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

SHANTÉ A. HASTINGS
SECRETARY

September 5, 2025

Dawn M. Riggi, P.E.
Davis, Bowen & Friedel, Inc.
1 Park Avenue
Milford, DE 19963

Dear Ms. Riggi,

The enclosed Traffic Impact Study (TIS) review letter for the **Harrington Industrial Park** (Tax Parcels: 6-09-18005-01-5900-00001, 6-09-18000-01-0700-00001, 6-09-18000-01 -1400-00001) industrial development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Development Coordination Manual and other accepted practices and procedures for such studies. DelDOT accepts this letter and concurs with the recommendations. If you have any questions concerning this letter or the enclosed review letter, please contact me at Annamaria.Furmato@delaware.gov

Sincerely,

Annamaria Furmato
TIS Review Engineer

AF:km
Enclosures
cc with enclosures: Norman Barlow, City of Harrington
Dave Heatwole, Siteworks Engineering, LLC
Amanda Marlow, City of Harrington
Kris Connelly, Kent County Planning and Zoning
Andrew J. Parker, McCormick Taylor, Inc.
Tucker Smith, McCormick Taylor, Inc.
DelDOT Distribution

DelDOT

DelDOT Distribution

Lanie Clymer, Deputy Secretary
Mark Luszcz, Chief Engineer, Transportation Solutions (DOTS)
Brad Eaby, Deputy Attorney General, DOTS
Michael Simmons, Chief Project Development South, DOTS
Peter Haag, Chief Traffic Engineer, DOTS
Wendy Carpenter, Traffic Calming & Subdivision Relations Manager, Traffic, DOTS
Sean Humphrey, Traffic Engineer, Traffic, DOTS
Matthew Lichtenstein, Central District Engineer, M&O
Steve McCabe, Central District Public Works Manager, M&O
Jared Kaufman, Service Development Planner, DTC
Tremica Cherry, Service Development Planner, DTC
Anthony Aglio, Planning Supervisor, Active Transportation & Community Connections, Planning
Anson Gock, Planner, Statewide & Regional Planning, Planning
Todd Sammons, Assistant Director, Development Coordination
Brian Yates, Process and Quality Control Engineer, Development Coordination
Wendy Polasko, Subdivision Engineer, Development Coordination
Will Mobley, Acting Kent Review Coordinator, Development Coordination
Joshua Schwartz, Kent Review Engineer, Development Coordination
Sireen Muhtaseb, TIS Engineer, Development Coordination
Ben Fisher, TIS Review Engineer, Development Coordination
Tijah Jones, TIS Review Engineer, Development Coordination

September 3, 2025

Ms. Sireen Muhtaseb, PE
TIS Engineer
DelDOT Development Coordination
800 Bay Road
Dover, DE 19901

RE: Agreement No. 2139S
Traffic Impact Study Services
Task No. 1A Subtask 08 – Harrington Industrial Park

Dear Ms. Muhtaseb:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the Harrington Industrial Park development prepared by Davis, Bowen, & Fridel, Inc. (DBF), dated July 2025. DBF prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed Harrington Industrial Park development to be located on the north side of Messicks Road (Kent Road 432) and just east of US Route 13, in the City of Harrington, Kent County, Delaware. The proposed development would consist of 521,500 square feet of General Light Industrial. Access to the site is proposed along US Route 13 by way of Cluckey Drive. Construction is anticipated to be completed in 2032.

The subject land is located on an approximately 123.04-acre assemblage of parcels. The land is currently split-zoned as M (Manufacturing) and IMP (Industrial Park) within the City of Harrington, and the developer does not plan to rezone.

The TIS includes reference to the potential future restriction of westbound left turns at the intersection of US Route 13 at Cluckey Drive based on the trip distribution figure in the scoping memorandum. At the time of this review letter, we are not aware of any formal plans to modify this intersection or prohibit any turning movements. The TIS and this review letter include analysis of two volume scenarios at the intersection of US Route 13 at Cluckey Drive and the intersection of US Route 13 at the crossover approximately 1,100 feet north of Cluckey Drive. One scenario includes full-access from Cluckey Drive onto US Route 13 and a second scenario prohibits westbound left-turns from Cluckey Drive and those trips are redistributed through the crossover to access southbound US Route 13.

The TIS included a Traffic Signal Justification Study (TSJS) for the intersection of US Route 13 at Cluckey Drive. The developer, the City of Harrington, proposes to install a traffic signal with full access at this location. The TSJS, prepared by the developer's engineer, found that the intersection meets signal warrants under Future Build (Case 3) volumes based on Warrant 3 (peak hour). However, DelDOT does not support the installation of a traffic signal at this intersection, as neither Warrant 1 (eight-hour vehicular volume), Warrant 2 (four-hour vehicular volume), nor

Warrant 7 (crash experience) are satisfied. Additionally, this review did not find any Level of Service (LOS) deficiencies at the intersection that would necessitate mitigation. To reduce vehicular conflict points and improve truck access to southbound US Route 13, alternative intersection geometry is recommended. Specifically, the intersection should be modified to a Reduced Left-Turn Conflict Intersection (RCUT), allowing only right-turns out, along with southbound left-turns and northbound right-turns in. To implement this, the developer should construct raised channelizing islands on westbound Cluckey Drive and within the US Route 13 median to prohibit existing westbound left-turn and through movements.

Relevant and On-Going Projects and Studies

Currently, DelDOT has one relevant and ongoing project within the area of study.

