



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

NICOLE MAJESKI
SECRETARY

March 4, 2022

Mr. Michael Kaszyski
Verdantas
5400 Limestone Road
Wilmington, DE 19808

Dear Mr. Kaszyski:

The enclosed Traffic Impact Study (TIS) review letter for the proposed **Kent County Family Courts** (Tax Parcels 2-05-077.09-03-21.00-00001, 32.00-00001, 33.00-00001, 37.00, 48.00-00001, 50.00-0001, 51.00-00001, 52.00-00001, 53.00-00001, and 61.00) 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.

Sincerely,

Claudy Joinville
Project Engineer

CJ:km
Enclosures
cc with enclosures:

Mr. Jerry Platt, Division of Facilities Management (State of Delaware)
Mr. James Taylor, Verdantas
Mr. Brian Clarke, Verdantas
Mr. David Edgell, Office of State Planning Coordination
Ms. Sharon Duca, City of Dover Public Works
Ms. Dawn Melson-Williams, City of Dover Planning
Mr. Andrew Parker, McCormick & Taylor, Inc. DelDOT Distribution
DelDOT Distribution

DelDOT Distribution

Brad Eaby, Deputy Attorney General
Pam Steinebach, Director, Planning
Shanté Hastings, Deputy Secretary
Mark Luszcz, Deputy Director, Traffic, DOTS
Michael Simmons, Assistant Director, Project Development South, DOTS
Todd Sammons, Assistant Director, Development Coordination
Wendy Polasko, Subdivision Engineer, Development Coordination
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
Peter Haag, Chief Traffic Engineer, Traffic, DOTS
Matthew Lichtenstein, Central District Engineer, Central District
Erin Osborne, Central District Public Works Manager, Central District
Jared Kauffman, Service Development Planner, Delaware Transit Corporation
Tremica Cherry, Service Development Planner, Delaware Transit Corporation
Anthony Aglio, Planning Supervisor, Statewide & Regional Planning
Olayiwola Okesola, Kent County Review Coordinator, Development Coordination
Ryan Schroder, Kent County Subdivision Manager, Development Coordination
Mark Galipo, Traffic Engineer, Traffic, DOTS
Annamaria Fumato, Project Engineer, Development Coordination



March 2, 2022

Mr. Claudy Joinville
Project Engineer
DelDOT Division of Planning
P.O. Box 778
Dover, DE 19903

RE: Agreement No. 1946F
Traffic Impact Study Services
Task No. 2A Subtask 05A – Kent County Family Court

Dear Mr. Joinville:

McCormick Taylor has completed its review of the Traffic Impact Study (TIS) for the Kent County Family Courts development prepared by Duffield Associates LLC, dated August 2021. Duffield Associates prepared the report in a manner generally consistent with DelDOT's Development Coordination Manual.

The TIS evaluates the impacts of the proposed Kent County Family Courts development, proposed to be located on the north side of W. Water Street (Kent Road 72), south of Bank Lane, and east of S. Governors Avenue (Kent Road 3), in the City of Dover, Kent County, Delaware. An associated parking lot is proposed on the west side of Governors Avenue. Five driveway access points are proposed: two on S. Governors Avenue, two on W. Water Street, and one on Bank Lane. One of the access points on S. Governors Avenue and one of the access points on W. Water Street would be located on the west side of S. Governors Avenue and would access that secondary parking lot proposed to serve the subject development. The proposed development consists of a 99,914 square-foot family court building and associated surface parking lots. Construction is anticipated to be complete by 2024.

The subject land is located on an approximately 3.98-acre assemblage of parcels. This development will replace one existing use consisting of a 5,000 sf medical/dental office building and other vacant buildings. The subject land had been zoned as RG-O (General Residence & Office) and C-2A (Limited Central Commercial) and was recently rezoned through the comprehensive plan process to IO (Institutional and Office) in the City of Dover. The proposed use is permitted by right within the existing zoning district.

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

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

All existing intersections within the study area exhibit adequate level of service (LOS) in all scenarios, so physical roadway and/or traffic control improvements to address any such deficiencies are not necessary. However, a number of items are recommended to accommodate



site entrances, to satisfy requirements of DelDOT’s Development Coordination Manual, and to address bicycle and pedestrian needs.

