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

SHAILEN P. BHATT
SECRETARY

August 15, 2013

Mr. D.J. Hughes
Davis, Bowen & Friedel, Inc.
Milford Office
23 North Walnut Street
Milford, DE 19963

Dear Mr. Hughes:

The enclosed Traffic Impact Study (TIS) review letter for the **CVS – Naamans Road** commercial development has been completed under the responsible charge of a registered professional engineer whose firm is authorized to work in the State of Delaware. They have found the TIS to conform to DelDOT's Standards and Regulations for Subdivision Streets and State Highway Access and other accepted practices and procedures for such studies. DelDOT accepts this review letter and concurs with the recommendations. If you have any questions concerning this letter or the enclosed review letter, please contact me at (302) 760-2167.

Sincerely,

Troy Brestel
Project Engineer

TEB:km
Enclosures
cc with enclosures: Ms. Constance C. Holland, Office of State Planning Coordination
Mr. James Smith, New Castle County Department of Land Use
Mr. Mir Wahed, Johnson, Mirmiran & Thompson, Inc.
DelDOT Distribution

DelDOT

DelDOT Distribution

John Janowski, New Castle County Department of Land Use
Owen Robatino, New Castle County Department of Land Use
Frederick H. Schranck, Deputy Attorney General
Natalie Barnhart, Director, Transportation Solutions (DOTS)
Drew Boyce, Director, Planning
Mark Luszcz, Chief Traffic Engineer, Traffic, DOTS
J. Marc Coté, Assistant Director, Development Coordination
T. William Brockenbrough, Jr., County Coordinator, Development Coordination
Thomas E. Meyer, Traffic Studies Manager, Traffic, DOTS
Ahmed Abdelmoteleb, Traffic Engineer, Traffic, DOTS
Kevin Canning, Canal District Public Works Engineer, Canal District
Wayne Henderson, Service Development Planner, Delaware Transit Corporation
John Garcia, New Castle County Subdivision Coordinator, Development Coordination
Joshua Schwartz, Subdivision Manager, Development Coordination
Marco Boyce, Planning Supervisor, Statewide & Regional Planning
Claudy Joinville, Project Engineer, Development Coordination

August 15, 2013

Mr. Troy Brestel
Project Engineer
Development Coordination
DelDOT Division of Planning
P O Box 778
Dover, DE 19903

RE: Agreement No. 2048
Traffic Impact Study Services
Task 12A, Subtask 1A-CVS-Naamans Road

Dear Mr. Brestel:

Johnson, Mirmiran and Thompson (JMT) has completed the review of the Final Traffic Impact Study (TIS) for a proposed CVS pharmacy, prepared by Davis, Bowen & Friedel, Inc. (DBF). This review was assigned as Subtask Number 1A under overall Task Number 12A. DBF prepared the report in a manner generally consistent with DelDOT's *Standards and Regulations for Subdivision Streets and State Highway Access.*

The TIS evaluates the impacts of a 13,225 square foot CVS pharmacy with a drive-through window proposed at the southwest corner of the Naamans Road (Delaware Route 92/New Castle Road 17) intersection with Peachtree Road (New Castle Road 72) in New Castle County, Delaware. The subject property is approximately 2.93 acres and is currently zoned NC-21 (Neighborhood Conservation). Two residential homes exist on the site with one driveway along Naamans Road and one driveway along Peachtree Road. As part of the project, the subject property is proposed to be rezoned to CN (Commercial Neighborhood) and the residential homes are proposed to be demolished. Access to the pharmacy would be provided via one right-in only driveway along Naamans Road and one full movement driveway along Peachtree Road. It should be noted that the TIS, as submitted, cites a rezoning of the property to CR (Commercial Regional); however, JMT has confirmed with New Castle County Department of Land Use that the rezoning application has recently been changed to CN. Construction of the site is anticipated to be completed in 2015.

DelDOT currently does not have any relevant or ongoing projects within the study area. However, the study area is encompassed by Site Z of DelDOT's 2009 Hazard Elimination Program (HEP), which is defined by the 1.75 mile section of Naamans Road from just east of Pin Oak Drive to US 13/Philadelphia Pike.

The Site Z Task I report included a crash summary as well as a review of the signalized intersection of Naamans Road with Peachtree Road. Suggested Task I remedial improvements within the study area included adding Signal Ahead (W3-3) signs and corresponding Advance Street Name (W16-8a-DE) signs along each approach to the Naamans Road and Peachtree Road intersection, installing a stop line along the southbound Montclair Drive approach to Naamans

Road, and restriping the northbound Society Drive approach to the Northtowne Shopping Center Main Entrance to provide one through lane and one right turn lane. This intersection was reviewed further under Task II to assess the feasibility and benefits of converting the split phasing on northbound Peachtree Road and southbound Society Drive to concurrent protected only phasing to increase capacity and to increase green time for Naamans Road through movements. This change in phasing was included as a Task II recommendation.

Field visits confirm that a stop line along the southbound Montclair Drive approach to Naamans Road has been installed and the signal operation at the Naamans Road intersection with Peachtree Road/Society Drive has been modified to provide protected only left turn phasing; however, the Signal Ahead/Advance Street Name signs have not been installed and the northbound Society Drive approach to the Northtowne Shopping Center Main Entrance has not been restriped.

Based on our review of the traffic impact study, we have the following comments and recommendations:

None of the intersections within the study area experience level of service (LOS) deficiencies in the existing scenario, nor are they anticipated to experience LOS deficiencies in 2015 with or without the development of the CVS site. Additionally, the proposed development will meet the New Castle County LOS standards as stated in Section 40.11.210 of the Unified Development Code (UDC). Although all intersections would operate with acceptable LOS under all future conditions, there are concerns regarding the impacts along the Naamans Road and Peachtree Road site frontages due to the proposed development's entrance location and configuration. These recommendations are made based on the TIS report dated April 2013. It is recognized that subsequent discussions between DelDOT and the applicant have resulted in the agreeance of several items listed below.

A right turn lane exists along eastbound Naamans Road at the site's frontage, which includes approximately 310 feet of storage and an 85 foot taper length. The TIS proposes a right-in only site entrance within this turn lane, located approximately 150 feet west of the Naamans Road and Peachtree Road/Society Drive intersection (measured from the stop bar to the edge of curb opening). The existing right turn lane is proposed to be restriped to provide a 280 foot right turn lane (including a 50 foot taper) for the site entrance and a separately striped 100 foot right turn lane (including a 50 foot taper) for the vehicles turning right onto southbound Peachtree Road. However, the proposed separately striped back-to-back right turn lanes would create potential operational issues, as there is not sufficient storage for the eastbound right turn lane onto Peachtree Road. Therefore, we recommend that a continuously striped eastbound right turn lane be installed to accommodate both the site entrance and the eastbound right turn movement. The turn lane should provide 350 feet of storage and a 50 feet taper. This total length will satisfy the storage requirements for both turn lanes and reduce the potential for sideswipe crashes.