DelDOT's Corridor Capacity Preservation Program (CCPP), a statewide program intended to sustain the through capacity of adopted highway corridors by various means such as limiting access points and using service roads for local vehicle trips. The general purpose of the program is to ensure that existing principal arterial roadways, including this section of US Route 13, are able to efficiently carry regional traffic without impedance from the effects of local development. The Harrington Industrial Park development proposes direct access to US Route 13, via the existing intersection with Cluckey Drive, in an area identified as Investment Level 1 in the Strategies for State Policies and Spending. More details on DelDOT's CCPP are available at the following link: https://deldot.gov/Programs/corr_cap/

Summary of Analysis Result

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

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

Intersection	***Existing Traffic Control***	***Situations for which deficiencies occur***
4. US Route 13 / Williamsville Road / Hammondtown Road	Unsignalized	2024 existing PM (Case 1) 2032 without development AM and PM (Case 2) 2032 with development AM and PM (Case 3)

4. US Route 13 / Williamsville Road / Hammondtown Road (See Table 5, Page 20)
This unsignalized intersection experiences LOS deficiencies in Case 1 on the minor westbound approach in the PM peak hour and Cases 2 and 3 on the minor eastbound and westbound approaches during the AM and PM peak hours. In Case 2 during the PM peak hour the westbound approach is expected to operate at LOS F with 58 seconds of delay and queues over 75 feet long. In Case 3 with the Harrington Industrial Park development, the westbound approach is expected to operate at LOS F with 62 seconds of delay and queues over 80 feet long. The addition of dedicated turn lanes on the minor approaches does not mitigate the LOS deficiency. Although a traffic signal may mitigate the LOS deficiency at this intersection, it is unlikely that the intersection

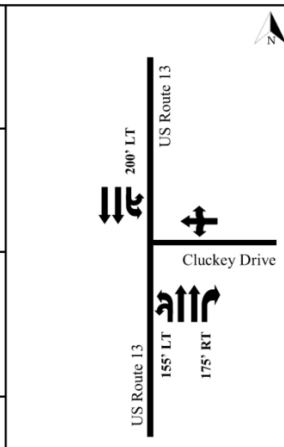
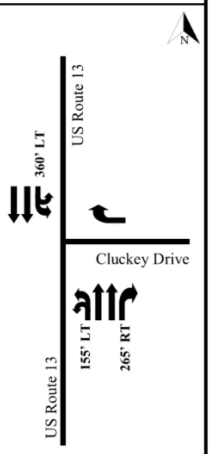
would satisfy the warrants for signalization based on volume alone. The intersection is currently being studied by DelDOT Traffic to evaluate the potential for converting the intersection into a RCUT intersection. Therefore, it is not recommended that the developer make any improvements at this intersection to address the LOS deficiencies on the minor eastbound and westbound approaches.

Development Improvements

Should the City of Harrington approve the proposed development, the following items should be incorporated into the site design and reflected on the record plan, entrance plans or construction plans by note or illustration, 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), 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 modify the existing Site Entrance at US Route 13 and Cluckey Drive to prohibit the existing westbound left-turn and through movements. To accomplish this, the developer should construct raised channelizing islands on westbound Cluckey Drive and in the US Route 13 median. The proposed configuration is shown in the table below.

Approach	Current Configuration		Approach	Proposed Configuration	
Eastbound	Approach does not exist.		Eastbound	No change	
Westbound Cluckey Drive	One shared left/ through/right turn lane. Stop controlled.		Westbound Cluckey Drive	One right turn lane. Stop controlled.	
Northbound US Route 13	One U-Turn/left turn lane, two through lanes, and one right turn lane.		Northbound US Route 13	Extended right turn lane.	
Southbound US Route 13	One U-Turn/left turn lane and two through lanes.		Southbound US Route 13	Extended left turn lane.	

At the proposed Site Entrance intersection, a northbound right-turn lane and a southbound left-turn lane are warranted on US Route 13 based on DelDOT's Auxiliary Lane Worksheet. Initial recommended minimum turn lane lengths (excluding taper) are a 265-foot northbound right-turn lane on US Route 13 and a 360-foot southbound left-turn lane on US Route 13. The developer should coordinate with DelDOT's Development Coordination Section to determine final turn lane lengths and other design details during the site plan review.

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

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

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

   c. A minimum 15-foot-wide permanent easement from the edge of the final determined right-of-way should be dedicated to DelDOT within the site frontages along US Route 13. Along the frontages, a minimum of a 10-foot wide shared-use path should be constructed. The shared-use path should meet AASHTO and ADA standards and should have a minimum of a five-foot buffer from the roadway. At the property

boundaries, the shared-use path should connect to the adjacent property or to the shoulder in accordance with DelDOT's Development Coordination Manual. The developer shall coordinate with DelDOT's Development Coordination Section through the plan review process to determine the details of the shared-use path design and connections/terminations at or before the boundaries of the property.