Should the City of Dover 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 improve the State-maintained roads on which they front (W. Water Street and S. Governors Avenue), within the limits of their frontage, to meet DelDOT’s standards for their Functional Classification as found in Section 1.1 of the Development Coordination Manual and elsewhere therein. The improvements shall include both directions of travel, regardless of whether the developer’s lands are on one or both sides of the road. Frontage is defined in Section 1 of the Development Coordination Manual, which states “This length includes the length of roadway perpendicular to lines created by the projection of the outside parcel corners to the roadway.” 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 the full-movement Site Access A on the east side of S. Governors Avenue approximately halfway between W. Water Street and Bank Lane. The proposed configuration is shown in the table below.

Approach	Existing Configuration	Proposed Configuration
Westbound Site Access A	Approach does not exist	One shared left/right-turn lane
Northbound S. Governors Avenue	One through lane	One shared through/right-turn lane
Southbound S. Governors Avenue	One through lane	One shared left-turn/through lane

3. The developer should construct the full-movement Site Access B on the west side of S. Governors Avenue to access the secondary parking lot north of W. Water Street. The proposed configuration is shown in the table below.

Approach	Existing Configuration	Proposed Configuration
Eastbound Site Access B	Approach does not exist	One shared left/right-turn lane
Northbound S. Governors Avenue	One through lane	One shared left-turn/through lane
Southbound S. Governors Avenue	One through lane	One shared through/right-turn lane

4. The developer should construct the full-movement Site Access C on the north side of W. Water Street near the eastern end of the site frontage. The proposed configuration is shown in the table below.

Approach	Existing Configuration	Proposed Configuration
Eastbound W. Water Street	One through lane	One shared left-turn/through lane
Westbound W. Water Street	One through lane	One shared through/right-turn lane
Southbound Site Access C	Approach does not exist	One shared left/right-turn lane

5. The developer should construct the full-movement Site Access D on the north side of W. Water Street to access the secondary parking lot west of S. Governors Avenue. The proposed configuration is shown in the table below.

Approach	Existing Configuration	Proposed Configuration
Eastbound W. Water Street	One left-turn lane for downstream intersection, one through lane, and one right-turn lane for downstream intersection	Same configuration, although left-turn lane is shared for lefts at Site Access D and for downstream intersection
Westbound W. Water Street	One through lane	One shared through/right-turn lane
Southbound Site Access D	Approach does not exist	One shared left/right-turn lane

6. The developer should construct the full-movement Site Access E on Bank Lane. The proposed configuration is shown in the table below.

Approach	Existing Configuration	Proposed Configuration
Eastbound Bank Lane	One through lane	One shared through/right-turn lane
Westbound Bank Lane	One through lane	One shared left-turn/through lane
Northbound Site Access E	Approach does not exist	One shared left/right-turn lane

Note that Bank Lane is maintained by the City of Dover, not the State of Delaware. As such, the City's requirements apply, not the State's.

7. The following bicycle, pedestrian, and transit improvements should be included:
 - a. Appropriate bicycle symbols, directional arrows, pavement markings, and signing should be included along bicycle facilities within the project limits.
 - b. Utility covers should be made flush with the pavement.
 - c. A minimum 15-foot wide easement from the edge of the right-of-way should be dedicated to DelDOT within the site frontage along South Governors Avenue and West Water Street.
 - d. Maintain or improve all existing sidewalks on all sides of the property. For any existing driveways that are being closed as part of the redevelopment of the property, install curb and gutter and sidewalks within the footprint of the former driveway to match with and connect to the existing drainage and pedestrian facilities on either side. Any substandard sidewalk that exists within any of the site frontages of the proposed development should be replaced with sidewalk that meets current standards including AASHTO and ADA standards. New sidewalks should have a minimum five-foot width with a minimum five-foot buffer from the roadway. The developer should coordinate with DelDOT to determine which sections of existing sidewalk need to be replaced.
 - e. ADA compliant curb ramps and crosswalks should be provided at all pedestrian crossings, including all site entrances. Type 3 curb ramps are discouraged.
 - f. Install a crosswalk on Governors Avenue at Bank Lane. Design of this crosswalk, including but not limited to signing, pavement markings, and ADA-compliant curb ramps, should be coordinated with DelDOT.
 - g. Internal sidewalks for pedestrian safety should be constructed within the development. These sidewalks should each be a minimum of five feet wide and should meet current AASHTO and ADA standards. These internal sidewalks should connect to the frontage sidewalks on all sides of the property.
 - h. Where internal sidewalks are located alongside of parking spaces, a buffer should be added to prevent vehicular overhang onto the sidewalk.
 - i. The developer should coordinate with the Delaware Transit Corporation (DTC) regarding the possibility of adding 5' by 8' Type 1 pads to bus stop #2858 and a new stop on Governors Avenue south of Bank Lane. The developer should coordinate with DTC and DelDOT regarding details of the requested improvements.