A radius larger than 50 feet is proposed for the right-in only access on Naamans Road. This radius could be reduced if needed, as the right turn lane would not be held to meeting the required right turn lane storage for a radius less than 50 feet, due to site constraints. As part of

the Entrance Plan design, the developer should submit a plan depicting the limits of work and coordinate with DelDOT's Subdivision Section to determine the exact right turn lane and right-in access layout along Naamans Road.

The TIS also proposes to reconstruct the existing median along Peachtree Road to allow for a full movement site access at the southern limits of the property on Peachtree Road (see Figure 1). To accommodate this, the developer proposes to convert the existing southerly entrance of the gas station located on the opposite side of Peachtree Road from a right-in/right-out access to a full movement access and the existing northerly entrance of the gas station from a full movement access to a right-in/right-out access. The developer also proposes additional modifications to the intersection of Peachtree Road and the Crowne Plaza Hotel Entrance to accommodate a new left turn lane into the proposed CVS site. While the proposed lane configuration at each of these intersections will meet LOS standards in all cases, there are operational concerns with the proposed modifications. As an alternative, JMT has prepared a conceptual lane configuration plan along Peachtree Road which we believe will alleviate some of these issues (see Figure 1). These issues are described as follows:

From its intersection with Naamans Road, there are two receiving lanes onto southbound Peachtree Road that convert to a single through lane within a very short distance; this distance is not sufficient with respect to MUTCD standards. The inside lane converts to a left turn lane into the gas station and the outside lane continues as a through lane. We recommend that a separate left turn lane be provided for southbound vehicles turning into the gas station and two through lanes be carried through the proposed site entrance, as shown in Figure 1. This will reduce operational hazards associated with the existing sudden lane drop along southbound Peachtree Road and allow it to occur over a longer distance. Based on DelDOT's auxiliary lane spreadsheet, a 150 feet left turn lane (including a 100 feet taper) is needed for the southbound left turn lane at the site entrance. However, due to site constraints, and based on queues noted in the field (maximum of two vehicles during a peak hour), we recommend that a 100 feet left turn lane (including a 50 feet taper) should be provided. A concrete median should be constructed as shown in Figure 1 to prevent southbound left turning vehicles from entering the northern gas station entrance, which is proposed to be a right-in-right-out only access. In addition, to accommodate the addition of a separate left turn lane at this location, the existing monument sign located within the Peachtree Road median would need to be relocated closer to the northern median nose.

Field observations revealed instances where vehicles would queue from the gas station pumps onto Peachtree Road. In an ideal condition, the two closely spaced gas station entrances would be consolidated to a single entrance and be aligned with the proposed CVS full movement site access to help alleviate this situation. Furthermore, the grade between the northerly driveway and the roadway is uneven, where vehicles significantly slow down when entering the driveway. However, we realize that such a recommendation is beyond the scope of this TIS. As such, we do not recommend any changes to the gas station entrances beyond what the developer proposes.

As stated above, in an effort to effectively lengthen the distance over which the southbound inner-most lane drop occurs along southbound Peachtree Road from its intersection with

Naamans Road, we recommend that the two through lanes continue along Peachtree Road until its intersection with the Hotel Entrance, as shown in Figure 1. Signing and striping should be provided per MUTCD standards, as spacing constraints allow.

To accommodate northbound left turning vehicles into the proposed CVS site, we recommend that a 80 foot left turn lane (including 40 foot taper) be provided, which will eliminate the need for southbound left turning vehicles at the hotel entrance to cross over the adjacent northbound left turn lane into the CVS site, as proposed by the developer.

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

1. The developer should provide a bituminous concrete overlay to the right turn travel lane/shoulder along Naamans Road from the adjacent Service Road to Peachtree Road at DelDOT's discretion. DelDOT should analyze the existing lanes' pavement section and recommend an overlay thickness to the developer's engineer if necessary.

2. The developer should improve the Naamans Road site frontage as well as Peachtree Road from Naamans Road to the Crowne Plaza Hotel Entrance in accordance with the following recommendations:
    a. The developer should restripe the existing eastbound right turn lane at the intersection of Naamans Road and Peachtree Road/Society Drive to provide a total continuous storage length (excluding taper) of 350 feet. Within this right turn lane, the developer should construct a right-in only entrance located approximately 150 feet west of the Naamans Road intersection with Peachtree Road/Society Drive. The right turn lane for the site entrance and the right turn lane onto southbound Peachtree Road should be designed as a continuous lane. The developer should submit a plan and coordinate with DelDOT Subdivision Section to specifically identify the restriping needed to accommodate the turn lane.
    b. The developer should construct a full movement entrance for the proposed site on Peachtree Road, as shown in Figure 1. Efforts should be made to align this entrance perpendicularly with Peachtree Road and with the southerly gas station entrance. The site access is to be consistent with the proposed lane configurations as shown in following table.

Approach	Current Configuration	Proposed Configuration
Eastbound CVS Pharmacy Site Access	One shared through/left turn/right turn lane (residential driveway)	One shared through/left turn/right turn lane
Westbound Gas Station Accesses	Northerly driveway: one shared through/left turn/right turn lane Southerly driveway: one right turn lane	Northerly driveway: one right turn lane Southerly driveway: one shared through/left/right turn lane
Northbound Peachtree Road	One shared through/left turn/right turn lane	One left turn lane and one shared through/right turn lane
Southbound Peachtree Road	One shared through/left turn lane and one shared through/right turn lane	One left turn lane, one through lane, and one shared through/right turn lane

Based on DelDOT's *Standards and Regulations for Subdivision Streets and State Highway Access*, the Peachtree Road northbound and southbound left turn lanes should include 50 feet of storage and a 100 foot taper length. However, due to site contraints, we recommend 50 feet of storage and a 50 foot taper for the southbound left turn lane and 40 feet of storage and a 40 foot taper for the northbound left turn lane. It should be noted that storage lengths based on the HCS analysis provide shorter queue lengths than what is reported here.

c. The developer should construct a concrete median to prevent southbound left turning vehicles from entering the northern gas station entrance, which is proposed to be a right-in-right-out access. The developer should relocate the existing monument sign located within the Peachtree Road median to a location closer to the median nose. This is needed for the construction of the southbound left turn lane onto the gas station site.

d. The developer should submit a plan and coordinate with DelDOT's Subdivision Section to identify median demolition and striping improvements needed at the intersection of Peachtree Road and the Crowne Plaza Hotel Entrance. Improvements should include the provision of a "left lane must turn left" sign (R3-7L) for southbound left-turning vehicles with appropriate signage and pavement markings.

3. The developer should improve Peachtree Road from Naamans Road to the Crowne Plaza Hotel Entrance to meet DelDOT's local road standards. These standards include, but are not limited to, eleven-foot travel lanes and five-foot shoulders. Due to roadway constraints and the charateristics of surrounding roadways, the provision of five-foot shoulders may not be required along the Peachtree Road site frontage. The developer should provide a bituminous concrete overlay to the existing travel lanes, at DelDOT's discretion. DelDOT should analyze the existing lanes' pavement section and recommend an overlay thickness to the developer's engineer if necessary.