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

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

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

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

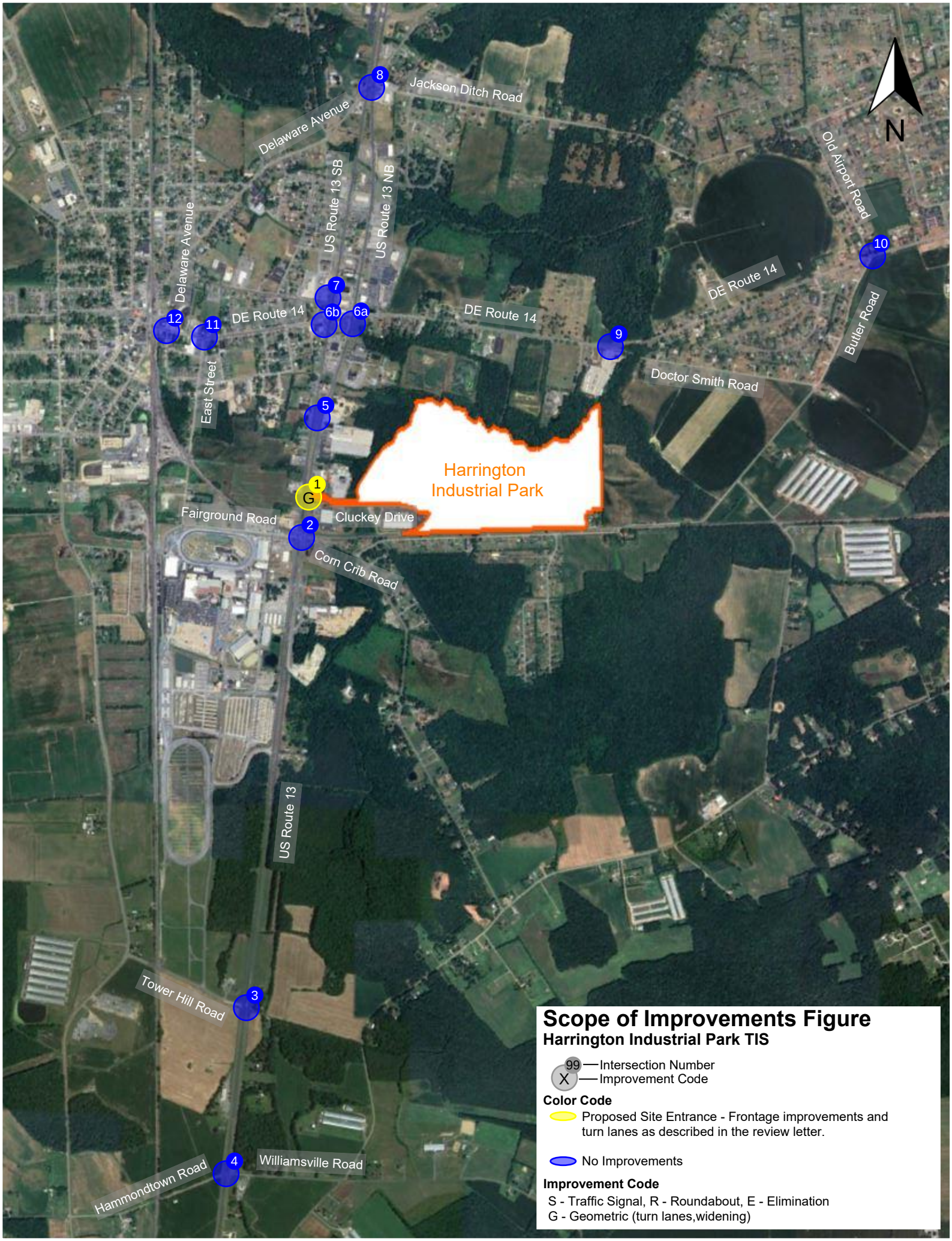
Additional details on our review of this TIS are attached. Please contact me at (610) 640-3500 or through e-mail at ajparker@mccormicktaylor.com if you have any questions concerning this review.

Sincerely,

McCormick Taylor, Inc.

Andrew J. Parker, PE, PTOE
Project Manager

Enclosure


N
Jackson Ditch Road
Delaware Avenue
Delaware Avenue
US Route 13 SB
US Route 13 NB
Old Airport Road
DE Route 14
DE Route 14
DE Route 14
Butler Road
East Street
Doctor Smith Road
Harrington
Industrial Park
Fairground Road
Cluckey Drive
Corn Crib Road
US Route 13
Tower Hill Road
Williamsville Road
Hammondtown Road
8
7
6b
6a
12
11
10
9
5
G
1
2
3
4
Scope of Improvements Figure
Harrington Industrial Park TIS
99 — Intersection Number
X — Improvement Code
Color Code
Proposed Site Entrance - Frontage improvements and turn lanes as described in the review letter.
No Improvements
Improvement Code
S - Traffic Signal, R - Roundabout, E - Elimination
G - Geometric (turn lanes,widening)

General Information

Report date: July 2025
Prepared by: Davis, Bowen, & Fridel, Inc. (DBF)
Prepared for: City of Harrington
Tax parcels: 6-09-18005-01-5900-00001, 6-09-18000-01-0700-00001, and 6-09-18000-01-1400-00001
Generally consistent with DelDOT's Development Coordination Manual: Yes

Project Description and Background

Description: The proposed Harrington Industrial Park development consists of 521,500 square feet of General Light Industrial.
Location: This site is located on the north side of Messicks Road (Kent Road 432) and just east of US Route 13, in the City of Harrington, Kent County, Delaware. A site location map is included on page 8.
Amount of land to be developed: an approximately 123.04-acre assemblage of parcels.
Land use approval(s) needed: The land is currently split-zoned as M (Manufacturing) and IMP (Industrial Park) within the City of Harrington, and the developer does not plan to rezone.
Proposed completion year: 2032
Proposed access locations: Access to the site is proposed along US Route 13 by way of Cluckey Drive.
Average Daily Traffic Volumes (per DelDOT Traffic Summary 2024):

- US Route 13: 24,844 vehicles/day


Site Location Map
Proposed Entrance
N
US Route 13
Corn Crib Road
Cluckey Drive
Messicks Road
Delaware Route 14

2020 Delaware Strategies for State Policies and Spending

Location with respect to the Strategies for State Policies and Spending Map of Delaware:
The proposed Harrington Industrial Park development is located within Investment Level 1.

