Management. Mr. Weber can be reached at (302) 659-4651 or by email at [Don.Weber@delaware.gov](mailto:Don.Weber@delaware.gov).

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.

A handwritten signature in black ink, appearing to read 'Joanne M. Arellano', is positioned above the typed name.

Joanne M. Arellano, P.E., PTOE

cc: Mir Wahed, P.E., PTOE  
Enclosure

## **General Information**

**Report date:** March 2021

**Prepared by:** Century Engineering

**Prepared for:** Silicato Development

**Tax Parcels:** 135-19.07-7.00, 135-19.07-7.01, 135-19.07-7.02

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

## **Project Description and Background**

**Description:** The October 5, 2020 DelDOT Scoping Meeting Memorandum states the proposed development will be comprised of a 5,589 square-foot super convenience store with gas pumps. However, the TIS as part of this review evaluates the impacts of a larger commercial development comprised of a 5,051 square-foot super convenience store with gas pumps, a 4,600 square-foot automated car wash, and a 6,815.5 square-foot automobile parts sales building.

**Location:** The subject site is located on the northeast corner of the intersection of US Route 113 (Sussex County Road 113) and Edward Street in the Town of Georgetown, Sussex County.

**Amount of Land to be developed:** An approximately 3.61-acre assemblage of parcels.

**Land Use approval(s) needed:** Entrance Plan.

**Proposed completion date:** 2021.

**Proposed access locations:** One full access entrance on Edward Street and one rights-in/rights-out entrance on northbound US Route 113.

### **Daily Traffic Volumes:**

- 2020 Average Annual Daily Traffic on US Route 113: 17,721

## **Site Map**



*\*Graphic is an approximation based on the Full Build-Out Display prepared by Century Engineering dated January 2021.*

## **Relevant and On-going Projects**

DelDOT has relevant and ongoing projects within and adjacent to the study area including the *Corridor Capacity Preservation Program (CCPP)*, which aims to maintain the regional importance and preserve the intended function and capacity of existing designated transportation routes within the Program. The main objectives of the program are listed below:

- Prevent the need to build an entirely new road
- Minimize the transportation impacts of increased economic growth
- Maintain an existing road's ability to handle traffic efficiently and safely
- Preserve the ability to make future improvements
- Sort local and through traffic

US Route 113 is one of the highways included in the CCPP and the current corridor plan is summarized in the *US 113 North/South Study*. More information regarding the CCPP can be found at: [https://deldot.gov/Publications/manuals/corr\\_cap/index.shtml](https://deldot.gov/Publications/manuals/corr_cap/index.shtml).

The *US 113 North/South Study* is examining potential improvements throughout the entire length of US Route 113 in Delaware, from the Maryland state line in Selbyville to SR 1 north of Milford. The study is divided into four geographic areas, and the site falls into the Georgetown area. For each of these areas, environmental studies are required for potential improvements by the Federal Highway Administration (FHWA). The selected On-alignment Alternative consists of widening

US Route 113 to provide one additional lane northbound and southbound, provide controlled access with grade separated interchanges at eight locations, eliminate all traffic signals and unsignalized crossovers along US Route 113, and widen existing shoulders to 15 feet. Additionally, the study identified the grade separated intersection at US Route 113 and Bridgeville Road to be the highest priority. The Georgetown Area Environmental Assessment of the On-alignment Alternative was completed in 2012. More information about the *US 113 North/South Study* can be found at: <https://deldot.gov/information/projects/us113/index.shtml>

The *US 113 @ SR 18/SR 404 (Georgetown) Grade Separated Intersection* project (DelDOT Contract No. T201412701) was identified in the Georgetown Environmental Assessment through the *US 113 North/South Study*. The project aims to preserve mobility for local residents and businesses while providing highway improvements that would reduce congestion, decrease accidents, and accommodate the anticipated traffic growth. The project will convert the intersection of US Route 113 and Bridgeville Road (Delaware Route 18) to a grade separated intersection. The grade separation will include Bridgeville Road bridging over US Route 113 with loop ramps in the northeast and southwest quadrants. Additionally, the project will widen US Route 113 to provide three lanes in each direction from Bedford Street to Ennis Street. The project is currently in the design and planning phase, and construction is anticipated to begin in 2024 and end in 2026. More information about the project can be found at: <https://deldot.gov/projects/index.shtml?dc=details&projectNumber=T201412701#project-details1>

Additionally, the *US 113 @ US 9 Grade Separated Intersection* project was identified in the Georgetown Environmental Assessment through the *US 113 North/South Study*. The project will convert the intersection of US Route 113 and US Route 9 to a grade separated intersection. The grade separation will include US Route 113 bridging over US Route 9 with a loop ramp in the northwest quadrant and on/off ramps along southbound US Route 113. Additionally, the project will widen US Route 113 to provide three lanes in each direction from south of the intersection to Ennis Street. Design of the project is anticipated to begin in Fiscal Year 2027.