4. The following bicycle, pedestrian, and transit improvements should be included:
    a. A fifteen-foot wide permanent easement from the edge of the right-of-way should be dedicated to DelDOT along the site's frontage at Naamans Road and Peachtree Road. The existing five foot wide sidewalk along the site's frontage should be relocated/reconstructed within this easement to maintain a five foot setback from the curb to the sidewalk. The sidewalk should be constructed to meet current AASHTO and ADA standards. If feasible, street trees should be provided within the buffer area, in accordance with New Castle County's Unified Development Code.
    b. Where internal sidewalks are located alongside of parking spaces, a buffer, physical barrier, or signage should be added to eliminate vehicular overhang onto the sidewalk.
    c. ADA compliant curb ramps and marked crosswalks should be provided at the site entrance. The use of Type 3 curb ramps is discouraged.
    d. Bike parking should be provided near the building entrance. Where the building architecture provides for an anwning or other overhang, the bike parking should be covered.
    e. Utility covers should be moved outside of any designated bicycle lanes or should be flush with the pavement.
    f. The developer should coordinate with DART to determine a suitable relocation for the existing bus stop located along the site's frontage at Naamans Road. Coordination should include provisions for appropriate ammenties (bus pad, shelter, etc).

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 subdivision review process.

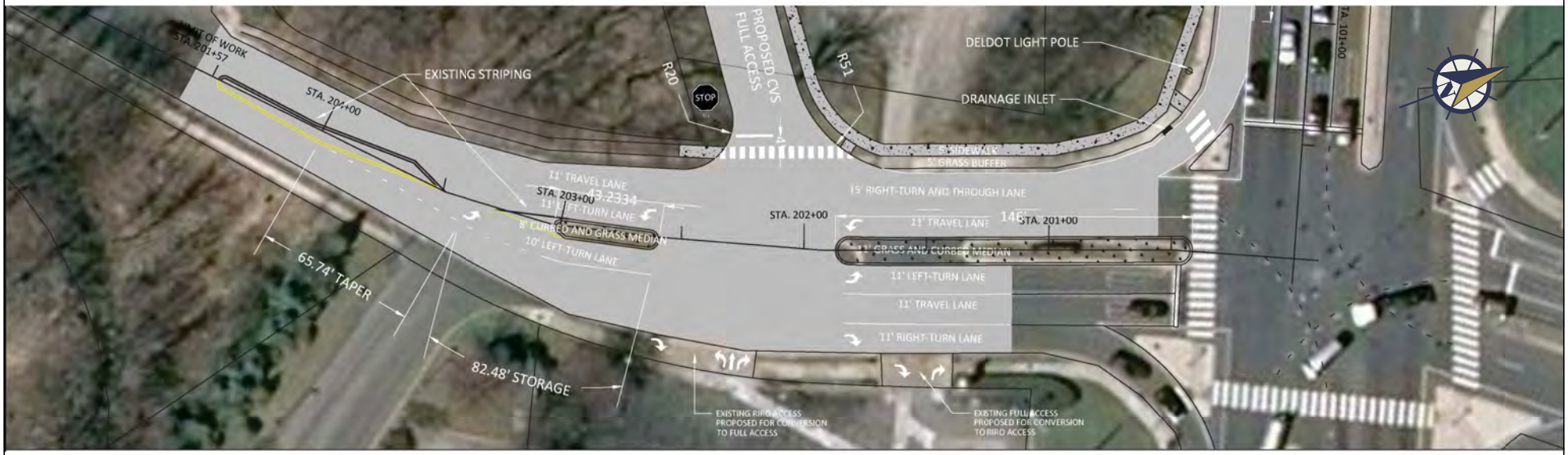
Improvements in this TIS may be considered "significant" under DelDOT's *Work Zone Safety and Mobility Procedures and Guidelines.* These guidelines are available on DelDOT's website at http://www.deldot.gov/information/pubs_forms/manuals/de_mutcd/index.shtml.

For any additional information regarding the work zone impact and mitigation procedures during construction please contact Mr. Adam Weiser of DelDOT's Traffic Section. Mr. Weiser can be reached at (302) 659-4073 or by email at Adam.Weiser@state.de.us.

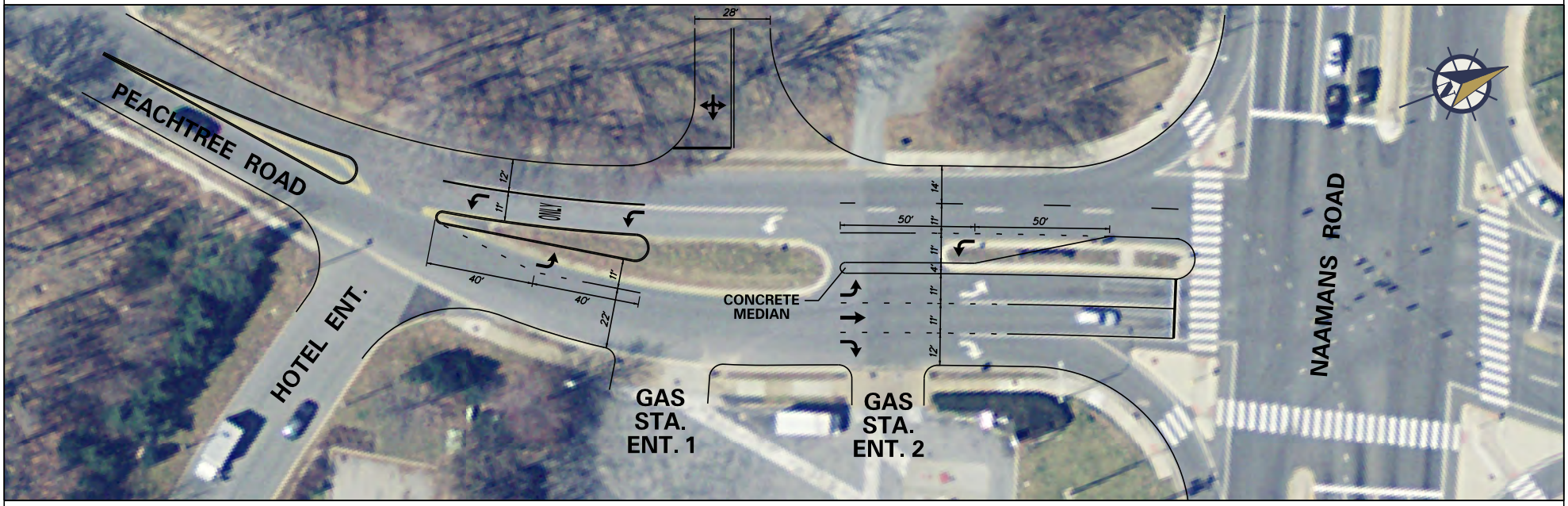
Additional details on our review of the TIS are attached. Please contact me at (302) 266-9600 if you have any questions concerning this review.

Sincerely,
Johnson, Mirmiran, and Thompson, Inc.