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.

A handwritten signature in black ink, appearing to read "Andrew J. Parker".

Andrew J. Parker, PE, PTOE
Project Manager

Enclosure

General Information

Report date: August 2021

Prepared by: Duffield Associates, LLC

Prepared for: Division of Facilities Management, State of Delaware

Tax parcels: 2-05-077.09-03-21.00-00001, 32.00-00001, 33.00-00001, 37.00, 48.00-00001, 50.00-0001, 51.00-00001, 52.00-00001, 53.00-00001, and 61.00

Generally consistent with DelDOT's Development Coordination Manual: Yes

Project Description and Background

Description: The proposed Kent County Family Courts development consists of a 99,914 square-foot family court building and associated surface parking lots.

Location: The site is located on the north side of W. Water Street (Kent Road 72), south of Bank Lane, and east of S. Governors Avenue (Kent Road 3), in the City of Dover, Kent County, Delaware. A site location map is included on page 7.

Amount of land to be developed: approximately 3.98 acre assemblage of parcels

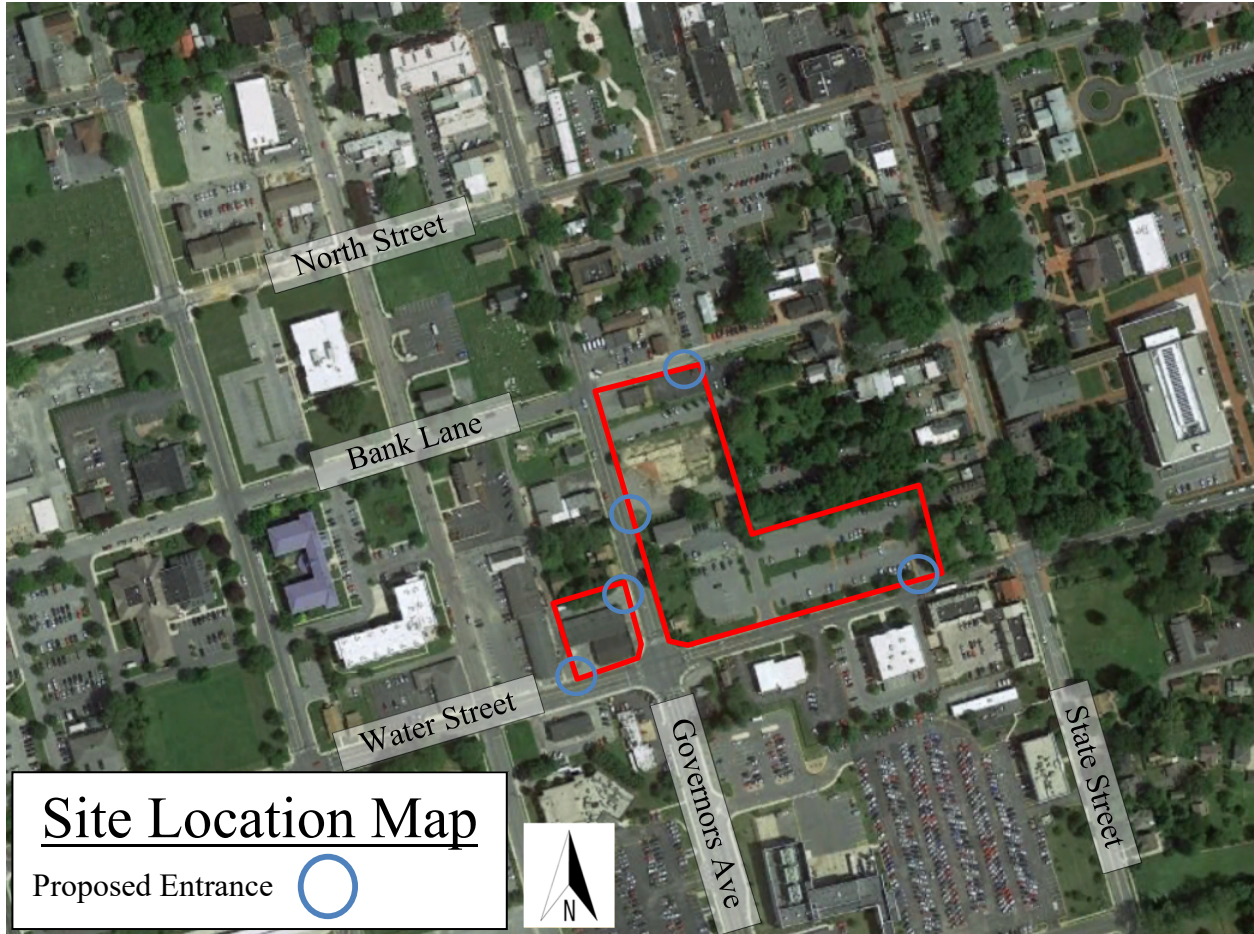
Land use approval(s) needed: Subdivision approval. The subject land had been split-zoned as RG-O (General Residence & Office) and C-2A (Limited Central Commercial) but was recently rezoned through the comprehensive plan process to I-O (Institutional and Office) in the City of Dover.