### **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 the 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 first 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 would be located in Investment Level 1. Investment Level 1 encourage a wide range of uses, densities, transportation options, and foster efficient use of existing public and private investments to enhance community identity and integrity. Redevelopment is encouraged in Level 1 areas. Therefore, the proposed development is generally consistent with the 2020 update of the Livable Delaware "Strategies for State Policies and Spending."

**Comprehensive Plan**

*(Source: Town of Georgetown 2010 Comprehensive Plan)*

**Town of Georgetown Comprehensive Plan:**

Per the *Town of Georgetown Comprehensive Plan Map* (adopted February 2019) the proposed development is in an area designated as Highway Commercial (HC) and the developer does not plan to rezone the land.

**Proposed Development's Compatibility with the Town of Georgetown Comprehensive Plan:**

The *Town Georgetown Comprehensive Plan* states that for development along US Route 113, the township prefers commercial development which provides internal connections to neighboring sites. The proposed development would be comprised of different commercial uses with internal connections provided. Therefore, the proposed development is generally consistent with the *Town of Georgetown 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, 10<sup>th</sup> Edition: An ITE Informational Report*, published by the Institute of Transportation Engineers (ITE) for ITE Land Use Codes: 843 (Automobile Parts Sales), 948 (Automated Car Wash), and 960 (Super Convenience Market/Gas Station).

**Table 1**  
Georgetown Convenience Store Trip Generation

Land Use	ADT	AM Peak Hour			PM Peak Hour			Saturday Peak Hours		
		In	Out	Total	In	Out	Total	In	Out	Total
6,815 SF Automobile Parts Store (ITE Code 843)	360	10	8	18	16	17	33	40	39	79
4,600 SF Automated Car Wash (ITE Code 948)	650*	0	0	0	32	33	65	70	70	140
5,051 SF Super Convenience Market/Gas Station (ITE Code 960)	4,231	214	215	429	175	175	350	162	163	325
<b>Total Trips</b>	4,591	224	223	447	223	225	448	272	272	544

\*The *Trip Generation, 10<sup>th</sup> Edition: An ITE Informational Report* does not provide ADT values for Automated Car Wash. As such, a K-factor of 10 for the PM peak hour was assumed to estimate ADT for the land use.

**Overview of TIS**

**Intersections examined:**

1. Entrance A and US Route 113 (DuPont Boulevard)
2. Entrance B and Edward Street
3. US Route 113 and Edward Street

**Conditions examined:**

1. Case 1 – 2020 Existing
2. Case 2 – 2021 without Development
3. Case 3 – 2021 with Development

**Committed Developments considered:** No committed developments were evaluated per the DelDOT Scoping Meeting Memorandum dated October 5, 2020.

**Peak hours evaluated:** Weekday morning, weekday evening, and summer Saturday midday peak hours.

### **Intersection Descriptions**

#### **1. US Route 113 (DuPont Boulevard) and Site Entrance A**

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

**Northbound Approach:** (US Route 113) Existing one through lane and one shared through/right turn lane; proposed two through lanes and one right turn lane

**Southbound Approach:** (US Route 113) Existing two through lanes

**Westbound Approach:** (Site Entrance A) Existing one right turn lane, yield controlled; proposed one right turn lane, yield controlled.

#### **2. Edward Street and Site Entrance B**

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

**Eastbound Approach:** (Edward Street) Existing one shared left turn/through lane; proposed one left turn lane and one through lane.

**Westbound Approach:** (Edward Street) Existing one shared through/right turn lane; proposed one through lane and one right turn lane.

**Southbound Approach:** (Site Entrance B) Existing one shared left turn/right turn lane, yield controlled; proposed one shared left turn/right turn lane, stop controlled.