Mir Abe Wahed,
Mir Wahed, P.E., PTOE



DEVELOPER CONCEPTUAL SKETCH



JMT CONCEPTUAL SKETCH

JOHNSON, MIRMIRAN & THOMPSON
Engineering A Brighter Future

CVS – NAAMANS ROAD
TIS REVIEW
ENTRANCE PLAN SKETCH RECOMMENDATIONS

NTS	FIGURE 1	AUGUST 2013

General Information

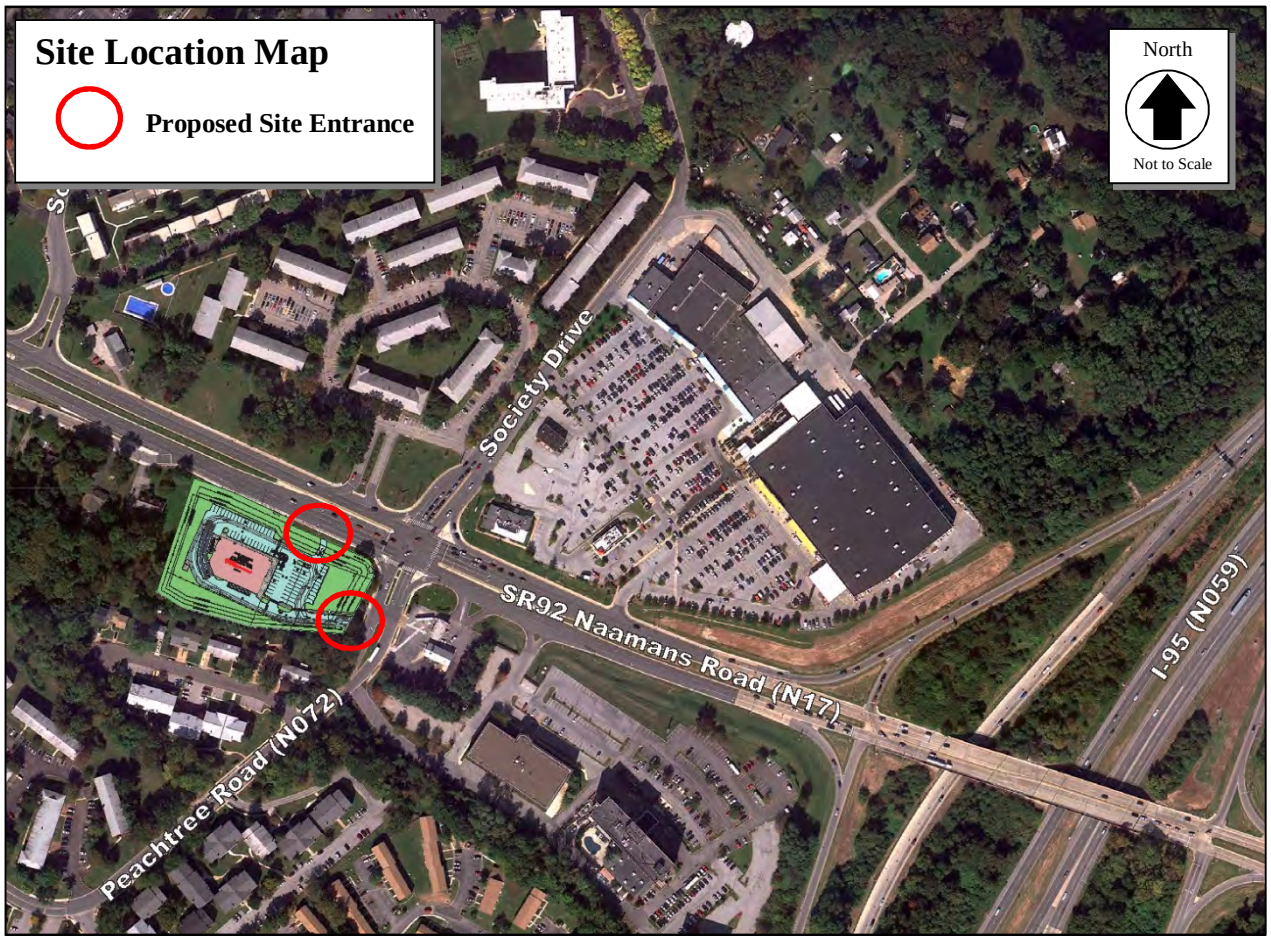
Report date: April, 2013.
Prepared by: Davis, Bowen &Friedel, Inc. (DBF)
Prepared for: JEM X, LLC
Tax Parcels: 06-047.00-288, 06-047.00-294, 06-047.00-295
Generally consistent with DelDOT's *Standards and Regulations for Subdivision Streets and State Highway Access*: Yes.

Project Description and Background

Description: 13,255 square feet CVS pharmacy with drive-through.
Location: The project is proposed on the southwest corner of Naamans Road (Delaware Route 92/New Castle Road 17) and Peachtree Road (New Castle Road 72).
Amount of Land to be developed: Approximately 2.93 acres of land.
Land Use approval(s) needed: Rezoning to CN (Commercial Neighborhood).
Note: The TIS proposes the property to be rezoned as CR (Commercial Regional), however per New Castle County the property is currently proposed to be rezoned as CN.
Proposed completion date: 2015.
Proposed access locations: Two access points are proposed, one right-in access on Naamans Road and one full access on Peachtree Road.
Daily Traffic Volumes:

- 2011 Average Annual Daily Traffic on Naamans Road: 22,182 vehicles per day.
- 2011 Average Annual Daily Traffic on Peachtree Road: 4,876 vehicles per day.

Site Map



**Graphic is an approximation based on the DelDOT Exhibit plan prepared by Bohler Engineering dated March 11, 2013.*

Relevant and On-going Projects

DelDOT currently does not have any relevant or ongoing projects within the study area. However, the study area is encompassed by Site Z of DelDOT's 2009 Hazard Elimination Program (HEP), which is defined by the 1.75 mile section of Naamans Road from just east of Pin Oak Drive to US 13/Philadelphia Pike.

The Site Z Task I report included a crash summary as well as a review of the signalized intersection of Naamans Road with Peachtree Road. Suggested Task I remedial improvements within the study area included adding Signal Ahead (W3-3) signs and corresponding Advance Street Name (W16-8a-DE) signs along each approach to the Naamans Road and Peachtree Road intersection, installing a stop line along the southbound Montclair Drive approach to Naamans Road, and restriping the northbound Society Drive approach to the Northtowne Shopping Center Main Entrance to provide one through lane and one right turn lane. This intersection was reviewed further under Task II to assess the feasibility and benefits of converting the split phasing on northbound Peachtree Road and southbound Society Drive to concurrent protected

only phasing to increase capacity and to increase green time for Naamans Road through movements. This change in phasing was included as a Task II recommendation.

Field visits confirm that a stop line along the southbound Montclair Drive approach to Naamans Road has been installed and the signal operation at the Naamans Road intersection with Peachtree Road/Society Drive has been modified to provide protected only left turn phasing; however, the Signal Ahead/Advance Street Name signs have not been installed and the northbound Society Drive approach to the Northtowne Shopping Center Main Entrance has not been restriped.

Livable Delaware
(Source: Delaware Strategies for State Policies and Spending, 2010)

Location with respect to the Strategies for State Policies and Spending Map of Delaware: The proposed development is located within Investment Level 1 and Level 2 areas.

