



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

NICOLE MAJESKI
SECRETARY

May 24, 2021

Mr. Michael Kaszyski
Duffield Associates, Inc.
5400 Limestone Road
Wilmington, DE 19808-1232

Dear Mr. Kaszyski:

The Department has completed its review of the Traffic Impact Study (TIS) for the Incyte Office Expansion (Protocol Tax Parcel 06-136.00-028), prepared by your firm and dated September 2020. The report was prepared in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed development, proposed to be located on the Augustine Cut-Off, just outside of the City of Wilmington, in New Castle County.

The proposed development would consist of the addition of office and laboratory space to the existing site to serve an additional 1,200 employees. The expansion would be constructed on an approximately 31.00-acre parcel (Tax Parcel 06-136.00-028) and would replace the existing Wilmington Friends Lower School campus. Three access points, all existing, are to be utilized for the development on the Augustine Cut-Off: one across from West 18th Street, one just north of Stone Hill Road, and one across from Cantera Road. Construction is planned in three phases: the first phase proposes to add 600 employees to the site in 2023; the second phase proposes to add 300 employees to the site in 2025; and the third phase proposes to add 300 employees to the site in 2027.

The land is currently split-zoned as S (Suburban) and OR (Office Regional) in New Castle County, and the developer proposes to rezone the S portion of the site to OR.

Currently, there are no DelDOT projects within the area of study.

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

Four intersections were identified by DelDOT and New Castle County as being required for study to satisfy the level of service (LOS) requirements for both the New Castle County Unified Development Code (UDC) and DelDOT's Development Coordination Manual (DCM). Four



additional intersections were identified by New Castle County as being required to satisfy the LOS requirements of New Castle County’s UDC, while seven additional intersections were identified by DelDOT as being required for study to satisfy the LOS requirements of DelDOT’s DCM. All fifteen intersections are listed in the enclosures.

Of the intersections analyzed in the study, the following exhibit LOS deficiencies:

Intersection	Scenarios for which the deficiencies occur:
North Site Entrance / Augustine Cut-Off / Cantera Road	AM & PM Peak Hour – 2020 Existing, 2023 without development, 2023 with Phase I of development, 2025 with Phase II of development, 2027 with Phase III of development
Middle Site Entrance / Augustine Cut-Off	AM Peak Hour – 2023 with Phase I of development, 2025 with Phase II of development, 2027 with Phase III of development PM Peak Hour – 2020 Existing, 2023 without development, 2023 with Phase I of development, 2025 with Phase II of development, 2027 with Phase III of development
Augustine Cut-Off / Edgewood Drive	AM & PM Peak Hour – 2020 Existing, 2023 without development, 2023 with Phase I of development, 2025 with Phase II of development, 2027 with Phase III of development
West Park Drive / Rockland Road	AM & PM Peak Hour – 2020 Existing, 2023 without development, 2023 with Phase I of development, 2025 with Phase II of development, 2027 with Phase III of development
West Park Drive / Powder Mill Road	AM & PM Peak Hour – 2025 with Phase II of development, 2027 with Phase III of development

At the North Site Entrance / Augustine Cut-Off / Cantera Road intersection, the deficiencies occur along the minor streets (North Site Entrance and Cantera Road) of the intersection. The LOS for the North Site Entrance approach is lower than LOS D for all of the scenarios listed above, while the LOS for the Cantera Road approach is lower than LOS D for the future Phase I, Phase II and Phase III future build scenarios only. There is also significant vehicle queuing along the North Site Entrance approach. To mitigate the deficient LOS and vehicle queuing issues, the developer proposes to prohibit the eastbound left-turn along the North Site Entrance approach, where vehicles wanting to make the left-turn would utilize one of the other site entrances to the south. After review, we concur with the developer’s proposal, and will require that this movement be prohibited at the intersection.

At the Middle Site Entrance / Augustine Cut-Off intersection, the deficiencies occur along the minor street (Middle Site Entrance) of the intersection. The LOS for the Middle Site Entrance approach is lower than LOS D for the Phase I, Phase II, and Phase III future build scenarios during the a.m. peak hour, and for all of the scenarios listed above for the p.m. peak hour. To mitigate

the deficient LOS, the developer proposes to install a signal at the intersection along with realigning Stone Hill Road to form a new easterly leg at the intersection. To this end, the developer submitted a traffic signal justification study during the course of the TIS review to support their proposal. After review, DelDOT's Traffic Section concurred that this proposal was acceptable. Therefore, we will require the developer to install a signal at the intersection in addition to realigning Stone Hill Road as mentioned above.