Proposed completion year: 2024

Proposed access locations: Five access points are proposed: two on S. Governors Avenue, two on W. Water Street, and one on Bank Lane. One of the access points on S. Governors Avenue would be located on the west side of the road and would access a parking lot proposed to serve the subject development.

Daily Traffic Volumes (per DelDOT Traffic Summary 2019):

- 2020 Average Annual Daily Traffic on Water Street: 3,715 vehicles/day
- 2020 Average Annual Daily Traffic on Governors Avenue: 8,871 vehicles/day



2015 Delaware Strategies for State Policies and Spending

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

The proposed Kent County Family Court development is located within Investment Level 1.

Investment Level 1

Areas of the state designated as Investment Level 1 are most prepared for growth and are where the state can make cost-effective infrastructure investments in schools, roads, and public safety. In these 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. Investment Level 1 areas are often municipalities, towns, or urban/urbanizing places. Density is generally higher than in the surrounding areas. 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.

Proposed Development's Compatibility with Strategies for State Policies and Spending:

The proposed Kent County Family Court development falls within Investment Level 1 and is to be developed as family court building. The proposed development is consistent with the character of Investment Level 1. It is therefore concluded that the proposed development appears to generally comply with the policies stated in the 2015 "Strategies for State Policies and Spending."

Comprehensive Plan

Kent County Comprehensive Plan:

(Source: Kent County Comprehensive Plan Update, June 2008)

The Kent County Comprehensive Plan Future Land Use Map indicates that the Kent County Family Court is in the City of Dover, a municipality. Kent County strongly favors directing development to municipalities that desire it. The specific permitted uses and densities governing new construction within an incorporated municipality will continue to be governed by that municipality's zoning ordinance, its public water and sewer capacities, and its comprehensive planning policies.

City of Dover Comprehensive Plan:

(Source: City of Dover 2019 Comprehensive Plan, adopted January 2020)

The City of Dover's Comprehensive Plan Future Land Use Map indicates that the proposed Kent County Family Court site is planned for "Mixed Use" land use. It would appear that the proposed family court building fits within the intended land use for this location.

Proposed Development's Compatibility with Comprehensive Plan:

The proposed development appears to comply with the City of Dover's Comprehensive Plan. The Kent County Family Court is proposed on land that is planned for mixed use, and the land had been zoned as RG-O (General Residence & Office) and C-2A (Limited Central Commercial) but was recently rezoned through the comprehensive plan process to I-O (Institutional and Office) in

the City of Dover. The proposed facility generally aligns with both the Future Land Use Map and the current zoning.

Relevant Projects in the DelDOT Capital Transportation Program

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

Trip Generation

Trip generation for the proposed development was estimated using site specific data collected from the existing Kent County Family Court using employee and visitor data. The resulting trip generations are shown in Table 1.

