

Final Report | June 2024

# CR 614, CR 603 and New Albany Road Local Concept Development Study (LCD)

BURLINGTON COUNTY IN COOPERATION WITH THE DELAWARE VALLEY REGIONAL PLANNING COMMISSION (DVRPC)









#### **Table of Contents**

I.	IN	FRODUCTION	. 1
	A.	Foreword	. 1
	B.	Original and Successor Projects	. 1
		Data Reviewed	
	D.	Design Standards	. 2
		Characteristics of the Roadways and Surrounding Area	
		Concept Development Scope Statement	
		LCD Public Action Plan	
II.		IRPOSE AND NEED	
	Α.	Project Need	. 3
		Goals and Objectives	
III.		ISTING INVENTORY AND CONDITION	
		Maintenance Issues	
		Existing Roadway Inventory and Condition	
		Existing Utilities	
		Summary of Existing Deficiencies (not including CSDEs)	
		List of Substandard Design Elements	
		As-Built Plans and Tax Maps	
IV.		AFFIC AND CRASH SUMMARY	
		Traffic Operations	
		Traffic Data	
	C.	Traffic Volume Forecasts	. 8
	D.	Crash Data Analysis and Diagram	. 8
V.	SO	CIAL, ECONOMIC AND ENVIRONMENTAL SCREENING	. 9
	A.	Community Outreach	. 9
	B.	Noise and Air Quality	. 9
	C.	Socioeconomics	10
	D.	Cultural Resources	10
	E.	Section 4(f) Properties	10
	F.	Wetlands	11
	G.	Reforestation	11
	H.	Floodplain	11
	I.	Surface Water Characteristics	11
	J.	Sole Source Aquifer	11
	K.	Threatened/Endangered Species	11
	L.	Category 1 Waters	11
	M.	Vernal Pools	11
	N.	Stormwater	11
	Ο.	Hazardous Waste	12
	P.	Anticipated Environmental Permits or Approvals	12
		Environmental Summary with Probable NEPA Document	
VI.	ΕV	ALUATION OF CONCEPTUAL ALTERNATIVES	12
	A.	Conceptual Alternatives	12

В.	Traffic Analysis	13
C.	Right of Way Impacts and Review	13
	Access Impacts and Review	
	Utility Impacts	
	Environmental Impacts	
	Constructability and Staging Plans and Detour Plan	
	Controlling Substandard Design Elements	
I.		
J.	Alternatives Matrix / Risk Register	15
K.	Discussions with Subject Matter Experts	
	Preliminary Preferred Alternative (PPA)	
	Schedule	
VII.LC	OCAL CONCEPT DEVELOPMENT RECOMMENDATION	17
	of Figures and Tables  1 – Project Location	1
J	•	
Table	1 – Vertical Alignment Data	4
Table	2 – Sight Distance at Unsignalized Intersections	5
	3 – 2019 Existing LOS and Delay	
	4 – 2045 No-Build LOS and Delay	
	5 – Community Outreach Meetings	
	6 – Population Characteristics	
	7 – Alternatives Level of Service	
	8 – Estimated Construction Costs	
	9 – Right of Way Impacts	
	10 – Construction Staging Sequence	10
Tabla	11 – Design Schedule	17

#### **Appendices**

- A. Problem Statement (RFP Information)
- B. Tax Maps
- C. Crash Summary and Collision Diagrams
- D. Traffic Data, Flow Diagrams, and Warrant Analysis Report
- E. Aerial Plan
- F. Straight Line Diagrams
- G. Environmental Screening and Constraints Map
- H. Alternatives and Preliminary Preferred Alternative Plans
- I. Communications
- J. Resolutions of Support (final report only)
- K. Cost Estimates
- L. Alternatives Matrix
- M. Risk Register
- N. Complete Streets Checklist
- O. Public Involvement Action Plan
- P. Utility Coordination
- Q. Interagency Review Committee Approval (final report only)

Compact disc/flash drive (upon request): Photographs

#### I. INTRODUCTION

#### A. Foreword

Burlington County, in partnership with the Delaware Valley Regional Planning Commission (DVRPC) and the New Jersey Department of Transportation (NJDOT), initiated a Local Concept Development (LCD) study of the three adjoining intersections of CR 614 (Tom Brown Road) and New Albany Road, CR 614 (Tom Brown Road) and CR 603 (Riverton Road), and New Albany Road and CR 603 (Riverton Road) in Moorestown Township, Burlington County.

The intersection of CR 614 (Tom Brown Road) and New Albany Road was identified by DVRPC as a high crash location in the HSIP eligibility rankings. The study investigated safety and integrated operation enhancements at each intersection, which form a triangle, as shown in Figure 1. Copies of the NJDOT Straight Line Diagrams for each road within the project limits are included within Appendix F.



Figure 1 - Project Location

The Project Team consisted of Burlington County, DVRPC, NJDOT, Greenman-Pedersen, Inc. (GPI), and KMA Consulting Engineers, Inc. (KMA). The Project Team gathered and evaluated sufficient data to generate viable alternatives to address the Project Need, assess each alternative's impacts on the surrounding environment and community, and solicit input from local officials, community stakeholders, and the pubic to confirm the Project Need and identify a Preliminary Preferred Alternative (PPA). The results of the Local Concept Development study are summarized herein.

#### B. Original and Successor Projects

The intersection of CR 614 (Tom Brown Road) and New Albany Road was identified by DVRPC as a high crash location in the HSIP eligibility rankings.

#### C. Data Reviewed

During the data collection phase of this project, various sources were consulted to obtain information on existing conditions in the study area. This information was evaluated to determine areas of non-conformance with current design standards and to also form the base data for use in the development of alternatives. The following information was obtained and reviewed:

- Crash Data and Traffic Counts
- Environmental Maps (NJDEP, NOAA)
- Tax Maps

In addition to this specific information, field visits were conducted to evaluate and document existing conditions. Photographs were taken of the project area and are available upon request.

#### D. Design Standards

The following design standards were utilized in the analysis of the existing conditions and deficiencies within the project area and in the development of alternatives for this project.

- A Policy on Geometric Design of Highways and Streets, AASHTO, 7th Edition, 2018
- Roadside Design Guide (RDG) AASHTO, 2011
- Highway Capacity Manual (HCM) Transportation Research Board, 2016
- Manual on Uniform Traffic Control Devices (MUTCD) FHWA, 2009

#### E. Characteristics of the Roadways and Surrounding Area

CR 614 (Tom Brown Road), herein simply referred to as Tom Brown Road, is classified as an urban minor arterial with one travel lane in each direction and a posted speed limit of 45 mph. CR 603 (Riverton Road), herein referred to as simply Riverton Road, is classified as an urban minor arterial with one travel lane in each direction and a posted speed limit of 40 mph. New Albany Road is classified as an urban major collector with one travel lane in each direction and a posted speed limit of 35 mph. In general, Tom Brown Road and New Albany Road have narrow or unmarked shoulders and lack separate pedestrian and bicycle facilities. Riverton Road has wider shoulders suitable for bicyclist use. An existing paved multiuse path exists along the west side of New Albany Road, north side of Tom Brown Road; the north side of Tom Brown Road. Sidewalk is present along the south side of Riverton Road.

Tom Brown Road and New Albany Road form a four-legged intersection with all-way stop control. Riverton Road forms two 'T' type intersections with Tom Brown Road and New Albany Road forming the stems of the 'T.' A left turn lane is provided along Riverton Road at Tom Brown Road. A yield condition is present on the Tom Brown Road approach while stop control is present on the New Albany approach. Both 'T' intersections have a skewed alignments.

Adjacent land use is primarily residential, consisting of detached single-family homes. The Willow Point Condominiums are located within the triangular infield of the study's intersections. Moorestown High School, New Albany Elementary School, the George Baker Elementary School, and several churches are located within a mile of the study limits.

An aerial view of the project site is furnished in Appendix E.

#### F. Concept Development Scope Statement

A Local Concept Development Scope Statement was not prepared for this project.

#### G. LCD Public Action Plan

The PAP developed for the project is provided in Appendix O. The specific public involvement activities conducted during the project's Local Concept Development phase included identification and coordination with stakeholders; meetings with local officials; and Public Information Centers. The results of these public involvement activities are summarized in the discussion of Community Outreach contained in Section V.A. of this report.

#### II. PURPOSE AND NEED

The overall purpose of this project is to enhance the safety of the stop-controlled intersection of Tom Brown Road (CR 614) and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of Tom Brown Road and Riverton Road and New Albany Road and Riverton Road.

#### A. Project Need

Based on data for the five-year period of January 2016 to December 2020, a total of 93 crashes occurred within the project limits. Overrepresentations, which is a comparison of the site crashes to a typical similar roadway, included right angle (70%); injury (all severities, 33%); wet surface (20%); and at night (40%). There was one (1) reported pedestrian/bicyclist crash. Eighty-one percent (81%) of the crashes occurred at the intersection of Tom Brown Road and New Albany Road. This project area is also ranked on intersection network screening lists based on 2012-2016 data – a lower number rank means the location has more crashes within the County. The intersection of Tom Brown Road and New Albany Road ranks #4 for all crashes, Riverton Road and New Albany Road ranks #7 for pedestrian crashes, and Riverton Road and Tom Brown Road ranks #24 for pedestrian/bicyclist crashes.

The existing four-way stop condition at the intersection of Tom Brown Road and New Albany Road violates driver expectancy, particularly along the higher speed approaches of Tom Brown Road. The lack of driver expectancy for the stop condition and high approach speeds contribute to the right-angle crashes at the intersection. Tom Brown Road east of New Albany Road has narrow shoulders and lacks separate pedestrian and bicycle facilities. The intersection of Tom Brown Road and Riverton Road has insufficient / obstructed intersection sight distance for the yield control of the Tom Brown Road approach. The skewed angle of both intersections along Riverton Road contributes to higher vehicular speeds for turning movements which reduces safety. Lack of sidewalk, curb ramps, and crosswalks diminish driver awareness of pedestrians at the intersections and the need to share the road with all users.

#### B. Goals and Objectives

It is the goal of this project to improve safety at each intersection while minimizing environmental, quality of life, access, right of way and utility impacts. Any proposed improvements will consider impacts to local residents, business owners, emergency services and disadvantaged groups. The design of the project will also consider additional goals and

objectives obtained via stakeholder and public outreach. While the project may not be able to fully satisfy all of them, as many as possible should be addressed.

- Improve bicycle and pedestrian access.
- Minimize impacts to all road users during construction.
- Consider the context of the project area and identify opportunities for aesthetic enhancements.

#### III. EXISTING INVENTORY AND CONDITION

#### A. Maintenance Issues

No maintenance issues were identified during Local Concept Development.

#### B. Existing Roadway Inventory and Condition

The following data was obtained from review of survey data and field observations.

#### 1. Passing & Stopping Sight Distance

No passing zones exist along Tom Brown, Riverton, or New Albany Roads within the project limits. According to Table 3-1 of AASHTO, the minimum stopping sight distance (SSD) for design speed of 40, 45, 50 mph is 305, 360, and 425 feet, respectively.

At the intersection of Tom Brown Road and Riverton Road there is insufficient intersection sight distance for the yield control of the Tom Brown Road approach. The skewed angle of both intersections along Riverton Road contributes to higher vehicular speeds for turning movements which reduces safety.

#### 2. Horizontal Alignment

All roads within the project limits follow a tangent alignment.

#### 3. Vertical Alignment

The following table summarizes the existing vertical curves within the study limits based on a best fit profile run along the centerline of each roadway alignment.

rable i – Vertical Aliginilent Data							
Roadway	PVI Station	Curve Type	A	К	Length (ft)	Minimum Length (ft)	
Tom Brown Road	55+38.65	Sag	0.82%	122	100	79	
Tom Brown Road	57+10.83	Sag	1.54%	65	100	148	
Tom Brown Road	58+06.27	Crest	0.81%	99	80	68	
Tom Brown Road	59+96.55	Crest	2.19%	55	120	184	
Riverton Road	55+38.65	Sag	2.30%	139	320	181	
Riverton Road	57+10.83	Crest	3.35%	90	300	204	
Riverton Road	58+06.27	Crest	1.51%	198	300	92	
Riverton Road	59+96.55	Sag	1.09%	183	200	86	
New Albany Road	81+78.78	Sag	0.80%	438	350	51	
New Albany Road	84+66.00	Crest	3.89%	26	100	171	

Table 1 - Vertical Alignment Data

Roadway	PVI Station	Curve Type	A	К	Length (ft)	Minimum Length (ft)
New Albany Road	85+58.40	Sag	0.87%	92	80	56
New Albany Road	88+50.00	Crest	0.48%	208	100	21

One sag curve and three crest curves were identified within the project limits with lengths below the minimum required to meet the design K value as identified in AASHTO Figures 3-36 and 3-37. However, each curve does meet stopping sight distance requirements.

#### 4. Intersection Sight Distance

For unsignalized intersections, Section 9.5 of AASHTO states that intersection designs should provide sufficient sight distances to avoid potential conflicts between vehicles. The table below summarizes the required intersection sight distance (ISD) and SSD for each controlled intersection approach. The ISD shown assumes a passenger vehicle turning left; design speed is for the major roadway.

Design ISD SSD **Speed Movement** Control **ISD Obstructed?** (ft) (ft) (mph) Tom Brown EB at New Albany Stop 40 445 425 Unobstructed Tom Brown WB at New Albany Stop 40 445 425 Unobstructed New Albany NB at Tom Brown Stop 50 555 305 Unobstructed New Albany SB at Tom Brown Stop 50 555 305 Unobstructed Tom Brown WB at Riverton Yield 590<sup>1</sup> 425 45 Yes, vegetation 45 New Albany SB at Riverton Stop 500 305 Yes, vegetation

Table 2 - Sight Distance at Unsignalized Intersections

It should be noted that the intersection of Tom Brown Road and New Albany Road has all-way stop control, and per AASHTO Section 9.5.3.5 only requires sufficient intersection sight distance to see the first stopped driver on each approach.

#### 5. Major Roadway Cross Section Elements

#### Lane and Shoulder Widths

Lane widths along each roadway are typically 11-12 feet, which meets the minimum 10-foot lane width required in Section 7.3.3.2 of AASHTO.

Shoulders vary in width and are only present as the roadway cross section narrows or widens to accommodate lane tapers or on-street parking lanes. Section 7.3.3.3 of AASHTO notes that the use of shoulders on arterial streets is limited by restricted right-of-way and the need to use available right-of-way for travel lanes, parking lanes, transit lanes, bicycle lanes, pedestrian facilities, and other needs.

<sup>&</sup>lt;sup>1</sup> Yield control requires 590 feet of ISD along Riverton Road per Table 9-15 of AASHTO and 82 feet of ISD is required along Tom Brown Road per Section 9.5.3.3.2 of AASHTO. The yield sight triangle is obstructed for both left and right turns due to the presence of multiple trees and other roadside vegetation.

#### Superelevation

Since the roadways within the project limits are on tangent alignments, superelevation is not present or required.

#### Cross Slope

AASHTO states that the minimum plane cross slope for pavement should be 1.5 percent, increasing in each successive lane by 0.5 percent. Based on measurements taken from the digital terrain model (DTM), Tom Brown Road and New Albany Road have variable cross slopes between 1.5 - 3.0 percent depending upon lane and location. A DTM along Riverton Road was not available.

#### 6. Clear Zone

The clear zone is defined as the area starting at the edge of the traveled way that is available for safe use by errant vehicles. The width of the clear zone varies with speed, traffic volume, roadside slope, and horizontal roadway alignment. Based on the highest design speed, 50 mph, as well as an ADT over 6,000 vehicles, the range of the clear zone for Tom Brown Road should be between 20 and 22 feet. Currently, utility poles, trees and signs exist within the clear zone.

#### 7. Lighting

Lighting is provided via utility pole mounted fixtures along Riverton Road only. Lighting warrant and illumination analyses were not performed in LCD to determine the need for illumination along each roadway or to verify if the existing lighting meets the illumination requirements of AASHTO, respectively. A lighting warrant analysis should be performed during Preliminary Engineering to determine the need for additional lighting, as proposed in some of the alternatives, given there is an overrepresentation of nighttime crashes.

#### C. Existing Utilities

GPI prepared and distributed the Utility Contact Letter, which requests verification of existing and/or proposed facilities within the project limits and the name, address, and telephone number of the appropriate contact, to those utilities that have facilities within the project limits. Based on information provided to date, the following utility providers have facilities within the study limits:

- Electric Public Service Electric and Gas (PSEG)
- Gas PSEG
- Telephone Verizon
- Cable Comcast
- Water/Sewer Moorestown Water & Sewer
- Fiber none identified

Both aerial and underground facilities are present within the project limits. Aerial utilities are present along each road except for Tom Broad Road between Riverton and New Albany Roads. No Intelligent Transportation Systems (ITS) are located within the project limits. Responses to the Utility Contact Letter can be found in Appendix P.

#### D. Summary of Existing Deficiencies (not including CSDEs)

- Undesirable sag and crest vertical curve lengths
- Intersection sight distance (yield)

#### E. List of Substandard Design Elements

None

#### F. As-Built Plans and Tax Maps

As-built plans were not available for this project. Available tax maps are provided in Appendix B.

#### IV. TRAFFIC AND CRASH SUMMARY

#### A. Traffic Operations

Tom Brown Road and New Albany Road form a four-legged intersection with all-way stop control. Riverton Road forms two 'T' type intersections with Tom Brown Road and New Albany Road forming the stems of the 'T.' A yield condition is present on the Tom Brown Road approach while stop control is present on the New Albany approach. Both 'T' intersections have a skewed alignment. All approaches consist of a single lane for all movements, except for a left turn lane along Riverton Road at Tom Brown Road. There are no turning restrictions at any intersection.

#### B. Traffic Data

GPI performed a data collection program in October 2021 consisting of Classified Manual Turning Movement Counts (MTMC) at the following intersections.

- 1. Tom Brown Road and New Albany Road
- 2. Riverton Road and Tom Brown Road
- 3. Riverton Road and New Albany Road

The MTMC were classified in 15-minute increments into the following categories:

- ✓ Pedestrians
- ✓ Bicyclists (On road or in crosswalk)
- ✓ Motorcycles
- ✓ Cars & Light Goods (Automobiles, SUV's, minivans, pick-up trucks, and full-size vans, for personal or commercial use)
- ✓ Buses
- ✓ Single-Unit Trucks
- ✓ Articulated Trucks

GPI summarized the traffic count data in a flow diagram. A copy of the traffic flow diagram can be found in Appendix D. GPI also analyzed the existing operation of each of the counted intersections using HCS. The results of these analyses, including the LOS, delay and queue length by movement during the AM, midday and PM peak hours, can also be found in table format in Appendix D. The following table summarizes the overall LOS and delay for each intersection. The LOS and delay shown for the Riverton Road intersections is for the controlled movement only.

Table 3 – 2021 Existing LOS and Delay

		_				
	AM		MD		PM	
Intersection <sup>2</sup>	LOS	Delay	LOS	Delay	LOS	Delay
	203	(sec.)	LUS	(sec.)	LUS	(sec.)
1 – Tom Brown / New Albany Rds (U)	С	22.9	В	11.4	E	45.0
2 – Riverton / Tom Brown Rds (U)	В	11.9	В	11.0	С	15.4
3 – Riverton / New Albany Rds (U)	Е	38.3	С	18.5	Е	43.8

#### C. Traffic Volume Forecasts

Growth rates were obtained from the DVRPC Travel Improvement Model and compared with socioeconomic data from DVRPC for a design year of 2045. To be conservative, the demographic forecast rates from DVRPC were used to project the existing traffic volumes to the design year. A copy of the growth rate calculations can be found in Appendix D.

The operation of each counted intersection under no-build conditions was analyzed using HCS. The results of these analyses including the LOS, delay and queue length by movement during the AM, midday and PM peak hours can be found in table format in Appendix D. The following table summarizes the overall no-build LOS and delay for each intersection. The LOS and delay shown for the Riverton Road intersections is for the controlled movement only.

Table 4 – 2045 No-Build LOS and Delay

				•		
	AM		MD		PM	
Intersection <sup>2</sup>	LOS	Delay	LOS	Delay	LOS	Delay
	LU3	(sec.)	LUS	(sec.)	LO3	(sec.)
1 – Tom Brown / New Albany Rds (U)	Е	42.1	В	12.6	F	80.8
2 – Riverton / Tom Brown Rds (U)	В	12.7	В	11.6	С	18.1
3 – Riverton / New Albany Rds (U)	F	66.4	С	21.7	F	78.4

#### D. Crash Data Analysis and Diagram

Based on data for the five-year period of January 2016 to December 2020, a total of 93 crashes occurred within the project limits. Overrepresentations, which is a comparison of the site crashes to a typical similar roadway, included right angle (70%); injury (all severities, 33%); wet surface (20%); and at night (40%). There was one (1) reported pedestrian/bicyclist crash. Eighty-one percent (81%) of the crashes occurred at the intersection of Tom Brown Road and New Albany Road. The project area is also ranked on intersection network screening lists based on 2012-2016 data – a lower number rank means the location has more crashes within the County. The intersection of Tom Brown Road and New Albany Road ranks #4 for all crashes, Riverton Road and New Albany Road ranks #7 for pedestrian crashes, and Riverton Road and Tom Brown Road ranks #24 for pedestrian/bicyclist crashes. A copy of the analysis and diagrams are included in Appendix C.

<sup>&</sup>lt;sup>2</sup> (S) = signalized, (U) = unsignalized

#### V. SOCIAL, ECONOMIC AND ENVIRONMENTAL SCREENING

An Environmental Screening was conducted in 2021 to identify regulated resources within the vicinity of the study area. The study area is defined as a 300-foot buffer around the project limits. All of the environmentally sensitive areas are outside the project limits, including wetlands and water bodies. It is not anticipated that any of the identified resources pose an overwhelming environmental challenge that would preclude the project from advancing through to construction. A copy of the Screening can be found in Appendix G.

#### A. Community Outreach

A Public Action Plan (PAP) was prepared and submitted for approval to the Project Team in September 2021. Burlington County, DVRPC, and NJDOT Local Aid approved the PAP. In addition, the following meetings were held with local officials and the public. Copies of the minutes for each meeting can be found in Appendix I.

Date	Meeting
March 15, 2022	Local Officials: Moorestown
May 17, 2022	Project Stakeholders
August 16, 2022	Public Information Center #1 (PIC)
March 20, 2023	Local Officials: Moorestown, Cinnaminson
October 17, 2023	Project Stakeholders
October 17, 2023	Public Information Center #2 (PIC)

Table 5 – Community Outreach Meetings

Two rounds of public outreach were held for the project, with all meetings being held virtually. The first round of outreach included meeting with Moorestown local officials and project stakeholders prior to the Public Information Center. The purpose of these first meetings was to solicit input from the local officials and community on the project need, identify local concerns, and identify additional project stakeholders. From these meetings and the data collection process, a Purpose and Need Statement was developed for the project. A second round of meetings was held to present the recommended preferred alternative developed for the project, inform the attendees of potential impacts, and solicit community concerns.

In addition, a project website was developed (tombrownroadintersection.com). The website included general project information, meeting notices, and documents prepared for the project.

Copies of the minutes for each meeting can be found in Appendix I.

#### B. Noise and Air Quality

Sensitive receptors, primarily residential, for noise and air quality are located within the study area. The proposed project is exempt from the conformity requirement of the Clean Air Act Amendment (CAAA), including a PM 2.5 analysis, per 40 CFR 93.126 and is not anticipated to have adverse air quality impacts. It is anticipated that the project would be classified as a Type III project under 23 CFR 772.7 and would not require analysis for highway traffic noise impacts.

#### C. Socioeconomics

GPI prepared a Community Profile to identify the surrounding community demographics using the Environmental Justice (EJ) minority and low-income definitions and U.S. Census data (including American Community Survey updates). The Profile does not make any conclusions about EJ or Title VI issues; rather it serves to alert the Project Team of the presence of protected populations within the project area using the EJ minority and low-income definitions. A more detailed impact analysis may be conducted to evaluate potential environmental justice issues as the project progresses.

This evaluation determined that the study area is predominantly White. In general, median household income is above the poverty line. Most commuters use personal vehicles. Efforts will be made to reach out to these communities during the scoping process to obtain their input. The table below summarizes the population characteristics.

	Characteristic	Project Area	Moorestown	Burlington County
Low Income	•	5%	4%	6%
Limited Eng	lish Proficiency (LEP)	1%	1%	3%
Race/	White	80%	81%	67%
Ethnicity Hispanic/Latino		3%	3%	8%
	Asian American	11%	7%	5%
	Black or African American	5%	6%	16%
	American Indian/Alaskan	0.1%	0.0%	0.0%
Other <sup>3</sup>		1%	2%	3%
Use Public T	<b>Transportation</b>	2%	4%	4%
Walk/Bike to	o Work	2%	2%	1%
Homes with	No Vehicle Available	6%	5%	5%

Table 6 – Population Characteristics

Subsequent review of more recent data, as well as a larger, one mile buffer, indicates a slight increase in the White population and decrease in the minority populations. Percentages of low income and LEP populations remained the same.

#### D. Cultural Resources

The Screening did not identify any historic properties or districts within one-half mile of the project area. No previously registered archaeological sites are located within the project area. Architectural/archaeological surveys were not conducted for the screening.

#### E. Section 4(f) Properties

No Section 4(f), Green Acres Encumbered Parcels or State Open Space were identified within the study area limits.