At the Augustine Cut-Off / Edgewood Drive intersection, the deficiencies occur along the minor street (Edgewood Drive) of the intersection. While the LOS for the minor street approach is lower than LOS D, the vehicle queues along the minor street are shorter than 150 feet for all of the scenarios listed above. This intersection is two-way stop-controlled, meaning that it consists of a major street where through traffic does not stop and a minor street where traffic must stop before proceeding. It is common for the minor street to experience such LOS and queues, and where the minor street volume does not warrant different traffic control, e.g., a roundabout or signal, there is often no remedy. Therefore, we do not recommend any improvements for this intersection.

At the West Park Drive / Rockland Road intersection, the deficiencies occur along the minor street (Rockland Road) of the intersection. The LOS for the minor street approach is lower than LOS D, and there is significant vehicle queuing along the minor street for all of the scenarios listed above. The geometry of West Park Drive and the proximity of the intersection to Powder Mill Road are such that simple remedies such as adding signals or turning lanes are not feasible without significant realignments of both roads. The level of effort required to improve this intersection is beyond what we could reasonably require the developer to do. Therefore, we do not recommend any improvements for this intersection.

At the West Park Drive / Powder Mill Road intersection, the deficiencies occur during both the a.m. and p.m. peak hours for the Phase II and Phase III future build scenarios listed above. The LOS is lower than LOS D, and there is significant vehicle queuing along each of the approaches for these scenarios. As this intersection is signalized and in close proximity to other signalized intersections along Powder Mill Road, the improvements required to address these issues would involve intersections beyond the scope of this study and possibly reconfiguring the Powder Mill Road interchange with Concord Pike. Again, the improvements are beyond what we could reasonably require the developer to do. Therefore, we do not recommend any improvements for this intersection.

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

1. The developer shall reconfigure the North Site Entrance / Augustine Cut-Off / Cantera Road intersection so that the eastbound left-turn along the site entrance approach is prohibited. The developer should coordinate with DelDOT's Development Coordination Section on the details of the reconfiguration.

2. The developer shall realign Stone Hill Road so that it forms a fourth leg with the Middle Site Entrance / Augustine Cut-Off intersection. The developer should coordinate with DelDOT's Development Coordination and Traffic Sections on the details of the realignment.
3. The developer shall enter into a signal agreement with DelDOT for the realigned Middle Site Entrance / Augustine Cut-Off / Stone Hill Road intersection as described in item 2. Under this agreement, the developer will be solely responsible for the installation of this signal.
4. Roadway improvements to the Augustine Cut-Off within the limits of the site frontage that were previously identified in the TIS review letters for the previous expansions (dated 2/23/16 and 6/17/19; copies attached) shall be completed prior to the beginning of construction of Phase I of the development.
5. During the Entrance Plan review process, DelDOT will determine whether a bituminous concrete overlay of the existing travel lanes will be needed on Augustine Cut-Off along the limits of the site frontage. If DelDOT determines that an overlay is needed, the developer shall provide an overlay within the limits specified by DelDOT and of a thickness specified by DelDOT.
6. The developer shall coordinate with DelDOT's Development Coordination Section early in the plan review process to determine if any bicycle, pedestrian, and / or transit facilities are needed.

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://www.deldot.gov/information/pubs_forms/manuals/de_mutcd/index.shtml. For any additional information regarding the work zone impact and mitigation procedures during construction please contact Mr. Don Weber of DelDOT's Traffic Section. Mr. Weber can be reached at (302) 659-4651 or by email at Don.Weber@delaware.gov.

Mr. Michael Kaszyski
May 24, 2021
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Additional details on our review of this TIS are enclosed. If you have any questions concerning this review, please contact me at (302) 760-2167. My email is Troy.Brestel@delaware.gov.