Table 1
Kent County Family Court Peak Hour Trip Generation

User Classification	Qty	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Employees ¹	130	130	0	130	0	130	130
Visitors ²	280	0	0	0	0	0	0
TOTAL TRIPS		130	0	130	0	130	130

¹ Existing court hours of operation are from 8:30 AM to 4:30 PM. All employees assumed to arrive during the AM peak hour (7:30 to 8:30 AM) and depart during the PM peak hour (4:30 to 5:30 PM)

² Cases begin at 10:00 AM and the last case ends no later than 4:00 PM, therefore no visitors are anticipated during the AM or PM peak hours. An average of 93 cases per day are held, with an average of 3 visitors each, yielding approximately 280 daily visitors.

Overview of TIS

Intersections examined:

- 1) Site Entrance A / S. Governors Avenue (Kent Road 3)
- 2) Site Entrance B / S. Governors Avenue (Parking Entrance)
- 3) Site Entrance C / W. Water Street (Kent Road 72)
- 4) Site Entrance D / W. Water Street (Parking Entrance / Shotgun Alley)
- 5) Site Entrance E / Bank Lane
- 6) S. Governors Avenue / W. Water Street
- 7) W. Water Street / S. State Street (Kent Road 25)
- 8) S. Governors Avenue / Bank Lane
- 9) S. Governors Avenue / W. North Street
- 10) S. Governors Avenue / W. Loockerman Street
- 11) Bank Lane / The Green

Conditions examined:

- 1) 2020 existing (Case 1)
- 2) 2024 without Kent County Family Court (Case 2)
- 3) 2024 with Kent County Family Court (Case 3)

Peak hours evaluated: Weekday morning and evening peak hours

Committed developments considered:

- 1) USPS Dover Carrier Annex & Retail (20,393 square-foot post office)
- 2) 1601 POW-MIA Parkway (f.k.a. 1436 New Burton Road) (475,000 square-foot manufacturing facility)
- 3) Eden Hill (132 apartments, 153 townhouses, 192 duplexes, 101 single-family detached houses, 153,380 square feet of commercial space, 149,600 square feet of medical office space, 65,000 square-foot skilled nursing facility)

Intersection Descriptions

1) Site Entrance A / S. Governors Avenue

Type of Control: proposed one-way stop (T-intersection)

Westbound Approach: (Site Access) proposed one shared left-turn/right-turn lane, stop controlled

Northbound Approach: (S. Governors Avenue) existing one through lane; proposed one shared through/right-turn lane

Southbound Approach: (S. Governors Avenue) existing one through lane; proposed one shared left-turn/through lane

2) Site Entrance B / S. Governors Avenue

Type of Control: proposed one-way stop (T-intersection)

Eastbound Approach: (Site Access) proposed one shared left-turn/right-turn lane, stop controlled

Northbound Approach: (S. Governors Avenue) existing one through lane; proposed one shared left-turn/through lane

Southbound Approach: (S. Governors Avenue) existing one through lane; proposed one shared through/right-turn lane

3) Site Entrance C / W. Water Street

Type of Control: proposed one-way stop (T-intersection)

Eastbound Approach: (W. Water Street) existing one through lane; proposed one shared left-turn/through lane

Westbound Approach: (W. Water Street) existing one through lane; proposed one shared through/right-turn lane

Southbound Approach: (Site Access) proposed one shared left-turn/right-turn lane, stop controlled

4) Site Entrance D / W. Water Street

Type of Control: proposed one-way stop (T-intersection)

Eastbound Approach: (W. Water Street) existing one left-turn lane for downstream intersection at Governors Avenue, one through lane and one right-turn lane for downstream intersection at Governors Avenue through lane; proposed same geometry although left-turn lane is shared for lefts at Site Entrance D and for downstream intersection

Westbound Approach: (W. Water Street) existing one through lane; proposed one shared through/right-turn lane

Southbound Approach: (Site Access) proposed one shared left-turn/right-turn lane, stop controlled

5) Site Entrance E / Bank Lane

Type of Control: proposed one-way stop (T-intersection)

Eastbound Approach: (Bank Lane) existing one through lane; proposed one shared through/right-turn lane