Investment Level 1

These areas are often municipalities, towns, or urban/urbanizing places in counties where density is generally higher than the surrounding areas. 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.

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. Furthermore, Level 1 areas are the first priority for planning projects and studies, bicycle facilities, signal-system enhancements, and the promotion of interconnectivity between neighborhoods and public facilities.

Investment Level 2

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

In Investment Level 2 Areas, like Investment Level 1 Areas, state investments and policies should support and encourage a wide range of uses and densities, promote other transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity. Investments should encourage departure from the typical single-family-

dwelling developments and promote a broader mix of housing types and commercial sites encouraging compact, mixed-use development where applicable. Level 2 Areas share similar priorities as with the Level 1 Areas where the aim remains to: make context sensitive transportation system capacity enhancements, preserve existing facilities, make safety enhancements, make transportation system capacity improvements, create transit system enhancements, ensure ADA accessibility, and close gaps in the pedestrian system. Other priorities for Level 2 Areas include: Corridor Capacity Preservation, off-alignment multi-use paths, interconnectivity of neighborhoods and public facilities, and signal-system enhancements.

Proposed Development's Compatibility with Livable Delaware:

The proposed CVS pharmacy is relatively consistent with the character of other existing commercial developments in the area. According to Livable Delaware, use of the land located within Investment Level 1 areas should promote well-designed and efficient new growth as well as promote redevelopment. Additionally, Livable Delaware states that land within Investment Level 2 areas should depart from the typical single family dwelling developments and promote a broader mix of housing types and commercial sites. Single family dwellings exist on the site and will be removed with the construction of the CVS pharmacy. As such, this development appears to be generally consistent with the 2010 update of the Livable Delaware "Strategies for State Policies and Spending."

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

New Castle County Comprehensive Plan:

The proposed pharmacy is situated within New Castle County and the parcel is currently zoned as NC21 (Single Family 21,000 square feet). As part of the project, the land is proposed to be rezoned CN (Commercial Neighborhood). According to the New Castle County Comprehensive Plan, the future land use of the property would be within the Low Density Residential area.

Proposed Development's Compatibility with the New Castle County Comprehensive Plan:

As part of the development proposal, the property would be rezoned as CN. As a result, the site would not be consistent with the future land use of the property within the County Comprehensive Plan of providing a low density residential area for this part of the county. However, the adjacent properties to the east of the site are currently zoned as CR (Commercial Regional) and the future land use of those properties would be within the Commercial/Office/Industrial Development area. Therefore, the rezoning of the subject site to CN would be consistent with the adjacent properties in the area. As such, the proposed rezoning as part of the CVS pharmacy is generally compatible with the New Castle County Comprehensive Plan.

Transportation Analysis Zones (TAZ)

Transportation Analysis Zones (TAZ) where development would be located: 115

TAZ Boundaries:

Current employment estimate for TAZ:1,474 in 2010
Future employment estimate for TAZ: 1,532 in 2040
Current Population estimate for TAZ: 3,757 in 2010
Future Population estimate for TAZ: 3,316 in 2040
Current household estimate for TAZ: 1,855 in 2010
Future household estimate for TAZ: 1,824 in 2040
Relevant committed developments in the TAZ: Presidential Towers and Society Office Complex
Would the addition of committed developments to current estimates exceed future projections: Yes
Would the addition of committed developments and the proposed development to current estimates exceed future projections: Yes

Trip Generation

As per the TIS, the trip generation for the proposed development was determined by using the comparable land use and rates/equations contained in the ***Trip Generation, 9th Edition: An ITE Informational Report***, published by the Institute of Transportation Engineers (ITE) for ITE Land Use Code 881 (Pharmacy with Drive-Through Window).

The peak period trip generation for the proposed CVS pharmacy is included in Table 1.

Table 1
CVS NAAMANS ROAD TRIP GENERATION

Land Use	ADT	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
13,281 Square Feet CVS Pharmacy with Drive-Through Window	1,287	24	22	46	66	66	132
Pass-By		0	0	0	33	32	65
Net New Trips		**24**	**22**	**46**	**33**	**34**	**67**

Note: The Trip Generation for the TIS are based on a 13,281 square foot pharmacy with drive-through window. However, the TIS cites the proposed pharmacy to be 13,225 square feet.

Overview of TIS

Intersections examined:

1. Naamans Road (Delaware Route 92/New Castle Road 17)/Site Entrance
2. Peachtree Road (New Castle Road 72)/Gas Station Entrance/Site Entrance
3. Naamans Road/Peachtree Road
4. Naamans Road/Gas Station Entrance
5. Naamans Road/Hotel Complex Entrance
6. Naamans Road/Montclair Drive
7. Naamans Road/Society Drive
8. Peachtree Road/Hotel Complex Entrance
9. Peachtree Road/Appletree Court
10. Peachtree Road/Cedartree Lane
11. Society Drive/Montclair Drive
12. Society Drive/Shopping Center Main Entrance

Conditions examined:

1. Case 1 - 2012 Existing conditions
2. Case 2 – 2015 No Build conditions without CVS Pharmacy
3. Case 3 –2015 Build conditions with CVS Pharmacy

Peak hours evaluated: Weekday morning and weekday evening

Committed Developments considered:

1. Presidential Towers (115 apartments)
2. Society Office Complex (6,200 square feet of general office space)

Intersection Descriptions

1. **Naamans Road (Delaware Route 92/New Castle Road 17) and Site Entrance (Proposed Right-In Access)**
   Type of Control: proposed unsignalized intersection (T-intersection)
   Eastbound Approach: (Naamans Road) existing two left turn lanes, two through lanes, and one right turn lane
   Westbound Approach: (Naamans Road) existing two through lanes
   Note: The Site Entrance forms the southerly leg of this intersection. Due to the right-in only configuration at the intersection, a level of service/delay analysis was not conducted since there are no conflicting movements.

2. **Peachtree Road (New Castle Road 72) and Gas Station Entrance/Site Entrance (Proposed Full Access)**
   Type of Control: existing four-legged stop controlled intersection
   Eastbound Approach: (Site Entrance) proposed one shared through/left turn/right turn lane, stop controlled
   Westbound Approach: (Gas Station Entrance) existing one shared through/left turn/right turn lane, stop controlled
   Northbound Approach: (Peachtree Road) existing one shared through/left turn/right turn lane; proposed one left turn lane and one shared through/right turn lane
   Southbound Approach: (Peachtree Road) existing one shared through/left turn lane and one shared through/right turn lane; proposed one left turn lane and one shared through/right turn lane
   Note: Under existing conditions, a residential driveway with one shared through/left turn/right turn lane is along the eastbound approach. However, this driveway was omitted from the analysis since there was minimal traffic utilizing this driveway during the data collection.