Sincerely,



Troy Brestel
Project Engineer

TEB:km

Enclosures

cc with enclosures: Ms. Deirdre Smith, Duffield Associates, Inc.
Ms. Tigist Zegeye, WILMAPCO
Mr. Daniel Blevins, WILMAPCO
Mr. George Haggerty, New Castle County Department of Land Use
Mr. Owen Robatino, New Castle County Department of Land Use
Mr. Mark Wolanski, Jr., New Castle County Department of Land Use
Mr. Brian Mitchell, City of Wilmington
Mr. Brad Eaby, Deputy Attorney General
Ms. Shanté Hastings, Director, Transportation Solutions (DOTS)
Mr. J. Marc Coté, Director, Planning
Mr. Mark Luszcz, Deputy Director, DOTS
Ms. Pamela Steinebach, Assistant Director, Project Development North,
DOTS
Mr. Todd Sammons, Assistant Director, Development Coordination
Mr. T. William Brockenbrough, Jr., County Coordinator, Development
Coordination
Mr. Peter Haag, Chief Traffic Engineer, Traffic, DOTS
Mr. Don Weber, Assistant Director, Traffic, DOTS
Mr. Jared Kauffman, Service Development Planner, Delaware Transit
Corporation
Mr. Anthony Aglio, Planning Supervisor, Statewide & Regional Planning
Ms. Wendy Polasko, Subdivision Engineer, Development Coordination
Ms. Sireen Muhtaseb, New Castle County Review Coordinator,
Development Coordination
Mr. Jun Xie, Subdivision Manager, Development Coordination
Mr. Claudy Joinville, Project Engineer, Development Coordination
Ms. Annamaria Fumato, Project Engineer, Development Coordination

General Information

Report date: September, 2020

Prepared by: Duffield Associates, Inc.

Prepared for: The Incyte Corporation

Tax Parcel: Tax Parcel 06-136.00-028

Generally consistent with DelDOT's Development Coordination Manual: Yes

Project Description and Background

Description: 1,200-employee office (research and development) building

Location: 20 Granite Road, Wilmington, New Castle County

Amount of land to be developed: approximately 21 acres of an approximately 31-acre parcel

Current zoning: S (Suburban) and OR (Office Regional)

Proposed zoning: OR (Office Regional)

Land use approval(s) needed: County approval

Proposed completion date: 2027

Proposed access locations: Three along the Augustine Cut-Off

Livable Delaware

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

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

The proposed location of the development is located within Investment Level 1.

Description of Investment Level: *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 other 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 citizens are most prepared to accept it.

Concerning transportation, 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. Additionally, Level 1 areas are a first priority for planning projects and studies, bicycle facilities, signal-system enhancements, the promotion of interconnectivity of

neighborhoods and public facilities. Street design and access should also be compatible to the context of an area.

Proposed Development’s Compatibility with Livable Delaware: Based on the above description, it appears that this development proposal is generally consistent with the 2020 update of the Livable Delaware “Strategies for State Policies and Spending.”

Comprehensive Plans

The proposed development is located within New Castle County.

New Castle County Comprehensive Plan: (Source: New Castle County Comprehensive Plan Update, 2012)

The site is located in an area with a Future Land Use designated as an Office / Commercial / Industrial Development Area (OCI).

Proposed Development’s Compatibility with Comprehensive Plan: Based on the above description, the proposed development generally adheres to the New Castle County Comprehensive Plan.

Trip Generation

Table 1
Trip Generation for the Incyte Office Expansion
Based on Site Data

Land Use	Morning Peak Hour			Evening Peak Hour		
	In	Out	Total	In	Out	Total
<i>1,200-employee research and development center</i>	423	69	492	48	432	480

Overview of TIS

The following intersections were included to satisfy the conditions set forth in the Development Coordination Manual and New Castle County's Unified Development Code.

- 1) North Site Entrance / Augustine Cut-Off (New Castle Road 49) / Cantera Road
- 2) Middle Site Entrance / Augustine Cut-Off
- 3) South Site Entrance / Augustine Cut-Off / West 18th Street (New Castle Road 504)
- 4) Augustine Cutoff / Alapocas Drive (New Castle Road 268)

The following intersections were included to satisfy the conditions set forth in New Castle County's Unified Development Code. They were not needed to satisfy the conditions set forth in the Development Coordination Manual.