Westbound Approach: (Bank Lane) existing one through lane; proposed one shared left-turn/through lane

Northbound Approach: (Site Access) proposed one shared left-turn/right-turn lane, stop controlled

6) S. Governors Avenue / W. Water Street

Type of Control: existing signalized

Eastbound Approach: (W. Water Street) one left-turn lane, one through lane, and one right-turn lane

Westbound Approach: (W. Water Street) one left-turn lane and one shared through/right-turn lane

Northbound Approach: (S. Governors Avenue) one left-turn lane and one shared through/right-turn lane

Southbound Approach: (S. Governors Avenue) one left-turn lane and one shared through/right-turn lane

7) W. Water Street / S. State Street

Type of Control: existing signalized

Eastbound Approach: (W. Water Street) one left-turn lane and one shared through/right-turn lane

Westbound Approach: (W. Water Street) one left-turn lane and one shared through/right-turn lane

Northbound Approach: (S. State Street) one left-turn lane and one shared through/right-turn lane

Southbound Approach: (S. State Street) one left-turn lane and one shared through/right-turn lane

8) S. Governors Avenue / Bank Lane

Type of Control: existing two-way stop

Eastbound Approach: (Bank Lane) one shared left-turn/through/right-turn lane, stop controlled

Westbound Approach: (Bank Lane) one shared left-turn/through/right-turn lane, stop controlled

Northbound Approach: (S. Governors Avenue) one shared left-turn/through/right-turn lane

Southbound Approach: (S. Governors Avenue) one shared left-turn/through/right-turn lane

9) S. Governors Avenue / W. North Street

Type of Control: existing signalized

Eastbound Approach: (W. North Street) one shared left-turn/through/right-turn lane

Westbound Approach: (W. North Street) one shared left-turn/through/right-turn lane

Northbound Approach: (S. Governors Avenue) one left-turn lane and one shared through/right-turn lane

Southbound Approach: (S. Governors Avenue) one left-turn lane and one shared through/right-turn lane

10) S. Governors Avenue / W. Loockerman Street

Type of Control: existing signalized

Eastbound Approach: (W. Loockerman Street) one shared left-turn/through/right-turn lane

Westbound Approach: (W. Loockerman Street) one shared left-turn/through/right-turn lane

Northbound Approach: (S. Governors Avenue) one left-turn lane and one shared through/right-turn lane

Southbound Approach: (S. Governors Avenue) one left-turn lane and one shared through/right-turn lane

11) Bank Lane / The Green

Type of Control: existing one-way stop (T-intersection)

Eastbound Approach: (Bank Lane) one right-turn lane, stop controlled

Southbound Approach: (The Green) one shared through/right-turn lane

Safety Evaluation

Crash Data: Delaware Crash Analysis Reporting System (CARS) data was provided in Appendix E of the TIS for the three-year period from December 23, 2017, through December 23, 2020. The data includes crashes along S. Governor's Avenue from a point 0.1 miles north of W. Loockerman Street to a point 0.1 miles south of W. Loockerman Street; and a 300-foot radius around the intersection of W. Water Street / S. State Street.

A total of 58 crashes occurred within the study area during the three-year period, four of which were alcohol related. One crash involved either a bicyclist or pedestrian, resulting in one injury

and zero fatalities. Of the 53 crashes involving two vehicles, 24 were angle collisions, 16 were front to rear collisions (rear end), six were sideswipes, one was front to front (head on), and six were other/unknown. Zero fatalities occurred, while 19 crashes resulted in injuries including 10 angle collisions, 6 front to rear collisions (rear end), one front to front (head on), one sideswipe, and one other/unknown.

Sight Distance: The study area generally consists of relatively flat roadways and there are few visual obstructions. Sight distance appears adequate throughout the study area. No problematic sight distance issues have been reported or indicated by crash data. As always adequacy of available sight distance should be confirmed during the site plan review process for all proposed movements at the site accesses.

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Based on the current DART Bus Stop Map, the Delaware Transit Corporation (DTC) currently operate several fixed-route transit bus services in the area of the proposed Kent County Family Courthouse development. Route 303 runs along S. Governor's Avenue in front of the site, with the nearest Bus Stop #2858 located south of Bank Lane. Route 107 runs along W. Water Street, with the nearest Bus Stop #3807 being located at the intersection of W. Water Street and Federal Street. All bus stops are accessible via existing sidewalks. Weekday service on these routes generally runs from 6:00 AM to 10:00 PM, with headways ranging from 30 to 60 minutes during the peak periods.