3. **Naamans Road and Peachtree Road**
   Type of Control:existing four-legged signalized intersection
   Eastbound Approach: (Naamans Road) two left turn lanes, two through lanes, and one channelized right turn lane
   Westbound Approach: (Naamans Road) two left turn lanes, two through lanes, and one channelized right turn lane
   Northbound Approach: (Peachtree Road) one left turn lane, one through lane, and one channelized right turn lane
   Southbound Approach: (Society Drive) two left turn lanes, one through lane, and one channelized right turn lane

4. **Naamans Road and Gas Station Entrance**
   Type of Control: existing three-legged stop controlled intersection (T-intersection)
   Eastbound Approach: (Naamans Road) existing two through lanes and one right turn lane
   Northbound Approach: (Gas Station Entrance) existing one right turn lane, stop controlled

5. **Naamans Road and Hotel Complex Entrance**
   Type of Control: existing three-legged stop controlled intersection (T-intersection)
   Eastbound Approach: (Naamans Road) existing two through lanes and one right turn lane
   Northbound Approach: (Hotel Complex Entrance) existing one right turn lane, stop controlled

6. **Naamans Road and Montclair Drive**
   Type of Control: existing three-legged stop controlled intersection (T-intersection)
   Westbound Approach: (Naamans Road) existing one through lane and one shared through/right turn lane
   Southbound Approach: (Montclair Drive) existing one right turn lane, stop controlled

7. **Naamans Road and Society Drive**
   Type of Control: existing three-legged yield controlled intersection (T-intersection)
   Eastbound Approach: (Naamans Road) existing one left turn lane and two through lanes
   Westbound Approach: (Naamans Road) existing two through lanes and one right turn lane
   Southbound Approach: (Society Drive) existing one right turn lane, yield controlled

8. **Peachtree Road and Hotel Complex Entrance**
   Type of Control: existing three-legged stop controlled intersection (T-intersection)
   Westbound Approach: (Hotel Complex Entrance) existing one shared left turn/right turn lane, stop controlled
   Northbound Approach: (Peachtree Road) existing one shared through/right turn lane
   Southbound Approach: (Peachtree Road) existing one left turn lane and one through lane

9. **Peachtree Road and Appletree Court**
   Type of Control: existing three-legged stop controlled intersection (T-intersection)
   Eastbound Approach: (Appletree Court) existing one shared left turn/right turn lane, stop controlled
   Northbound Approach: (Peachtree Road) existing one shared through/left turn lane
   Southbound Approach: (Peachtree Road) existing one shared through/right turn lane

10. **Peachtree Road and Cedartree Lane**
    Type of Control: existing four-legged stop controlled intersection
    Eastbound Approach: (Peachtree Road) existing one shared through/left turn/right turn lane

Westbound Approach: (Peachtree Road) existing one shared through/left turn/right turn lane
Northbound Approach: (Cedartree Lane) existing one shared through/left turn/right turn lane, stop controlled
Southbound Approach: (Cedartree Lane) existing one shared through/left turn/right turn lane, stop controlled
Note: Stop bars exist along Peachtree Road approaches, however no stop signs present.

11. **Society Drive and Montclair Drive**
Type of Control: existing three-legged stop controlled intersection (T-intersection)
Eastbound Approach: (Montclair Drive) existing one shared left turn/right turn lane, stop controlled
Northbound Approach: (Society Drive) existing one shared through/left turn lane and one through lane
Southbound Approach: (Society Drive) existing one shared through/right turn lane

12. **Society Drive and Shopping Center Main Entrance**
Type of Control: existing three-legged stop controlled intersection (T-intersection)
Westbound Approach: (Shopping Center Main Entrance) existing one shared left turn/right turn lane, stop controlled
Northbound Approach: (Society Drive) existing one shared through/right turn lane
Southbound Approach: (Society Drive) existing one shared through/left turn lane

Transit, Pedestrian, and Bicycle Facilities

Existing transit service: Delaware Transit Corporation (DTC) currently provides services via DTC Routes 1, 21, and 61 within the study area. A designated bus stop for DTC Route 21 exists along the Naamans Road site frontage. A bus stop for DTC Route 21 also exists along Peachtree Road. Additionally, DTC Route 21 serves Foulk Road and downtown Wilmington. DTC Route 21 provides 17 round trips daily operating from 5:40 a.m. to 5:39 p.m. Designated bus stops for DTC Routes 1 and 61 exist along Naamans Road, Society Drive, and Peachtree Road. Additionally, DTC Route 1 serves Philadelphia Pike as well as downtown Wilmington and provides 57 round trips daily operating from 5:12 a.m. to 10:40 p.m. DTC Route 61 provides 10 round trips daily from 5:16 a.m. to 5:49 p.m. Two Park & Ride facilities exist within the vicinity of the site, at the Naamans Road/Carpenter Road intersection (approximately ½ mile west of the site) and at the Tri-State Mall (approximately ½ mile east of the site). DTC Routes 21 and 61 have stops at the Naamans Road/Carpenter Road Park & Ride, and DTC Routes 1 and 61 have stops at the Tri-State Mall Park & Ride. The Claymont Train Station, operated by SEPTA, is also located approximately 2 miles to the southeast of the site.

Planned transit service: DBF and JMT contacted Semia Hackett, Service Development Planner of DTC. In an email from February 5, 2013, the DTC prefers that the existing bus stop along the Naamans Road site frontage be relocated to the far side of the right-in only entrance and a 10' x 10' concrete pad be provided connecting to the proposed sidewalk. The DTC also requests that the developer provide a onetime contribution of $1,500 towards an endowment fund for the on-going maintenance of the bus stop and future amenities. Additionally, in an email from May 29, 2013, the DTC requests that the bus stops adjacent to the Peachtree Road site frontage, the

Naamans Road intersection with Montclair Drive, and the Society Drive intersection with the Shopping Center Main Entrance be improved to be ADA compliant and also requests that the developer provide a onetime contribution of $1,500 towards an endowment fund for each of those bus stops.

Existing bicycle and pedestrian facilities: According to DelDOT's *Delaware Bicycle Facility Master Plan* (October 2005) and the *New Castle County Bicycle Map*, Regional Bicycle Route NC-1 exists within the study area. Within the area, Statewide Bicycle Route NC-1 contains a bikeway and runs along Naamans Road. This route traverses through five of the project's study intersections (the Naamans Road intersections with Society Drive, Montclair Drive, Peachtree Road, the Gas Station Entrance, and the Hotel Complex Entrance).

Planned bicycle and pedestrian facilities: JMT and DBF contacted Mr. Marco Boyce, DelDOT's Bicycle and Pedestrian Coordinator. Per the October 16, 2012 Meeting Summary prepared by DBF, DBF coordinated with the DelDOT Bicycle Coordinator and it was noted that a dedicated bicycle lane would not be required along either Naamans Road or Peachtree Road, and a 5 feet sidewalk would be required along the Naamans Road site frontage and would continue to the Peachtree Road site access. Additionally, per a May 7, 2013 email from Mr. Boyce, it is requested that the new 5 feet sidewalk along Naamans Road be placed within a 15 feet wide access easement that would contain an 8 to 10 feet wide grass buffer between the curb and sidewalk. If feasible, street trees should be provided within the buffer area, in accordance with New Castle County's Unified Development Code. Further, per the May 7, 2013 email, a crosswalk is recommended to be added to the westerly leg of the Naamans Road and Peachtree Road intersection and a crosswalk with curb ramps is recommended to be added to the intersection of Peachtree Road and Appletree Court.