<sup>&</sup>lt;sup>3</sup> Percentages may not equal 100% due to rounding. Other includes individuals who identified themselves as 'Native Hawaiian or Pacific Islander', 'Some Other Race Alone' or 'Two or More Races'

#### F. Wetlands

A review of existing mapping sources and a field investigation identified no wetland areas within the study area limits.

#### G. Reforestation

No project alternatives would result in deforestation of one-half acre or more.

#### H. Floodplain

No portion of the study area lies within the FEMA 100-year floodplain.

#### I. Surface Water Characteristics

There are no stream crossings within the study area.

#### J. Sole Source Aquifer

The study area is located in the New Jersey Coastal Plain Sole-Source Aquifer System.

#### K. Threatened/Endangered Species

The following species may occur within the study area or could potentially be affected by proposed project activities: northern long-eared bat (Myotis septentrionalis, federally threatened) and swamp pink (Helonias bullata, federally threatened). The New Jersey Natural Heritage Program of the Office of Natural Lands Management (NHP) does not list any NJ State threatened or endangered species as occurring within the study area. Due to the developed nature of the study area, there is no characteristic swamp pink habitat present in the study area, and no documented occurrences were found in Moorestown Township.

Subsequent to the screening, it was noted that the northern long-eared bat was uplisted to endangered status in 2023 and the Tricolored bat (Perimyotis subflavus) is proposed to be listed as federally endangered in 2024. The Black-crowned Night-heron (Nycticorax nycticorax, state threatened) may also be present as suitable foraging habitat was identified nearby.

#### L. Category 1 Waters

No Category 1 or Trout Producing/Trout Maintenance (TP/TM) waters are identified within the study area. NJDEP mapping does not show any streams within the study area.

#### M. Vernal Pools

According to data available through NJDEP and NHP consultation, no vernal pool habitats are present within one mile of the study area. According to NJDEP GIS data no vernal pools are located within the study area.

#### N. Stormwater

It is anticipated that the project will not result in new impervious area of greater than  $\frac{1}{4}$  acre, but the project will result in over one acre of total land disturbance. Therefore, compliance with the NJDEP Stormwater Management Rules (SWM) will be required.

#### O. Hazardous Waste

No NJDEP known contaminated sites are located within 300 feet of the proposed project location or historic fill identified within the study area. There was one NJEMS site, 904 Fernwood Road, identified within the study area. According to the NJDEP, this site is classified with the remedial level of C1, with cited groundwater contamination due to an underground storage tank that was remediated.

#### P. Anticipated Environmental Permits or Approvals

The following permits and approvals are anticipated to be required.

- Soil Erosion and Sediment Control Approval Burlington Soil Conservation District
- NJDEP Stormwater Construction General Permit (5G3)

#### Q. Environmental Summary with Probable NEPA Document

In summary, the Environmental Screening did not identify any "fatal flaws" that would prohibit the advancement of this project. The repair, reconstruction, restoration, retrofitting or replacement of any road, including ancillary transportation facilities (pedestrian / bicycle paths and bike lanes) lie within the Categorical Exclusion Category for NEPA documents. It is our recommendation that the probable NEPA document for this project will be a Categorical Exclusion.

#### VI. EVALUATION OF CONCEPTUAL ALTERNATIVES

With the project's Purpose and Need defined, the process of identifying and evaluating viable alternatives was undertaken along with consideration given to a "no-build" alternative. Conceptual plans and an alternatives matrix were prepared for each of the alternatives and are included with this document. The plans and matrix are provided in Appendices H and L, respectively.

#### A. Conceptual Alternatives

Traffic signal and all-way stop sign control (AWSC) warrant analyses were performed utilizing the warrant criteria in the MUTCD (Section 4C.02 for signals and 2B.07 for AWSC). Based on the collected data, which includes traffic volumes, crash and pedestrian information, along with the physical characteristics of the intersections, traffic signals and all-way stop controls are warranted at all three locations as summarized below. Note that there are minimal pedestrians and bicyclists using each of the three intersections. A summary of the warrant analyses is provided in Appendix D.

As a result, several alternatives were investigated for each intersection including two-way stop control, all-way stop control, traffic signalization, and roundabouts. Each alternative included MUTCD compliant signing and striping, ADA compliant pedestrian accommodations, and lighting (where necessary). At the Riverton Road intersections with Tom Brown Road and New Albany Road, alternatives also included improving the skew of the intersections to improve sight distance.

Ultimately, the following alternatives emerged from this evaluation, further described below.

#### Alternative 1

This alternative proposes a roundabout at Tom Brown Road and New Albany Road with pedestrian improvements and roundabout lighting. The roundabout would have an inscribed diameter of 90 feet. The Tom Brown Road approach to Riverton Road would be realigned to reduce the skew using a 533-foot radius. This intersection would be converted to either a two-way stop control or traffic signal with pedestrian improvements. In addition, the speed limit along Tom Brown Road would be reduced to 35 mph. The shared use path would be relocated to follow the new Tom Brown Road alignment. No improvements are proposed at New Albany Road and Riverton Road.

#### Alternative 2

This alternative proposes the same roundabout at Tom Brown Road and New Albany Road with pedestrian improvements and roundabout lighting as in Alternative 1. It also proposes a second roundabout at Tom Brown Road and Riverton Road with pedestrian improvements and roundabout lighting. This roundabout would have an inscribed diameter of 120 feet and all approaches would be realigned to minimize impacts and reduce operating speeds of incoming vehicles. A cul-de-sac is proposed at New Albany Road and Riverton Road, with an option to maintain right turns onto New Albany Road only.

#### Alternative 3: No-Build

This alternative considers that no proposed improvements are implemented within the project limits. It is intended that this alternative serve as a reference for comparison to each of the other proposed alternatives. This alternative does not address the project's Purpose and Need.

#### B. Traffic Analysis

GPI analyzed each alternative using HCS (unsignalized) and Synchro (signalized and roundabouts). The results of these analyses including the LOS, delay and queue length by movement during the AM, midday and PM peak hours can be found in table format in Appendix D and is summarized below.

Alternative LOS	1		2		3	
Intersection	AM	PM	AM	PM	AM	PM
1 – Tom Brown / New Albany Rds	Α	Α	Α	Α	Е	F
2 – Riverton / Tom Brown Rds	Α	Α	Α	Α	Α	Α
3 – Riverton / New Albany Rds	В	Α	n/a	n/a	В	Α

Table 7 - Alternative Level of Service

#### C. Right of Way Impacts and Review

The available right of way information was developed based on existing tax maps and GIS mapping. Deed research should be performed during subsequent design phases to better define impacts to existing right-of-way and adjust the design to avoid impacts where feasible. It is anticipated that the roundabout areas and realignment will require partial right of way acquisitions and temporary construction easements. No total takings are required for any of the alternatives. Stormwater Management basins may also require partial right of way acquisitions. A breakdown of the anticipated quantity and type of right of way impacts for each alternative is listed in the Alternatives Analysis Matrix in Appendix L.

#### D. Access Impacts and Review

A detailed investigation of the existing access was not conducted during Local Concept Development. Two (2) driveways will require adjustments to tie into the realigned Tom Brown Road. A breakdown of the anticipated quantity and type of access impacts for each alternative is listed in the Alternatives Analysis Matrix in Appendix L.

#### E. Utility Impacts

It is anticipated that utility impacts for the proposed alternatives would include aerial utility pole relocations within the improvement limits. Coordination with facilities owners will be required during Preliminary Engineering and through Final Design.

#### F. Environmental Impacts

All of the alternatives will result in disturbance of over one acre, but no increase in impervious surface is anticipated. This triggers "major development" per current NJDEP Stormwater Management (SWM) Rules (2023). The anticipated stormwater Best Management Practices (BMPs) would be basins. Since NJDEP Permits are not required the County would Self-Certify the SWM for the project. In addition, the project disturbs more than 5,000 square feet of land, so a certification from the Burlington Soil Conservation District is also required.

#### G. Constructability and Staging Plans and Detour Plan

No significant constructability issues were identified for the construction of the alternatives. The majority of the improvements can be completed in five (5) main stages. It was assumed that long term detours are not permissible, and only short term/off-peak detours would be permitted to finish construction of the roundabout's splitter and central islands and perform the final paving and striping operations.

Allowable lane closure hours will be requested from Burlington County during Preliminary Engineering. Access to residences and businesses must be maintained at all times.

#### H. Controlling Substandard Design Elements

Since there are no existing Controlling Substandard Design Elements (CSDEs) identified within the project limits, a Design Exception from the standards set forth in AASHTO is not required.

#### I. Construction Cost Estimate

An estimate of the probable construction cost for each alternative was prepared based on preliminary quantities and relevant cost data from prior NJDOT and County projects. The estimated construction cost for each alternative is noted in the following table. Right of way costs are not included in this estimate. A copy of the estimates can be found in Appendix K.

Construction Construction **Total Estimated Alternative** Cost Inspection **Construction Cost** \$4,568,300 Alternative 1 \$489,500 \$4,078,800 \$545,000 \$5,086,900 Alternative 2 \$4,541,900 Alternative 3 (No Build) \$0.00 \$0.00 \$0.00

Table 8 – Estimated Construction Costs

#### J. Alternatives Matrix / Risk Register

The Alternatives Analysis Matrix, summarizing the critical facts associated with each of the alternatives, is included in Appendix L. Alternatives 1 and 2 both address the project's Purpose and Need.

The risk management efforts conducted during Concept Development included performing risk analysis to determine the probability and impacts of potential risk events and populating the Risk Register with the associated risks for the PPA. A copy of the Risk Register can be found in Appendix M.

#### K. Discussions with Subject Matter Experts

A meeting was held with NJDOT Subject Matter Experts (SMEs) on May 17, 2023 during Local Concept Development. Minutes are available in Appendix I.

#### L. Preliminary Preferred Alternative (PPA)

Based on the aforementioned data, and coordination with the Project Team, DVRPC, local officials, Alternative 2 was selected as the PPA. The PPA proposes roundabouts at the intersections of Tom Brown Road and New Albany Road and Tom Brown Road and Riverton Road and a cul-de-sac along New Albany Road in close proximity to Riverton Road as shown on the enclosed plan. The roundabout at Tom Brown Road and New Albany Road has an inscribed diameter of 90 feet and provides a level of service (LOS) A in each peak hour. The roundabout at Riverton Road and Tom Brown Road has an inscribed diameter of 120 feet and provides a LOS A in each peak hour. The low crash history at Riverton Road and New Albany Road, along with satisfactory traffic operations, did not necessitate construction of a traffic signal or a roundabout. The proposed cul-de-sac was the result of public feedback from the first Public Information Center.

The preferred alternative addresses the project's Purpose and Need, utilizes proven safety countermeasures, improves operations, provides standard lane/shoulder widths where appropriate, improves sight distance (realignment), and includes ADA compliant curb ramps and crosswalks. Connections to the shared use path and the sidewalk along Riverton Road are also included as part of the preferred alternative. Outside of the roundabout approaches, shoulders are provided that can accommodate bicyclists. A copy of the PPA can be found in Appendix H.

#### 1. Geometrics

The PPA proposes the following changes.

- The Tom Brown / New Albany Road roundabout has an inscribed diameter of 90 feet.
- The Riverton / Tom Brown Road roundabout has an inscribed diameter of 120 feet.
- Tom Brown Road will be realigned using a 500-foot radius curve.

#### 2. Right of Way and Access Impacts

The PPA requires partial acquisitions and easements from the properties noted below. ROW and parcel information is based on available as-built plans, tax maps and GIS data; therefore, all areas are approximate. The estimated ROW cost is \$ 2,540,000, which is based on available property tax assessments, recent sales data, and estimates from other

projects as reference. A fee simple right of way cost estimate of \$200 per square foot was developed, with easements assumed to be 30% of a fee take cost (see Appendix K).

Table 9 – Right of Way Impacts

		Total	lmpa	ct Areas (SF)  Easement			
Block	Lot	Area	Fee			Land Use	Location
		(Ac)	Take	Slope	Constr.		
5000	10	1.8	0	0	1230	Residential	291 Tom Brown Rd
5000	11	1.4	0	0	0	Residential	295 Tom Brown Rd
5000	12	1.38	210	0	35	Residential	299 Tom Brown Rd
5001	2	0.26	8335	0	0	Public Property	Tom Brown Rd
5001	1	3.82	2480	0	0	Residential	4 Willow Pt
5100	1	12.68	870	0	0	Farm	301 Tom Brown Rd
5400	1.01	2.4	410	0	0	Residential	300 Tom Brown Rd

Of note, a 20-foot wide easement is shown on tax maps for the existing paved path and sewer system along Tom Brown, Riverton, and New Albany Roads so some easements may be eliminated. The areas shown in the table do not include SWM basins, as more information is needed to determine the size and location of the same. Areas will need to be verified in Preliminary Engineering depending on the final limits of the proposed improvements and deed research.

#### 3. Construction Staging

Construction of the PPA will be completed in five (5) main stages as summarized below. It was assumed that long term detours are not permissible, and only short term/off-peak detours would be permitted to finish construction of the splitter and central islands and perform the final paving and striping operations.

Table 10 – Construction Staging Sequence

rable to construction stagning coquentes									
Stage	Construction by Intersection								
Stage	Tom Brown/New Albany	Riverton/Tom Brown	Riverton/New Albany						
1	Construct south quadrant of roundabout	Construct northeast roundabout corner and basin (Tom Brown realignment)	Construct basin						
2	Construct west quadrant of roundabout	Construct northwest roundabout corner and basin; traffic shifted to new Tom Brown alignment	No work						
3	Construct north quadrant of roundabout	Construct south portion of roundabout (Riverton realignment)	No work						
4	Construct east quadrant of roundabout	No work	No work						
5	Construct splitter and central islands using short term detour	Construct splitter and central islands using short term detour	Construct cul-de-sac after roundabouts complete						

Allowable working hours will be provided by the County during Preliminary Engineering. Due to the adjacent residences, it was assumed that overnight work is prohibited. Access to all residences shall be maintained at all times. Staging sequence plans and possible short term/off peak detours are provided in Appendix H.

#### 4. Anticipated Environmental Impacts

The PPA will result in disturbance of over one acre, but no increase in impervious surface. While this triggers "Major Development" per current NJDEP Stormwater Management Rules, the County would only need to self-certify the stormwater management and no additional stormwater management measures would be required. Since the project disturbs more than 5,000 square feet of land, a certification from the Burlington Soil Conservation District is also required.

#### 5. Cost Estimate

The total construction cost estimate of the PPA is approximately \$5.1 million, excluding right of way. Using available property tax assessments, recent sales data, and estimates from other projects, a right of way cost estimate of \$2.5 million was prepared with the noted assumptions. A copy of the construction cost estimate can be found in Appendix K.

#### 6. Community Outreach

Public outreach consisted of six (6) meetings, as outlined in Section V.A of this report. Overall, the response was positive for the PPA.

Moorestown Township concurred with the PPA via written letter dated February 12, 2024. The Burlington County Board of Commissioners passed a Resolution of Support for this project dated March 13, 2024. Copies of Resolution of Support can be found in Appendix J.

#### M. Schedule

The following are the anticipated start dates for the subsequent stages of this project.

**Project Delivery Phase Anticipated Start Date Estimate** Local Concept Development Completed June 2024 \$249,000 Local Preliminary Engineering \$250,000 Winter 2024 (FY 2025) Final Design Winter 2026 (FY 2027) \$370,000 Right of Way Summer 2027 (FY 2028) \$2,540,000 Construction Spring 2028 (FY 2029) \$5,100,000

Table 11 – Design Schedule

#### VII. LOCAL CONCEPT DEVELOPMENT RECOMMENDATION

The Local Concept Development study identified existing deficiencies, formulated the Purpose and Need Statement, developed and evaluated the various alternatives, and identified a PPA that is the most prudent and feasible course of action to satisfy the purpose and need defined for the project. This alternative can be constructed with minimal social, economic, and environmental impacts and will provide significant safety improvements.

It is recommended that this project advance to Local Preliminary Engineering.

#### A. Interagency Review Committee (IRC) Coordination

On May 29, 2024 the project was presented to the Interagency Review Committee (IRC), and it was recommended that the PPA, (Alternative 2) be advanced to the Local Preliminary Engineering and Final Design Phases. On June 18, 2024, the IRC issued a letter acknowledging that the PPA best addressed the purpose and need and that the project should advance to the Local Preliminary Engineering phase. DVRPC anticipates that the subsequent phases of this project will be federally funded in Fiscal Year 2025. Documentation of the IRC approval is provided in Appendix Q.

## **APPENDIX A**

### PROBLEM STATEMENT – PURPOSE & NEED



#### PURPOSE AND NEED STATEMENT



# Burlington County CR 614, CR 603, and New Albany Road Moorestown Township Local Concept Development Study

Purpose and Need sets the stage for consideration of the alternatives and is a fundamental requirement in the development of a project that will require future NEPA documentation.

#### **PURPOSE**

The overall purpose of this project is to enhance the safety of the stop-controlled intersection of Tom Brown Road (CR 614) and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of Tom Brown Road and Riverton Road (CR 603) and New Albany Road and Riverton Road.

#### **NEED**

Based on data for the five-year period of January 2016 to December 2020, a total of 93 crashes occurred within the project limits. Overrepresentations, which is a comparison of the site crashes to a typical similar roadway, included right angle (70%); injury (all severities, 33%); wet surface (20%); and at night (40%). There was one (1) reported pedestrian/bicyclist crash. Eighty-one percent (81%) of the crashes occurred at the intersection of Tom Brown Road and New Albany Road. This project area is also ranked on intersection network screening lists based on 2012-2016 data – a lower number rank means the location has more crashes within the County. The intersection of Tom Brown Road and New Albany Road ranks #4 for all crashes, Riverton Road and New Albany Road ranks #7 for pedestrian crashes, and Riverton Road and Tom Brown Road ranks #24 for pedestrian/bicyclist crashes.

The existing four-way stop condition at the intersection of Tom Brown Road and New Albany Road violates driver expectancy, particularly along the higher speed approaches of Tom Brown Road. The lack of driver expectancy for the stop condition coupled with substandard sight distance for existing stop signs and high approach speeds contribute to the right-angle crashes at the intersection. Tom Brown Road east of New Albany Road has narrow shoulders and lacks separate pedestrian and bicycle facilities. The intersection of Tom Brown Road and Riverton Road has insufficient intersection sight distance for yield control of the Tom Brown Road approach. Intersection stopping sight distance appears to be obstructed at the intersection of New Albany Road and Riverton Road due to overgrown roadside vegetation. The skewed angle of both intersections along Riverton Road contributes to higher vehicular speeds for turning movements which reduces safety. Lack of sidewalk, curb ramps, and crosswalks diminish driver awareness of pedestrians at the intersections and the need to share the road with all users.

#### **GOALS AND OBJECTIVES**

It is the goal of this project to improve safety at each intersection while minimizing environmental, quality of life, access, right of way and utility impacts. Any proposed improvements will consider impacts to local residents, business owners, emergency services and disadvantaged groups. The design of the project will also consider additional goals and objectives obtained via stakeholder and public outreach. While the project may not be able to fully satisfy all of them, as many as possible should be addressed.

- Improve bicycle and pedestrian access.
- Minimize impacts to all road users during construction.
- Consider the context of the project area and identify opportunities for aesthetic enhancements.





# FY 2021 Burlington County Local Concept Development Intersection Study for CR 614, CR 603 and New Albany Road

The Delaware Valley Regional Planning Commission (DVRPC) on behalf of Burlington County, New Jersey is seeking consultant support for the preparation of a Local Concept Development (LCD) study being advanced through its Local Capital Project Delivery (LCPD) Program. This program is consistent with the Project Delivery Process (PDP) recently implemented by the New Jersey Department of Transportation (NJDOT). Through this Request for Proposals (RFP), DVRPC is seeking to engage one (1) firm to provide professional consultant services in Burlington County for a LCD intersection study for County Route 614 (Tom Brown Road), County Route 603 (Riverton Road) and New Albany Road, in the Township of Moorestown, New Jersey.

#### **DVRPC Timeline for RFP Process:**

Posting of Request for Proposals:	Wednesday, February 17, 2021
Submission of Inquiries by Email:	Friday, February 26, 2021 at 3:00 PM EDT
Posting of Responses to Inquiries:	Rolling basis
Technical Proposal Deadline:	Wednesday, March 10, 2021 at 10:00 AM EDT
Administrative Proposal Deadline:	Wednesday, March 10, 2021 at 10:00 AM EDT
Anticipated Award of Projects:	April 2021

**DVRPC's vision** for the Greater Philadelphia Region is a prosperous, innovative, equitable, resilient, and sustainable region that increases mobility choices by investing in a safe and modern transportation system; that protects and preserves our natural resources while creating healthy communities; and that fosters greater opportunities for all.

**DVRPC's mission** is to achieve this vision by convening the widest array of partners to inform and facilitate data-driven decision-making. We are engaged across the region, and strive to be leaders and innovators, exploring new ideas and creating best practices.

DVRPC fully complies with Title VI of the Civil Rights Act of 1964 and related nondiscrimination statutes in all activities. For more information, visit www.dvrpc.org/GetInvolved/TitleVI.

DVRPC is funded through a variety of funding sources including federal grants from the U.S. Department of Transportation's Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), the Pennsylvania and New Jersey departments of transportation, as well as by DVRPC's state and local member governments.

DVRPC, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

#### **LIST OF APPENDICES**

**APPENDIX A: Burlington County LCD Study Project Description** 

**APPENDIX B: Burlington County LCD Study Location Maps** 

#### **APPENDIX A**

#### LCD PROJECT: BURLINGTON COUNTY STUDY

**Project Sponsor: Burlington County** 

**Project Description:** 

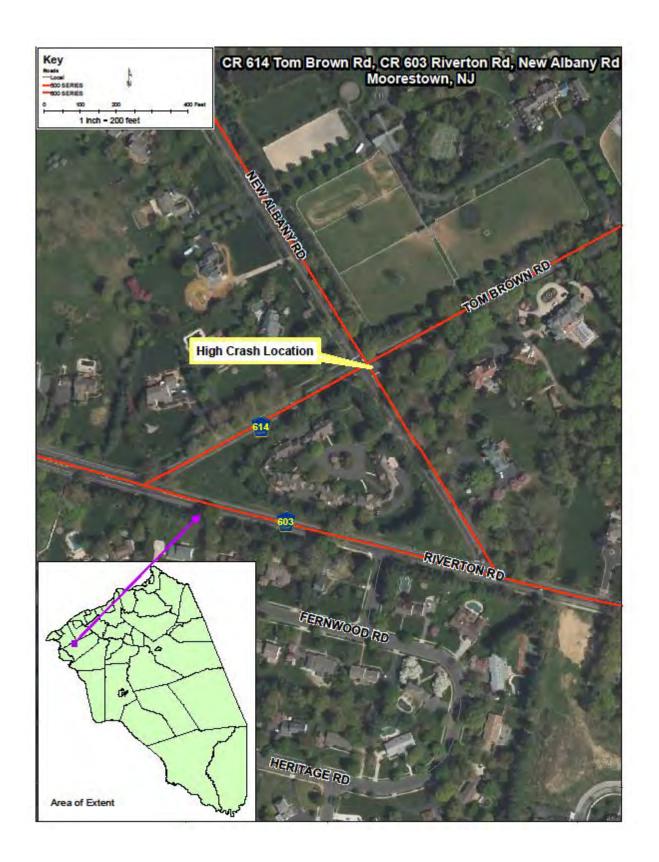
#### LCD Study CR 614 (Tom Brown Road), CR 603 (Riverton Road) & New Albany Road:

The intersections of CR 614 (Tom Brown Road), CR 603 (Riverton Road) and New Albany Road, Moorestown Township form a 3-intersection triangle, two intersections of which have a skewed alignment and substandard sight distance. The project is located in the Philadelphia Urban Area.

The intersection of CR 614 (Tom Brown Road) and New Albany Road is a 4-way stop and has previously been identified by DVRPC as a high crash location in the Highway Safety Improvement Program (HSIP)eligibility rankings. The LCD study shall focus on developing a concept for improving the safety and efficiency of the 3 intersections for motorists, bicyclists and pedestrians. The concept/location of modern roundabout(s) shall be included in the study.


\*Project area images are in Appendix B.