- 5) Alapocas Drive / School Road
- 6) Alapocas Drive / Edgewood Road
- 7) Augustine Cut-Off / Edgewood Drive
- 8) Augustine Cut-Off / West Park Drive (New Castle Road 49) / US Route 202 Connector

The following intersections were included to satisfy the conditions set forth in the Development Coordination Manual. They were not needed to satisfy the conditions set forth in New Castle County's Unified Development Code.

- 9) Augustine Cut-Off / Lovering Avenue (New Castle Road 49)
- 10) West 18th Street / North Broom Street (New Castle Road 217)
- 11) West 18th Street / Baynard Boulevard (New Castle Road 44)
- 12) North Broom Street / US Route 202
- 13) North Broom Street / Baynard Boulevard
- 14) West Park Drive / Rockland Road (New Castle Road 232)
- 15) West Park Drive / Powder Mill Road (New Castle Road 267)

Conditions examined:

- 1) Existing (2020)
- 2) 2023 without proposed development
- 3) 2023 with development of Phase I (up to 600 employees)
- 4) 2025 with development of Phase II (up to 900 employees)
- 5) 2027 with development of Phase III (up to 1,200 employees)

Peak hours evaluated: All intersections were examined during the weekday morning and weekday evening peak hours.

Committed developments considered:

- 1) Morgan / AstraZeneca (832,073 square feet of office space)
- 2) DuPont Experimental Station (1,069,974 square feet of office space)
- 3) Rockford Falls (343 condominiums, 32 townhouses)
- 4) Avenue North (335 apartments, 977,000 square feet of office space, 179,000 square feet of retail, 45,000 square feet of restaurant space, 200-room hotel, 80-student day care, 12,000 square foot fitness club)
- 5) Incyte Campus Expansion (444-employee research and development center)

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Currently, local transit service is provided on 18th Street, North Broom Street, and Baynard Boulevard in Wilmington.

Planned transit service: Per item 6 on page 4 of this document, the developer shall coordinate with DelDOT's Development Coordination Section early in the plan review process to determine if any bicycle, pedestrian, and / or transit facilities are needed.

Existing bicycle and pedestrian facilities: The New Castle County Bicycle Map indicates that the Augustine Cut-Off, 18th Street, North Broom Street, West Park Drive, Rockland Road and Alapocas Road are considered Connector Bicycle Routes. Augustine Cut-Off has a separate bikeway. There are also off-road trails in the area.

Planned bicycle and pedestrian facilities: Per item 6 on page 4 of this document, the developer shall coordinate with DelDOT's Development Coordination Section early in the plan review process to determine if any bicycle, pedestrian, and / or transit facilities are needed.

General HCS Analysis Comments

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

- 1) For various scenarios analyzed, the Consultant did not utilize the peak hour factors (PHF) correctly. The PHFs should be utilized in accordance with Chapter 2 of the DCM.
- 2) For various scenarios analyzed, the Consultant did not utilize the heavy vehicle percentages correctly. The heavy vehicle percentages should be utilized in accordance with Chapter 2 of the DCM.