Bicycle Level of Service and Bicycle Compatibility Index: According to the League of Illinois Bicyclists (LIB), Bicycle Level of Service (BLOS) is an emerging national standard for quantifying the bike-friendliness of a roadway by measuring on-road bicyclist comfort levels for specific roadway geometries and traffic conditions. Utilizing the 10-year projected AADT along the site frontages, the BLOS with the construction of the proposed development and the provision of 5 foot bike lanes are summarized below. The BLOS was determined utilizing the calculators published on the LIB website: http://www.bikelib.org/roads/blos/blosform.htm

- Naamans Road – BLOS E (Existing), BLOS E (10-year Projected)
- Peachtree Road – BLOS C (Existing), BLOS C (10-year Projected)

Previous Comments
None.

General HCS Analysis Comments
(See table footnotes on the following pages for specific comments)

1. Davis, Bowen, and Friedel, Inc. performed analyses using HCS2000 Version 4.1f. JMT used HCS+T7F, Version 5.5. As such, some of the results are different between the two analyses.

2. For future conditions, the TIS sometimes used peak hour factors inconsistent with the guidelines provided in the *DelDOT Standards and Regulations for Subdivision Streets and State Highway Access*. However, JMT applied the appropriate peak hour factors in accordance to the DelDOT standards (0.80, 0.88, or 0.92 based on the total intersection volumes, or the peak hour factor based on existing turning movement counts, when greater).

3. *The DelDOT Standards and Regulations for Subdivision Streets and State Highway Access* recommends using 3% heavy vehicles for each movement at intersections when there is a significant change in intersection volume. As such, JMT increased truck percentages for all movements at an intersection to be a minimum of 3% when there was an increase in intersection volume. However, the TIS only increased truck percentages to be a minimum of 3% along movements where site traffic was added.

4. Due to the right-in only configuration at the Naamans Road and Site Entrance intersection, a level of service/delay analysis was not conducted since there are no conflicting movements.

5. JMT included pedestrian and bicycle volumes within the analysis whereas the TIS did not.

6. At the unsignalized intersections, the TIS and JMT used different distances, progressed volume, progression speed, and saturation flow rate parameters when incorporating the upstream signal information from the Naamans Road intersection with Peachtree Road.

Table 2
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[1] (Two Way Stop Control)	**LOS per TIS**		**LOS per JMT**	
Peachtree Road/ Gas Station Entrance/Site Entrance	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)[2]				
Westbound Gas Station Entrance	B (10.3)	B (10.5)	B (10.3)	B (10.8)
Southbound Peachtree Road	A (7.9)	A (7.8)	A (7.9)	A (8.0)
2015 Without CVS Pharmacy (Case 2)[2]				
Westbound Gas Station Entrance	B (10.3)	B (10.5)	B (10.4)	B (10.9)
Southbound Peachtree Road	A (7.9)	A (7.8)	A (8.0)	A (8.0)
2015 With CVS Pharmacy (Case 3)[2,3]				
Eastbound Site Entrance	B (13.7)	C (17.2)	B (13.7)	C (17.3)
Westbound Gas Station Entrance	B (10.3)	B (11.0)	B (10.6)	B (11.6)
Northbound Peachtree Road - Left	-	-	A (7.5)	A (7.8)
Northbound Peachtree Road	A (7.5)	A (7.8)	-	-
Southbound Peachtree Road – Left	-	-	A (8.0)	A (8.0)
Southbound Peachtree Road	A (7.9)	A (7.8)	-	-

[1]For signalized and unsignalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.
[2]Two driveways (a right-in/right-out access as well as a full movement access) serve the Gas Station Entrance at this intersection. However, these two driveways were analyzed as one full movement access point.
[3]Per the TIS, exclusive left turn lanes along the northbound and southbound Peachtree Road approaches to this intersection are proposed; however, the TIS did not include the exclusive lanes as part of the analysis. JMT included the exclusive left turn lanes along Peachtree Road in the Case 3 analysis.

Table 2 (Continued)
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[4] (Two Way Stop Control)	**LOS per TIS**		**LOS per JMT**	
Peachtree Road/ Gas Station Entrance/Site Entrance	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2015 With CVS Pharmacy (Case 3)[5] *with Improvements*				
Eastbound Site Entrance	-	-	B (14.2)	C (17.7)
Westbound Gas Station Entrance	-	-	B (10.6)	B (11.1)
Northbound Peachtree Road - Left	-	-	A (7.5)	A (7.6)
Southbound Peachtree Road – Left			A (8.0)	A (8.0)

[4]For signalized and unsignalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.
[5]Improvements scenario includes the modification of the southbound Peachtree Road approach to the Site Entrance to provide one left turn lane, one through lane, and one shared through/right turn lane as shown in attached Figure 1. Additionally, the two driveways that serve the gas station would be consolidated to be one full movement access point directly across the proposed CVS site entrance.

Table 3
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Signalized Intersection[6]	**LOS per TIS**		**LOS per JMT**	
Naamans Road/Peachtree Road[7]	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)	C (27.7)	C (31.7)	C (27.8)	C (31.6)
2015 Without CVS Pharmacy (Case 2)[8]	C (28.2)	C (31.9)	C (28.2)	C (32.4)
2015 With CVS Pharmacy (Case 3)[8]	C (28.3)	C (32.0)	C (28.3)	C (32.5)

[6]For signalized and unsignalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.
[7]As customary, JMT utilized the heavy vehicle percentage calculated from the total number of vehicles who executed right turn movements. However, the TIS took a different approach.
[8]Based on a recommendation from McTrans, JMT proportionally increased the right turn on red volumes as a result of the increase in right turn volumes.

Table 4
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[9] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Naamans Road/ Gas Station Entrance	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Northbound Gas Station Entrance	A (9.6)	A (9.4)	A (9.7)	A (9.6)
2015 Without CVS Pharmacy (Case 2)				
Northbound Gas Station Entrance	A (9.7)	A (9.5)	A (9.8)	A (9.4)
2015 With CVS Pharmacy (Case 3)				
Northbound Gas Station Entrance	B (10.1)	A (9.5)	A (9.8)	A (9.4)

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

Table 5
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[10] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Naamans Road/ Hotel Complex Entrance	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Northbound Hotel Complex Entrance	A (9.4)	A (9.3)	A (9.5)	A (9.2)
2015 Without CVS Pharmacy (Case 2)				
Northbound Hotel Complex Entrance	A (9.4)	A (9.3)	A (9.6)	A (9.3)
2015 With CVS Pharmacy (Case 3)				
Northbound Hotel Complex Entrance	A (9.8)	A (9.4)	A (9.6)	A (9.3)

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

Table 6
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[11] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Naamans Road/ Montclair Drive	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Southbound Montclair Drive	A (9.2)	A (9.6)	A (9.0)	A (9.5)
2015 Without CVS Pharmacy (Case 2)				
Southbound Montclair Drive	A (9.2)	A (9.6)	A (9.0)	A (9.6)
2015 With CVS Pharmacy (Case 3)				
Southbound Montclair Drive	A (9.0)	A (10.0)	A (9.0)	A (9.6)