# APPENDIX B BURLINGTON COUNTY LCD STUDY LOCATION MAPS




## **APPENDIX B**

TAX MAPS







## APPENDIX C

### CRASH SUMMARY AND COLLISION DIAGRAMS

#### **2016 - 2020 CRASH DATA SUMMARY**

# DVRPC FY 2021 Burlington County Local Concept Development Intersection Study for CR 614, CR 603 and New Albany Road Moorestown Township, Burlington County 01/01/2016 through 12/31/2020

TOTAL CRASHES: 93

SEVERITY	COUNT	% OF TOTAL	2019 AVERAGE
Fatal	0	0.00%	
Injury*	31	33.33%	23.98%
Property Damage	62	66.67%	
Total	93		

COLLISION TYPE	COUNT	% OF TOTAL	2019 AVERAGE	**
Rear End	14	15.05%		
Sideswipe	0	0.00%		
Right Angle	65	69.89%	18.74%	
Head On	0	0.00%		
Opp. Sideswipe†	0	0.00%		
Parked Veh.	1	1.08%		
Left Turn	0	0.00%		
Backing	0	0.00%		
Encroachment	0	0.00%		
Overturned	0	0.00%		
Fixed Object	4	4.30%		
Animal	2	2.15%		
Pedestrian	0	0.00%		
Pedacyclist	1	1.08%	0.78%	
Non-fixed Object	0	0.00%		
Other	6	6.45%	0.01%	
Total	93			

INTERSECTION	COUNT	% OF TOTAL	2019 AVERAGE	**
At Signalized Intersection	76	81.72%	13.49%	
At Unsignalized Intersection	17	18.28%		
Between Intersections	0	0.00%		
Railroad Crossing	0	0.00%		
Total	93			

SURFACE CONDITION	COUNT	% OF TOTAL	2019 AVERAGE	**
Dry	72	77.42%	77.29%	
Wet Surface	19	20.43%	17.20%	
Snow	1	1.08%		
Ice	1	1.08%	0.77%	
Unknown	0	0.00%		
Other	0	0.00%		
Total	93			

LIGHT	COUNT	% OF TOTAL	2019 AVERAGE	**
Day	52	55.91%		
Dawn	0	0.00%		
Dusk	4	4.30%		
Night	37	39.78%	1.39%	
Unknown	0	0.00%		
Total	93			

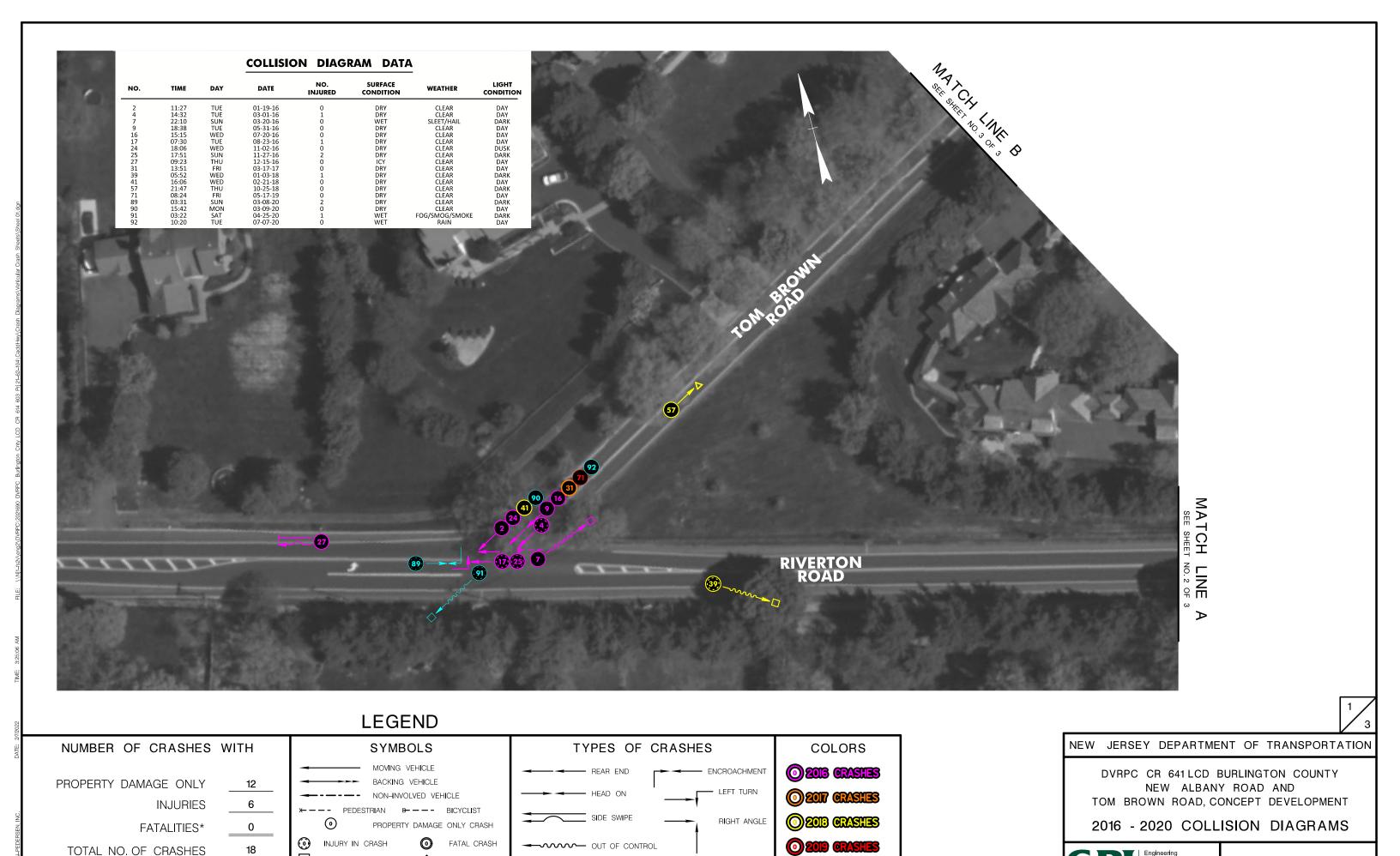
#### Note:

2019 average (latest available at time of preparation) for the county road system (all counties) shown where overrepresented.

<sup>\*</sup> Injury severity (major, moderate or minor) not available. 2019 average is sum of injury types (24.38%).

<sup>\*\*</sup> These columns indicate the number of fatal crashes in each accident category.

<sup>†</sup> Summaries do not include this crash type, although it is listed on the NJTR-1 form.



2020 CRASHES

FIXED OBJECT

NON-FIXED OBJECT

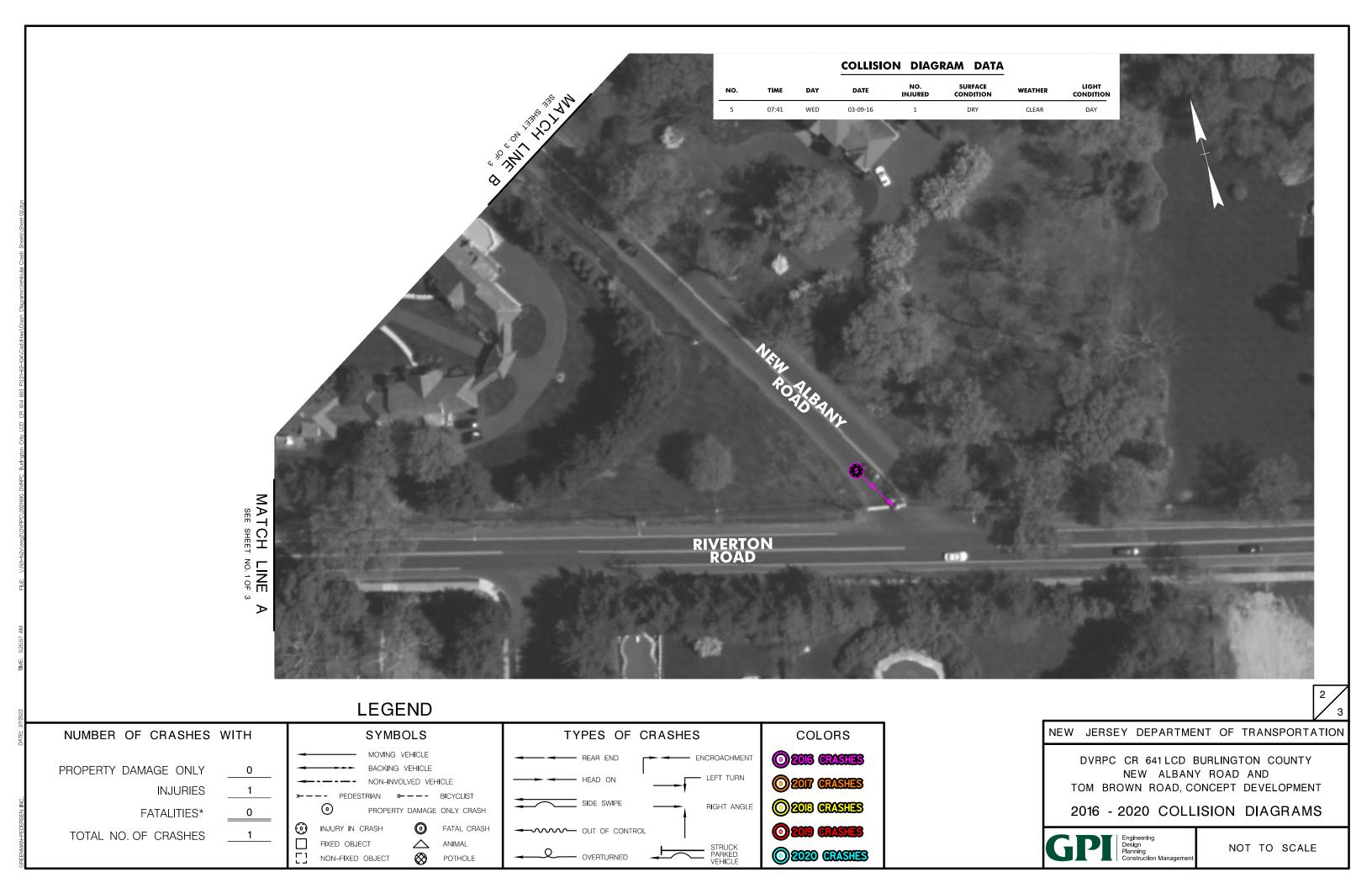
ANIMAL

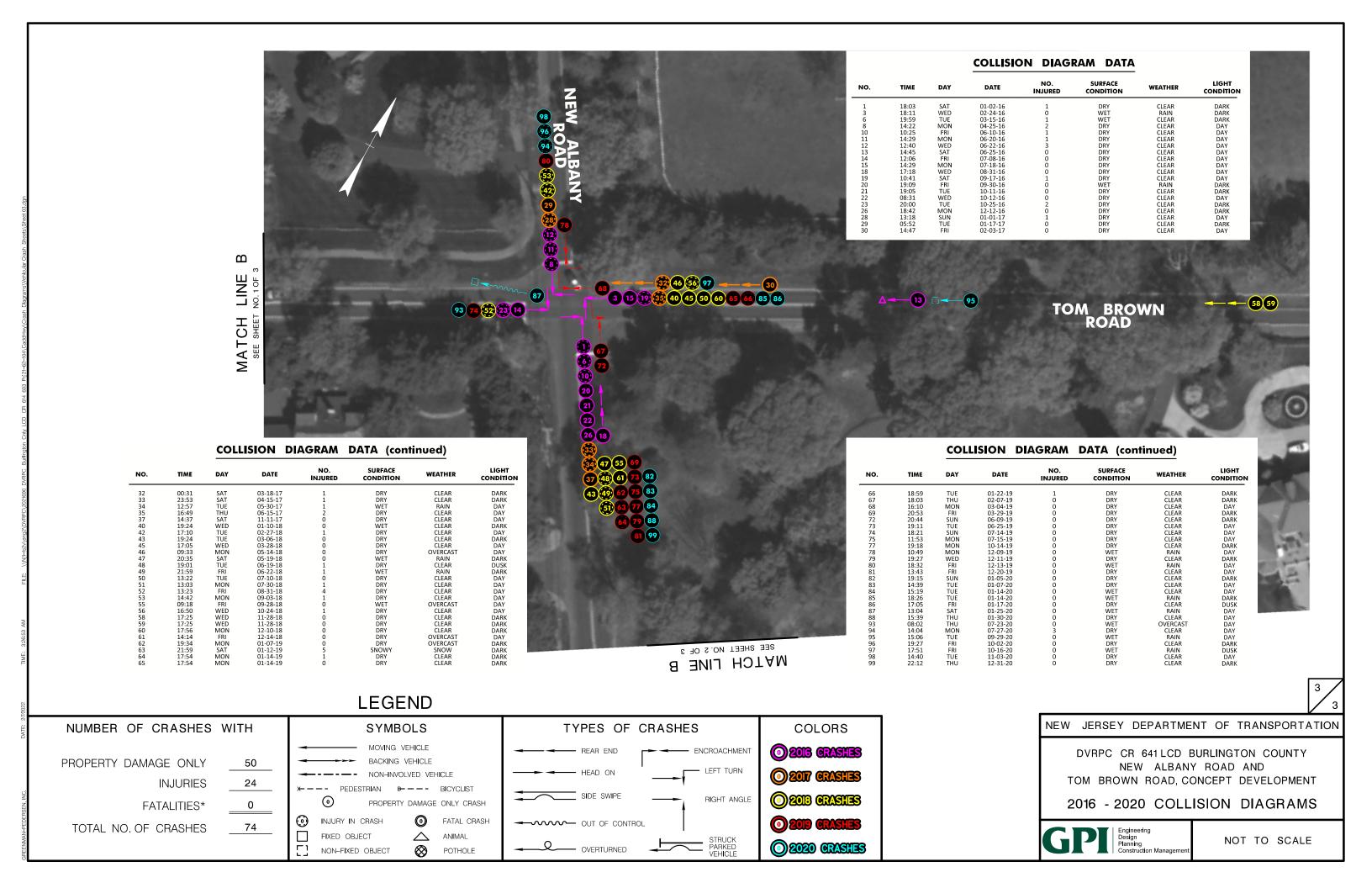
POTHOLE

OVERTURNED

Engineering
Deslgn
Planning
Construction Manageme

NOT TO SCALE





# APPENDIX D

TRAFFIC DATA, FLOW DIAGRAMS, WARRANT REPORT

Manual Turning Movement Counts performed on Wednesday, October 20, 2021 by Greenman-Pedersen Inc.

AM/MIDDAY/PM PEAK HOURS (HEAVY VEHICLES - BUSES, SINGLE-UNIT AND ARTICULATED TRUCKS)

FLOW DIAGRAM MOORESTOWN TOWNSHIP BURLINGTON COUNTY

FEBRUARY 2022

FEBRUARY 2022

## Delaware Valley Regional Planning Commission LCD for CR 614, CR 603, and New Albany Road GPI Project No. 2021690 Level of Service (LOS) Comparison AM

# 1 - Riverton Road (CR 603) & Tom Brown Road (CR 614)

Lane Group		2021	Existing (Ur	nsig.)		2045	No-Build (U	nsig.)		2045 Build	- Alt 1 (Rοι	undabout)		2045 Build	l - Alt 2 (Rou	ndabout)
Laile Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)
Riverton Rd (CR 603) EB L	Α	8.4	0.24	23	Α	8.5	0.25	25	۸	7.7	0.49	75	_	7.7	0.49	75
Riverton Rd (CR 603) EB T	Α	0.0	0.17	0	Α	0.0	0.18	0	^	7.7	0.43	/3	_ ^	7.7	0.43	/3
Riverton Rd (CR 603) WB T	۸	0.0	0.11	0	^	0.0	0.11	0	۸	5.9	0.21	25	۸	5.9	0.21	25
Riverton Rd (CR 603) WB R	A	0.0	0.11	U	Α.	0.0	0.11	U	A	5.9	0.21	25	A	5.9	0.21	25
Tom Brown Rd (CR 614) SW L	D	11.9	0.34	38	D	12.7	0.40	48	۸	6.2	0.29	25	۸	6.2	0.29	25
Tom Brown Rd (CR 614) SW R	Ь	11.9	0.34	30	ь	12.7	0.40	40	A	0.2	0.29	25	A	0.2	0.29	25
Intersection LOS	Α	5.5	-	-	Α	5.9	-		Α	7.0	-	-	Α	7.0	-	-

2 - Riverton Road (CR 603) & New Albany Road

= miterion media (en eco) a media media y media													
Lane Group		2021	Existing (Ur	ısig.)		2045	No-Build (U	nsig.)		2045 B	uild - Alt 1 (	Unsig.)	2045 Build - Alt 2 (Unsig.)
Latte Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS Delay (sec.) V/C Ratio 95% Queue (ft.)*
Riverton Rd (CR 603) EB LT	Α	0.1	0.00	0	Α	0.1	0.00	0	Α	0.1	0.00	0	
Riverton Rd (CR 603) WB TR	Α	0.0	0.23	0	Α	0.0	0.25	0	Α	0.0	0.25	0	Does Not Exist
New Albany Rd SE LR	D	30.1	0.73	146	Ε	38.5	0.80	184	Е	38.5	0.80	184	DOES NOT EXIST
Intersection LOS	В	10.0	-	•	В	12.6	-	•	В	12.6	•	-	

3 - Tom Brown Road (CR 614) & New Albany Road

3 - Tolli Brown Rodd (CR 014) & NEW Albully R	ouu															
Lane Group		2021	. Existing (U	nsig.)		2045	No-Build (U	nsig.)		2045 Build	l - Alt 1 (Sig.	) (60 Sec.)		2045 Build	l - Alt 2 (Rou	ındabout)
Lane Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)*	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)*	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)
New Albany Rd SE LT	_	20.3	0.59		_	26.7	0.68		0	0.0	0.00	0	_	8.4	0.36	50
New Albany Rd SE R		20.5	0.39	-	D	20.7	0.00	-	0	0.0	0.00	U	Α.	0.4	0.30	30
New Albany Rd NW LTR	С	17.2	0.49	-	С	21.2	0.56	-	0	0.0	0.00	0	Α	7.1	0.28	25
Tom Brown Rd (CR 614) NE L	_	22.3	0.65		_	30.5	0.75		0	0.0	0.00	0	^	8.8	0.40	50
Tom Brown Rd (CR 614) NE TR		22.5	0.03	-	U	30.3	0.75	-	0	0.0	0.00	U	A	0.0	0.40	30
Tom Brown Rd (CR 614) SW L	D	31.0	0.79		_	67.5	1.00		В	12.1	0.49	131	^	8.1	0.44	50
Tom Brown Rd (CR 614) SW TR	, D	31.0	0.79	-		07.5	1.00	-	0	0.0	0.00	0	A	0.1	0.44	30
Intersection LOS	С	23.7	-	-	Ε	41.0	-	-	В	18.1	-	-	Α	8.2	-	-

## NOTES:

- 1. '#' 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
- 2. 'm' Volume for the 95th percentile queue is metered by an upstream signal.
- 3. 'dl' Defacto Left Lane.
- 4. 'dr' Defacto Right Lane.
- 5. '\*' Queue not calculated for all-way stop controlled intersections.

## Delaware Valley Regional Planning Commission LCD for CR 614, CR 603, and New Albany Road GPI Project No. 2021690 Level of Service (LOS) Comparison MD

# 1 - Riverton Road (CR 603) & Tom Brown Road (CR 614)

Lane Group		2021	Existing (Ur	isig.)		2045	No-Build (U	nsig.)		2045 Build	- Alt 1 (Rοι	ındabout)		2045 Build	l - Alt 2 (Rou	ndabout)
Laile Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)
Riverton Rd (CR 603) EB L	Α	8.1	0.15	13	Α	8.2	0.16	14	۸	5.5	0.31	25	_	5.5	0.31	25
Riverton Rd (CR 603) EB T	Α	0.0	0.10	0	Α	0.0	0.11	0	^	5.5	0.31	23		5.5	0.51	23
Riverton Rd (CR 603) WB T	۸	0.0	0.13	0	^	0.0	0.13	0	۸	5.3	0.21	25	۸	E 2	0.21	25
Riverton Rd (CR 603) WB R	A	0.0	0.13	U	А	0.0	0.13	U	Α.	5.5	0.21	25	Α.	5.5	0.21	25
Tom Brown Rd (CR 614) SW L	D	11.1	0.23	22	D	11 2	0.24	23	۸	5.0	0.17	25	۸	5.0	0.17	25
Tom Brown Rd (CR 614) SW R	Ь	11.1	0.23	22	ь	11.5	0.24	25	A	5.0	0.17	25	Α.	5.0	0.17	25
Intersection LOS	Α	4.6	-	-	Α	4.7	-	-	Α	5.4	-	-	Α	5.4	-	-

#### 2 - Riverton Road (CR 603) & New Albany Road

= mirerten meda fen eest ander medany meda													
Lane Group		2021	Existing (Ur	ısig.)		2045	No-Build (U	nsig.)		2045 Bı	uild - Alt 1 (	Unsig.)	2045 Build - Alt 2 (Unsig.)
Lane Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS Delay (sec.) V/C Ratio 95% Queue (ft.)*
Riverton Rd (CR 603) EB LT	Α	0.1	0.00	0	Α	0.1	0.00	0	Α	0.1	0.00	0	
Riverton Rd (CR 603) WB TR	Α	0.0	0.25	0	Α	0.0	0.27	0	Α	0.0	0.27	0	Does Not Exist
New Albany Rd SE LR	С	16.1	0.39	46	С	17.2	0.42	51	С	17.2	0.42	51	DOES NOT EXIST
Intersection LOS	Α	4.1	-	•	Α	4.2	-	•	Α	4.2	•	-	

3 - Tom Brown Road (CR 614) & New Albany Road

Lane Group		2021	Existing (U	nsig.)		2045	No-Build (U	nsig.)		2045 Build	- Alt 1 (Sig.	(60 Sec.)		2045 Build	d - Alt 2 (Roι	ındabout)
Latte Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)*	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)*	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)
New Albany Rd SE LT	Р	11.1	0.28		D	11.6	0.31		0	0.0	0.00	0	_	F 2	0.18	25
New Albany Rd SE R	В	11.1	0.20	_	ь	11.0	0.51	_	U	0.0	0.00	U	A	5.2	0.10	25
New Albany Rd NW LTR	В	11.3	0.34	-	В	11.9	0.37	-	0	0.0	0.00	0	Α	5.8	0.23	25
Tom Brown Rd (CR 614) NE L	D	11.4	0.33		D	11.8	0.35		0	0.0	0.00	0	۸	5.6	0.21	25
Tom Brown Rd (CR 614) NE TR	В	11.4	0.55	_	В	11.0	0.55	-	U	0.0	0.00	U	A	5.0	0.21	25
Tom Brown Rd (CR 614) SW L	D	12.7	0.45		D	13.4	0.47		Α	8.0	0.30	70	۸	5.8	0.27	25
Tom Brown Rd (CR 614) SW TR	В	12.7	0.45	-	٥	13.4	0.47	-	0	0.0	0.00	0	A	5.8	0.27	25
Intersection LOS	В	11.7	-	-	В	12.3	-	-	В	12.4	-	-	Α	5.6	-	-

## NOTES:

- 1. '#' 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
- 2. 'm' Volume for the 95th percentile queue is metered by an upstream signal.
- 3. 'dl' Defacto Left Lane.
- 4. 'dr' Defacto Right Lane.
- 5. '\*' Queue not calculated for all-way stop controlled intersections.

## Delaware Valley Regional Planning Commission LCD for CR 614, CR 603, and New Albany Road GPI Project No. 2021690 Level of Service (LOS) Comparison PM

#### 1 - Riverton Road (CR 603) & Tom Brown Road (CR 614)

Lane Group		2021	Existing (Ur	rsig.)		2045	No-Build (U	rsig.)		2045 Build	- Alt 1 (Rοι	undabout)		2045 Build	d - Alt 2 (Rou	ındabout)
Lane Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)
Riverton Rd (CR 603) EB L	Α	9.1	0.29	31	Α	9.5	0.33	36	۸	7.4	0.47	75	_	7.4	0.47	75
Riverton Rd (CR 603) EB T	Α	0.0	0.14	0	Α	0.0	0.15	0	^	7.4	0.47	/3		7.4	0.47	73
Riverton Rd (CR 603) WB T	۸	0.0	0.19	0	^	0.0	0.22	0	۸	8.7	0.41	50	۸	8.7	0.41	50
Riverton Rd (CR 603) WB R	A	0.0	0.19	U	А	0.0	0.22	U	Α.	0.7	0.41	50	Α.	0.7	0.41	50
Tom Brown Rd (CR 614) SW L	(	15.1	0.49	68	(	17.6	0.56	86	۸	8.1	0.38	50	۸	8.1	0.38	50
Tom Brown Rd (CR 614) SW R	C	15.1	0.49	00	C	17.0	0.50	80	A	0.1	0.36	50	A	0.1	0.36	30
Intersection LOS	Α	6.7	-	-	A	7.2	-	-	Α	8.0	-	-	Α	8.0	-	

2 - Riverton Road (CR 603) & New Albany Road

		2021	Existing (Ur	nsig.)		2045	No-Build (U	nsig.)		2045 B	uild - Alt 1 (I	Unsig.)	2045 B	uild - Alt 2 (Unsig.)
Lane Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS Delay (sec.)	V/C Ratio 95% Queue (ft.)*
Riverton Rd (CR 603) EB LT	Α	0.5	0.01	1	Α	0.5	0.01	1	Α	0.5	0.01	1		
Riverton Rd (CR 603) WB TR	Α	0.0	0.43	0	Α	0.0	0.48	0	Α	0.0	0.48	0	6	oes Not Exist
New Albany Rd SE LR	D	29.2	0.61	97	Е	43.5	0.75	145	Ε	43.5	0.75	145	U	des Not Exist
Intersection LOS	Α	5.6	-	-	Α	8.1	-	-	Α	8.1	-	-		

3 - Tom Brown Road (CR 614) & New Albany Road

Lane Group		2021	Existing (U	nsig.)		2045	No-Build (U	nsig.)		2045 Build	- Alt 1 (Sig.	) (60 Sec.)		2045 Build	l - Alt 2 (Roι	undabout)
Latte Group	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)*	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)*	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)	LOS	Delay (sec.)	V/C Ratio	95% Queue (ft.)
New Albany Rd SE LT	(	21.6	0.52	_	_	23.9	0.56	_	_	21.2	0.54	122	_	6.8	0.25	25
New Albany Rd SE R		21.0	0.52	_	C	23.9	0.50	_		21.2	0.54	122	^	0.8	0.23	23
New Albany Rd NW LTR	F	50.4	0.91	-	F	77.8	1.02	-	С	27.2	0.79	#271	В	11.5	0.53	75
Tom Brown Rd (CR 614) NE L	_	39.7	0.82		_	55.0	0.92		D	14.0	0.53	154	^	7.9	0.39	50
Tom Brown Rd (CR 614) NE TR	-	39.7	0.62	_		33.0	0.52	_	L D	14.0	0.55	134	^	7.5	0.33	30
Tom Brown Rd (CR 614) SW L	_	72.1	1.01		_	131.9	1.19		_	24.3	0.81	#247	^	9.7	0.51	75
Tom Brown Rd (CR 614) SW TR	Г	72.1	1.01	-	Г	151.9	1.19	-		24.5	0.61	#247	^	9.7	0.51	/5
Intersection LOS	F	50.6	-	-	F	82.6	-		###	#VALUE!	-	-	Α	9.4	-	-

## NOTES:

- 1. '#' 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
- 2. 'm' Volume for the 95th percentile queue is metered by an upstream signal.
- 3. 'dl' Defacto Left Lane.
- 4. 'dr' Defacto Right Lane.
- 5. '\*' Queue not calculated for all-way stop controlled intersections.