Table 2
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Unsignalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
North Site Entrance / Augustine Cut-Off / Cantera Road				
2020 Existing				
Northbound Augustine Cut-Off Left-Turn	A (9.5)	A (8.7)	A (9.9)	A (8.7)
Southbound Augustine Cut-Off Left-Turn	A (8.7)	A (9.0)	A (8.9)	A (8.9)
Eastbound Site Entrance	D (30.8)	F (94.2)	E (42.6)	F (90.8)
Westbound Cantera Road	C (19.1)	C (19.4)	D (27.0)	C (19.2)
2023 without development				
Northbound Augustine Cut-Off Left-Turn	B (10.1)	A (9.5)	B (10.0)	A (9.4)
Southbound Augustine Cut-Off Left-Turn	A (9.3)	A (9.5)	A (9.2)	A (9.4)
Eastbound Site Entrance	E (48.8)	F (346.2)	F (51.5)	F (334.6)
Westbound Cantera Road	D (26.6)	D (27.5)	D (31.7)	D (27.2)
2023 with Phase I of development				
Northbound Augustine Cut-Off Left-Turn	B (10.5)	A (9.5)	B (10.8)	A (9.4)
Southbound Augustine Cut-Off Left-Turn	A (9.3)	A (9.8)	A (9.3)	A (9.7)
Eastbound Site Entrance	F (62.3)	F (544.8)	F (81.8)	F (554.8)
Westbound Cantera Road	D (29.2)	D (30.3)	E (40.0)	D (29.8)
2025 with Phase II of development				
Northbound Augustine Cut-Off Left-Turn	B (10.7)	A (9.5)	B (10.8)	A (9.8)
Southbound Augustine Cut-Off Left-Turn	A (9.4)	A (9.9)	A (9.6)	A (10.0)
Eastbound Site Entrance	F (71.5)	F (687.8)	F (95.8)	F (926.7)
Westbound Cantera Road	D (31.3)	D (32.2)	E (45.2)	E (36.3)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 2 (continued)
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Unsignalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
North Site Entrance / Augustine Cut-Off / Cantera Road				
2027 with Phase III of development				
Northbound Augustine Cut-Off Left-Turn	B (11.0)	A (9.6)	B (11.0)	A (9.8)
Southbound Augustine Cut-Off Left-Turn	A (9.4)	B (10.1)	A (9.6)	B (10.2)
Eastbound Site Entrance	F (85.2)	F (852.9)	F (106.2)	F (1131.1)
Westbound Cantera Road	D (33.5)	D (34.4)	E (48.4)	E (38.9)
2027 with Phase III of development – with proposed mitigation ²				
Northbound Augustine Cut-Off Left-Turn	(N/I)	(N/I)	B (11.0)	A (9.8)
Southbound Augustine Cut-Off Left-Turn	(N/I)	(N/I)	A (9.7)	B (10.9)
Eastbound Site Entrance	C (17.7)	C (15.1)	C (17.9)	C (16.1)
Westbound Cantera Road	D (33.5)	D (34.4)	E (49.6)	E (48.3)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

² Proposed mitigation includes modifying the eastbound site entrance to allow rights-in / rights-out / lefts-in traffic only.

Table 3
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Unsignalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Middle Site Entrance / Augustine Cut-Off				
2020 Existing				
Northbound Augustine Cut-Off Left-Turn	A (9.4)	A (8.7)	A (9.4)	A (8.7)
Eastbound Site Entrance	C (24.3)	F (85.8)	C (20.6)	E (40.8)
2023 without development				
Northbound Augustine Cut-Off Left-Turn	B (10.1)	A (9.8)	B (10.1)	A (9.8)
Eastbound Site Entrance	E (41.7)	F (*)	D (31.6)	F (235.6)
2023 with Phase I of development				
Northbound Augustine Cut-Off Left-Turn	B (10.6)	A (9.8)	B (10.6)	A (9.8)
Eastbound Site Entrance	F (75.7)	F (*)	F (50.3)	F (*)
2025 with Phase II of development				
Northbound Augustine Cut-Off Left-Turn	B (11.0)	A (9.9)	B (11.0)	A (9.9)
Eastbound Site Entrance	F (102.2)	F (*)	F (63.1)	F (*)
2027 with Phase III of development				
Northbound Augustine Cut-Off Left-Turn	B (11.4)	A (9.9)	B (11.4)	A (9.9)
Eastbound Site Entrance	F (137.9)	F (*)	F (79.7)	F (*)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 4
PEAK HOUR LEVELS OF SERVICE (LOS)
Incyte – Campus Expansion
Prepared by Duffield Associates, Inc.

Signalized Intersection¹	LOS per TIS²		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Middle Site Entrance / Augustine Cut-Off / Stone Hill Road ³				
2027 with Phase III of development	A (3.4)	C (27.5)	B (12.0)	D (46.7)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

² Results were taken from traffic signal justification study that was submitted on April 14, 2021.

³ In this scenario, Stone Hill Road would be realigned to form the fourth leg of the intersection.