Investment Level 1
Investment Level 1 areas are often municipalities, towns, or urban/urbanizing places in counties. Density is generally higher than in the surrounding areas. There are a variety of transportation opportunities available. Buildings may have mixed uses, such as a business on the first floor and apartments above.

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, to promote well-designed and efficient new growth, and to facilitate redevelopment in Investment Level 1 areas. These areas would be a prime location for designating "pre-permitted areas" to help steer development where the local government and citizens are most prepared to accept it.

Proposed Development's Compatibility with Strategies for State Policies and Spending:
The proposed Harrington Industrial Park development would include 521,500 square feet of General Light Industrial in the City of Harrington, within Investment Level 1. As such, the proposed development generally appears to comply with the guidelines for Investment Levels as described in the 2020 "Strategies for State Policies and Spending."

Comprehensive Plan

City of Harrington Comprehensive Plan:
(Source: City of Harrington Comprehensive Plan, December 2013)

The City of Harrington Comprehensive Plan Future Land Use Map indicates that the proposed Harrington Industrial Park is on land designated for Manufacturing and Industrial land uses.

Kent County Comprehensive Plan:
(Source: Kent County Comprehensive Plan, October 2018)

The Kent County Comprehensive Plan Future Land Use Map indicates that the proposed Harrington Industrial Park site is within the designated "Growth Zone Overlay" and is within the Harrington municipal boundary.

Proposed Development's Compatibility with Comprehensive Plan:
The proposed development includes 521,500 square feet of General Light Industrial on approximately 123.04-acres designated for growth and Manufacturing and Industrial land uses within the City of Harrington. As such, it would appear that the proposed Harrington Industrial Park development may fit within the intended land use for this location.

Relevant and On-Going Projects and Studies

Currently, DelDOT has one relevant and ongoing project within the area of study.

DelDOT's Corridor Capacity Preservation Program (CCPP), a statewide program intended to sustain the through capacity of adopted highway corridors by various means such as limiting access points and using service roads for local vehicle trips. The general purpose of the program is to ensure that existing principal arterial roadways, including this section of US Route 13, are able to efficiently carry regional traffic without impedance from the effects of local development. The Harrington Industrial Park development proposes direct access to US Route 13, via the existing intersection with Cluckey Drive, in an area identified as Investment Level 1 in the Strategies for State Policies and Spending. More details on DelDOT's CCPP are available at the following link: https://deldot.gov/Programs/corr_cap/

Trip Generation

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

- General Light Industrial (ITE Land Use Code 110)

Table 1
Peak Hour Trip Generation

ITE Land Use Codes	Units	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
			In	Out	Total	In	Out	Total
110	521,500 Square Feet	2,011	315	43	358	18	114	132
Total Trips		**2,011**	**315**	**43**	**358**	**18**	**114**	**132**

Overview of TIS

Intersections examined:

1) US Route 13 / Cluckey Drive (Site Entrance)
2) US Route 13 / Corn Crib Road (Kent Road 433) / Fairground Road (Kent Road 316)
3) US Route 13 / Tower Hill Road (Kent Road 315)
4) US Route 13 / Williamsville Road (Kent Road 116) / Hammondtown Road (Kent Road 311)
5) US Route 13 / Crossover (approximately 1,100 feet north of Cluckey Drive)
6) US Route 13 / Delaware Route 14 (Clark Street / Milford Harrington Highway)
    a. US Route 13 Northbound / Delaware Route 14 (Milford Harrington Highway)
    b. US Route 13 Southbound / Delaware Route 14 (Clark Street)
7) US Route 13 / E. Liberty Street (Kent Road 80)
8) US Route 13 / Jackson Ditch Road (Kent Road 430) / Delaware Avenue (Kent Road 81)
9) Delaware Route 14 (Milford Harrington Highway) / Doctor Smith Road (Kent Road 429)
10) Delaware Route 14 (Milford Harrington Highway) / Old Airport Road / Butler Road (Kent Road 350)
11) Delaware Route 14 (Clark Street) / East Street (Kent Road 350)
12) Delaware Route 14 (Clark Street) / Delaware Avenue

Conditions examined:

1) 2024 existing (Case 1)
2) 2032 without development (Case 2)
3) 2032 with development (Case 3)

Peak hours evaluated: Weekday morning and evening peak hours.

Committed developments considered:

1) **Harmill Village** (58 single-family detached houses and 103 low-rise multi-family housing units)
2) **Harrington Retail Center** (17,353 square-foot medical office building)

Intersection Descriptions

1) **US Route 13 / Cluckey Drive (Site Entrance)**
   Type of Control: Minor stop-controlled T-intersection. Proposed signal.
   Westbound Approach: (Site Entrance) existing stop-controlled, shared left/through/right-turn lane.
   Northbound Approach: (US Route 13) one U-turn/left-turn lane, two through lanes, and one right-turn lane.
   Southbound Approach: (US Route 13) one U-turn/left-turn lane and two through lanes.

2) **US Route 13 / Corn Crib Road / Fairground Road**
   Type of Control: Two-way stop-controlled intersection.
   Eastbound Approach: (Fairground Road) one right-turn lane. Stop control.
   Westbound Approach: (Corn Crib Road) one shared left-through-right turn lane. Stop Control.
   Northbound Approach: (US Route 13) one left-turn lane (stop-control), two through lanes, and one right-turn lane.
   Southbound Approach: (US Route 13) one through lane and one shared through/right-turn lane.