#### **3. US Route 113 at Edward Street**

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

**Northbound Approach:** (US Route 113) Existing one U-turn lane, two through lanes, and one right turn lane.

**Southbound Approach:** (US Route 113) Existing one left turn lane and two through lanes.

**Westbound Approach:** (Edward Street) Existing one shared left turn/right turn lane, stop controlled.

### **Transit, Pedestrian, and Bicycle Facilities**

**Existing transit service:** Per DelDOT Gateway, Delaware Transit Corporation (DTC) currently provides existing services through the study area via DART Flex Routes 901 and 902. DART Flex Route 901 provides service along US Route 113 and Edward Street within the study area. DART Flex Route 902 provides service along US Route 113 (south of Edward Street) and along Edward Street within the study area. No bus stops exist within the study area, but two bus stops exist west of the study area at the intersection of Edward Street with Margaret Street which service DART Flex Routes 901 and 902. As of April 12, 2021, DART Flex Routes 901 and 902 have transitioned



to the DART Connect service which provides on demand transportation within their route area between the hours of 5:45 A.M. to 8:00 P.M. Monday through Friday.

**Planned transit service:** Per email correspondence on April 9th, 2021 with Mrs. Tremica Cherry-Wall, Planner for DART, transit improvements are not being requested in the area at this time.

**Existing bicycle and pedestrian facilities:** According to DelDOT's Sussex County Bicycle Map, no bicycle routes exist within the study area.

**Planned bicycle and pedestrian facilities:** Per email correspondence dated April 12<sup>th</sup>, 2021, from Mr. John Fiori, DelDOT's Bicycle Coordinator and Ms. Linda Osiecki, DelDOT's Pedestrian Coordinator, the following improvements were recommended:

- Referring to the State Strategies and Spending Map this site is within Level 1. Per the DelDOT SUP/Sidewalk Policy a non-motorized facility is required unless a physical impossibility exist. It would be recommended that a 10-foot wide shared-use path be installed for this development with angled terminations into the shoulder and shared-use path extended to both property lines. Although the frontage roads are state maintained, the site is within Town limits, where it is highly recommended to contact the Town of Georgetown to verify if the Town would be requiring any non-motorized facilities along US Route 113 or either street maintained by the Town.
- At least one internal connection of a sidewalk or shared use path from the shared-use path along US Route 113 is required.
- Provide a marked crosswalk for pedestrians to cross Edward Road with curb ramps at either end.
- Per the Development Coordination Manual (DCM) the site shall dedicate right-of-way per the roadway classification and establish a 15' wide permanent easement along the property frontage of US Route 113 and Edward Street.
- At this time the Department has no bicycle/pedestrian improvement projects within the area of this project.
- 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.

**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 map on the DelDOT Gateway.

- US Route 113 LTS: 3 and 4
- Edward Street LTS: 1

### **Crash Evaluation**

Per the crash data included in the TIS from December 30, 2017 to December 30, 2020 and provided by the Delaware Crash Analysis Reporting System, a total of 14 crashes were reported within a 0.1 mile radius of the US Route 113 and Edward Street intersection. Of the 14 crashes reported, five were rear-end, four were sideswipe, three were angle, one was a fixed object, and one was unknown. None of the crashes resulted in injury and no fatalities were reported within the study area during the 3-year study period.

### **Previous Comments**

JMT updated the 2021 Future with Development volumes (Case 3) as the trips associated with the proposed car wash were not included in the future volume development contained within the TIS. The updated volumes were utilized during the TIS review.

**General HCS Analysis Comments**

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

1. JMT utilized version 7.9 of HCS7, whereas the TIS utilized version 7.8.5.
2. 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 analyses, 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 analysis of future scenarios, whereas the TIS utilized a heavy vehicle percentage of 3% for all movements and all scenarios.
3. 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 and site entrances, whereas the TIS utilized a heavy vehicle percentage of 3% at all unsignalized intersections.
4. Due to a lack of recent count data and per DelDOT's *Development Coordination Manual*, JMT utilized a PHF for all cases 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, whereas the TIS utilized a PHF of 0.92 for all cases.
5. JMT utilized updated 2021 Future with Development volumes (Case 3) as the trips associated with the proposed car wash were not included in the future volume development contained within the TIS.