Table 5
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
South Site Entrance / Augustine Cut-Off / West 18 th Street				
2020 Existing	C (22.2)	C (23.2)	C (26.3)	C (26.3)
2023 without development	C (28.1)	C (32.4)	C (33.5)	D (37.5)
2023 with Phase I of development	C (31.8)	D (38.5)	C (33.5)	D (37.5)
2025 with Phase II of development	C (34.6)	D (43.2)	D (35.2)	D (40.4)
2027 with Phase III of development	D (38.0)	D (53.3)	D (35.7)	D (41.1)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 6
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
West 18 th Street / North Broom Street				
2020 Existing	B (15.2)	B (11.8)	B (19.1)	B (19.8)
2023 without development	B (13.4)	B (12.5)	B (18.7)	B (18.6)
2023 with Phase I of development	B (14.0)	B (13.5)	B (18.6)	B (18.6)
2025 with Phase II of development	B (15.6)	B (14.4)	B (18.6)	B (18.6)
2027 with Phase III of development	B (15.7)	B (15.6)	B (18.6)	B (18.6)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 7
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
West 18 th Street / Baynard Boulevard				
2020 Existing	C (25.4)	C (22.4)	C (26.8)	C (22.5)
2023 without development	C (24.9)	C (23.8)	C (26.0)	C (24.0)
2023 with Phase I of development	C (25.9)	C (25.7)	C (26.0)	C (24.0)
2025 with Phase II of development	C (26.5)	C (26.6)	C (26.1)	C (25.9)
2027 with Phase III of development	C (28.4)	C (28.8)	C (26.3)	C (25.9)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 8
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
US Route 202 / North Broom Street				
2020 Existing	C (26.5)	C (28.6)	D (37.9)	C (31.1)
2023 without development	C (30.2)	C (29.6)	D (40.1)	C (32.0)
2023 with Phase I of development	C (29.7)	C (29.8)	D (40.1)	C (32.0)
2025 with Phase II of development	C (31.7)	C (30.1)	D (40.3)	C (32.0)
2027 with Phase III of development	C (33.9)	C (30.5)	D (40.7)	C (32.1)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 9
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Baynard Boulevard / North Broom Street				
2020 Existing	A (7.6)	B (10.6)	A (9.7)	B (14.2)
2023 without development	B (11.8)	B (10.7)	A (9.5)	B (14.4)
2023 with Phase I of development	B (12.1)	B (10.7)	A (9.5)	B (14.4)
2025 with Phase II of development	B (12.3)	B (10.8)	A (9.6)	B (14.5)
2027 with Phase III of development	B (12.5)	B (10.8)	A (9.6)	B (14.5)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 10
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Augustine Cut-Off / Lovering Avenue				
2020 Existing	B (16.2)	B (18.9)	B (17.8)	C (20.3)
2023 without development	C (25.5)	C (32.8)	C (21.8)	D (38.1)
2023 with Phase I of development	C (27.9)	C (32.9)	C (21.8)	D (38.1)
2025 with Phase II of development	C (30.5)	D (37.3)	C (23.1)	D (46.4)
2027 with Phase III of development	C (26.8)	D (40.4)	C (23.5)	D (47.9)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 11
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Augustine Cut-Off / Alapocas Drive				
2020 Existing	B (18.5)	B (16.3)	C (23.8)	B (15.7)
2023 without development	C (20.7)	B (19.3)	C (22.8)	B (19.5)
2023 with Phase I of development	C (21.6)	B (19.5)	C (22.8)	B (19.5)
2025 with Phase II of development	C (22.8)	C (20.0)	C (23.2)	C (20.4)
2027 with Phase III of development	C (24.6)	C (20.1)	C (23.4)	C (21.0)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 12
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

All-Way Stop-Controlled Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Alapocas Drive / School Road				
2020 Existing	B (11.0)	A (8.0)	C (20.2)	A (8.7)
2023 without development	B (13.4)	A (9.7)	B (13.9)	A (9.7)
2023 with Phase I of development	B (13.7)	A (9.8)	B (13.9)	A (9.7)
2025 with Phase II of development	B (13.9)	A (9.9)	B (13.9)	A (9.7)
2027 with Phase III of development	B (14.3)	B (10.0)	B (14.0)	A (9.7)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 13
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