Planned transit service: Based on coordination with DTC representative Jared Kaufmann, no planned changes to nearby transit routes were indicated. A request was made for transit-related improvements associated with the proposed development, including:

- A new Type 1 5'x8' pad to be placed on the near-side of Bank Lane
- Existing Stop #2858 should have a Type 1 5'x8' pad added
- Add crosswalk on Governors Avenue at Bank Lane

Existing bicycle and pedestrian facilities: The following study area roadways are identified as "Bicycling Routes" on the *Kent County Bicycle Map* published by DelDOT:

- W. Water Street (east of S. Governors Avenue):
 - Connector Bicycle Route with bikeway
- W. Water Street (west of S. Governors Avenue):
 - Connector Bicycle Route with bikeway
 - Over 5,000 vehicles daily
- S. Governors Avenue (north of W. Water Street):
 - Not a designated bicycle route
 - Includes sharrow markings
 - Over 5,000 vehicles daily
- S. Governors Avenue (south of W. Water Street):
 - Not a designated bicycle route, but has a bikeway
 - Includes marked bicycle lanes
 - Over 5,000 vehicles daily

- Bank Lane:
 - Not a designated bicycle route, and not a bikeway

There are existing sidewalks along roadways throughout the study area.

Planned bicycle and pedestrian facilities: As noted, DTC requested that a crosswalk on Governors Avenue at Bank Lane should be implemented in association with the proposed development. Signing and pavement markings for this crossing should be coordinated with DelDOT.

Previous Comments

In a review letter dated May 4, 2021, DelDOT indicated that the Preliminary TIS was acceptable as submitted.

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 Duffield Associates LLC and McCormick Taylor utilized Highway Capacity Software (HCS) version 7.8 to complete the traffic analyses.
- 2) The TIS and McCormick Taylor applied heavy vehicle factors (HV) by lane group using existing data. The TIS and McCormick Taylor generally assumed future HV to be the same as existing HV at all intersections. Both the TIS and McCormick Taylor assumed 3% HV for future movements to and from the proposed site access points as per the DelDOT Development Coordination Manual section 2.2.8.11.6.H.
- 3) For existing conditions, 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.
- 4) For analyses of all intersections, the TIS and McCormick Taylor assumed 0% grade for all movements.
- 5) The TIS and McCormick Taylor used different signal timings when analyzing the signalized intersections in some cases.

Table 2
Peak Hour Levels of Service (LOS)
Based on Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Unsignalized Intersection ¹ Two-Way Stop Control	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Site Entrance A & S. Governors Avenue				
2024 with Kent County Family Court (Case 3)				
Westbound Site Entrance – Left/Right	A (0.0)	C (15.7)	A (0.0)	C (15.7)
Southbound S. Governors Avenue – Left	A (8.4)	A (8.5)	A (8.4)	A (8.5)

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 Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Unsignalized Intersection ² Two-Way Stop Control	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Site Entrance B & S. Governors Avenue				
2024 with Kent County Family Court (Case 3)				
Eastbound Site Entrance – Left/Right	A (0.0)	B (14.8)	A (0.0)	B (14.8)
Northbound S. Governors Avenue – Left	A (8.2)	A (8.2)	A (8.2)	A (8.2)

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 Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Unsignalized Intersection ³ Two-Way Stop Control	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Site Entrance C & W. Water Street				
2024 with Kent County Family Court (Case 3)				
Eastbound W. Water Street – Left	A (7.8)	A (7.9)	A (7.8)	A (7.9)
Southbound Site Entrance – Left/Right	A (0.0)	B (12.3)	A (0.0)	B (12.3)

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 Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Unsignalized Intersection ⁴ Two-Way Stop Control	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Site Entrance D & W. Water Street				
2024 with Kent County Family Court (Case 3)				
Eastbound W. Water Street – Left	A (8.1)	A (8.2)	A (8.1)	A (8.2)
Southbound Site Entrance – Left/Right	A (0.0)	B (13.3)	A (0.0)	B (13.3)