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854 All Vehicles (no bicycles)

7 (11 V 0111010 0 (110 1)		erton Road	CR 614 Tom	Brown Road	CR 603 Riv	/erton Road	
Start Time		bound		bound		bound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	46	20	0	20	14	0	100
6:45:00 AM	67	29	1	20	22	0	139
7:00:00 AM	60	45	2	36	16	0	159
7:15:00 AM	90	41	0	60	34	0	225
7:30:00 AM	63	45	1	57	28	0	194
7:45:00 AM	68	64	3	63	34	0	232
8:00:00 AM	68	74	0	67	41	0	250
8:15:00 AM	84	70	0	64	45	0	263
8:30:00 AM	63	57	1	54	30	0	205
8:45:00 AM	59	64	0	34	35	0	192
9:00:00 AM	48	50	0	42	43	0	183
9:15:00 AM	45	28	0	34	33	0	140
10:30:00 AM	45	41	0	29	38	0	153
10:45:00 AM	47	38	0	35	29	0	149
11:00:00 AM	22	37	0	36	28	1	124
11:15:00 AM	46	43	1	37	32	0	159
11:30:00 AM	40	43	1	22	44	0	150
11:45:00 AM	41	36	2	56	53	2	190
12:00:00 PM	53	42	1	30	51	2	179
12:15:00 PM	38	48	0	31	30	0	147
12:30:00 PM	36	40	0	37	44	0	157
12:45:00 PM	26	41	1	38	48	3	157
1:00:00 PM	30	46	0	33	44	0	153
1:15:00 PM	44	46	1	29	53	0	173
1:30:00 PM	35	34	1	34	36	1	141
1:45:00 PM	39	46	2	43	44	0	174
3:00:00 PM	70	77	0	46	82	0	275
3:15:00 PM	54	54	3	68	73	0	252
3:30:00 PM	56	39	1	67	81	2	246
3:45:00 PM	61	56	0	56	53	0	226
4:00:00 PM	60	54	2	80	82	0	278
4:15:00 PM	61	51	0	72	68	0	252
4:30:00 PM	70	63	1	77	54	0	265
4:45:00 PM	67	51	2	61	78	0	259
5:00:00 PM	78	48	0	75	76	0	277
5:15:00 PM	92	58	1	86	78	0	315
5:30:00 PM	86	53	0	73	68	1	281
5:45:00 PM	63	51	0	74	53	0	241
6:00:00 PM	54	60	0	56	41	0	211
6:15:00 PM	40	45	0	53	42	2	182
Total	2215	1928	28	1985	1878	14	8048

			AM				
Heavy Vehicle #	8	6	1	15	4	0	34
Heavy Vehicle %	3%	2%	25%	6%	3%	0%	4%
		_	MD			-	
Heavy Vehicle #	7	7	2	6	6	1	29
Heavy Vehicle %	4%	4%	40%	4%	3%	25%	4%
			PM				
Heavy Vehicle #	2	5	0	4	2	0	13
Heavy Vehicle %	1%	2%	0%	1%	1%	0%	1%

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854

Motorcycles

Motorcycles	CR 603 Riv	verton Road	CR 614 Tom	Brown Road	CR 603 Riv	erton Road	
Start Time	South	bound	Westl	oound	North	oound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	1	0	1
7:00:00 AM	0	0	0	0	0	0	0
7:15:00 AM	1	0	0	0	0	0	1
7:30:00 AM	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	1	0	1
8:30:00 AM	0	0	0	0	0	0	0
8:45:00 AM	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0
10:30:00 AM	0	1	0	0	0	0	1
10:45:00 AM	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0
11:15:00 AM	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	1	0	0	1
12:00:00 PM	0	0	0	0	0	0	0
12:15:00 PM	0	0	0	0	0	0	0
12:30:00 PM	0	0	0	0	0	0	0
12:45:00 PM	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0
1:15:00 PM	0	1	0	0	0	0	1
1:30:00 PM	2	0	0	0	0	0	2
1:45:00 PM		0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0
4:00:00 PM	0	0	0	0	0	0	0
4:15:00 PM	0	0	0	0	0	0	0
4:30:00 PM		0	0	0	0	0	0
4:45:00 PM		1	0	0	0	0	
5:00:00 PM		0	0	0	0	0	0
5:15:00 PM		0	0	0	0	0	0
5:30:00 PM		0	0	0	0	0	2
5:45:00 PM		0	0	0	0	0	1
6:00:00 PM		0	0	1	0	0	1
6:15:00 PM		0	0	1	1	0	2
Total	6	3	0	3	3	0	15

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854 Cars & Light Goods Vehicles

Cars a Light	Goods venic		00011		00 000 01		
	CR 603 Riverton Road			Brown Road	CR 603 Riv		
Start Time	Southbound			Westbound		oound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM		19	0	19	14	0	98
6:45:00 AM		28	1	20	20	0	136
7:00:00 AM		45	2	34	15	0	154
7:15:00 AM		39	0	58	32	0	217
7:30:00 AM		41	0	54	26	0	180
7:45:00 AM		62	3	58	34	0	224
8:00:00 AM		74	0	63	40	0	244
8:15:00 AM		70	0	61	43	0	256
8:30:00 AM		54	1	52	30	0	200
8:45:00 AM		63	0	31	33	0	185
9:00:00 AM	45	50	0	40	41	0	176
9:15:00 AM	44	27	0	32	33	0	136
10:30:00 AM	44	39	0	26	38	0	147
10:45:00 AM	43	37	0	33	27	0	140
11:00:00 AM	21	34	0	33	28	0	116
11:15:00 AM	44	42	1	35	30	0	152
11:30:00 AM	39	43	0	21	44	0	147
11:45:00 AM	39	34	1	54	50	1	179
12:00:00 PM	51	38	1	28	50	2	170
12:15:00 PM	35	48	0	31	29	0	143
12:30:00 PM	36	39	0	35	41	0	151
12:45:00 PM	26	40	0	38	48	3	155
1:00:00 PM	28	41	0	32	42	0	143
1:15:00 PM	44	42	1	29	52	0	168
1:30:00 PM	29	32	1	34	34	0	130
1:45:00 PM	36	44	2	42	43	0	167
3:00:00 PM	67	76	0	43	81	0	267
3:15:00 PM	51	52	3	65	70	0	241
3:30:00 PM		37	1	64	80	2	239
3:45:00 PM		53	0	54	52	0	218
4:00:00 PM		53	2	80	78	0	272
4:15:00 PM		51	0	71	65	0	245
4:30:00 PM		62	1	76	54	0	262
4:45:00 PM		50	2	61	74	0	253
5:00:00 PM	77	47	0	73	76	0	273
5:15:00 PM	92	57	1	85	78	0	313
5:30:00 PM	84	51	0	73	67	1	276
5:45:00 PM	61	50	0	73	52	0	236
6:00:00 PM	54	58	0	55	41	0	208
6:15:00 PM		45	0	52	41	2	180
Total	2151	1867	24	1918	1826	11	7797

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854

**Buses** 

Duses							
	CR 603 Riv	erton Road	CR 614 Tom	Brown Road	CR 603 Riv	erton Road	
Start Time	South	bound	Westl	bound	North	oound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	1	0	0	0	0	1
6:45:00 AM	0	1	0	0	1	0	2
7:00:00 AM	0	0	0	0	1	0	1
7:15:00 AM	0	1	0	1	1	0	3
7:30:00 AM	3	1	0	1	2	0	7
7:45:00 AM	1	1	0	3	0	0	5
8:00:00 AM	0	0	0	2	0	0	2
8:15:00 AM	0	0	0	1	1	0	2
8:30:00 AM	0	2	0	0	0	0	2
8:45:00 AM	0	0	0	3	1	0	4
9:00:00 AM	0	0	0	0	1	0	1
9:15:00 AM	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0
10:45:00 AM	0	1	0	0	0	0	1
11:00:00 AM	0	0	0	0	0	0	0
11:15:00 AM	0	0	0	1	0	0	1
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	1	0	0	0	0	1
12:00:00 PM	1	2	0	0	1	0	4
12:15:00 PM	1	0	0	0	1	0	2
12:30:00 PM	0	0	0	0	2	0	2
12:45:00 PM	0	0	0	0	0	0	0
1:00:00 PM	0	3	0	0	0	0	3
1:15:00 PM	0	2	0	0	0	0	2
1:30:00 PM	2	1	0	0	0	0	3
1:45:00 PM	1	1	0	0	0	0	2
3:00:00 PM	0	0	0	2	0	0	2
3:15:00 PM	0	1	0	2	2	0	5
3:30:00 PM	0	2	0	1	1	0	4
3:45:00 PM	1	1	0	2	1	0	5
4:00:00 PM	0	1	0	0	1	0	2
4:15:00 PM	0	0	0	0	1	0	1
4:30:00 PM	0	0	0	0	0	0	0
4:45:00 PM		0	0	0	1	0	2
5:00:00 PM		0	0	1	0	0	1
5:15:00 PM		0	0	0	0	0	0
5:30:00 PM		1	0	0	0	0	1
5:45:00 PM		0	0	0	0	0	0
6:00:00 PM		1	0	0	0	0	1
6:15:00 PM		0	0	0	0	0	0
Total	11	25	0	20	19	0	75

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854

Single Unit Trucks

Start Time         CR 603 Riverton Road Southbound         CR 614 Tom Brown Road Westbound         CR 603 Riverton Road Northbound           6:30:00 AM         0         0         0         1         0         0           6:30:00 AM         0         0         0         0         0         0           6:45:00 AM         0         0         0         0         0         0           7:00:00 AM         2         0         0         1         0         0           7:15:00 AM         1         1         0         1         1         0           7:45:00 AM         0         1         0         2         0         0           8:00:00 AM         0         0         2         1         0         0           8:15:00 AM         2         0         0         2         0         0         0           8:45:00 AM         1         1         0         2         1         0	Total  1 0 3 4 7 3 3
Left         Thru         Left         Right         Thru         Right           6:30:00 AM         0         0         0         1         0         0           6:45:00 AM         0         0         0         0         0         0           7:00:00 AM         2         0         0         1         0         0           7:15:00 AM         1         1         0         1         1         0           7:30:00 AM         1         3         1         2         0         0           7:45:00 AM         0         1         0         2         0         0           8:00:00 AM         0         0         2         1         0           8:15:00 AM         2         0         0         2         0         0           8:30:00 AM         0         1         0         2         0         0         0           8:45:00 AM         1         1         0         0         2         1         0         0           9:00:00 AM         3         0         0         2         1         0         0         0         0         0         0 <td>1 0 3 4 7 3 3</td>	1 0 3 4 7 3 3
6:30:00 AM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 3 4 7 3 3
6:45:00 AM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 3 4 7 3 3
7:00:00 AM         2         0         0         1         0         0           7:15:00 AM         1         1         0         1         1         0           7:30:00 AM         1         3         1         2         0         0           7:45:00 AM         0         1         0         2         0         0           8:00:00 AM         0         0         0         2         1         0           8:15:00 AM         2         0         0         2         0         0           8:30:00 AM         0         1         0         2         0         0           8:45:00 AM         1         1         0         0         1         0           9:00:00 AM         3         0         0         2         1         0           9:15:00 AM         1         1         0         2         0         0           10:30:00 AM         1         1         0         3         0         0	3 4 7 3 3
7:15:00 AM         1         1         0         1         1         0           7:30:00 AM         1         3         1         2         0         0           7:45:00 AM         0         1         0         2         0         0           8:00:00 AM         0         0         0         2         1         0           8:15:00 AM         2         0         0         2         0         0           8:30:00 AM         0         1         0         2         0         0           8:45:00 AM         1         1         0         0         1         0           9:00:00 AM         3         0         0         2         1         0           9:15:00 AM         1         1         0         2         0         0           10:30:00 AM         1         1         0         3         0         0	4 7 3 3
7:30:00 AM         1         3         1         2         0         0           7:45:00 AM         0         1         0         2         0         0           8:00:00 AM         0         0         0         2         1         0           8:15:00 AM         2         0         0         2         0         0           8:30:00 AM         0         1         0         2         0         0           8:45:00 AM         1         1         0         0         1         0           9:00:00 AM         3         0         0         2         1         0           9:15:00 AM         1         1         0         2         0         0           10:30:00 AM         1         1         0         3         0         0	7 3 3
7:45:00 AM         0         1         0         2         0         0           8:00:00 AM         0         0         0         2         1         0           8:15:00 AM         2         0         0         2         0         0           8:30:00 AM         0         1         0         2         0         0           8:45:00 AM         1         1         0         0         1         0           9:00:00 AM         3         0         0         2         1         0           9:15:00 AM         1         1         0         2         0         0           10:30:00 AM         1         1         0         3         0         0	3
8:00:00 AM       0       0       0       2       1       0         8:15:00 AM       2       0       0       2       0       0         8:30:00 AM       0       1       0       2       0       0         8:45:00 AM       1       1       0       0       1       0         9:00:00 AM       3       0       0       2       1       0         9:15:00 AM       1       1       0       2       0       0         10:30:00 AM       1       1       0       3       0       0	3
8:15:00 AM       2       0       0       2       0       0         8:30:00 AM       0       1       0       2       0       0         8:45:00 AM       1       1       0       0       1       0         9:00:00 AM       3       0       0       2       1       0         9:15:00 AM       1       1       0       2       0       0         10:30:00 AM       1       1       0       3       0       0	
8:30:00 AM       0       1       0       2       0       0         8:45:00 AM       1       1       0       0       1       0         9:00:00 AM       3       0       0       2       1       0         9:15:00 AM       1       1       0       2       0       0         10:30:00 AM       1       1       0       3       0       0	/
8:45:00 AM     1     1     0     0     1     0       9:00:00 AM     3     0     0     2     1     0       9:15:00 AM     1     1     0     2     0     0       10:30:00 AM     1     1     0     3     0     0	3
9:00:00 AM 3 0 0 2 1 0 9:15:00 AM 1 1 0 2 0 0 10:30:00 AM 1 1 0 3 0	3
9:15:00 AM 1 1 0 2 0 0 10:30:00 AM 1 1 0 3 0	6
10:30:00 AM 1 1 0 3 0 0	4
	5
	7
10:45:00 AM 3 0 0 2 2 0 11:00:00 AM 0 3 0 3 0 1	7
11:15:00 AM	4
11:30:00 AM	3
11:45:00 AM 2 1 1 1 3 0	8
11.43.00 AM 2 1 1 1 3 0 1 1 1 2 1 1 1 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	5
12:00:00 FM 1 2 0 0 0 0 0 0 0 0	2
12:13:00 PM	2
12:45:00 PM	2
1:00:00 PM 2 2 0 1 1 0	6
1:00:00 FM	2
1:30:00 PM	3
1:45:00 PM	4
3:00:00 PM 3 1 0 1 1 0	6
3:15:00 PM 3 1 0 0 1 0	5
3:30:00 PM	2
3:45:00 PM 1 2 0 0 0 0	3
4:00:00 PM 1 0 0 0 2 0	3
4:15:00 PM 2 0 0 1 1 0	4
4:30:00 PM	3
4:45:00 PM 0 0 0 0 2 0	2
5:00:00 PM	3
5:15:00 PM	2
5:30:00 PM	1
5:45:00 PM	3
6:00:00 PM	1
6:15:00 PM	0
Total 39 33 4 39 23 1	

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854

**Articulated Trucks** 

Articulated							
	CR 603 Riverton Road			Brown Road	CR 603 Riv		
Start Time	Southbound		Westl	bound	North	oound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	1	0	0	1
7:15:00 AM	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0
8:00:00 AM	1	0	0	0	0	0	1
8:15:00 AM	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	0	0	0
8:45:00 AM	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0
10:45:00 AM	1	0	0	0	0	0	1
11:00:00 AM	1	0	0	0	0	0	1
11:15:00 AM	2	0	0	0	0	0	2
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	0	1	1
12:00:00 PM	0	0	0	0	0	0	0
12:15:00 PM	0	0	0	0	0	0	0
12:30:00 PM	0	0	0	2	0	0	2
12:45:00 PM	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	1	0	1
1:15:00 PM	0	0	0	0	0	0	0
1:30:00 PM	1	0	0	0	1	1	3
1:45:00 PM	1	0	0	0	0	0	1
3:00:00 PM	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	1	0	0	1
3:30:00 PM	0	0	0	1	0	0	1
3:45:00 PM	0	0	0	0	0	0	0
4:00:00 PM	0	0	0	0	1	0	1
4:15:00 PM	1	0	0	0	1	0	2
4:30:00 PM	0	0	0	0	0	0	0
4:45:00 PM		0	0	0	1	0	1
5:00:00 PM		0	0	0	0	0	0
5:15:00 PM		0	0	0	0	0	0
5:30:00 PM		0	0	0	1	0	1
5:45:00 PM		0	0	0	1	0	1
6:00:00 PM		0	0	0	0	0	0
6:15:00 PM		0	0	0	0	0	0
Total	8	0	0	5	7	2	22

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854

Bicycles on Road

Dicycles on i		verton Road	CR 614 Tom	Brown Road	CR 603 Riv	erton Road	
Start Time		bound		bound	North		Total
Start Time	Left	Thru	Left	Right	Thru	Right	lotai
6:30:00 AM		0	0	0	0	0	0
6:45:00 AM		0	0	0	0	0	0
7:00:00 AM		0	0	0	0	0	0
7:15:00 AM		0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	0	0	0
8:45:00 AM	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	1	0	1
9:15:00 AM	0	0	0	1	0	0	1
10:30:00 AM	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0
11:00:00 AM		0	0	0	0	0	0
11:15:00 AM	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	0	0	0
12:00:00 PM	0	0	0	0	0	0	0
12:15:00 PM	0	0	0	0	0	0	0
12:30:00 PM	0	0	0	0	0	0	0
12:45:00 PM		0	0	0	0	0	0
1:00:00 PM		0	0	0	0	0	0
1:15:00 PM		0	0	0	0	0	0
1:30:00 PM		0	0	0	0	1	1
1:45:00 PM		0	0	0	0	0	0
3:00:00 PM		1	0	0	0	0	1
3:15:00 PM		0	0	0	0	0	0
3:30:00 PM		0	0	0	0	0	0
3:45:00 PM		0	0	0	0	0	0
4:00:00 PM	0	0	0	0	0	0	0
4:15:00 PM	0	1	0	0	2	0	3
4:30:00 PM		1	0	0	0	0	1
4:45:00 PM		0	0	0	1	0	1
5:00:00 PM		0	0	0	0	0	0
5:15:00 PM		0	0	0	0	0	0
5:30:00 PM		0	0	0	0	0	0
5:45:00 PM		0	0	0	0	0	0
6:00:00 PM		0	0	0	0	0	0
6:15:00 PM		0	0	0	0	0	0
Total	0	3	0	1	4	1	9

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854 Pedestrians in Crosswalk

Start Time	CR 603 Riverton Road	CR 614 Tom Brown Road	CR 603 Riverton Road	Total
	Southbound Approach	Westbound Approach	Northbound Approach	
6:30:00 AM	0	0	0	0
6:45:00 AM	0	0	0	0
7:00:00 AM	0	0	0	0
7:15:00 AM	0	0	0	0
7:30:00 AM	1	0	0	1
7:45:00 AM	0	1	0	1
8:00:00 AM	0	1	0	1
8:15:00 AM	0	0	0	0
8:30:00 AM	0	0	0	0
8:45:00 AM	0	0	0	0
9:00:00 AM	0	0	0	0
9:15:00 AM	0	0	0	0
10:30:00 AM	0	0	0	0
10:45:00 AM	0	0	0	0
11:00:00 AM	0	0	0	0
11:15:00 AM	0	0	0	0
11:30:00 AM	0	0	0	0
11:45:00 AM	0	0	0	0
12:00:00 PM	0	0	0	0
12:15:00 PM	0	0	0	0
12:30:00 PM	0	0	0	0
12:45:00 PM	0	0	0	0
1:00:00 PM	0	0	0	0
1:15:00 PM	0	0	0	0
1:30:00 PM	0	0	0	0
1:45:00 PM	0	0	0	0
3:00:00 PM	0	0	0	0
3:15:00 PM	0	0	0	0
3:30:00 PM	0	0	0	0
3:45:00 PM	0	0	0	0
4:00:00 PM	0	0	0	0
4:15:00 PM	0	0	0	0
4:30:00 PM	0	0	0	0
4:45:00 PM	0	0	0	0
5:00:00 PM	0	1	0	1
5:15:00 PM	0	0	0	0
5:30:00 PM	0	0	0	0
5:45:00 PM	0	0	0	0
6:00:00 PM	0	0	0	0
6:15:00 PM	0	0	0	0
Total	1	3	0	4

CR 603 Riverton Road and CR 614 Tom Brown Road

Moorsetown Township, Burlington County, NJ

Lat: 39.984167 Lon: -74.966854 Bicycles in Crosswalk

Start Time	CR 603 Riverton Road	CR 614 Tom Brown Road	CR 603 Riverton Road	Total
	Southbound Approach	Westbound Approach	Northbound Approach	
6:30:00 AM	0	0	0	0
6:45:00 AM	0	0	0	0
7:00:00 AM	0	0	0	0
7:15:00 AM	0	0	0	0
7:30:00 AM	0	0	0	0
7:45:00 AM	0	0	0	0
8:00:00 AM	0	0	0	0
8:15:00 AM	0	0	0	0
8:30:00 AM	0	0	0	0
8:45:00 AM	0	0	0	0
9:00:00 AM	0	0	0	0
9:15:00 AM	0	0	0	0
10:30:00 AM	0	0	0	0
10:45:00 AM	0	0	0	0
11:00:00 AM	0	0	0	0
11:15:00 AM	0	0	0	0
11:30:00 AM	0	0	0	0
11:45:00 AM	0	0	0	0
12:00:00 PM	0	0	0	0
12:15:00 PM	0	2	0	2
12:30:00 PM	0	0	0	0
12:45:00 PM	0	0	0	0
1:00:00 PM	0	0	0	0
1:15:00 PM	0	0	0	0
1:30:00 PM	0	0	0	0
1:45:00 PM	0	0	0	0
3:00:00 PM	0	0	0	0
3:15:00 PM	0	0	0	0
3:30:00 PM	0	0	0	0
3:45:00 PM	0	0	0	0
4:00:00 PM	0	0	0	0
4:15:00 PM	0	0	0	0
4:30:00 PM	0	0	0	0
4:45:00 PM	0	0	0	0
5:00:00 PM	0	0	0	0
5:15:00 PM	0	0	0	0
5:30:00 PM	0	0	0	0
5:45:00 PM	0	0	0	0
6:00:00 PM	0	0	0	0
6:15:00 PM	0	0	0	0
Total	0	2	0	2

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447 All Vehicles (no bicycles)

All vehicles							
	CR 603 Riverton Road			any Road	CR 603 Riv		
Start Time	South	bound	West	bound	Northb	oound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	23	35	0	14	33	105
6:45:00 AM	2	30	52	0	26	37	147
7:00:00 AM	5	48	44	0	18	32	147
7:15:00 AM	1	45	61	1	36	35	179
7:30:00 AM	0	44	79	2	32	44	201
7:45:00 AM	0	68	86	0	35	57	246
8:00:00 AM	0	76	74	0	45	48	243
8:15:00 AM	2	75	56	2	44	54	233
8:30:00 AM	0	61	68	0	30	43	202
8:45:00 AM	1	67	63	0	39	46	216
9:00:00 AM	0	53	49	0	41	36	179
9:15:00 AM	1	32	38	0	36	32	139
10:30:00 AM	1	41	32	0	40	36	150
10:45:00 AM	0	37	36	0	31	41	145
11:00:00 AM	1	39	49	2	28	39	158
11:15:00 AM	0	48	41	0	33	42	164
11:30:00 AM	1	44	50	2	42	47	186
11:45:00 AM	0	38	41	1	56	51	187
12:00:00 PM	1	45	40	0	53	56	195
12:15:00 PM	1	50	45	1	33	47	177
12:30:00 PM	0	40	50	1	46	47	184
12:45:00 PM	0	45	36	1	52	41	175
1:00:00 PM	1	44	49	0	47	50	191
1:15:00 PM	1	48	43	1	51	55	199
1:30:00 PM	0	36	46	0	40	47	169
1:45:00 PM	0	43	41	0	47	59	190
3:00:00 PM	1	80	37	1	83	77	279
3:15:00 PM	2	55	50	0	75	90	272
3:30:00 PM	2	43	56	3	83	78	265
3:45:00 PM	0	55	63	0	56	73	247
4:00:00 PM		57	45	3	82	73	261
4:15:00 PM		53	59	0	69	69	251
4:30:00 PM	2	65	67	1	60	75	270
4:45:00 PM	1	56	60	1	77	91	286
5:00:00 PM		51	43	2	83	98	278
5:15:00 PM		59	56	0	79	97	294
5:30:00 PM	3	51	54	0	71	87	266
5:45:00 PM		53	64	4	53	81	257
6:00:00 PM		62	44	0	44	68	218
6:15:00 PM		48	46	2	43	60	201
Total	40	2008	2048	31	1953	2272	8352