All-Way Stop-Controlled Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Alapocas Drive / Edgewood Road				
2020 Existing	A (9.5)	A (7.6)	B (12.5)	A (8.0)
2023 without development	B (10.7)	A (8.1)	B (10.8)	A (8.2)
2023 with Phase I of development	B (10.8)	A (8.2)	B (10.8)	A (8.2)
2025 with Phase II of development	B (11.0)	A (8.3)	B (10.8)	A (8.2)
2027 with Phase III of development	B (11.1)	A (8.3)	B (10.9)	A (8.2)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 14
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Two-Way Stop-Controlled Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Augustine Cut-Off / Edgewood Drive				
2020 Existing				
Northbound Augustine Cut-Off Left-Turn	B (10.0)	A (9.0)	B (11.0)	A (8.9)
Eastbound Edgewood Drive	C (21.6)	C (20.1)	F (84.9)	E (36.2)
2023 without development				
Northbound Augustine Cut-Off Left-Turn	B (10.8)	A (9.7)	B (11.2)	A (9.5)
Eastbound Edgewood Drive	D (27.3)	D (26.5)	F (98.0)	F (77.5)
2023 with Phase I of development				
Northbound Augustine Cut-Off Left-Turn	B (11.1)	A (9.8)	B (11.2)	A (9.5)
Eastbound Edgewood Drive	D (29.4)	D (28.1)	F (98.0)	F (77.5)
2025 with Phase II of development				
Northbound Augustine Cut-Off Left-Turn	B (11.4)	A (9.8)	B (11.3)	A (9.8)
Eastbound Edgewood Drive	D (30.9)	D (29.4)	F (129.8)	F (103.2)
2027 with Phase III of development				
Northbound Augustine Cut-Off Left-Turn	B (11.6)	A (9.8)	B (11.4)	A (9.9)
Eastbound Edgewood Drive	D (32.6)	D (30.8)	F (135.7)	F (107.4)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 15
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Augustine Cut-Off / West Park Drive / US 202 Connector				
2020 Existing	B (15.8)	B (12.5)	A (9.7)	A (4.3)
2023 without development	C (27.2)	B (15.4)	A (9.7)	A (4.6)
2023 with Phase I of development	C (21.7)	B (16.1)	A (9.7)	A (4.6)
2025 with Phase II of development	C (23.7)	B (16.7)	B (11.1)	A (4.7)
2027 with Phase III of development	C (25.7)	B (17.4)	B (11.2)	A (4.7)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 16
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Two-Way Stop-Controlled Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
West Park Drive / Rockland Road				
2020 Existing				
Northbound West Park Drive Left-Turn	B (13.1)	B (10.3)	B (14.1)	B (10.1)
Eastbound Rockland Road	F (*)	F (234.3)	F (*)	F (176.8)
2023 without development				
Northbound West Park Drive Left-Turn	B (14.6)	B (12.4)	B (14.7)	B (11.5)
Eastbound Rockland Road	F (*)	F (*)	F (*)	F (*)
2023 with Phase I of development				
Northbound West Park Drive Left-Turn	C (15.2)	B (12.6)	B (14.7)	B (11.5)
Eastbound Rockland Road	F (*)	F (*)	F (*)	F (*)
2025 with Phase II of development				
Northbound West Park Drive Left-Turn	C (15.7)	B (12.3)	C (15.1)	B (12.0)
Eastbound Rockland Road	F (*)	F (754.8)	F (*)	F (*)
2027 with Phase III of development				
Northbound West Park Drive Left-Turn	C (16.3)	B (13.0)	C (15.3)	B (12.1)
Eastbound Rockland Road	F (*)	F (*)	F (*)	F (*)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.

Table 17
 PEAK HOUR LEVELS OF SERVICE (LOS)
 Incyte – Campus Expansion
 Prepared by Duffield Associates, Inc.

Signalized Intersection ¹	LOS per TIS		LOS per DelDOT	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
West Park Drive / Powder Mill Road				
2020 Existing	F (92.1)	E (75.3)	C (29.1)	C (27.6)
2023 without development	F (98.0)	F (111.0)	D (50.1)	D (45.0)
2023 with Phase I of development	F (103.2)	F (122.6)	D (50.1)	D (45.0)
2025 with Phase II of development	F (109.6)	F (132.1)	E (59.5)	E (56.0)
2027 with Phase III of development	F (116.1)	F (138.8)	E (61.5)	E (57.6)

¹ The numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.