3) **US Route 13 / Tower Hill Road**
   Type of Control: Minor Stop-Controlled T-intersection.
   Eastbound Approach: (Tower Hill Road) one left-turn lane (stop control) and one right-turn lane (yield control).
   Northbound Approach: (US Route 13) one left-turn lane (stop control) and two through lanes.
   Southbound Approach: (US Route 13) two through lanes and one right-turn lane.

4) **US Route 13 / Williamsville Road / Hammondtown Road**
   Type of Control: Two-way stop-controlled intersection.
   Eastbound Approach: (Hammondtown Road) one shared left/through/right-turn lane. Stop control.
   Westbound Approach: (Williamsville Road) one shared left-turn/through lane (stop control) and one short channelized right-turn lane (yield control).
   Northbound Approach: (US Route 13) one left-turn lane, two through lanes, and one right-turn lane.
   Southbound Approach: (US Route 13) one left-turn lane, two through lanes, and one right-turn lane.

5) **US Route 13 / Crossover**
   Type of Control: Stop-Controlled U-Turns.
   Northbound Approach: (US Route 13) one U-turn lane (stop control) and two through lanes.
   Southbound Approach: (US Route 13) one U-turn lane (stop control) and two through lanes.

6) **US Route 13 / Delaware Route 14 (Clark Street / Milford Harrington Highway)**
   a. **Type of Control:** Signalized intersection
   Eastbound Approach: (DE Route 14) one left-turn lane and one through lane.
   Westbound Approach: (DE Route 14) one through lane and one right-turn lane.
   Northbound Approach: (US Route 13) one left-turn lane, two through lanes, and one right-turn lane.

   b. **Type of Control:** Signalized intersection
   Eastbound Approach: (DE Route 14) one through lane and one right-turn lane.
   Westbound Approach: (DE Route 14) one left-turn lane and one through lane.
   Southbound Approach: (US Route 13) one left-turn lane, two through lanes, and one right-turn lane.

7) **US Route 13 / E. Liberty Street**
   Type of Control: one-way stop control (right-in/right-out T-intersection)
   Eastbound Approach: (East Liberty Road) one right-turn lane. Stop controlled.
   Southbound Approach: (US Route 13) two through lanes and one right-turn lane.

8) **US Route 13 / Jackson Ditch Road / Delaware Avenue**
   Type of Control: Signalized intersection.
   Eastbound Approach: (Delaware Avenue) one shared left/through lane and one right-turn lane.
   Westbound Approach: (Jackson Ditch Road) one shared left-turn/through/right-turn lane.
   Northbound Approach: (US Route 13) one left-turn lane, two through lanes, and one right-turn lane.
   Southbound Approach: (US Route 13) one left-turn lane, two through lanes, and one right-turn lane.

9) **Delaware Route 14 (Milford Harrington Highway) / Doctor Smith Road**
   Type of Control: Minor Stop-Controlled T-intersection.
   Eastbound Approach: (DE Route 14) one through lane and one right-turn lane.
   Westbound Approach: (DE Route 14) shared left-turn/through lane.
   Northbound Approach: (Doctor Smith Road) one shared left-turn/right-turn lane. Stop controlled.

10) **Delaware Route 14 (Milford Harrington Highway) / Old Airport Road / Butler Road**
   Type of Control: Two-way stop-controlled intersection.
   Eastbound Approach: (DE Route 14) shared left-turn/through/right-turn lane.
   Westbound Approach: (DE Route 14) shared left-turn/through/right-turn lane.
   Northbound Approach: (Butler Road) shared left-turn/through/right-turn lane. Stop controlled.
   Southbound Approach: (Old Airport Road) shared left-turn/through/right-turn lane. Stop controlled.

11) **Delaware Route 14 (Clark Street) / East Street**
Type of Control: Minor Stop-Controlled T-intersection.
Eastbound Approach: (DE Route 14) one shared through/right-turn lane.
Westbound Approach: (DE Route 14) one shared left-turn/through lane.
Northbound Approach: (East Street) one shared left-turn/right-turn lane. Stop control.

12) **Delaware Route 14 (Clark Street) / Delaware Avenue**
Type of Control: Minor Stop-Controlled T-intersection.
Eastbound Approach: (DE Route 14) one shared left-turn/through lane.
Westbound Approach: (DE Route 14) one shared through/right-turn lane.
Southbound Approach: (Delaware Avenue) one shared left-turn/right-turn lane. Stop control.

Safety Evaluation

Crash Data: Delaware Crash Analysis Reporting System (CARS) data was provided in the TIS for the three-year period from July 22, 2021, through July 21, 2024, at the 12 study intersections. The crash data indicates that 172 crashes occurred (excluding crashes reported twice at adjacent intersections) within the study area over that timeframe. The group of intersections, including US Route 13 (northbound and southbound) at Delaware Route 14 and US Route 13 at E. Liberty Street had the highest crash frequency over the three-year period with 47 total crashes including five (5) injury crashes. The second highest frequency occurred at the signalized intersection of US Route 13 at Jackson Ditch Road / Delaware Avenue with 28 reported crashes that included seven (7) injury crashes. At the site entrance intersection of US Route 13 at Cluckey Drive there were five (5) crashes that included one (1) injury crash.

On April 27, 2022, at 10:24 am, a Fatal crash occurred at the intersection of US Route 13 at Tower Hill Road. The crash report stated that a driver failed to yield right of way.