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 Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Unsignalized Intersection ⁵ Two-Way Stop Control	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Site Entrance E & Bank Lane				
2024 with Kent County Family Court (Case 3)				
Westbound Bank Lane – Left	A (7.4)	A (7.3)	A (7.4)	A (7.3)
Northbound Site Entrance – Left/Right	A (0.0)	A (8.8)	A (0.0)	A (8.8)

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 Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Signalized Intersection ⁶	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
S. Governors Avenue & W. Water Street				
2020 Existing (Case 1)	B (13.7)	B (14.5)	C (20.3)	B (18.2)
2024 without Kent County Family Court (Case 2)	B (15.5)	B (17.3)	C (22.0)	C (20.2)
2024 with Kent County Family Court (Case 3)	B (15.9)	B (17.9)	C (22.5)	C (20.4)

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.

Table 8
Peak Hour Levels of Service (LOS)
Based on Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Signalized Intersection ⁷	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
W. Water Street & S. State Street				
2020 Existing (Case 1)	B (19.1)	C (21.5)	C (24.6)	C (32.1)
2024 without Kent County Family Court (Case 2)	B (19.8)	C (23.1)	C (26.4)	C (32.3)
2024 with Kent County Family Court (Case 3)	B (19.8)	B (23.6)	C (26.4)	C (32.4)

⁷ 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 9
Peak Hour Levels of Service (LOS)
Based on Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Unsignalized Intersection ⁸ Two-Way Stop Control	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
S. Governors Avenue & Bank Lane				
2020 Existing (Case 1)				
Eastbound Bank Lane – Left/Through/Right	B (14.9)	B (14.5)	C (20.2)	C (19.4)
Westbound Bank Lane – Left/Through/Right	C (16.6)	C (20.5)	C (16.7)	C (20.1)
2024 without Kent County Family Court (Case 2)				
Eastbound Bank Lane – Left/Through/Right	C (15.6)	C (15.6)	C (21.5)	C (20.7)
Westbound Bank Lane – Left/Through/Right	C (17.6)	C (21.8)	C (17.8)	C (21.4)
2024 with Kent County Family Court (Case 3)				
Eastbound Bank Lane – Left/Through/Right	C (16.9)	C (18.7)	C (24.5)	C (22.9)
Westbound Bank Lane – Left/Through/Right	C (18.7)	C (23.2)	C (18.9)	C (22.6)

⁸ For both unsignalized and signalized analyses, the numbers in parentheses following level 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 Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Signalized Intersection ⁹	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
S. Governors Avenue & W. North Street				
2020 Existing (Case 1)	B (12.5)	B (12.0)	B (17.2)	C (20.4)
2024 without Kent County Family Court (Case 2)	B (14.2)	B (15.6)	B (19.1)	C (25.0)
2024 with Kent County Family Court (Case 3)	B (14.2)	B (15.9)	B (19.2)	C (25.1)

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.

Table 11
Peak Hour Levels of Service (LOS)
Based on Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Signalized Intersection ¹⁰	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
S. Governors Avenue & W. Loockerman Street				
2020 Existing (Case 1)	B (14.8)	B (15.6)	B (19.7)	B (18.8)
2024 without Kent County Family Court (Case 2)	B (14.9)	B (15.7)	B (19.9)	B (19.0)
2024 with Kent County Family Court (Case 3)	B (15.1)	B (15.7)	C (20.1)	B (19.0)

¹⁰ 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 Kent County Family Court Traffic Impact Study – August 2021
Prepared by Duffield Associates LLC

Unsignalized Intersection ¹¹ Two-Way Stop Control	LOS per TIS		LOS per McCormick Taylor	
	Weekday AM	Weekday PM	Weekday AM	Weekday PM
Bank Lane & The Green				
2020 Existing (Case 1)				
Eastbound Bank Lane – Right	A (8.5)	A (8.5)	A (8.6)	A (8.6)
2024 without Kent County Family Court (Case 2)				
Eastbound Bank Lane – Right	A (8.5)	A (8.6)	A (8.6)	A (8.7)
2024 with Kent County Family Court (Case 3)				
Eastbound Bank Lane – Right	A (8.5)	A (8.6)	A (8.7)	A (8.8)

¹¹ 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.