	AM Peak Hour									
Heavy Vehicle	0	9	10	0	6	10	35			
Heavy Vehicle	0%	3%	3%	0%	4%	5%	4%			
MD Peak Hour										
Heavy Vehicle	0	9	6	0	10	4	29			
Heavy Vehicle	0%	5%	3%	0%	5%	2%	4%			
			PM Peak	Hour						
Heavy Vehicle	0	4	4	0	6	5	19			
Heavy Vehicle	0%	2%	2%	0%	2%	1%	2%			

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447

Motorcycles

iviotorcycles	0D 000 Di				0D 000 D		
		erton Road		any Road		erton Road	
Start Time		bound		bound	North		Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	1	0	1
7:00:00 AM	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	1	1
8:15:00 AM	0	0	0	0	1	0	1
8:30:00 AM	0	0	0	0	0	0	0
8:45:00 AM	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0
10:30:00 AM	0	1	0	0	0	0	1
10:45:00 AM	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0
11:15:00 AM	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	0	1	1
12:00:00 PM	0	0	0	0	0	0	0
12:15:00 PM	0	0	0	0	0	0	0
12:30:00 PM	0	0	0	0	0	1	1
12:45:00 PM	0	0	0	0	0	0	0
1:00:00 PM	0	0	1	0	0	0	1
1:15:00 PM	0	1	0	0	0	0	1
1:30:00 PM	0	0	0	0	1	0	1
1:45:00 PM	0	0	0	0	0	0	0
3:00:00 PM	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	1	1
4:00:00 PM	0	0	0	0	0	1	1
4:15:00 PM	0	0	1	0	0	0	1
4:30:00 PM	0	0	0	0	0	0	0
4:45:00 PM	0	1	0	0	0	0	1
5:00:00 PM	0	0	0	0	0	1	1
5:15:00 PM	0	0	0	0	0	0	0
5:30:00 PM	0	0	0	0	0	0	0
5:45:00 PM	0	0	2	0	0	1	3
6:00:00 PM	0	0	0	0	0	0	0
6:15:00 PM	0	0	0	1	0	0	1
Total	0	3	4	1	3	7	18

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447 Cars & Light Goods Vehicles

Gara & Eigin	CR 603 Riv	verton Road		any Road	CR 603 Rive	erton Road	
Start Time	South	bound	West	bound	Northb	oound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	22	35	0	14	33	104
6:45:00 AM	2	30	52	0	24	37	145
7:00:00 AM	4	48	40	0	17	32	141
7:15:00 AM	1	43	60	1	34	33	172
7:30:00 AM	0	40	76	2	30	42	190
7:45:00 AM	0	63	82	0	35	52	232
8:00:00 AM	0	76	73	0	43	44	236
8:15:00 AM	2	75	54	2	41	54	228
8:30:00 AM	0	56	65	0	30	37	188
8:45:00 AM	1	65	61	0	37	46	210
9:00:00 AM	0	53	47	0	40	29	169
9:15:00 AM	1	31	38	0	35	31	136
10:30:00 AM	1	40	29	0	38	33	141
10:45:00 AM	0	36	36	0	29	39	140
11:00:00 AM	1	37	49	2	27	38	154
11:15:00 AM	0	45	40	0	29	40	154
11:30:00 AM	1	44	49	2	42	47	185
11:45:00 AM	0	34	39	1	51	48	173
12:00:00 PM	1	43	38	0	52	56	190
12:15:00 PM	1	49	43	1	32	44	170
12:30:00 PM	0	39	49	1	43	46	178
12:45:00 PM	0	44	35	1	52	37	169
1:00:00 PM	1	41	47	0	46	46	181
1:15:00 PM	0	45	42	1	49	54	191
1:30:00 PM	0	34	44	0	37	44	159
1:45:00 PM	0	40	38	0	46	55	179
3:00:00 PM	1	77	36	1	82	72	269
3:15:00 PM	2	54	47	0	72	90	265
3:30:00 PM	2	40	56	3	81	77	259
3:45:00 PM	0	54	62	0	55	68	239
4:00:00 PM	1	56	45	3	79	72	256
4:15:00 PM	1	51	55	0	66	68	241
4:30:00 PM	2	64	64	1	60	75	266
4:45:00 PM	1	55	59	1	73	88	277
5:00:00 PM	1	50	42	2	83	97	275
5:15:00 PM	3	58	56	0	79	96	292
5:30:00 PM	3	49	52	0	69	86	259
5:45:00 PM	1	53	62	4	53	80	253
6:00:00 PM	0	60	44	0	44	67	215
6:15:00 PM	2	48	46	1	43	60	200
Total	37	1942	1987	30	1892	2193	8081

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447

Buses

Duses	OD 000 D:	t D	Marri Alli	DI	OD 000 D:	t D l	
- · · · -		erton Road		any Road		erton Road	
Start Time		bound	West	bound	North	bound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	1	0	0	0	0	1
6:45:00 AM	0	0	0	0	1	0	1
7:00:00 AM	1	0	2	0	1	0	4
7:15:00 AM	0	1	1	0	1	0	3
7:30:00 AM	0	1	0	0	2	1	4
7:45:00 AM	0	2	1	0	0	2	5
8:00:00 AM	0	0	1	0	0	0	1
8:15:00 AM	0	0	1	0	2	0	3
8:30:00 AM	0	3	0	0	0	0	3
8:45:00 AM	0	0	0	0	1	0	1
9:00:00 AM	0	0	0	0	1	0	1
9:15:00 AM	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	1	1
10:45:00 AM	0	1	0	0	0	0	1
11:00:00 AM	0	0	0	0	0	0	0
11:15:00 AM	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	1	0	0	0	0	1
12:00:00 PM	0	2	0	0	1	0	3
12:15:00 PM	0	0	0	0	1	0	1
12:30:00 PM	0	0	0	0	1	0	1
12:45:00 PM	0	0	0	0	0	0	0
1:00:00 PM	0	3	0	0	0	0	3
1:15:00 PM	1	1	0	0	0	0	2
1:30:00 PM	0	1	0	0	0	0	1
1:45:00 PM	0	1	0	0	0	1	2
3:00:00 PM	0	1	1	0	0	2	4
3:15:00 PM	0	1	1	0	2	0	4
3:30:00 PM	0	3	0	0	2	0	5
3:45:00 PM	0	1	0	0	1	2	4
4:00:00 PM	0	1	0	0	1	0	2
4:15:00 PM	0	1	1	0	2	0	4
4:30:00 PM	0	0	0	0	0	0	0
4:45:00 PM	0	0	0	0	1	0	1
5:00:00 PM	0	0	0	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0
5:30:00 PM	0	1	0	0	0	0	1
5:45:00 PM	0	0	0	0	0	0	0
6:00:00 PM	0	2	0	0	0	1	3
6:15:00 PM	0	0	0	0	0	0	0
Total	2	29	9	0	21	10	71

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447

Single Unit Trucks

Cirigio Criic I	CR 603 Riv	verton Road	New Alba	any Road	CR 603 Riv	erton Road	
Start Time	South	bound	West	bound	North	bound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0
7:00:00 AM	0	0	2	0	0	0	2
7:15:00 AM	0	1	0	0	1	2	4
7:30:00 AM	0	2	1	0	0	1	4
7:45:00 AM	0	3	3	0	0	2	8
8:00:00 AM	0	0	0	0	2	2	4
8:15:00 AM	0	0	1	0	0	0	1
8:30:00 AM	0	2	3	0	0	5	10
8:45:00 AM	0	2	2	0	0	0	4
9:00:00 AM	0	0	2	0	0	7	9
9:15:00 AM	0	1	0	0	1	1	3
10:30:00 AM	0	0	3	0	1	2	6
10:45:00 AM	0	0	0	0	2	2	4
11:00:00 AM	0	2	0	0	1	1	4
11:15:00 AM	0	3	1	0	4	2	10
11:30:00 AM	0	0	1	0	0	0	1
11:45:00 AM	0	2	1	0	3	2	8
12:00:00 PM	0	0	2	0	0	0	2
12:15:00 PM	0	0	1	0	0	3	4
12:30:00 PM	0	0	1	0	2	0	3
12:45:00 PM	0	1	1	0	0	4	6
1:00:00 PM	0	0	1	0	1	4	6
1:15:00 PM	0	0	1	0	2	1	4
1:30:00 PM	0	1	2	0	2	3	8
1:45:00 PM	0	2	2	0	1	3	8
3:00:00 PM	0	2	0	0	1	3	6
3:15:00 PM	0	0	2	0	1	0	3
3:30:00 PM	0	0	0	0	0	1	1
3:45:00 PM	0	0	1	0	0	1	2
4:00:00 PM	0	0	0	0	1	0	1
4:15:00 PM	0	1	1	0	1	1	4
4:30:00 PM	0	1	3	0	0	0	4
4:45:00 PM	0	0	1	0	2	3	6
5:00:00 PM	0	1	1	0	0	0	2
5:15:00 PM	0	1	0	0	0	1	2
5:30:00 PM	0	1	1	0	0	1	3
5:45:00 PM	1	0	0	0	0	0	1
6:00:00 PM	0	0	0	0	0	0	0
6:15:00 PM	0	0	0	0	0	0	0
Total	1	29	41	0	29	58	158

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447

Articulated Trucks

/ itiodiatod 1		erton Road	New Alba	any Road	CR 603 Riv	erton Road	
Start Time	South	bound	West	oound	North	oound	Total
	Left	Thru	Left	Right	Thru	Right	
6:30:00 AM	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0
7:30:00 AM	0	1	2	0	0	0	3
7:45:00 AM	0	0	0	0	0	1	1
8:00:00 AM	0	0	0	0	0	1	1
8:15:00 AM	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	0	1	1
8:45:00 AM	0	0	0	0	1	0	1
9:00:00 AM	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	1	0	1
10:45:00 AM	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0
11:15:00 AM	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	1	1	0	2	0	4
12:00:00 PM	0	0	0	0	0	0	0
12:15:00 PM	0	1	1	0	0	0	2
12:30:00 PM	0	1	0	0	0	0	1
12:45:00 PM	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0
1:15:00 PM	0	1	0	0	0	0	1
1:30:00 PM	0	0	0	0	0	0	0
1:45:00 PM	0	0	1	0	0	0	1
3:00:00 PM	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	1	1
4:00:00 PM	0	0	0	0	1	0	1
4:15:00 PM	0	0	1	0	0	0	1
4:30:00 PM	0	0	0	0	0	0	0
4:45:00 PM	0	0	0	0	1	0	1
5:00:00 PM	0	0	0	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0
5:30:00 PM	0	0	1	0	2	0	3
5:45:00 PM	0	0	0	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0
6:15:00 PM	0	0	0	0	0	0	0
Total	0	5	7	0	8	4	24

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447

Bicycles on Road

Start Time	CR 603 Riv	verton Road bound		any Road bound	CR 603 Riv Northl		Total
Ctart Time	Left	Thru	Left	Right	Thru	Right	Total
6:30:00 AM	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	0	0	0	0
7:15:00 AM	0	3	0	0	0	0	3
7:30:00 AM	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	0	0	0
8:30:00 AM	0	0	2	0	0	0	2
8:45:00 AM	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	1	0	1	2
9:15:00 AM	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	2	2
11:15:00 AM	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	0	0	0
12:00:00 PM	0	0	1	0	0	0	1
12:15:00 PM	0	0	0	1	1	0	2
12:30:00 PM	0	0	0	0	0	0	0
12:45:00 PM	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0
1:15:00 PM	0	0	0	0	0	2	2
1:30:00 PM	0	0	0	0	0	0	0
1:45:00 PM	0	0	0	0	0	3	3
3:00:00 PM	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0
4:00:00 PM	0	1	0	0	2	0	3
4:15:00 PM	0	1	0	0	0	0	1
4:30:00 PM	0	1	0	0	0	0	1
4:45:00 PM	0	0	0	0	1	0	1
5:00:00 PM	0	0	0	0	1	0	1
5:15:00 PM	0	0	0	0	0	0	0
5:30:00 PM	0	1	0	0	0	0	1
5:45:00 PM	0	0	0	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0
6:15:00 PM	0	0	0	0	0	0	0
Total	0	7	3	2	5	8	25

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447 Pedestrians in Crosswalk

Pedestrians i	II CIUSSWAIK			
Start Time	CR 603 Riverton Road	New Albany Road	CR 603 Riverton Road	Total
Otart Time	Southbound Approach	Westbound Approach	Northbound Approach	rotai
6:30:00 AM	0	0	0	0
6:45:00 AM	0	0	0	0
7:00:00 AM	0	0	0	0
7:15:00 AM	0	0	0	0
7:30:00 AM	0	0	0	0
7:45:00 AM	0	0	0	0
8:00:00 AM	0	0	0	0
8:15:00 AM	0	1	0	1
8:30:00 AM	0	0	0	0
8:45:00 AM	0	0	0	0
9:00:00 AM	0	0	0	0
9:15:00 AM	0	0	0	0
10:30:00 AM	0	0	0	0
10:45:00 AM	0	0	0	0
11:00:00 AM	0	0	0	0
11:15:00 AM	0	0	0	0
11:30:00 AM	0	0	0	0
11:45:00 AM	0	0	0	0
12:00:00 PM	0	0	0	0
12:15:00 PM	0	0	0	0
12:30:00 PM	0	0	0	0
12:45:00 PM	0	0	0	0
1:00:00 PM	0	0	0	0
1:15:00 PM	0	0	0	0
1:30:00 PM	0	0	0	0
1:45:00 PM	0	0	0	0
3:00:00 PM	0	0	0	0
3:15:00 PM	0	0	0	0
3:30:00 PM	0	0	0	0
3:45:00 PM	0	0	0	0
4:00:00 PM	0	0	0	0
4:15:00 PM	0	0	0	0
4:30:00 PM	0	0	0	0
4:45:00 PM	0	0	0	0
5:00:00 PM	1	0	0	1
5:15:00 PM	0	0	0	0
5:30:00 PM	0	0	0	0
5:45:00 PM	0	0	0	0
6:00:00 PM	0	0	0	0
6:15:00 PM	0	0	0	0
Total	1	1	0	2

CR 603 Riverton Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.983544 Lon: -74.963447 Bicycles in Crosswalk

Bioyoloo iii o				
Start Time	CR 603 Riverton Road	,	CR 603 Riverton Road	Total
	Southbound Approach	Westbound Approach	Northbound Approach	
6:30:00 AM	0	0	0	0
6:45:00 AM	0	0	0	0
7:00:00 AM	0	0	0	0
7:15:00 AM	0	0	0	0
7:30:00 AM	0	0	0	0
7:45:00 AM	0	0	0	0
8:00:00 AM	0	0	0	0
8:15:00 AM	0	0	0	0
8:30:00 AM	2	0	0	2
8:45:00 AM	0	0	0	0
9:00:00 AM	0	1	0	1
9:15:00 AM	0	0	0	0
10:30:00 AM	0	0	0	0
10:45:00 AM	0	0	0	0
11:00:00 AM	0	0	0	0
11:15:00 AM	0	0	0	0
11:30:00 AM	0	0	0	0
11:45:00 AM	0	0	0	0
12:00:00 PM	0	0	0	0
12:15:00 PM	0	0	0	0
12:30:00 PM	0	0	0	0
12:45:00 PM	0	0	0	0
1:00:00 PM	0	0	0	0
1:15:00 PM	0	0	0	0
1:30:00 PM	0	0	0	0
1:45:00 PM	0	0	0	0
3:00:00 PM	0	0	0	0
3:15:00 PM	1	0	0	1
3:30:00 PM	0	0	0	0
3:45:00 PM	0	0	0	0
4:00:00 PM	0	0	0	0
4:15:00 PM	0	0	0	0
4:30:00 PM	0	0	0	0
4:45:00 PM	0	0	0	0
5:00:00 PM	0	0	0	0
5:15:00 PM	0	0	0	0
5:30:00 PM	0	0	0	0
5:45:00 PM	0	0	0	0
6:00:00 PM	0	0	0	0
6:15:00 PM	0	0	0	0
Total	3	1	0	4

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711 All Vehicles (no bicycles)

All verlicies (													
		w Albany R			Tom Brow		Ne	w Albany R		CR 614	Tom Brow		
Start Time		Southbound			Westbound			Northbound			Eastbound		Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:30:00 AM	15	23	1	7	19	10	0	25	9	0	46	0	155
6:45:00 AM	6	26	0	28	23	8	0	29	6	0	70	0	196
7:00:00 AM	18	34	0	6	37	9	1	24	12	0	59	0	200
7:15:00 AM	24	40	3	21	54	8	0	18	19	0	90	0	277
7:30:00 AM	19	52	3	36	56	10	0	25	16	0	64	0	281
7:45:00 AM	12	56	6	27	58	17	0	43	19	2	69	0	309
8:00:00 AM	11	44	4	28	63	12	0	31	15	0	68	0	276
8:15:00 AM	9	38	3	22	63	9	0	38	20	1	81	1	285
8:30:00 AM	11	44	0	16	50	17	0	26	17	1	64	0	246
8:45:00 AM	10	49	1	16	36	13	0	31	17	0	65	1	239
9:00:00 AM	18	37	0	12	38	11	0	25	10	0	50	1	202
9:15:00 AM	4	20	0	15	34	5	0	20	11	0	49	0	158
10:30:00 AM	10	23	2	10	27	8	0	23	15	0	42	0	160
10:45:00 AM	9	23	1	10	32	8	0	29	9	0	49	0	170
11:00:00 AM	14	39	0	9	37	12	0	28	13	2	22	0	176
11:15:00 AM	12	26	1	14	36	11	0	31	12	0	46	0	189
11:30:00 AM	5	37	1	12	22	15	0	33	13	1	38	0	177
11:45:00 AM	9	26	1	16	57	13	0	31	20	1	41	0	215
12:00:00 PM	10	27	1	17	31	8	0	39	17	3	51	0	204
12:15:00 PM	10	24	2	17	31	9	0	40	10	0	38	2	183
12:30:00 PM	8	32	0	17	33	11	1	27	5	1	33	1	169
12:45:00 PM	5	26	1	10	36	12	0	36	8	0	29	2	165
1:00:00 PM	12	41	1	14	33	12	0	33	19	1	27	0	193
1:15:00 PM	8	29	0	9	27	12	0	36	20	2	44	1	188
1:30:00 PM	8	31	1	17	34	13	0	27	16	1	34	0	182
1:45:00 PM	5	26	1	13	44	13	0	47	16	0	40	0	205
3:00:00 PM	12	28	1	14	45	12	0	47	30	0	63	1	253
3:15:00 PM	10	32	1	17	68	20	1	53	36	0	55	0	293
3:30:00 PM	23	45	4	16	63	25	0	50	28	2	54	0	310
3:45:00 PM	16	50	2	10	54	20	0	49	27	2	58	0	288
4:00:00 PM	18	36	4	13	78	22	0	43	28	0	60	0	302
4:15:00 PM	13	35	1	17	70	15	0	41	26	0	57	0	275
4:30:00 PM	25	45	1	21	76	18	0	41	34	1	75	0	337
4:45:00 PM	15	35	1	20	64	14	0	55	33	1	66	0	304
5:00:00 PM	13	26	1	17	72	14	0	52	44	1	78	0	318
5:15:00 PM	12	36	3	19	80	15	1	75	27	1	87	0	356
5:30:00 PM	12	23	1	24	69	22	0	54	37	1	82	1	326
5:45:00 PM	13	36	3	19	70	18	1	64	17	2	65	2	310
6:00:00 PM	21	22	2	13	53	18	0	38	24	4	48	0	243
6:15:00 PM	9	27	0	16	63	13	0	39	18	4	46	0	235
Total	494	1349	59	655	1936	532	5	1496	773	35	2203	13	9550

					Α	M Peak I	Hour						
Heavy Vehicle	0	4	4	6	15	4	0	3	5	1	7	0	49
Heavy Vehicle	0%	2%	25%	5%	6%	8%	0%	2%	7%	33%	2%	0%	4%
					N	1D Peak	Hour						
Heavy Vehicle	2	3	0	4	6	1	0	3	3	1	6	0	29
Heavy Vehicle	6%	3%	0%	7%	4%	2%	0%	2%	5%	20%	3%	0%	4%
_					Р	M Peak I	Hour						
Heavy Vehicle	0	2	0	0	1	1	0	3	0	0	2	0	9
Heavy Vehicle	0%	2%	0%	0%	0%	2%	0%	1%	0%	0%	1%	0%	1%

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711

Motorcycles

Start Time		w Albany R Southbound			Tom Brow Westbound			w Albany R Northbound		CR 614	Tom Brow Eastbound		Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
8:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	1	0	0	0	1	0	0	0	2
12:00:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
12:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
1:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
1:45:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
4:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:45:00 PM	0	0	0	2	0	0	0	1	0	0	1	0	4
6:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	0	2	0	3	2	0	0	3	3	0	6	0	19

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711 Cars & Light Goods Vehicles

Cars & Light					1 T D	D	NI	All D		OD 047	1 T D	D	
OL 1 T		w Albany R			Tom Brow			w Albany R		CR 614	Tom Brow		T
Start Time		Southbound	ı		Westbound			Northbound		1 0	Eastbound		Total
0.00.00.414	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	454
6:30:00 AM	15	23	1	7	18	7	0	25	9	0	46	0	151
6:45:00 AM	6	26	0	28	23	6	0	29	6	0	69	0	193
7:00:00 AM	18	31	0	5	35	9	1	23	11	0	56	0	189
7:15:00 AM	23	40 51	2	20 33	53 52	6 10	0	18 25	18 15	0	87	0	267
7:30:00 AM	19		2	26	_	16	,		17	0	60	0	267
7:45:00 AM	12 11	54 44	4	27	54 59	10	0	40 31	12	0	69 67	0	293 265
8:00:00 AM 8:15:00 AM	9	37	2	21	60	8	0	38	20	1	79	1	276
8:30:00 AM	10	42	0	15	48	16	0	24	13	1	63	0	232
8:45:00 AM	10	48	0	15	34	13	0	31	17	0	64	1	232
9:00:00 AM	17	36	0	12	35	11	0	24	5	0	47	1	188
9:15:00 AM	4	20	0	15	32	4	0	20	10	0	49	0	154
		-					0	-	-				
10:30:00 AM 10:45:00 AM	10 9	20 23	2	10 10	24 31	<u>8</u> 8	0	22 27	13 9	0	41 46	0	150 164
11:00:00 AM	14	39	0	9	34	12	0	27	13	2	21	0	171
11:15:00 AM	11	25	1	14	35	10	0	29	12	0	44	0	181
11:30:00 AM	4	37	1	11	21	15	0	32	13	0	38	0	172
11:45:00 AM	9	26	1	14	54	13	0	31	16	1	39	0	204
12:00:00 PM	10	24	1	16	29	8	0	39	17	3	49	0	196
12:15:00 PM	10	24	2	16	30	9	0	38	8	0	35	2	174
12:30:00 PM	7	31	0	16	32	11	1	27	5	1	33	1	165
12:45:00 PM	5	25	1	10	36	12	0	31	7	0	29	2	158
1:00:00 PM	12	41	1	12	32	12	0	30	19	1	25	0	185
1:15:00 PM	8	29	0	9	27	12	0	34	17	2	44	1	183
1:30:00 PM	7	29	1	17	34	13	0	24	15	1	28	0	169
1:45:00 PM	4	24	1	12	43	13	0	42	15	0	36	0	190
3:00:00 PM	12	26	0	13	43	12	0	47	27	0	62	1	243
3:15:00 PM	9	31	0	16	67	17	1	52	36	0	54	0	283
3:30:00 PM	21	45	4	16	60	24	0	50	27	2	54	0	303
3:45:00 PM	16	49	1	9	53	20	0	48	23	2	55	0	276
4:00:00 PM	16	36	4	13	77	22	0	43	28	0	59	0	298
4:15:00 PM	12	34	1	16	70	15	0	41	26	0	55	0	270
4:30:00 PM	24	43	1	21	74	18	0	41	34	1	74	0	331
4:45:00 PM	15	35	1	20	64	13	0	53	33	1	65	0	300
5:00:00 PM	13	25	1	17	72	14	0	51	44	1	77	0	315
5:15:00 PM	12	36	3	19	79	15	1	75	27	1	87	0	355
5:30:00 PM	12	22	1	24	69	22	0	54	37	1	80	1	323
5:45:00 PM	13	36	3	17	69	18	0	63	17	2	63	2	303
6:00:00 PM	19	22	2	13	53	18	0	38	23	4	48	0	240
6:15:00 PM	9	26	0	16	62	13	0	39	18	4	46	0	233
Total	477	1315	50	630	1877	513	4	1456	732	33	2143	13	9243