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

Table 7
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[12] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Naamans Road/ Society Drive	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Eastbound Naamans Road - Left	A (9.4)	B (11.9)	A (9.1)	B (11.9)
Southbound Society Drive	A (9.7)	A (9.8)	A (9.1)	A (9.8)
2015 Without CVS Pharmacy (Case 2)				
Eastbound Naamans Road - Left	A (9.4)	B (12.3)	A (9.2)	B (12.3)
Southbound Society Drive	A (9.8)	A (10.0)	A (9.2)	A (9.9)
2015 With CVS Pharmacy (Case 3)				
Eastbound Naamans Road - Left	A (9.2)	B (11.9)	A (9.3)	B (12.5)
Southbound Society Drive	A (9.2)	B (10.3)	A (9.2)	A (9.9)

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

Table 8
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[13] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Peachtree Road/ Hotel Complex Entrance	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Westbound Hotel Complex Entrance	A (9.5)	B (10.0)	A (9.6)	B (10.4)
Southbound Peachtree Road - Left	A (7.7)	A (7.7)	A (7.7)	A (7.8)
2015 Without CVS Pharmacy (Case 2)				
Westbound Hotel Complex Entrance	A (9.6)	B (10.1)	A (9.7)	B (10.5)
Southbound Peachtree Road - Left	A (7.7)	A (7.7)	A (7.8)	A (7.8)
2015 With CVS Pharmacy (Case 3)				
Westbound Hotel Complex Entrance	A (9.6)	B (10.2)	A (9.7)	B (10.7)
Southbound Peachtree Road - Left	A (7.7)	A (7.7)	A (7.8)	A (7.8)

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

Table 9
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[14] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Peachtree Road/ Appletree Court[15]	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Eastbound Appletree Court	B (10.4)	B (10.7)	B (10.5)	B (10.8)
Northbound Peachtree Road	A (7.4)	A (7.8)	A (7.5)	A (7.9)
2015 Without CVS Pharmacy (Case 2)				
Eastbound Appletree Court	B (10.4)	B (10.8)	B (10.6)	B (10.9)
Northbound Peachtree Road	A (7.4)	A (7.8)	A (7.5)	A (7.9)
2015 With CVS Pharmacy (Case 3)				
Eastbound Appletree Court	B (10.5)	B (11.0)	B (10.7)	B (11.1)
Northbound Peachtree Road	A (7.5)	A (7.9)	A (7.5)	A (7.9)

[14]For signalized and unsignalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.
[15]The LOS per TIS shown above is different from the LOS tables within the TIS report. Specifically, the TIS listed the results for the Peachtree Road and Hotel Complex Entrance intersection instead of the Peachtree Road and Appletree Court intersection within the report.

Table 10
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[16] Two Way Stop Control	**LOS per TIS**		**LOS per JMT**	
Peachtree Road/ Cedartree Lane[17]	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Eastbound Peachtree Road	A (7.4)	A (7.8)	A (7.4)	A (7.8)
Westbound Peachtree Road	A (7.7)	A (7.7)	A (7.8)	A (7.7)
Northbound Cedartree Lane	B (10.6)	B (11.6)	B (11.2)	B (12.0)
Southbound Cedartree Lane	B (10.7)	B (13.1)	B (11.0)	B (13.4)
2015 Without CVS Pharmacy (Case 2)				
Eastbound Peachtree Road	A (7.4)	A (7.8)	A (7.4)	A (7.9)
Westbound Peachtree Road	A (7.7)	A (7.7)	A (7.8)	A (7.8)
Northbound Cedartree Lane	B (10.7)	B (11.7)	B (11.2)	B (12.0)
Southbound Cedartree Lane	B (10.8)	B (13.2)	B (11.1)	B (13.6)
2015 With CVS Pharmacy (Case 3)				
Eastbound Peachtree Road	A (7.4)	A (7.9)	A (7.5)	A (7.8)
Westbound Peachtree Road	A (7.7)	A (7.7)	A (7.8)	A (7.7)
Northbound Cedartree Lane	B (10.8)	B (11.9)	B (11.4)	B (11.6)
Southbound Cedartree Lane	B (10.9)	B (13.8)	B (11.2)	B (13.4)

[16]For signalized and unsignalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.
[17]Stop bars exist along the Peachtree Road approaches, however no stop signs are present. The TIS and JMT both modeled Peachtree Road as the major street and Cedartree Lane as stop controlled.

Table 11
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[18] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Society Drive/ Montclair Drive	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Eastbound Montclair Drive	B (10.5)	B (13.6)	B (10.2)	B (12.8)
Northbound Society Drive	A (8.0)	A (8.6)	A (8.0)	A (8.6)
2015 Without CVS Pharmacy (Case 2)				
Eastbound Montclair Drive	B (10.9)	B (14.0)	B (10.5)	B (13.1)
Northbound Society Drive	A (8.1)	A (8.7)	A (8.1)	A (8.8)
2015 With CVS Pharmacy (Case 3)				
Eastbound Montclair Drive	B(10.9)	B (14.0)	B (10.5)	B (13.2)
Northbound Society Drive	A (8.1)	A (8.7)	A (8.1)	A (8.8)

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

Table 12
PEAK HOUR LEVELS OF SERVICE (LOS)
Based on Traffic Impact Study for CVS-Naamans Road
Prepared by Davis, Bowen, & Friedel, Inc.

Unsignalized Intersection[19] (T-Intersection)	**LOS per TIS**		**LOS per JMT**	
Society Drive/ Shopping Center Main Entrance	Weekday AM	Weekday PM	Weekday AM	Weekday PM
2012 Existing (Case 1)				
Westbound Shopping Center Main Entrance	B (11.0)	C (22.2)	B (11.0)	C (21.5)
Southbound Society Drive	A (8.0)	A (7.7)	A (8.0)	A (7.7)
2015 Without CVS Pharmacy (Case 2)				
Westbound Shopping Center Main Entrance	B (11.6)	D (27.7)	B (11.6)	D (27.2)
Southbound Society Drive	A (8.0)	A (7.8)	A (8.0)	A (7.9)
2015 Without CVS Pharmacy (Case 2)[20]*with Improvements*				
Westbound Shopping Center Main Entrance	-	-	B (11.1)	C (21.5)
Southbound Society Drive	-	-	A (8.0)	A (7.9)
2015 With CVS Pharmacy (Case 3)				
Westbound Shopping Center Main Entrance	B (11.6)	D (27.4)	B (11.6)	D (27.4)
Southbound Society Drive	A (8.0)	A (7.8)	A (8.0)	A (7.9)
2015 With CVS Pharmacy (Case 3)[20]*with Improvements*				
Westbound Shopping Center Main Entrance	-	-	B (11.2)	C (21.8)
Southbound Society Drive	-	-	A (8.0)	A (7.9)

[19]For signalized and unsignalized analyses, the numbers in parentheses following levels of service are average delay per vehicle, measured in seconds.
[20]Improvements scenario includes the HEP recommended addition of a northbound Society Drive right turn lane.