Sight Distance: The study area generally consists of relatively flat roadways and there are few visual obstructions. As always, the adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site access.

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operates one fixed-route transit bus route (Routes 117) that travels along US Route 13. The nearest bus stops (13CC and 13FG) are located approximately 350 feet south of Cluckey Drive on east and west side of US Route 13. There are small bus pads without shelters at each stop, but no sidewalks connecting the stops to Cluckey Drive.

Planned transit service: Delaware Transit Corporation (DTC) has not provided any comments on this TIS as of 8/14/2025.

Existing bicycle and pedestrian facilities: According to DelDOT's Kent County Bicycle Map, Corn Crib Road is a Statewide Bicycle Route without a Bikeway, Delaware Route 14 is a Regional Bicycle Route with a Bikeway and high AADT, and US Route 13 is a Connector Bicycle Route Suggestion with Bikeway and high AADT. There are existing sections of sidewalk along Delaware Route 14, but nothing along US Route 13 or Cluckey Drive near the proposed development.

Planned bicycle and pedestrian facilities: The developer is expected to construct a 10-foot wide shared use path along the projected frontage on US Route 13.

Previous Comments

The initial scoping memorandum between the developer and DelDOT was dated August 23, 2022.

In a review letter dated May 28, 2024, DelDOT commented on the traffic counts and seasonally adjusted traffic volumes. The developer was asked to revise somethings related to committed development, apply the growth factors provided, and resubmit the traffic counts.

Following the first review letter, there were several email exchanges between DelDOT and the developer that discussed the distribution of committed development site trips. The developer did not submit the traffic counts a second time.

In a second review letter dated September 19, 2024, DelDOT commented on the Preliminary TIS. DelDOT clarified previous comments made in the review letter dated May 28, 2024. Additionally, DelDOT requested revisions to some volume figures and narrative in the report. The developer was then directed to resubmit the Preliminary TIS.

In a third review letter dated October 15, 2024, DelDOT found the Preliminary TIS to be acceptable as submitted and directed the developer to proceed to the Final TIS.

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

General HCS Analysis Comments

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

1) Both the TIS and McCormick Taylor utilized Highway Capacity Manual (HCM) methodology to complete the traffic analyses. McCormick Taylor used Synchro software and the TIS used Highway Capacity Software (HCS).

2) The TIS and McCormick Taylor generally used heavy vehicle percentages (HV%) from turning movement counts for existing and future conditions (as per DelDOT's Development Coordination Manual section 2.2.8.11.6.H). McCormick Taylor and the TIS used HV % based on forecasted traffic composition for future movements and at the proposed site entrance.

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

Table 2
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [1] **One-Way Stop (T-intersection)**	**LOS per TIS**		**LOS per McCormick Taylor**	
1. US Route 13 / Cluckey Drive (Site Entrance)	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1) – Stop Control w/ Full Access				
Westbound Cluckey Drive (Site Entrance)	B (13.5)	C (16.5)	B (13.2)	C (15.6)
Northbound US 13 – U-turn/Left	B (12.2)	C (15.2)	B (12.0)	B (14.6)
Southbound US 13 – U-turn/Left	B (13.0)	C (16.8)	B (13.0)	C (16.3)
2032 No Build (Case 2) – Stop Control w/ Full Access				
Westbound Cluckey Drive (Site Entrance)	B (14.1)	C (18.1)	B (13.8)	C (17.0)
Northbound US 13 – U-turn/Left	B (13.1)	C (16.8)	B (12.8)	C (16.0)
Southbound US 13 – U-turn/Left	B (14.1)	C (19.1)	B (14.2)	C (18.5)
2032 Build (Case 3) – Stop Control w/ No WB Left				
Westbound Cluckey Drive (Site Entrance)	B (12.9)	B (12.9)	B (13.0)	C (16.8)
Northbound US 13 – U-turn/Left	B (13.3)	B (13.3)	B (13.6)	C (18.0)
Southbound US 13 – U-turn/Left	C (16.9)	C (16.9)	C (17.6)	C (23.5)
2032 Build (Case 3) – Stop Control w/ Full Access				
Westbound Cluckey Drive (Site Entrance)	D (27.7)	E (36.4)	C (24.7)	D (32.2)
Northbound US 13 – U-turn/Left	B (13.3)	C (16.8)	B (13.3)	C (16.8)
Southbound US 13 – U-turn/Left	C (17.9)	C (20.5)	C (17.2)	C (20.5)
2032 Build (Case 3) – Signal w/ Full Access				
Overall	B (18.5)	C (22.0)	B (11.2)	A (9.0)

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

Table 3
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [2] Two-Way Stop	**LOS per TIS**		**LOS per McCormick Taylor**	
2. US Route 13 / Corn Crib Road / Fairground Road	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Eastbound Fairground Road	B (10.8)	B (12.7)	B (11.0)	B (12.3)
Westbound Corn Crib Road	C (16.4)	C (22.8)	C (15.9)	C (20.1)
Northbound US 13 – Left	A (9.3)	B (10.6)	A (9.1)	A (9.9)
2032 No Build (Case 2)				
Eastbound Fairground Road	B (11.2)	B (13.4)	B (11.4)	B (12.9)
Westbound Corn Crib Road	C (17.9)	D (26.8)	C (17.2)	C (22.9)
Northbound US 13 – Left	A (9.6)	B (11.2)	A (9.4)	B (10.4)
2032 Build (Case 3)				
Eastbound Fairground Road	B (11.4)	B (13.8)	B (11.6)	B (13.2)
Westbound Corn Crib Road	C (19.6)	D (27.6)	C (18.7)	C (23.4)
Northbound US 13 – Left	A (9.6)	B (11.5)	A (9.5)	B (10.6)