Start Date: 10/20/2021 Start Time: 6:30 AM

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711

Buses

Duscs	Nev	w Albany R	oad	CR 614	Tom Brow	n Road	Ne	w Albany R	oad	CR 614	1 Tom Brow	n Road	
Start Time		Southbound			Westbound			Northbound		0.101	Eastbound		Total
Otart Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
6:30:00 AM	0	0	0	0	1	1	0	0	0	0	0	0	2
6:45:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
7:00:00 AM	0	2	0	0	0	0	0	1	0	0	0	0	3
7:15:00 AM	1	0	1	1	0	1	0	0	0	0	0	0	4
7:30:00 AM	0	0	0	0	1	0	0	0	1	0	2	0	4
7:45:00 AM	0	1	2	0	2	0	0	0	2	1	0	0	8
8:00:00 AM	0	0	0	1	2	1	0	0	0	0	0	0	4
8:15:00 AM	0	1	1	0	1	1	0	0	0	0	0	0	4
8:30:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
8:45:00 AM	0	0	1	0	2	0	0	0	0	0	0	0	3
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	1
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
11:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:15:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
12:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
1:30:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
1:45:00 PM	0	0	0	0	0	0	0	0	1	0	1	0	2
3:00:00 PM	0	0	1	1	0	0	0	0	2	0	0	0	4
3:15:00 PM	0	0	1	1	0	3	0	1	0	0	0	0	6
3:30:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	2
3:45:00 PM	0	0	1	0	1	0	0	1	1	0	2	0	6
4:00:00 PM	2	0	0	0	0	0	0	0	0	0	0	0	2
4:15:00 PM	0	0	0	1	0	0	0	0	0	0	0	0	1
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
6:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	4	8	5	12	9	0	3	10	1	11	0	67

Start Date: 10/20/2021 Start Time: 6:30 AM

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711

Single Unit Trucks

Single Unit 1				05.04						05.011			
<u>_</u> .		w Albany R			Tom Brow			w Albany R		CR 614	Tom Brow		
Start Time		Southbound			Westbound			Northbound			Eastbound		Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:30:00 AM		0	0	0	0	2	0	0	0	0	0	0	2
6:45:00 AM		0	0	0	0	1	0	0	0	0	1	0	2
7:00:00 AM		1	0	1	1	0	0	0	1	0	3	0	7
7:15:00 AM		0	0	0	1	1	0	0	1	0	2	0	5
7:30:00 AM		1	1	3	3	0	0	0	0	0	1	0	9
7:45:00 AM		1	0	1	2	1	0	2	0	0	0	0	7
8:00:00 AM		0	0	0	2	0	0	0	1	0	0	0	3
8:15:00 AM		0	0	1	2	0	0	0	0	0	2	0	5
8:30:00 AM		2	0	1	1	0	0	2	3	0	1	0	10
8:45:00 AM		1	0	1	0	0	0	0	0	0	1	0	3
9:00:00 AM		1	0	0	3	0	0	1	5	0	3	0	14
9:15:00 AM		0	0	0	0	0	0	0	1	0	0	0	1
10:30:00 AM		3	0	0	3	0	0	1	1	0	1	0	9
10:45:00 AM		0	0	0	1	0	0	2	0	0	2	0	5
11:00:00 AM		0	0	0	2	0	0	1	0	0	0	0	3
11:15:00 AM		1	0	0	1	1	0	2	0	0	0	0	6
11:30:00 AM		0	0	1	1	0	0	1	0	1	0	0	5
11:45:00 AM		0	0	1	2	0	0	0	3	0	2	0	8
12:00:00 PM		2	0	1	2	0	0	0	0	0	1	0	6
12:15:00 PM		0	0	1	0	0	0	1	2	0	2	0	6
12:30:00 PM		1	0	1	0	0	0	0	0	0	0	0	3
12:45:00 PM		1	0	0	0	0	0	5	0	0	0	0	6
1:00:00 PM		0	0	1	1	0	0	2	0	0	2	0	6
1:15:00 PM		0	0	0	0	0	0	2	2	0	0	0	4
1:30:00 PM		1	0	0	0	0	0	3	1	0	1	0	6
1:45:00 PM		1	0	1	1	0	0	3	0	0	3	0	10
3:00:00 PM		2	0	0	2	0	0	0	1	0	1	0	6
3:15:00 PM		1	0	0	0	0	0	0	0	0	1	0	3
3:30:00 PM		0	0	0	0	0	0	0	1	0	0	0	2
3:45:00 PM		1	0	1	0	0	0	0	2	0	1	0	5
4:00:00 PM		0	0	0	1	0	0	0	0	0	1	0	2
4:15:00 PM		1	0	0	0	0	0	0	0	0	2	0	4
4:30:00 PM		2	0	0	2	0	0	0	0	0	1	0	6
4:45:00 PM		0	0	0	0	1	0	2	0	0	0	0	3
5:00:00 PM		1	0	0	0	0	0	1	0	0	0	0	2
5:15:00 PM		0	0	0	1	0	0	0	0	0	0	0	1
5:30:00 PM		0	0	0	0	0	0	0	0	0	0	0	0
5:45:00 PM		0	0	0	1	0	1	0	0	0	1	0	3
6:00:00 PM		0	0	0	0	0	0	0	0	0	0	0	2
6:15:00 PM		0	0	0	0	0	0	0	0	0	0	0	0
Total	11	25	1	16	36	7	1	31	25	1	36	0	190

Start Date: 10/20/2021 Start Time: 6:30 AM

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711

**Articulated Trucks** 

Articulated 1	Nev	w Albany R			Tom Brow			w Albany R		CR 614	Tom Brow		
Start Time		Southbound			Westbound			Northbound			Eastbound		Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	_
6:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
7:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00:00 AM	0	0	0	0	0	1	0	0	1	0	1	0	3
8:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00 AM	0	0	0	0	1	1	0	0	1	0	0	0	3
8:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	0	0	2	1	0	0	0	0	0	0	3
10:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
11:00:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
11:15:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	2
11:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	1
12:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
12:30:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
12:45:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
1:00:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
1:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30:00 PM	1	1	0	0	0	0	0	0	0	0	1	0	3
1:45:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
3:30:00 PM	1	0	0	0	2	0	0	0	0	0	0	0	3
3:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	3	0	1	9	3	0	3	3	0	7	0	31

Start Date: 10/20/2021 Start Time: 6:30 AM

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711

Bicycles on Road

New Albany Road Start Time Southbound			CR 614 Tom Brown Road Westbound			New Albany Road Northbound			CR 614 Tom Brown Road Eastbound			Total	
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
6:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
8:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
10:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00:00 AM	0	0	0	0	0	0	0	1	1	0	0	0	2
11:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
12:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15:00 PM	0	0	0	0	0	0	0	1	1	0	0	0	2
1:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
1:45:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1
3:00:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
3:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
4:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
6:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	5	1	0	0	1	0	2	3	1	1	0	15

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711 Pedestrians in Crosswalk

i edesilialis i						
Start Time	New Albany Road	CR 614 Tom Brown Road	New Albany Road	CR 614 Tom Brown Road	Total	
	Southbound Approach	Westbound Approach	Northbound Approach	Eastbound Approach	rotar	
6:30:00 AM	0	0	0	0	0	
6:45:00 AM	0	0	0	0	0	
7:00:00 AM	0	0	0	0	0	
7:15:00 AM	0	0	0	0	0	
7:30:00 AM	0	0	0	0	0	
7:45:00 AM	0	0	0	1	1	
8:00:00 AM	0	0	0	0	0	
8:15:00 AM	0	0	0	0	0	
8:30:00 AM	0	0	0	0	0	
8:45:00 AM	0	0	0	0	0	
9:00:00 AM	0	0	0	0	0	
9:15:00 AM	0	0	0	0	0	
10:30:00 AM	0	0	0	0	0	
10:45:00 AM	0	0	0	0	0	
11:00:00 AM	0	0	0	0	0	
11:15:00 AM	0	0	0	0	0	
11:30:00 AM	0	0	0	0	0	
11:45:00 AM	0	0	0	0	0	
12:00:00 PM	0	0	0	0	0	
12:15:00 PM	0	0	0	0	0	
12:30:00 PM	0	0	0	0	0	
12:45:00 PM	0	0	0	0	0	
1:00:00 PM	0	0	0	0	0	
1:15:00 PM	0	0	0	0	0	
1:30:00 PM	0	0	0	0	0	
1:45:00 PM	0	0	0	0	0	
3:00:00 PM	0	0	0	0	0	
3:15:00 PM	0	0	0	0	0	
3:30:00 PM	0	0	0	0	0	
3:45:00 PM	0	0	0	0	0	
4:00:00 PM	0	0	0	0	0	
4:15:00 PM	0	0	0	0	0	
4:30:00 PM	0	1	0	0	1	
4:45:00 PM	0	0	0	0	0	
5:00:00 PM	0	0	0	0	0	
5:15:00 PM	0	0	0	0	0	
5:30:00 PM	0	0	0	0	0	
5:45:00 PM	0	0	0	0	0	
6:00:00 PM	0	0	0	1	1	
6:15:00 PM	1	0	0	0	1	
Total	1	1	0	2	4	

CR 614 Tom Brown Road and New Albany Road Moorsetown Township, Burlington County, NJ

Lat: 39.985105 Lon: -74.964711 Bicycles in Crosswalk

Start Time	New Albany Road	CR 614 Tom Brown Road	New Albany Road	CR 614 Tom Brown Road	Total	
Start Time	Southbound Approach	Westbound Approach	Northbound Approach	Eastbound Approach		
6:30:00 AM	0	0	0	0	0	
6:45:00 AM	0	0	0	0	0	
7:00:00 AM	0	0	0	0	0	
7:15:00 AM	0	0	0	0	0	
7:30:00 AM	0	0	0	0	0	
7:45:00 AM	0	0	0	0	0	
8:00:00 AM	0	0	0	0	0	
8:15:00 AM	0	0	0	0	0	
8:30:00 AM	0	0	0	0	0	
8:45:00 AM	0	0	0	0	0	
9:00:00 AM	0	0	0	0	0	
9:15:00 AM	0	0	0	0	0	
10:30:00 AM	0	0	0	0	0	
10:45:00 AM	0	0	0	0	0	
11:00:00 AM	0	0	0	0	0	
11:15:00 AM	0	0	0	0	0	
11:30:00 AM	0	0	0	0	0	
11:45:00 AM	0	0	0	0	0	
12:00:00 PM	0	0	0	0	0	
12:15:00 PM	0	0	0	0	0	
12:30:00 PM	0	0	0	0	0	
12:45:00 PM	0	0	0	0	0	
1:00:00 PM	0	0	0	0	0	
1:15:00 PM	0	1	0	0	1	
1:30:00 PM	0	0	0	0	0	
1:45:00 PM	0	0	0	0	0	
3:00:00 PM	0	0	0	0	0	
3:15:00 PM	0	0	0	0	0	
3:30:00 PM	0	0	0	0	0	
3:45:00 PM	0	0	0	0	0	
4:00:00 PM	0	0	0	0	0	
4:15:00 PM	0	0	0	0	0	
4:30:00 PM	0	0	0	0	0	
4:45:00 PM	0	0	0	0	0	
5:00:00 PM	0	0	0	0	0	
5:15:00 PM	0	0	0	0	0	
5:30:00 PM	0	0	0	0	0	
5:45:00 PM	0	0	0	0	0	
6:00:00 PM	0	0	0	0	0	
6:15:00 PM	0	0	0	0	0	
Total	0	1	0	0	1	

#### **GREENMAN-PEDERSEN, INC.**

100 Corporate Drive, Suite 301 Lebanon, NJ 08833 (908) 236-9001

Job # and Name		NJX-202169	0 - Burlington County LO	CD	
	Sheet No.	1	(	of	2
	Calculated By	KJH	Dat	:е	03/09/22
	Checked By	RR	Dat	:e	03/10/22
		Vol	ume Projections		
		DVRPC Den	nographic Growth Rat	tes	5

County	Municipality	Population						Employment							
County	ividilicipality	2020	2025	2030	2035	2040	2045	2050	2020	2025	2030	2035	2040	2045	2050
Burlington	-	448,166	463,830	471,001	471,401	476,962	477,540	477,884	241,044	259,622	263,784	265,316	267,490	269,911	272,016
Burlington	Moorestown Twp	20,516	21,539	23,089	24,021	24,189	24,231	24,243	23,837	26,181	26,706	26,913	27,269	27,654	28,014

County	Municipality	Average Annual Percent Growth (Population + Employment)									
County	iviumcipanty	2020-2025	2025-2030	2030-2035	2035-2040	2040-2045	2045-2050	2020-2045			
Burlington	-	1.09%	0.31%	0.07%	0.20%	0.10%	0.08%	0.35%			
Burlington	Moorestown Twp	1.44%	0.90%	0.47%	0.20%	0.16%	0.13%	0.53%			
	Average	1.26%	0.61%	0.27%	0.20%	0.13%	0.11%	0.44%			

We will use the growth rate calculated from the DVRPC demographic data (highlighted orange on this sheet) since it is greater than the growth rate calculated from the DVRPC regional model data (highlighted orange on sheet 2).

Growth Rates					
2021-2045	1.111				

#### **GREENMAN-PEDERSEN. INC.**

100 Corporate Drive, Suite 301 Lebanon, NJ 08833 (908) 236-9001

Job # and Name		NJX-202169	0 - Burlington County LCD	
	Sheet No.	2	of	2
	Calculated By	KJH	Date	03/09/22
	Checked By		Date	
	_	Vol	ume Projections	
•		DVRPC	Model Growth Rates	

	2019-2035	2035-2050	2021-2045	2021-2045
Tom Brown Road (CR 614)	0.20%	0.15%	0.18%	1.044
Riverton Road (CR 603)	0.20%	0.15%	0.18%	1.044
New Albany Road	0.44%	0.17%	0.33%	1.082

#### Re: DVRPC Travel Improvement Model - Volume Request



Matt Gates <mgates@dvrpc.org>

To Kenneth Hausman

Cc Julia Steponanko; Joseph Di Lauri III



(1) If there are problems with how this message is displayed, click here to view it in a web browser. Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

DVRPC prepares growth factors by county and Federal Functional Class based on our long range population and employment forecasts and the major regional transportation projects included in our Long Range Plan, Connections 2050. DVRPC's long range plan, a list and map of the major transportation projects included in it, as well as its long range population and employment forecasts are available here: https://www.dvrpc.org/plan (expand the "quick links" at the bottom of the page for the population and employment forecasts).

These growth factors are average annual (not compound), and are intended to be used for background growth rates. Additional traffic from large planned developments in the immediate area should be estimated separately (from ITE Trip Generation rates or other suitable methods) and added to the future traffic volumes resulting from the growth factors. Due to the nature of the growth inherent in our 2050 Plan, we have developed separate growth factors for the periods of 2019-2035 and for 2035-2050.

The recommended growth factors for Tom Brown (CR 614) and Riverton (CR 603) roads (Burlington County Minor Arterials) are: 2019-2035 - 0.20%/year 2035-2050 - 0.15%/year

The recommended growth factors for New Albany Rd (Burlington County Major Collector) are:

2035-2050 - 0.17%/year

2019-2035 - 0.44%/year

Please note that our latest travel model has a base year of 2019, which represents pre-pandemic conditions. Our long range population and employment forecasts contain pandemic-related changes for the 2020 analysis year, but assume that recovery is complete by 2025. We have not yet incorporated any permanent behavior changes that may result from the pandemic into our travel models, such as a greater propensity to work from home and people being less likely to ride transit (especially rail to Center City Philadelphia). We are monitoring these trends, but have not determined (or assumed) what changes are likely to be permanent.

Nevertheless, we've found that average daily traffic volumes at most locations in the region fully recovered to their pre-pandemic level by mid to late 2021. Peak hour volumes, especially in the peak direction, in many cases continue to remain below their pre-pandemic levels but are generally within 90 percent of that volume. Therefore, we recommend to not use traffic counts from March 2020 thru September 2021 for base year volumes to apply these growth factors to



Re:

#### **DRAFT Memorandum**

**To:** Burlington County Engineer's Office

**From:** GPI/Greenman-Pedersen, Inc.

**Date:** March 10, 2022

Local Concept Development: New Albany Road at Tom Brown Road (CR 614);

Tom Brown Road (CR 614) at Riverton Road (CR 603); and New Albany Road at

Riverton Road (CR 603)

Traffic Signal and All-Way Stop Control (AWSC) Warrant Analysis

#### I. Summary & Recommendation

The Burlington County Engineer's Office requested that GPI perform traffic signal and all-way stop sign control (AWSC) warrant analyses for three unsignalized intersections in Moorestown Township: New Albany Road at Tom Brown Road (CR 614); Tom Brown Road (CR 614) at Riverton Road (CR 603); and New Albany Road at Riverton Road (CR 603). This is a result of the County's concerns regarding existing traffic operations and safety at the three intersections.

GPI performed classified manual turning movement traffic counts at all three (3) intersections on Wednesday, October 20, 2021 during the weekday morning peak (6:30 - 9:30 am), midday (10:30 am - 2:00 pm), and evening peak (3:00 - 6:30 pm) periods. The count data was classified in 15-minute increments into the following seven categories:

- Pedestrians in crosswalk
- Bicyclists (in crosswalk as well as bicyclists on road)
- Motorcycles
- Cars and Light Goods Vehicles
- Buses
- Medium Trucks (Single unit trucks)
- Heavy Trucks (Tractor trailers)

Based on the collected data, which includes traffic volume, crash and pedestrian information along with the physical characteristics of the intersections, <u>traffic signals and all-way stop controls are warranted at all three locations</u> as summarized below. Note that there are minimal pedestrians and bicyclists using each of the three intersections.

Intersection	MUTCD Signal Warrant Met							MUTCD AWSC Met							
1 1		2	3	4	5	6	7	8	9	Α	В	C1	C2	C3	D
Tom Brown Rd and	./		*	×	*	*	1	×	*	./		./	./	/	*
New Albany Rd	•	•		^			•	^		•	•	•	•	•	
Tom Brown Rd and	./	./	*	×	*	*	×	×	*	./	×	×	×	×	×
Riverton Rd	•	•		^			^	^		•	^	^	^	^	^
Riverton Rd and	./	./	*	×	*	*	×	×	*	./	٧	×	×	_/	۲
New Albany Rd	•	•		*			*	*		•	×	*	*	•	*

<sup>\*</sup> Not applicable





#### II. Intersection 1: New Albany Road at Tom Brown Road (CR 614)

#### **Existing Conditions**

Tom Brown Road (CR 614) between New Albany Road and Riverton Road (CR 603) is a two-lane Urban Minor Arterial with a posted speed limit of 45 mph. New Albany Road between Tom Brown Road (CR 614) and Riverton Road (CR 603) is a two-lane Urban Major Collector with a posted speed limit of 35 mph. These roadways form a four-way intersection where all movements are under stop sign control (AWSC). There are no sidewalks present and parking is not permitted on both sides of each roadway. The land use near the intersection is residential. There are no signalized intersections on either roadway within one mile of the intersection.

#### **Data Collection**

The eight (8) highest hours from the aforementioned count data was utilized for the existing major and minor street volumes. In accordance with Section 4C.02 of the MUTCD, the major street and the minor street are defined as those normally carrying the higher and lower volume of vehicular traffic, respectively. Based on the intersection's traffic volumes, Tom Brown Road (CR 614) is the major street and New Albany Road is the minor street.

#### **MUTCD Section 4C.02 Traffic Signal Warrants**

Warrants 1-4 compare site traffic volumes with minimum values. If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the MUTCD permits lower minimum volumes. Since Tom Brown Road (CR 614) is posted 45 mph, the lower minimum values were utilized for Warrants 1-4. Warrants 5-9 take other elements into consideration, such as crash history, signal coordination, and proximity to at-grade rail crossings. All warrants are detailed further below.

#### Warrant 1, Eight-Hour Vehicular Volume – Satisfied

The MUTCD specifies that the Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. In instances where both Conditions A and B are not satisfied, the MUTCD allows for the combination to satisfy Warrant 1, only after an adequate trial of the other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 1 is intended to be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combinations of Conditions A and B are not required. The same is true if Condition B is satisfied, then Warrant 1 is satisfied and the analyses of the combinations of Conditions A and B are not required.

The MUTCD provides a series of minimum traffic volume requirements for both the major and minor streets for each of any eight hours of an average day (Table 4C-1 of the MUTCD). Under this warrant the need for a traffic signal shall be considered if one of the following conditions exists:

- A. The vehicles per hour in both 100 percent columns of Condition A exist on the major street and the higher volume minor street approaches, respectively, to the intersection; or
- B. The vehicles per hour in both 100 percent columns of Condition B exist on the major street and the higher volume minor street approaches, respectively, to the intersection.





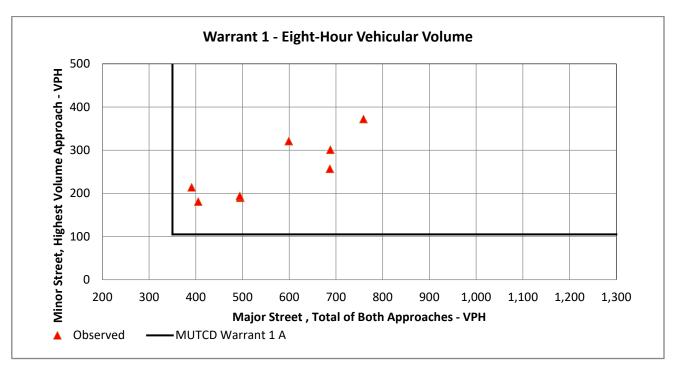
Where the combination of Conditions A and B are to be applied, the need for a traffic signal shall be considered if both of the following conditions exist for each of any eight hours of an average day:

- A. The vehicles per hour in both 80 percent columns of Condition A exist on the major street and the higher volume minor street approaches, respectively, to the intersection; and
- B. The vehicles per hour given in both of the 80 percent columns of Condition B exist on the major street and the higher volume minor street approaches, respectively, to the intersection.

Since the minimum volumes required for Warrant A are met or exceeded during each of the eight (8) hours, this warrant is satisfied. The minimum and observed volumes are summarized in the table and figure below. The higher of the two New Albany Road approaches is used as the minor street volume.

Volume	Condition A [vph] (70%)	Condition B [vph] (70%)	Combination Condition A [vph] (56%)	Combination Condition B [vph] (56%)
Major Street (Two-Way)	350	525	280	420
Minor Street (Highest)	105	53	84	42

	Major	Minor		Warra	nt Met?			
Hour	Major (Two-Way)		Condition A	Condition A Condition B		Combination Condition B		
6:30-7:30 am	495	190	YES					
7:30-8:30 am	687	257	YES					
8:30-9:30 am	494	194	YES	WARRANT				
12:00-1:00 pm	405	181	YES	CONDITION A	WARRANT C IS N			
1:00-2:00 pm	391	214	YES	IS MET	13 1	/IC I		
3:00-4:00 pm	599	321	YES					
4:00-5:00 pm	688	301	YES					
5:00-6:00 pm	759	372	YES					
Warı	rant Satisfied	?	YES	N/A	N	/A		

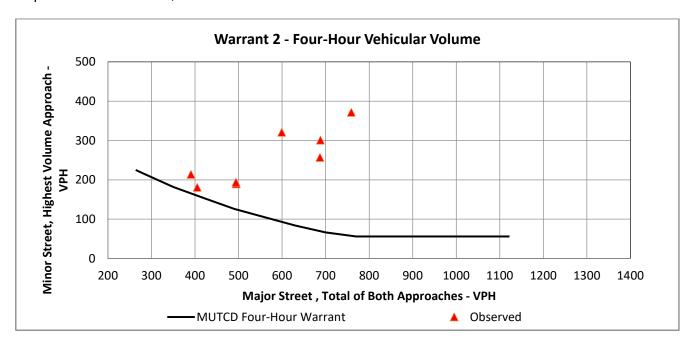






#### Warrant 2, Four-Hour Vehicular Volume - Satisfied

The MUTCD specifies that the Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. This warrant is satisfied when each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for the appropriate number of lanes for both streets, all fall above the applicable curve in Figure 4C-2 of the MUTCD, shown below. Each of the eight highest volume hours exceeds the minimum volumes required for this warrant, therefore Warrant 2 is satisfied.



#### Warrant 3, Peak Hour – Not applicable

This warrant is not applicable to this intersection as there are no unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities, that would attract or discharge a large number of vehicles over a short period of time.

#### Warrant 4, Pedestrian Volume - Not satisfied

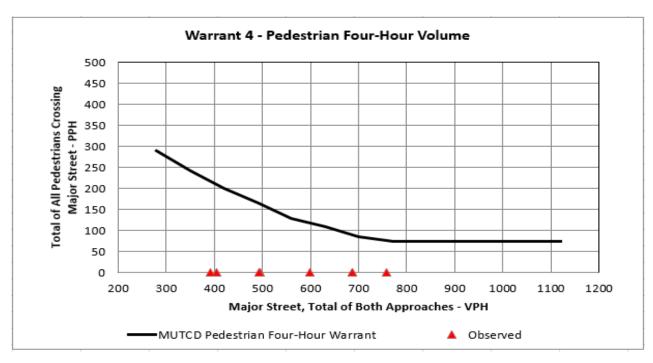
The MUTCD specifies that the Pedestrian Volume warrant is intended for application where the traffic volume on the major street is so heavy that pedestrians experience excessive delay in crossing the major street. The need for a traffic control signal at an intersection or midblock crossing shall be considered if one of the following criteria is met:

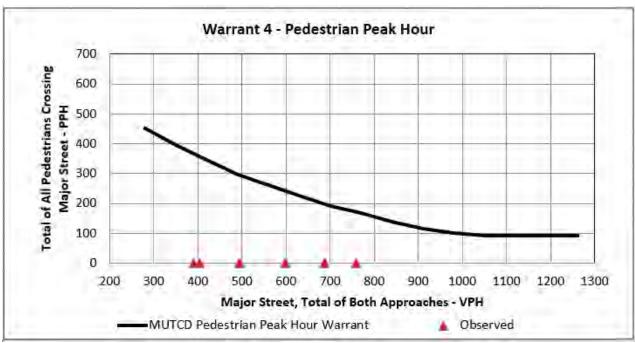
- A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6 of the MUTCD; or
- B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-8 of the MUTCD shown below.