**Table 2**  
**Peak Hour Levels Of Service (LOS)**  
**Based on Georgetown Convenience Store Traffic Impact Study**  
**Report Dated: March 2021**  
**Prepared by: Century Engineering**

<b>Unsignalized Intersection Two-Way Stop Control (T-intersection) <sup>1</sup></b>	<b>LOS per TIS</b>			<b>LOS per JMT</b>		
	<b>Weekday AM</b>	<b>Weekday PM</b>	<b>Summer SAT</b>	<b>Weekday AM</b>	<b>Weekday PM</b>	<b>Summer SAT</b>
<b>Site Entrance A/US Route 113</b>						
2020 Existing (Case 1)						
Westbound Site Entrance A Approach <sup>2</sup>	B (12.9)	B (14.8)	D (25.3)	B (13.0)	B (15.0)	D (25.8)
2021 without Development (Case 2)						
Westbound Site Entrance A Approach <sup>2</sup>	B (13.0)	B (15.0)	-	B (13.0)	C (15.1)	D (26.2)
2021 with Development (Case 3) <sup>3</sup>						
Westbound Site Entrance A Approach	B (14.1)	C (17.0)	E (44.1)	B (14.6)	C (18.0)	F (60.4)
2021 with Development (Case 3) <i>with Improvement Scenario 1</i> <sup>4</sup>						
Westbound Site Entrance A Approach	C (16.4)	C (19.8)	F (58.5)	C (15.9)	C (19.9)	F (77.2)

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

<sup>2</sup> Due to limitations with HCS software, JMT included 1 volume along the westbound right turn during the Summer Saturday peak hour to generate results for the approach.

<sup>3</sup> The intersection was modeled with a separate right turn lane along northbound US 113.

<sup>4</sup> Improvement Scenario 1 incorporates the restriction of left turns along the westbound Edward Street approach to US Route 113. It was assumed that 10% of the left turning traffic would access US Route 113 further south (no longer traversing the US Route 113/Edward Street intersection) and 90% of the traffic would turn right from Edward Street onto US Route 113 and then U-turn north of the site.

Table 2 (continued)  
Peak Hour Levels Of Service (LOS)  
Based on Georgetown Convenience Store Traffic Impact Study  
Report Dated: March 2021  
Prepared by: Century Engineering

Signalized Intersection <sup>1</sup>	LOS per TIS			LOS per JMT		
	Weekday AM	Weekday PM	Summer SAT	Weekday AM	Weekday PM	Summer SAT
Site Entrance A/US Route 113						
2021 with Development (Case 3) <sup>5</sup>	-	-	-	A (6.3)	A (5.9)	A (7.9)

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<sup>5</sup> JMT performed an additional analysis modeling the intersection as a signalized intersection with a 120 second cycle length during the AM and PM peak hours, and a 150 second cycle length during the Summer Saturday peak hour.

**Table 3**  
**Peak Hour Levels Of Service (LOS)**  
Based on Georgetown Convenience Store Traffic Impact Study  
Report Dated: March 2021  
Prepared by: Century Engineering

Unsignalized Intersection Two-Way Stop Control (T-intersection) <sup>1</sup>	LOS per TIS			LOS per JMT		
	Weekday AM	Weekday PM	Summer SAT	Weekday AM	Weekday PM	Summer SAT
<b>Site Entrance B/Edward Street</b>						
2020 Existing (Case 1)						
Eastbound Edward Street Left Turn	A (7.4)	A (7.4)	A (7.3)	A (7.4)	A (7.4)	A (7.4)
Southbound Site Entrance B Approach <sup>6</sup>	A (8.9)	A (9.0)	-	A (9.0)	A (9.1)	A (9.2)
2021 without Development (Case 2)						
Eastbound Edward Street Left Turn	A (7.4)	A (7.4)	A (7.3)	A (7.4)	A (7.4)	A (7.4)
Southbound Site Entrance B Approach <sup>6</sup>	A (8.9)	A (9.0)	-	A (9.0)	A (9.1)	A (9.2)
2021 with Development (Case 3)						
Eastbound Edward Street Left Turn	A (7.6)	A (7.6)	A (7.6)	A (7.7)	A (7.7)	A (7.7)
Southbound Site Entrance B Approach	B (10.7)	B (10.9)	B (11.3)	B (10.1)	B (10.7)	B (10.7)
2021 with Development (Case 3) <i>with Improvement Scenario 1</i> <sup>4</sup>						
Eastbound Edward Street Left Turn	A (7.6)	A (7.6)	A (7.5)	A (7.7)	A (7.7)	A (7.7)
Southbound Site Entrance B Approach	A (9.9)	B (11.3)	A (9.7)	B (10.4)	B (10.8)	B (11.1)

<sup>6</sup> Due to limitations with HCS software, JMT included 1 volume along the southbound left turn during the Summer Saturday peak hour to generate results for the approach.