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

Table 4
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [3] **One-Way Stop (T-intersection)**	**LOS per TIS**		**LOS per McCormick Taylor**	
3. US Route 13 / Tower Hill Road	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Eastbound Tower Hill Road	B (12.5)	B (12.4)	B (12.7)	B (12.5)
Northbound US 13 – Left	A (9.8)	B (10.3)	B (9.7)	B (10.5)
2032 No Build (Case 2)				
Eastbound Tower Hill Road	B (12.7)	B (13.0)	B (15.0)	B (13.1)
Northbound US 13 – Left	B (10.1)	B (10.9)	B (10.1)	B (11.2)
2032 Build (Case 3)				
Eastbound Tower Hill Road	B (12.9)	B (13.3)	C (16.3)	B (13.4)
Northbound US 13 – Left	B (10.2)	B (11.2)	B (10.2)	B (11.4)

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

Table 5
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [4] **Two-Way Stop**	**LOS per TIS**		**LOS per McCormick Taylor**	
4. US Route 13 / Williamsville Road / Hammondtown Road	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Eastbound Hammondtown Road	C (24.1)	D (34.0)	C (23.5)	D (33.0)
Westbound Williamsville Road	C (20.1)	D (27.0)	D (29.8)	E (43.6)
Northbound US 13 – Left	A (9.1)	B (11.2)	A (9.0)	A (9.8)
Southbound US 13 – Left	A (9.7)	B (10.4)	A (10.0)	B (10.4)
2032 No Build (Case 2)				
Eastbound Hammondtown Road	D (27.3)	E (41.0)	D (26.6)	E (40.0)
Westbound Williamsville Road	C (24.0)	E (35.3)	E (36.0)	F (57.8)
Northbound US 13 – Left	A (9.4)	B (11.8)	A (9.3)	B (10.2)
Southbound US 13 – Left	B (10.0)	B (11.0)	B (10.3)	B (10.9)
2032 Build (Case 3)				
Eastbound Hammondtown Road	D (31.3)	E (44.0)	D (30.4)	E (43.0)
Westbound Williamsville Road	C (24.8)	E (37.8)	E (41.2)	F (62.3)
Northbound US 13 – Left	A (9.5)	B (12.1)	A (9.4)	B (10.4)
Southbound US 13 – Left	B (10.4)	B (11.1)	B (10.8)	B (11.0)

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

Table 6
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [5] Two-Way Stop (U-turns)	**LOS per TIS**		**LOS per McCormick Taylor**	
5. US Route 13 / Crossover	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Northbound US 13 – U-turn/Left	B (12.8)	C (15.1)	B (11.9)	B (12.2)
Southbound US 13 – U-turn/Left	B (13.3)	C (16.8)	B (11.5)	B (13.0)
2032 No Build (Case 2)				
Northbound US 13 – U-turn/Left	B (13.7)	C (16.6)	B (12.4)	B (12.8)
Southbound US 13 – U-turn/Left	B (14.3)	C (18.8)	B (11.9)	B (13.7)
2032 Build (Case 3) – w/ Cluckey Dr WB Lefts Restricted				
Northbound US 13 – U-turn/Left	C (18.4)	C (20.1)	B (14.3)	B (14.1)
Southbound US 13 – U-turn/Left	B (14.7)	C (20.3)	B (12.6)	C (16.8)
2032 Build (Case 3) – w/ Cluckey Dr WB Lefts Permitted				
Northbound US 13 – U-turn/Left	C (16.5)	C (17.0)	B (14.3)	B (14.1)
Southbound US 13 – U-turn/Left	B (14.7)	C (20.3)	B (12.6)	C (16.1)

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

Table 7
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Signalized Intersection [6]	**LOS per TIS** [7]		**LOS per McCormick Taylor** [8]	
6a. US Route 13 / Delaware Route 14 (Clark Street / Milford Harrington Highway)	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Overall	B (18.1)	C (21.7)	C (20.8)	C (22.5)
2032 No Build (Case 2)				
Overall	B (19.1)	C (22.7)	C (22.4)	C (24.6)
2032 Build (Case 3)				
Overall	C (29.1)	C (22.9)	C (25.2)	C (22.8)

[6] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[7] The TIS modeled the intersections of US Route 13 NB at DE Route 14 and US Route 13 SB at DE Route 14 as one intersection. The results (LOS per TIS) presented in Table 7 and Table 8 are the same.
[8] MT results were developed using clustered intersections in Synchro Software.

Table 8
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Signalized Intersection [9]	**LOS per TIS** [10]		**LOS per McCormick Taylor** [11]	
6b. US Route 13 / Delaware Route 14 (Clark Street / Milford Harrington Highway)	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Overall	B (18.1)	C (21.7)	B (19.7)	C (20.9)
2032 No Build (Case 2)				
Overall	B (19.1)	C (22.7)	C (21.0)	C (22.4)
2032 Build (Case 3)				
Overall	C (29.1)	C (22.9)	C (24.0)	C (22.8)

[9] For both unsignalized and signalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds. For signalized analyses, LOS analysis results are given for only the overall intersection delay.
[10] The TIS modeled the intersections of US Route 13 NB at DE Route 14 and US Route 13 SB at DE Route 14 as one intersection. The results (LOS per TIS) presented in Table 7 and Table 8 are the same.
[11] MT results were developed using clustered intersections in Synchro Software.