The pedestrian volumes at this intersection are minimal throughout the day, therefore Warrant 4 is not satisfied.









#### Warrant 5, School Crossing – Not applicable

This warrant is not applicable to this intersection as school children crossing the major street are not present at this intersection.

#### Warrant 6, Coordinated Signal System – Not applicable

This warrant is not applicable since a traffic signal at this intersection is not needed for platooning in a coordinated signal system.





#### Warrant 7, Crash Experience – Satisfied

The MUTCD specifies that this warrant's conditions are intended where the severity and frequency of crashes are the principal reasons to consider the installation of a traffic control signal. The need for a traffic signal shall be considered if **all** of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency, and:
- B. Five or more reported crashes, of types susceptible to correction by a traffic signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and:
- C. For each of any eight hours of an average day, the vehicles per hour in both 56 percent columns of Condition A in Table 4C-1, or the vehicles per hour in both 56 percent columns of Condition B in Table 4C-1 exists on the major street and the higher volume minor street approaches, respectively, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in Warrant 4, Pedestrian Volume.

GPI obtained crash data from Safety Voyager for the five-year period between 2016 and 2020. The following table summarizes the crash data for each of the respective years.

Collision Type /	201	16	201	17	20	18	20	19	202	20
Condition	Count	% of Total								
Total Crashes	17		8		18		17		14	
Rear End	1	6%	2	25%	4	22%	0	0%	1	7%
Right Angle	15	88%	6	75%	14	78%	14	82%	11	79%
Left Turn	0	0%	0	0%	0	0%	1	6%	0	0%
Sideswipe	0	0%	0	0%	0	0%	0	0%	0	0%
Pedestrian	0	0%	0	0%	0	0%	0	0%	0	0%
Bicyclist	0	0%	0	0%	0	0%	0	0%	0	0%
Other	1	6%	0	0%	0	0%	2	12%	2	14%
Inclement Weather	2	12%	1	13%	5	28%	4	24%	5	36%
Night, Dawn, Dusk	7	41%	3	38%	8	44%	10	59%	6	43%

There were a high number of right angle crashes (60) over a five-year period as specified in Part A above. Based on an analysis of the crash history it can be reasoned that a traffic signal could have prevented a total of five or more reported crashes for each consecutive 12-month period between 2016 and 2020 as specified in Part B above. Since Warrant 1A is satisfied, the vehicular, but not pedestrian, volumes do meet the criteria specified in Part C above. Based on the high number of preventable crashes over the five-year period plus the high traffic volumes on both the major and minor street approaches, Warrant 7 is satisfied.

#### Warrant 8, Roadway Network - Not satisfied

The MUTCD specifies that installing a traffic control signal at some intersections may be justified to encourage concentration and organization of traffic flow on a roadway network. Specifically, it states that the intersection is to be common to two or more major routes that has one or more of the following characteristics:

- A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow, or:
- B. It includes rural or suburban highways outside, entering, or traversing a City, or:





C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

The two intersecting roads do not meet these criteria therefore the Warrant 8 is not satisfied.

#### Warrant 9, Intersection Near a Grade Crossing – Not applicable

This warrant is not applicable since this intersection is not in close proximity to an at-grade rail crossing controlled by a "Stop" or "Yield" sign.

#### **MUTCD Section 2B.07 Multi-Way Stop Sign Warrants**

Warrant A provides for the use of a multi-way stop sign as an interim measure when one or more of the traffic signal warrants has been met. Warrant B is related to crash experience, similar to Signal Warrant 7. Warrant C.1/C.2 compares observed total approach volumes (vehicles, pedestrians, and cyclists) with minimum values. If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, Warrant C.3 permits lower minimum volumes. Warrant D is a combined warrant that also considers lower minimum values for both crashes and volumes.

Other criteria include the following:

- 1) The need to control left turn conflicts;
- 2) The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- 3) Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
- 4) An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

#### Warrant A, Interim Measure - Satisfied

This warrant is met since this intersection does meet several of the traffic signal volume warrants.

#### Warrant B. Crash Experience – Satisfied

To meet this warrant, a minimum of five (5) crashes per year that would have been prevented by installation of multi-way stop control must be identified. GPI obtained crash data from Safety Voyager for the five-year period between 2016 and 2020. A summary table for each of the respective years was presented under Signal Warrant 7. There were seventy-four (74) crashes over the five-year period including sixty (60) right angle and (1) left turn crash. These crash types would be preventable by the installation of a multi-way stop. Thus, this warrant is met.

#### Warrant C.1/C.2, Minimum Traffic Volumes - Satisfied

The MUTCD specifies that the Traffic Volume warrant is intended for application where the total traffic volume (autos and bicyclists) on both the major and minor street is so heavy that pedestrians experience excessive delay in crossing the major street. The need for multi-way stop sign control at an intersection is satisfied if the following criteria are met:

For each of any eight (8) hours of an average day, vehicles plus bicycles per hour on the major street (total of both approaches) and the total corresponding combined volume (autos, bicyclists and pedestrians) on the minor street and also crossing the major street (total of both crossings) are greater than 300 and 200, respectively. The data for Warrant C.1/C.2 is plotted in the figure below. As seen in the figure, this warrant is met for both the major and minor street approaches for eight (8) hours.



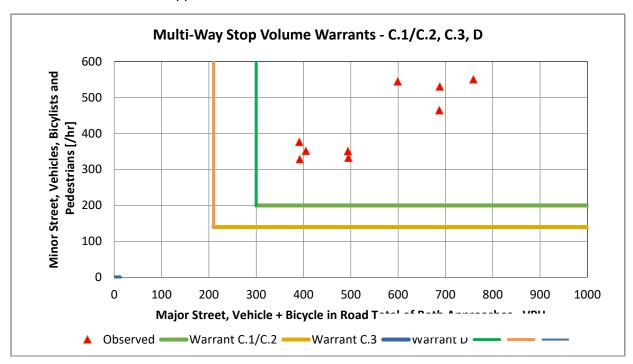


#### Warrant C.3, Minimum Traffic Volumes and Speed - Satisfied

This warrant is only considered if the speed on the major street exceeds 40 mph. The lower minimum required volumes for Warrant C.3 are also plotted in the figure below. As seen in the figure, this warrant is also met for eight (8) hours.

#### Warrant D, Combined Warrant - Not applicable

This warrant is satisfied when no previous single warrant is satisfied, but where Warrant B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Since Warrants B, C.1/C.2, and C.3 are satisfied, this warrant is not applicable.





Tom Brown Road (CR 614) Eastbound Approach





#### Other Criteria: Left Turn Volumes and Delay - Not satisfied

The HCS7 software was used to evaluate traffic operations for the Tom Brown Road (CR 614) eastbound and westbound left turns assuming that New Albany Road was under stop-sign control to Tom Brown Road (CR 614). The left turn movements operates at LOS A (< 10 seconds of delay) in the morning, midday, and evening peak hours, thus this warrant is not met. The HCS7 output reports are included in the Appendix.

#### Other Criteria: Pedestrian Volumes and Delay - Not applicable

Pedestrian volumes at this intersection are minimal therefore the warrant is not applicable. Pedestrians crossing all approaches during the morning, midday and evening peak hours operate at LOS D or better. As stated above, the HCS7 output reports are included in the Appendix.

#### Other Criteria: Conflicting Traffic Not Visible - Not satisfied

There are no visibility issues for Tom Brown Road (CR 614) eastbound and westbound left turns. The view from the Tom Brown Road eastbound approach is shown in the following figure. This warrant is not satisfied.

#### Other Criteria: Roadways of Similar Design and Character - Satisfied

New Albany Road and Tom Brown Road (CR 614) are an Urban Major Collector and an Urban Minor Arterial, respectively, that carry similar volumes during the weekday morning and evening peak hours. Since the characteristics of both roadways are similar, this warrant is satisfied.

#### III. Intersection 2: Tom Brown Road (CR 614) at Riverton Road (CR 603)

#### **Existing Conditions**

Riverton Road (CR 603) between Tom Brown Road (CR 614) and New Albany Road is a two-lane Urban Minor Arterial with a posted speed limit of 40 mph. Tom Brown Road (CR 614) between Riverton Road (CR 603) and New Albany Road is also a two-lane Urban Minor Arterial but with a posted speed limit of 45 mph. These roadways form an unsignalized 'T-type' intersection where Tom Brown Road (CR 614) is under yield control to Riverton Road (CR 603). Sidewalks are present along the south side of Riverton Road (CR 603) and along the west side of Tom Brown Road (CR 614). Parking is not permitted on both sides of each roadway. The land use near the intersection is residential. The nearest signalized intersection is located approximately 0.36 miles away at the intersection of Riverton Road (CR 603) and New Albany Road (south leg).

#### **Data Collection**

The eight (8) highest hours from the aforementioned count data was utilized for the existing major and minor street volumes. In accordance with Section 4C.02 of the MUTCD, the major street and the minor street are defined as those normally carrying the higher and lower volume of vehicular traffic, respectively. Based on the intersection's traffic volumes, Riverton Road (CR 603) is the major street and Tom Brown Road (CR 614) is the minor street.

#### **MUTCD Section 4C.02 Traffic Signal Warrants**

Warrants 1-4 compare site traffic volumes with minimum values. If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the MUTCD permits lower minimum volumes. Since Riverton Road (CR 603) is posted 40 mph, and traffic is likely traveling slightly above the speed limit, the lower minimum values were utilized for Warrants 1-4. Warrants 5-9 take other elements into consideration, such as crash history, signal coordination, and proximity to atgrade rail crossings. All warrants are detailed further below.





#### Warrant 1, Eight-Hour Vehicular Volume – Satisfied

The MUTCD specifies that the Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. In instances where both Conditions A and B are not satisfied, the MUTCD allows for the combination to satisfy Warrant 1, only after an adequate trial of the other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 1 is intended to be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combinations of Conditions A and B are not required. The same is true if Condition B is satisfied, then Warrant 1 is satisfied and the analyses of the combinations of Conditions A and B are not required.

The MUTCD provides a series of minimum traffic volume requirements for both the major and minor streets for each of any eight hours of an average day (Table 4C-1 of the MUTCD). Under this warrant the need for a traffic signal shall be considered if one of the following conditions exists:

- A. The vehicles per hour in both 100 percent columns of Condition A exist on the major street and the higher volume minor street approaches, respectively, to the intersection; or
- B. The vehicles per hour in both 100 percent columns of Condition B exist on the major street and the higher volume minor street approaches, respectively, to the intersection.

Where the combination of Conditions A and B are to be applied, the need for a traffic signal shall be considered if both of the following conditions exist for each of any eight hours of an average day:

- A. The vehicles per hour in both 80 percent columns of Condition A exist on the major street and the higher volume minor street approaches, respectively, to the intersection; and
- B. The vehicles per hour given in both of the 80 percent columns of Condition B exist on the major street and the higher volume minor street approaches, respectively, to the intersection.

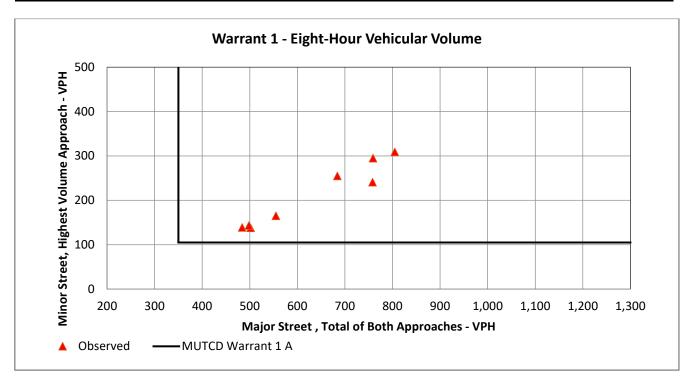
Since the minimum volumes required for Warrant A are met or exceeded during each of the eight (8) hours, this warrant is satisfied. The minimum and observed volumes are summarized in the table and figure below. The higher of the two Tom Brown Road (CR 614) approaches is used as the minor street volume.

Volume		Condition A [vph] (70%)	Condition B [vph] (70%)	Combination Condition A [vph] (56%)	Combination Condition B [vph] (56%)
Major Street (Tw	o-Way)	350	525	280	420
Minor Street (H	ighest)	105	53	84	42





	Major	Minor		Warran	t Met?		
Hour	(Two-Way)	(highest)	Condition A	Condition B	Combination Condition A	Combination Condition B	
6:30-7:30 am	484	139	YES				
7:30-8:30 am	684	255	YES				
8:30-9:30 am	555	165	YES	WARRANT			
12:00-1:00 pm	502	138	YES	CONDITION A	WARRANT C		
1:00-2:00 pm	498	143	YES	IS MET	IS M	1ET	
3:00-4:00 pm	758	241	YES				
4:00-5:00 pm	759	295	YES				
5:00-6:00 pm	805	309	YES				
Warr	ant Satisfied	?	YES	N/A	N/	A	

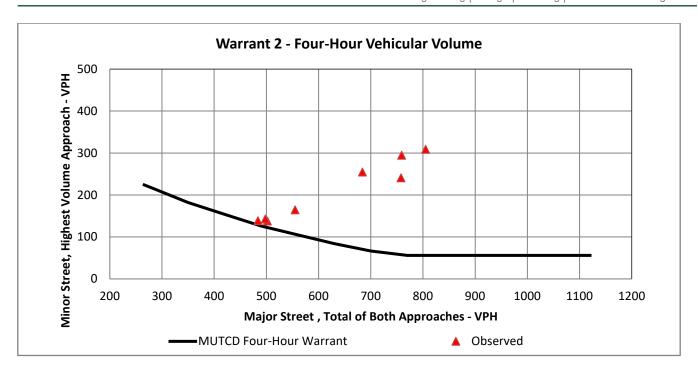


#### Warrant 2, Four-Hour Vehicular Volume - Satisfied

The MUTCD specifies that the Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. This warrant is satisfied when each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for the appropriate number of lanes for both streets, all fall above the applicable curve in Figure 4C-2 of the MUTCD, shown below. Each of the eight highest volume hours exceeds the minimum volumes required for this warrant, therefore Warrant 2 is satisfied.







#### Warrant 3, Peak Hour - Not applicable

This warrant is not applicable to this intersection as there are no unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities, that would attract or discharge a large number of vehicles over a short period of time.

#### Warrant 4, Pedestrian Volume - Not satisfied

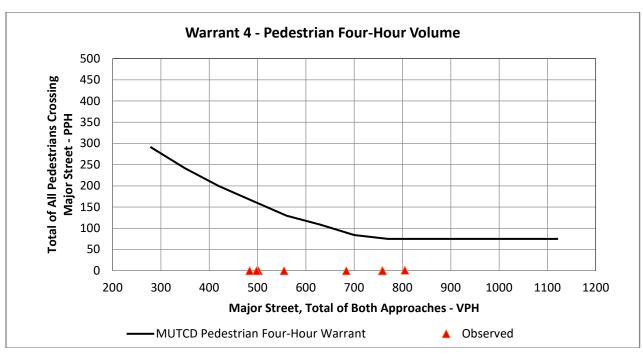
The MUTCD specifies that the Pedestrian Volume warrant is intended for application where the traffic volume on the major street is so heavy that pedestrians experience excessive delay in crossing the major street. The need for a traffic control signal at an intersection or midblock crossing shall be considered if one of the following criteria is met:

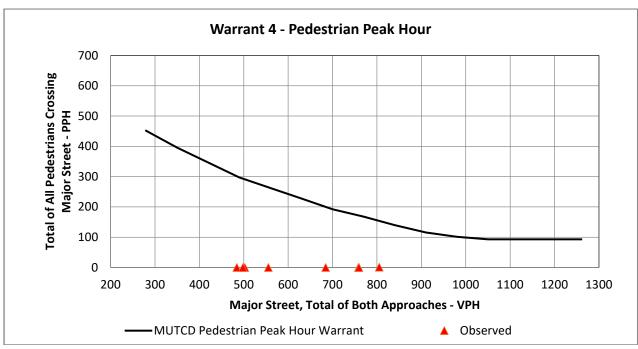
- A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6 of the MUTCD; or
- B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-8 of the MUTCD shown below.

The pedestrian volumes at this intersection are minimal throughout the day, therefore Warrant 4 is not satisfied.









#### Warrant 5, School Crossing – Not applicable

This warrant is not applicable to this intersection as school children crossing the major street are not present at this intersection.

#### Warrant 6, Coordinated Signal System – Not applicable

This warrant is not applicable since a traffic signal at this intersection is not needed for platooning in a coordinated signal system.





#### Warrant 7, Crash Experience - Not satisfied

The MUTCD specifies that this warrant's conditions are intended where the severity and frequency of crashes are the principal reasons to consider the installation of a traffic control signal. The need for a traffic signal shall be considered if **all** of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency, and:
- B. Five or more reported crashes, of types susceptible to correction by a traffic signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and:
- C. For each of any eight hours of an average day, the vehicles per hour in both 56 percent columns of Condition A in Table 4C-1, or the vehicles per hour in both 56 percent columns of Condition B in Table 4C-1 exists on the major street and the higher volume minor street approaches, respectively, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in Warrant 4, Pedestrian Volume.

GPI obtained crash data from Safety Voyager for the five-year period between 2016 and 2020. The following table summarizes the crash data for each of the respective years.

Collision Type /	2016		2017		2018		2019		2020	
Condition		% of								
Condition	Count	Total								
Total Crashes	9		1		3		1		4	
Rear End	2	22%	1	100%	0	0%	1	100%	1	25%
Right Angle	2	22%	0	0%	1	33%	0	0%	1	25%
Left Turn	2	22%	0	0%	0	0%	0	0%	0	0%
Sideswipe	1	11%	0	0%	0	0%	0	0%	0	0%
Pedestrian	0	0%	0	0%	0	0%	0	0%	0	0%
Bicyclist	1	11%	0	0%	0	0%	0	0%	0	0%
Other	1	11%	0	0%	2	67%	0	0%	2	50%
Inclement Weather	1	11%	0	0%	0	0%	0	0%	2	50%
Night, Dawn, Dusk	3	33%	0	0%	2	67%	0	0%	2	50%

It is unknown whether an adequate trial of alternatives failed given the low number of crashes (18) over a five-year period as specified in Part A above. Based on an analysis of the crash history it can be reasoned that a traffic signal could not have prevented a total of five or more reported crashes, of a type susceptible to correction by a traffic signal, for a consecutive 12-month period between 2016 and 2020 as specified in Part B above. The vehicular, but not pedestrian, volumes do meet the criteria specified in Part C above. Based on the low number of preventable crashes over the five-year period, Warrant 7 is not satisfied.

#### Warrant 8, Roadway Network - Not satisfied

The MUTCD specifies that installing a traffic control signal at some intersections may be justified to encourage concentration and organization of traffic flow on a roadway network. Specifically, it states that the intersection is to be common to two or more major routes that has one or more of the following characteristics:

- A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow, or:
- B. It includes rural or suburban highways outside, entering, or traversing a City, or:





C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

The two intersecting roads do not meet these criteria therefore the Warrant 8 is not satisfied.

#### Warrant 9, Intersection Near a Grade Crossing – Not applicable

This warrant is not applicable since this intersection is not in close proximity to an at-grade rail crossing controlled by a "Stop" or "Yield" sign.

#### **MUTCD Section 2B.07 Multi-Way Stop Sign Warrants**

Warrant A provides for the use of a multi-way stop sign as an interim measure when one or more of the traffic signal warrants has been met. Warrant B is related to crash experience, similar to Signal Warrant 7. Warrant C.1/C.2 compares observed total approach volumes (vehicles, pedestrians, and cyclists) with minimum values. If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, Warrant C.3 permits lower minimum volumes. Warrant D is a combined warrant that also considers lower minimum values for both crashes and volumes.

Other criteria include the following:

- 1) The need to control left turn conflicts;
- 2) The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- 3) Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
- 4) An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

#### Warrant A, Interim Measure - Satisfied

This warrant is met since this intersection does meet several of the traffic signal volume warrants.

#### Warrant B, Crash Experience - Not satisfied

To meet this warrant, a minimum of five (5) crashes per year that would have been prevented by installation of multi-way stop control must be identified. GPI obtained crash data from Safety Voyager for the five-year period between 2016 and 2020. A summary table for each of the respective years was presented under Signal Warrant 7. There were only eighteen (18) crashes over the five-year period including four (4) right angle and (2) left turn crashes. The most common crash type was a rear-end crash and would not be preventable by the installation of a multi-way stop. Thus, this warrant is not met.

#### Warrant C.1/C.2, Minimum Traffic Volumes – Not satisfied

The MUTCD specifies that the Traffic Volume warrant is intended for application where the total traffic volume (autos and bicyclists) on both the major and minor street is so heavy that pedestrians experience excessive delay in crossing the major street. The need for multi-way stop sign control at an intersection is satisfied if the following criteria are met:

For each of any eight (8) hours of an average day, vehicles plus bicycles per hour on the major street (total of both approaches) and the total corresponding combined volume (autos, bicyclists and pedestrians) on the minor street and also crossing the major street (total of both crossings) are greater than 300 and 200, respectively. The data for Warrant C.1/C.2 is plotted in the figure below. As seen in the figure, this warrant is not met for eight (8) hours for the minor street approach.



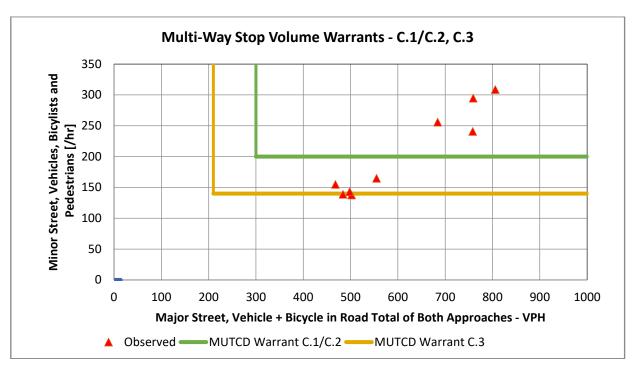


#### Warrant C.3, Minimum Traffic Volumes and Speed – Not satisfied

This warrant is only considered if the speed on the major street exceeds 40 mph. The lower minimum required volumes for Warrant C.3 are also plotted in the figure below. As seen in the figure, this warrant is also not met for eight (8) hours for the minor street approach.

#### Warrant D, Combined Warrant - Not satisfied

This warrant is satisfied when no previous single warrant is satisfied, but where Warrant B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Since the number of crashes is below 80 percent of the Warrant B requirements, this warrant not met.



#### Other Criteria: Left Turn Volumes and Delay - Not satisfied

The HCS7 software was used to evaluate traffic operations for the Riverton Road (CR 603) southbound left turns. The southbound left turn movement operates at LOS A (< 10 seconds of delay) in the morning, midday, and evening peak hours, thus this warrant is not met. The HCS7 output reports are included in the Appendix.

#### Other Criteria: Pedestrian Volumes and Delay – Not applicable

Pedestrian volumes at this intersection are minimal therefore the warrant is not applicable. Pedestrians crossing all approaches during the morning, midday and evening peak hours operate at LOS D or better. As stated above, the HCS7 output reports are included in the Appendix.

#### Other Criteria: Conflicting Traffic Not Visible - Not satisfied

There are no visibility issues for Riverton Road (CR 603) southbound left turns crossing northbound through and right turn movements, thus this warrant is not met. The view from the southbound approach is shown in the figure below.







#### Other Criteria: Roadways of Similar Design and Character – Satisfied

Riverton Road (CR 603) and Tom Brown Road (CR 614) are both Urban Minor Arterials that carry between 200 and 600 vehicles on each approach during the weekday morning and evening peak hours. Since the characteristics of both roadways are similar, this warrant is satisfied.

#### IV. Intersection 3: New Albany Road at Riverton Road (CR 603)

#### **Existing Conditions**

Riverton Road (CR 603) between Tom Brown Road (CR 614) and New Albany Road is a two-lane Urban Minor Arterial with a posted speed limit of 40 mph. New Albany Road between Tom Brown Road (CR 614) and Riverton Road (CR 603) is a two-lane Urban Major Collector with a posted speed limit of 35 mph. These roadways form an unsignalized 'T-type' intersection where New Albany Road is under stop control to Riverton Road (CR 603). A sidewalk is present along the south side of Riverton Road (CR 603), and parking is not permitted on both sides of each roadway. The land use near the intersection is residential. The nearest signalized intersection is located approximately 0.17 miles away at the intersection of Riverton Road (CR 603) and New Albany Road (south leg).

#### **Data Collection**

The eight (8) highest hours from the aforementioned count data was utilized for the existing major and minor street volumes. In accordance with Section 4C.02 of the MUTCD, the major street and the minor street are defined as those normally carrying the higher and lower volume of vehicular traffic, respectively. Based on the intersection's traffic volumes, Riverton Road (CR 603) is the major street and New Albany Road is the minor street.