Table 3 (continued)  
Peak Hour Levels Of Service (LOS)  
Based on Georgetown Convenience Store Traffic Impact Study  
Report Dated: March 2021  
Prepared by: Century Engineering

Unsignalized Intersection Two-Way Stop Control (T-intersection) <sup>1</sup>	LOS per TIS			LOS per JMT		
	Weekday AM	Weekday PM	Summer SAT	Weekday AM	Weekday PM	Summer SAT
<b>Site Entrance B/Edward Street</b>						
2021 with Development (Case 3) with Improvement Scenario 2 <sup>7</sup>						
Eastbound Edward Street Left Turn	-	-	-	A (7.7)	A (7.7)	A (7.7)
Southbound Site Entrance B Approach <sup>8</sup>	-	-	-	B (11.0)	B (11.3)	B (11.8)

<sup>7</sup> Improvement Scenario 2 incorporates the improvements in Improvement Scenario 1, as well as the provision of an acceleration lane along northbound US Route 113 for the westbound Edward Street right turns and the elimination of the rights-in/rights-out Site Entrance A along US Route 113.

<sup>8</sup> Due to limitations with HCS software, JMT included 1 volume along the southbound left turn during the Summer Saturday peak hour to generate results for the approach.



**Table 4**  
**Peak Hour Levels Of Service (LOS)**  
**Based on Georgetown Convenience Store Traffic Impact Study**  
**Report Dated: March 2021**  
**Prepared by: Century Engineering**

<b>Unsignalized Intersection Two-Way Stop Control (T-intersection) <sup>1</sup></b>	<b>LOS per TIS</b>			<b>LOS per JMT</b>		
	<b>Weekday AM</b>	<b>Weekday PM</b>	<b>Summer SAT</b>	<b>Weekday AM</b>	<b>Weekday PM</b>	<b>Summer SAT</b>
<b>US Route 113/Edward Street</b>						
2020 Existing (Case 1)						
Westbound Edward Street Approach	C (20.3)	D (32.5)	F (206.7)	C (20.5)	D (33.3)	F (219.7)
Northbound US Route 113 U-turn	C (18.5)	C (23.8)	F (56.5)	C (18.8)	C (24.2)	F (58.1)
Southbound US Route 113 Left Turn	B (11.1)	B (13.0)	D (26.7)	B (11.3)	B (13.2)	D (27.5)
2021 without Development (Case 2)						
Westbound Edward Street Approach	C (20.5)	D (33.2)	F (221.3)	C (20.8)	D (34.0)	F (235.4)
Northbound US Route 113 U-turn	C (18.8)	C (24.2)	F (58.3)	C (19.0)	C (24.2)	F (60.0)
Southbound US Route 113 Left Turn	B (11.2)	B (13.2)	D (27.3)	B (11.3)	B (13.3)	D (28.1)
2021 with Development (Case 3)						
Westbound Edward Street Approach	F (58.2)	F (211.8)	F (*)	F (82.4)	F (257.2)	F (*)
Northbound US Route 113 U-turn	C (17.7)	C (23.0)	F (54.3)	C (17.2)	C (22.4)	F (53.4)
Southbound US Route 113 Left Turn	C (17.7)	D (28.0)	F (505.8)	B (13.9)	C (20.2)	F (265.9)

Table 4 (continued)  
Peak Hour Levels Of Service (LOS)  
Based on Georgetown Convenience Store Traffic Impact Study  
Report Dated: March 2021  
Prepared by: Century Engineering

Unsignalized Intersection Two-Way Stop Control (T-intersection) <sup>1</sup>	LOS per TIS			LOS per JMT		
	Weekday AM	Weekday PM	Summer SAT	Weekday AM	Weekday PM	Summer SAT
<b>US Route 113/Edward Street</b>						
<i>2021 with Development (Case 3) with Improvement Scenario 1 <sup>4</sup></i>						
Westbound Edward Street Approach	C (17.3)	C (21.9)	F (62.7)	C (17.3)	C (23.2)	F (99.2)
Northbound US Route 113 U-turn	C (17.3)	C (22.5)	F (53.7)	C (19.9)	D (26.7)	F (68.0)
Southbound US Route 113 Left Turn	B (14.8)	C (19.6)	F (360.7)	B (14.8)	C (24.9)	F (*)
<i>2021 with Development (Case 3) with Improvement Scenario 2 <sup>7</sup></i>						
Northbound US Route 113 U-turn	-	-	-	C (19.9)	D (26.7)	F (68.0)
Southbound US Route 113 Left Turn	-	-	-	B (13.5)	C (18.6)	F (187.1)