Table 9
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [12] **One-Way Stop (right-in/right-out T-intersection)**	**LOS per TIS**		**LOS per McCormick Taylor**	
7. US Route 13 / E. Liberty Street	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Eastbound E. Liberty Street – Right	B (10.8)	B (12.6)	B (11.0)	B (13.0)
2032 No Build (Case 2)				
Eastbound E. Liberty Street – Right	B (11.1)	B (13.3)	B (11.5)	B (13.0)
2032 Build (Case 3)				
Eastbound E. Liberty Street – Right	B (11.6)	B (13.4)	B (12.0)	B (14.1)

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

Table 10
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Signalized Intersection [13]	**LOS per TIS**		**LOS per McCormick Taylor**	
8. US Route 13 / Jackson Ditch Road / Delaware Avenue	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Overall	D (40.0)	D (39.5)	C (24.4)	C (21.1)
2032 No Build (Case 2)				
Overall	D (46.4)	D (42.3)	C (26.4)	C (23.6)
2032 Build (Case 3)				
Overall	D (54.4)	D (43.5)	C (29.0)	C (24.5)

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

Table 11
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [14] One-Way Stop (T-intersection)	**LOS per TIS**		**LOS per McCormick Taylor**	
9. Delaware Route 14 (Milford Harrington Highway) / Doctor Smith Road	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Westbound DE 14 – Left	A (7.9)	A (8.2)	A (7.9)	A (8.1)
Northbound Doctor Smith Road	B (12.7)	C (15.6)	B (12.9)	C (15.2)
2032 No Build (Case 2)				
Westbound DE 14 – Left	A (8.1)	A (8.3)	A (8.1)	A (8.3)
Northbound Doctor Smith Road	B (13.9)	C (17.0)	B (14.2)	C (17.4)
2032 Build (Case 3)				
Westbound DE 14 – Left	A (8.1)	A (8.3)	A (7.9)	A (8.1)
Northbound Doctor Smith Road	B (14.9)	C (17.5)	B (12.9)	C (15.2)

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

Table 12
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [15] Two-Way Stop	**LOS per TIS**		**LOS per McCormick Taylor**	
10. Delaware Route 14 (Milford Harrington Highway) / Old Airport Road / Butler Road	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Eastbound DE 14 – Left	A (7.9)	A (8.2)	A (8.0)	A (8.2)
Westbound DE 14 – Left	A (7.9)	A (8.0)	A (7.8)	A (8.1)
Northbound Butler Road	B (11.9)	B (14.4)	B (12.3)	B (15.0)
Southbound Old Airport Road	C (17.8)	C (21.7)	C (18.2)	C (22.4)
2032 No Build (Case 2)				
Eastbound DE 14 – Left	A (8.0)	A (8.4)	A (8.1)	A (8.4)
Westbound DE 14 – Left	A (8.0)	A (8.2)	A (8.0)	A (8.3)
Northbound Butler Road	B (12.8)	C (16.6)	B (13.3)	C (17.5)
Southbound Old Airport Road	C (21.0)	D (27.5)	C (21.6)	D (28.6)
2032 Build (Case 3)				
Eastbound DE 14 – Left	A (8.1)	A (8.4)	A (8.0)	A (8.2)
Westbound DE 14 – Left	A (8.0)	A (8.2)	A (7.8)	A (8.1)
Northbound Butler Road	B (13.3)	C (17.1)	B (12.3)	B (15.0)
Southbound Old Airport Road	C (23.1)	D (29.0)	C (18.2)	C (22.4)

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

Table 13
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [16] **One-Way Stop (T-intersection)**	**LOS per TIS**		**LOS per McCormick Taylor**	
11. Delaware Route 14 (Clark Street) / East Street	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Westbound DE 14 – Left	A (8.0)	A (7.9)	A (7.9)	A (7.9)
Northbound East Street	B (12.0)	B (12.5)	B (11.5)	B (12.1)
2032 No Build (Case 2)				
Westbound DE 14 – Left	A (8.0)	A (8.0)	A (7.9)	A (7.9)
Northbound East Street	B (12.2)	B (13.0)	B (11.9)	B (12.6)
2032 Build (Case 3)				
Westbound DE 14 – Left	A (8.1)	A (8.0)	A (8.0)	A (7.9)
Northbound East Street	B (12.7)	B (13.2)	B (12.3)	B (12.7)

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

Table 14
Peak Hour Levels of Service (LOS)
Based on the Harrington Industrial Park TIS
Prepared by DBF – July 2025

Unsignalized Intersection [17] **One-Way Stop (T-intersection)**	**LOS per TIS**		**LOS per McCormick Taylor**	
12. Delaware Route 14 (Clark Street) / Delaware Avenue	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2024 Existing (Case 1)				
Eastbound DE 14 – Left	A (8.0)	A (8.1)	A (8.0)	A (8.1)
Southbound Delaware Avenue	B (13.1)	B (13.2)	B (12.4)	B (13.3)
2032 No Build (Case 2)				
Eastbound DE 14 – Left	A (8.0)	A (8.2)	A (8.0)	A (8.2)
Southbound Delaware Avenue	B (13.3)	B (13.9)	B (12.9)	B (14.0)
2032 Build (Case 3)				
Eastbound DE 14 – Left	A (8.0)	A (8.2)	A (8.1)	A (8.2)
Southbound Delaware Avenue	B (13.6)	B (14.1)	B (13.8)	B (14.2)

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