Table 4 (continued)  
Peak Hour Levels Of Service (LOS)  
Based on Georgetown Convenience Store Traffic Impact Study  
Report Dated: March 2021  
Prepared by: Century Engineering

Signalized Intersection <sup>1</sup>	LOS per TIS			LOS per JMT		
	Weekday AM	Weekday PM	Summer SAT	Weekday AM	Weekday PM	Summer SAT
US Route 113/Edward Street						
2021 with Development (Case 3) <sup>9</sup>	-	-	-	B (19.6)	C (21.1)	D (54.6)

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<sup>9</sup> JMT performed an additional analysis modeling the intersection as a signalized intersection with a 120 second cycle length during the AM and PM peak hours, and a 150 second cycle length during the Summer Saturday peak hour.

# Avigation Nuisance Easement & Non-Suit Covenant

This indenture made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and between \_\_\_\_\_, hereinafter referred to as Grantor, and \_\_\_\_\_ hereinafter referred to as Grantee, witnesseth:

WHEREAS the Grantor is the owner in fee of a certain parcel of land (“the Property”) in the County of \_\_\_\_\_, State of Delaware; and

WHEREAS said parcel of land is near or adjacent to \_\_\_\_\_, an operating airport (“Airport”); and

WHEREAS the Grantee is the owner of said airport; and

WHEREAS the Grantor proposes to make a use of said Property and to develop thereon the following:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

, which use and development require approval by Municipal and County authorities subject to the applicable provisions of law; and

WHEREAS the Grantor has been advised that the subject Property is located adjacent to the Airport; that the present and future impacts of Airport operations might be considered annoying to users of the Property for its stated purpose and might interfere with the unrestricted use and enjoyment of the Property in its intended use; that these Airport impacts might change over time, for example and not by way of limitation by an increase in the number of aircraft using the Airport, louder aircraft, seasonal variations, and time-of-day variations; that changes in Airport, air traffic control operating procedures or in Airport layout could result in increased noise impacts; and that the Grantor’s and users’ own personal perceptions of the noise exposure could change and that his or her sensitivity to aircraft noise could increase;

NOW, THEREFORE, for and in consideration of the mutual covenants, agreements and conditions contained herein, the parties hereto agree as follows:

Grantor does hereby grant a permanent nuisance and avigation easement (“Easement”) to Grantee over all of the following described real estate:

By virtue of this agreement, the Grantor, for and on behalf of himself and all successors in interest to any and all of the real property above described, waives as to Grantee or any successor agency legally authorized to operate said airport, any and all claims for damage of any kind whatsoever incurred as a result of aircraft using the Easement granted herein regardless of any future changes in volume or character of aircraft overflights, or changes in airport design and operating policies, or changes in air traffic control procedures.

The Grantor, for and on behalf of himself and all successors in interest to any and all of the real property above described, does further hereby covenant and agree with the Grantee, its successors and assigns, that it will not, from and after the effective date hereof, sue, prosecute, molest, or trouble the Grantee, its successors and assigns, in

These covenants and agreements shall run with the land of the Grantor, as hereinabove described, for the benefit of the Grantee, and its successors and assigns in the ownership, use and operation of the aforesaid Airport.

Grantee, its successors and assigns, shall have and hold said Easement and all rights appertaining thereto until said Airport shall be abandoned and shall cease to be used for airport purposes.

If any provision of this Easement or any amendments hereto, or the application thereof to any person, thing or circumstances is held invalid, such invalidity shall not affect the provisions or application of this Easement or such amendments that can be given effect without the invalid provisions or application, and to this end the provisions of this Easement and such amendments are declared to be severable.

IN WITNESS WHEREOF, the Grantor has hereunto set its hand and seal the day and year first above written.

\_\_\_\_\_(SEAL)

\_\_\_\_\_(SEAL)

## NOTARY ACKNOWLEDGEMENT

STATE OF DELAWARE

ss.

COUNTY OF KENT

**BE IT REMEMBERED** that on this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ personally, came before me, the subscriber, a Notary Public for the State and County aforesaid, \_\_\_\_\_, party(ies) to this Indenture, known to me personally to be such, and acknowledged this Indenture, to his/her (their) act or deed.

**GIVEN** under my Hand and Seal of office the day and year first above written.

\_\_\_\_\_  
Notary Public, State of Delaware

My Commission Expires \_\_\_\_\_