#### **MUTCD Section 4C.02 Traffic Signal Warrants**

Warrants 1-4 compare site traffic volumes with minimum values. If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, or if the intersection lies within the built-up area of an isolated community having a population of less than 10,000, the MUTCD permits lower minimum volumes. Since Riverton Road (CR 603) is posted 40 mph, and traffic is likely traveling slightly above the speed limit, the lower minimum values were utilized for Warrants 1-4. Warrants 5-9





take other elements into consideration, such as crash history, signal coordination, and proximity to atgrade rail crossings. All warrants are detailed further below.

#### Warrant 1, Eight-Hour Vehicular Volume – Satisfied

The MUTCD specifies that the Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. In instances where both Conditions A and B are not satisfied, the MUTCD allows for the combination to satisfy Warrant 1, only after an adequate trial of the other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems.

Warrant 1 is intended to be treated as a single warrant. If Condition A is satisfied, then Warrant 1 is satisfied and analyses of Condition B and the combinations of Conditions A and B are not required. The same is true if Condition B is satisfied, then Warrant 1 is satisfied and the analyses of the combinations of Conditions A and B are not required.

The MUTCD provides a series of minimum traffic volume requirements for both the major and minor streets for each of any eight hours of an average day (Table 4C-1 of the MUTCD). Under this warrant the need for a traffic signal shall be considered if one of the following conditions exists:

- A. The vehicles per hour in both 100 percent columns of Condition A exist on the major street and the higher volume minor street approaches, respectively, to the intersection; or
- B. The vehicles per hour in both 100 percent columns of Condition B exist on the major street and the higher volume minor street approaches, respectively, to the intersection.

Where the combination of Conditions A and B are to be applied, the need for a traffic signal shall be considered if both of the following conditions exist for each of any eight hours of an average day:

- A. The vehicles per hour in both 80 percent columns of Condition A exist on the major street and the higher volume minor street approaches, respectively, to the intersection; and
- B. The vehicles per hour given in both of the 80 percent columns of Condition B exist on the major street and the higher volume minor street approaches, respectively, to the intersection.

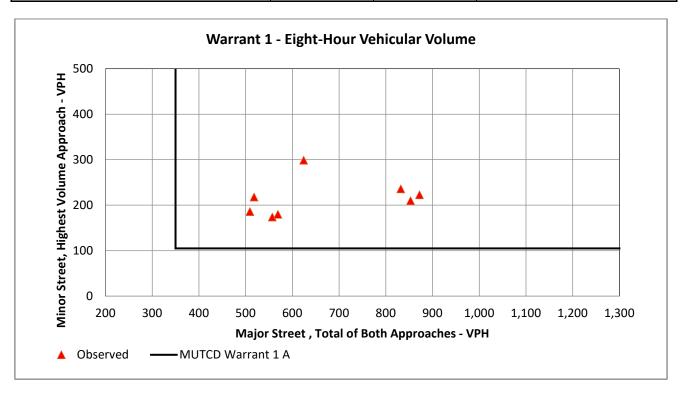
Since the minimum volumes required for Warrant A are met or exceeded during each of the eight (8) hours, this warrant is satisfied. The minimum and observed volumes are summarized in the table and figure below. The higher of the two New Albany Road approaches is used as the minor street volume.

Volume	Condition A [vph] (70%)	Condition B [vph] (70%)	Combination Condition A [vph] (56%)	Combination Condition B [vph] (56%)	
Major Street (Two-Way)	350	525	280	420	
Minor Street (Highest)	105	53	84	42	





Major		Minor	Warrant Met?						
Hour	(Two-Way)	(highest)	Condition A	Condition B	Combination Condition A	Combination Condition B			
7:30-8:30 am	624	299	YES						
8:30-9:30 am	518	218	YES						
11:00-12:00 am	509	186	YES	WARRANT	MADDANIT O	ONDITION A			
12:00-1:00 pm	557	174	YES	CONDITION A IS	WARRANT C IS N				
1:00-2:00 pm	569	180	YES	MET	13 10				
3:00-4:00 pm	853	210	YES						
4:00-5:00 pm	832	236	YES						
5:00-6:00 pm	872	223	YES						
Warrant Satisfied?			YES	N/A	N/	A			

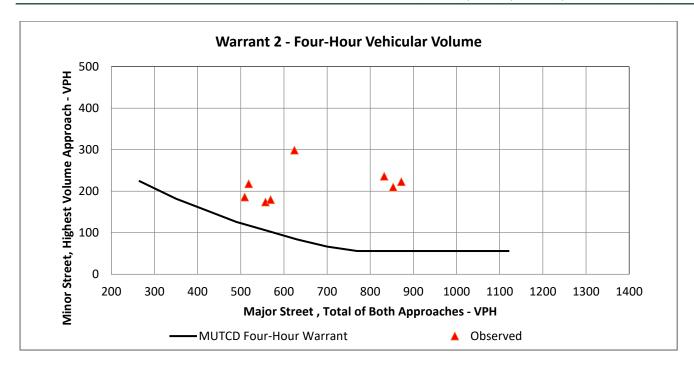


#### Warrant 2, Four-Hour Vehicular Volume - Satisfied

The MUTCD specifies that the Four-Hour Vehicular Volume signal warrant conditions are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing a traffic control signal. This warrant is satisfied when each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher volume minor street approach (one direction only) for the appropriate number of lanes for both streets, all fall above the applicable curve in Figure 4C-2 of the MUTCD, shown below. Each of the eight highest volume hours exceeds the minimum volumes required for this warrant, therefore Warrant 2 is satisfied.







#### Warrant 3, Peak Hour – Not applicable

This warrant is not applicable to this intersection as there are no unusual cases, such as office complexes, manufacturing plants, industrial complexes, or high-occupancy vehicle facilities, that would attract or discharge a large number of vehicles over a short period of time.

#### Warrant 4, Pedestrian Volume - Not satisfied

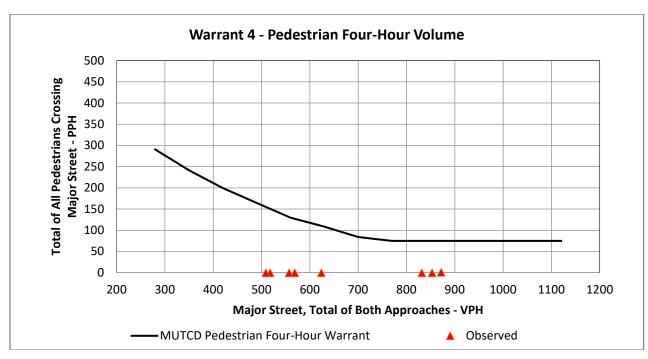
The MUTCD specifies that the Pedestrian Volume warrant is intended for application where the traffic volume on the major street is so heavy that pedestrians experience excessive delay in crossing the major street. The need for a traffic control signal at an intersection or midblock crossing shall be considered if one of the following criteria is met:

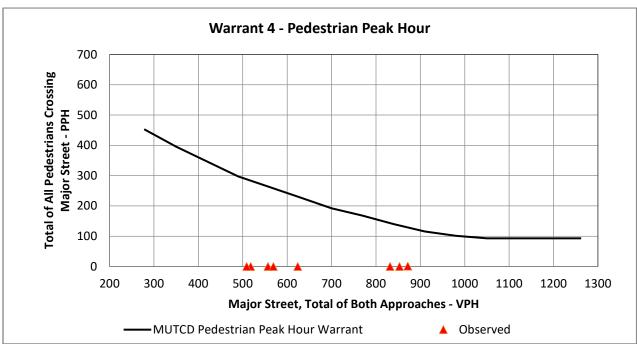
- A. For each of any 4 hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) all fall above the curve in Figure 4C-6 of the MUTCD; or
- B. For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings) falls above the curve in Figure 4C-8 of the MUTCD shown below.

The pedestrian volumes at this intersection are minimal throughout the day, therefore Warrant 4 is not satisfied.









#### Warrant 5, School Crossing – Not applicable

This warrant is not applicable to this intersection as school children crossing the major street are not present at this intersection.

#### Warrant 6, Coordinated Signal System – Not applicable

This warrant is not applicable since a traffic signal at this intersection is not needed for platooning in a coordinated signal system.





#### Warrant 7, Crash Experience - Not satisfied

The MUTCD specifies that this warrant's conditions are intended where the severity and frequency of crashes are the principal reasons to consider the installation of a traffic control signal. The need for a traffic signal shall be considered if **all** of the following criteria are met:

- A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency, and:
- B. Five or more reported crashes, of types susceptible to correction by a traffic signal, have occurred within a 12-month period, each crash involving personal injury or property damage apparently exceeding the applicable requirements for a reportable crash, and:
- C. For each of any eight hours of an average day, the vehicles per hour in both 56 percent columns of Condition A in Table 4C-1, or the vehicles per hour in both 56 percent columns of Condition B in Table 4C-1 exists on the major street and the higher volume minor street approaches, respectively, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in Warrant 4, Pedestrian Volume.

GPI obtained crash data from Safety Voyager for the five-year period between 2016 and 2020. The following table summarizes the crash data for each of the respective years.

Collision Type /	2016		2017		2018		2019		2020	
Condition	Count	% of Total								
Total Crashes	1		0		0		0		0	
Rear End	1	100%	0	0%	0	0%	0	0%	0	0%
Right Angle	0	0%	0	0%	0	0%	0	0%	0	0%
Left Turn	0	0%	0	0%	0	0%	0	0%	0	0%
Sideswipe	0	0%	0	0%	0	0%	0	0%	0	0%
Pedestrian	0	0%	0	0%	0	0%	0	0%	0	0%
Bicyclist	0	0%	0	0%	0	0%	0	0%	0	0%
Other	0	0%	0	0%	0	0%	0	0%	0	0%
Inclement Weather	0	0%	0	0%	0	0%	0	0%	0	0%
Night, Dawn, Dusk	0	0%	0	0%	0	0%	0	0%	0	0%

Based on the low number of crashes over the five-year period, Warrant 7 is not met.

#### Warrant 8, Roadway Network - Not satisfied

The MUTCD specifies that installing a traffic control signal at some intersections may be justified to encourage concentration and organization of traffic flow on a roadway network. Specifically, it states that the intersection is to be common to two or more major routes that has one or more of the following characteristics:

- A. It is part of the street or highway system that serves as the principal roadway network for through traffic flow, or:
- B. It includes rural or suburban highways outside, entering, or traversing a City, or:
- C. It appears as a major route on an official plan, such as a major street plan in an urban area traffic and transportation study.

The two intersecting roads do not meet these criteria therefore the Warrant 8 is not satisfied.





#### Warrant 9, Intersection Near a Grade Crossing - Not applicable

This warrant is not applicable since this intersection is not in close proximity to an at-grade rail crossing controlled by a "Stop" or "Yield" sign.

#### **MUTCD Section 2B.07 Multi-Way Stop Sign Warrants**

Warrant A provides for the use of a multi-way stop sign as an interim measure when one or more of the traffic signal warrants has been met. Warrant B is related to crash experience, similar to Signal Warrant 7. Warrant C.1/C.2 compares observed total approach volumes (vehicles, pedestrians, and cyclists) with minimum values. If the posted or statutory speed limit or the 85th percentile speed on the major street exceeds 40 mph, Warrant C.3 permits lower minimum volumes. Warrant D is a combined warrant that also considers lower minimum values for both crashes and volumes.

#### Other criteria include the following:

- 1) The need to control left turn conflicts;
- 2) The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- 3) Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
- 4) An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of the intersection.

#### Warrant A, Interim Measure - Satisfied

This warrant is met since this intersection does meet several of the traffic signal volume warrants.

#### Warrant B, Crash Experience - Not satisfied

To meet this warrant, a minimum of five (5) crashes per year that would have been prevented by installation of multi-way stop control must be identified. As stated earlier, based on the low number of crashes over the five-year period, Warrant B is not met.

#### Warrant C.1/C.2, Minimum Traffic Volumes – Not satisfied

The MUTCD specifies that the Traffic Volume warrant is intended for application where the total traffic volume (autos and bicyclists) on both the major and minor street is so heavy that pedestrians experience excessive delay in crossing the major street. The need for multi-way stop sign control at an intersection is satisfied if the following criteria are met:

For each of any eight (8) hours of an average day, vehicles plus bicycles per hour on the major street (total of both approaches) and the total corresponding combined volume (autos, bicyclists and pedestrians) on the minor street and also crossing the major street (total of both crossings) are greater than 300 and 200, respectively. The data for Warrant C.1/C.2 is plotted in the figure below. As seen in the figure, this warrant is not met for eight (8) hours.

#### Warrant C.3, Minimum Traffic Volumes and Speed – Satisfied

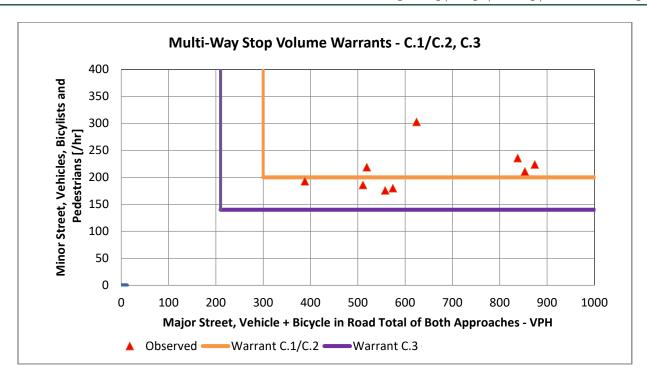
This warrant is only considered if the speed on the major street exceeds 40 mph. The lower minimum required volumes for Warrant C.3 are also plotted in the figure below. As seen in the figure, this warrant is met for eight (8) hours.

#### Warrant D, Combined Warrant - Not satisfied

This warrant is satisfied when no previous single warrant is satisfied, but where Warrant B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Since the number of crashes is below 80 percent of the Warrant B requirements, this warrant not met.







#### Other Criteria: Left Turn Volumes and Delay - Not satisfied

The HCS7 software was used to evaluate traffic operations for the Riverton Road (CR 603) southbound left turns. The southbound left turn movement operates at LOS A (< 10 seconds of delay) in the morning, midday, and evening peak hours, thus this warrant is not met. The HCS7 output reports are included in the Appendix.

#### Other Criteria: Pedestrian Volumes and Delay - Not applicable

Pedestrian volumes at this intersection are minimal therefore the warrant is not applicable. Pedestrians crossing all approaches during the morning, midday and evening peak hours operate at LOS D or better. As stated above, the HCS7 output reports are included in the Appendix.

#### Other Criteria: Conflicting Traffic Not Visible - Not satisfied

There are no visibility issues for Riverton Road (CR 603) southbound left turns. It may be desirable however to cut back the foliage on the New Albany Road approach to improve the sight distance for vehicles approaching from the left. The view from the Riverton Road (CR 603) southbound approach and the New Albany Road approach are shown in the following figures. This warrant is not satisfied.

#### Other Criteria: Roadways of Similar Design and Character - Satisfied

New Albany Road and Riverton Road (CR 603) are an Urban Major Collector and an Urban Minor Arterial, respectively, that carry similar volumes during the weekday morning and evening peak hours. Since the characteristics of both roadways are similar, this warrant is satisfied.







Riverton Road (CR 603) Southbound Approach



**New Albany Road Approach** 



# APPENDIX E

### AERIAL PLAN



# CR 614, CR 603, AND NEW ALBANY ROAD LOCAL CONCEPT DEVELOPMENT

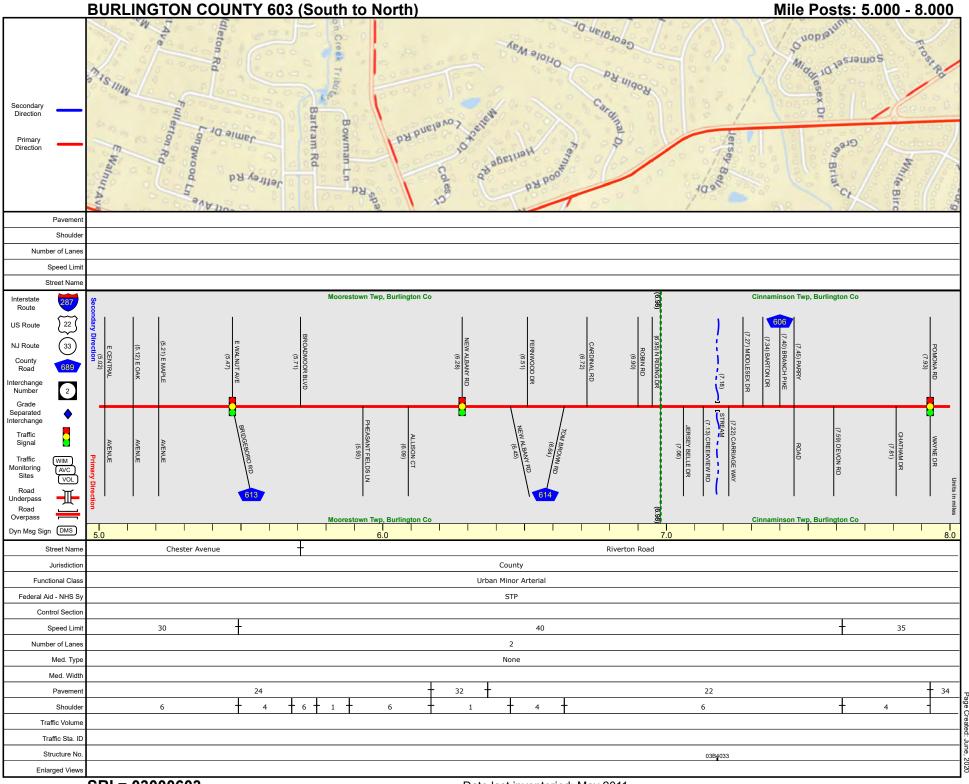
MOORESTOWN TOWNSHIP BURLINGTON COUNTY

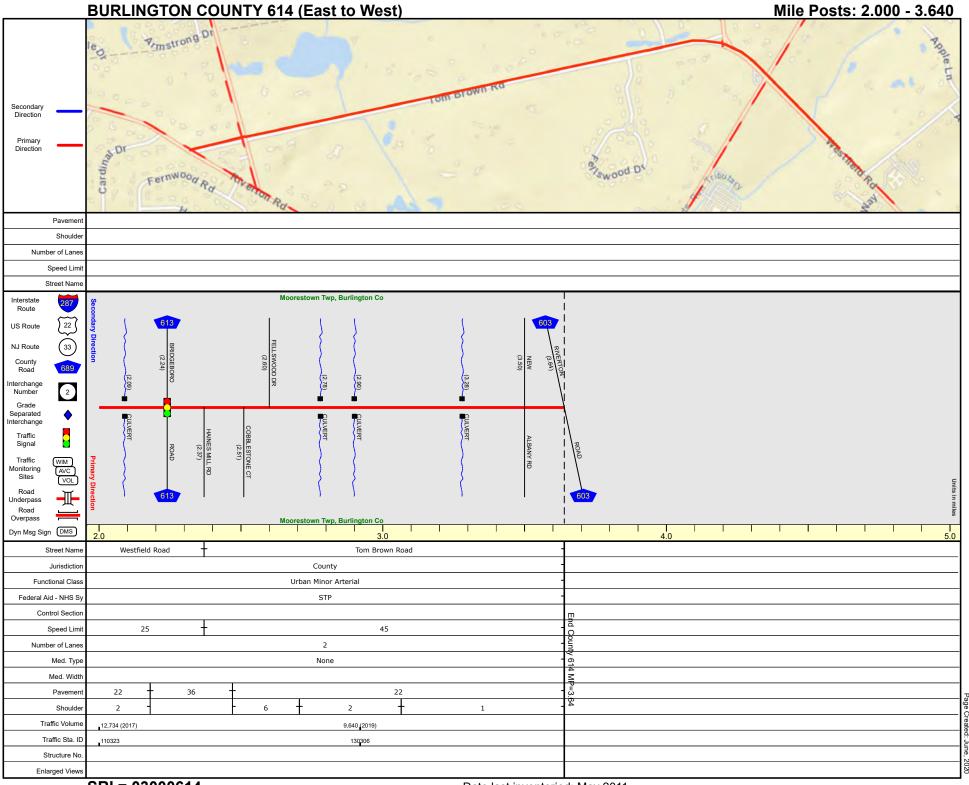
**AERIAL PLAN** 

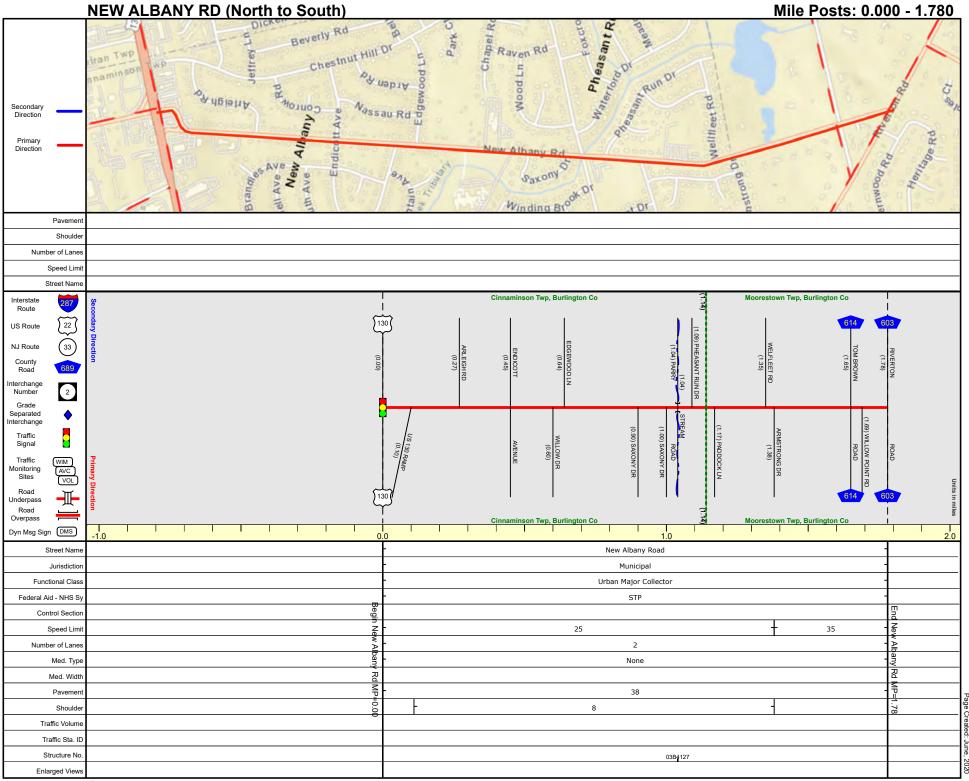


# APPENDIX F

## STRAIGHT LINE DIAGRAMS







# APPENDIX G ENVIRONMENTAL SCREENING AND CONSTRAINT MAP





#### Delaware Valley Regional Planning Commission Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road

**Township of Moorestown, Burlington County, New Jersey** 

#### **ENVIRONMENTAL SCREENING REPORT**

Prepared For:

Greenman-Pedersen, Inc. 100 Corporate Drive, Suite 301 Lebanon, NJ 08833

Prepared By:

CONSULTING ENGINEERS, INC.

KMA Consulting Engineers, Inc. 1010 Berlin Road Cherry Hill, NJ 08034

**NOVEMBER 2021** 

Delaware Valley Regional Planning Commission Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road Moorestown Township, Burlington County, New Jersey



**Environmental Screening Report** 

#### **TABLE OF CONTENTS**

1.0	INTRODUCTION
2.0	CULTURAL RESOURCES
3.0	SECTION 4(F) PROPERTIES - PUBLICLY OWNED PARKS AND RECREATIONAL AREAS
4.0	AIR QUALITY/NOISE
+.0 5.0	ECOLOGICAL CONSTRAINTS
5.1	WETLANDS AND VERNAL POOLS
5.2	Surface Waters
	2.2 Sole-Source Aquifers
	2.3 Tidelands
5	2.4 Well Head Protection Areas
5	2.5 Wild and Scenic Rivers4
5.3	FLOODPLAINS
5.4	STORMWATER MANAGEMENT AND WATER QUALITY
5.5	SOIL EROSION AND SEDIMENT CONTROL
5.6	THREATENED AND ENDANGERED SPECIES
	6.1 State Species
5.	
5.0	ENVIRONMENTAL JUSTICE AND SOCIOECONOMIC
7.0	HAZARDOUS WASTE
3.0	ZONING AND LAND USE
5.0	
9.0	ANTICIPATED APPROVALS AND AUTHORIZATIONS
9.1	FEDERAL PERMITS/APPROVALS/COORDINATION
9.2	STATE PERMITS/APPROVALS/COORDINATION
10.0	REFERENCES
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#### **APPENDICES**

Appendix A: Figures

Appendix B: Agency Correspondence

Appendix C: Greenman-Pedersen, Inc.'s LCD Study for CR 614, CR 603 and New Albany Road

Community Profile Memorandum (dated October 25, 2021)



**Environmental Screening Report** 

#### 1.0 INTRODUCTION

The Delaware Valley Regional Planning Commission (DVRPC), on behalf of Burlington County, is performing a Local Concept Development (LCD) study for the Intersection of County Route (CR) 614 (Tom Brown Road), CR 603 (Riverton Road) and New Albany Road located in Moorestown Township, Burlington County, New Jersey. Within this three-intersection triangle, two intersections exhibit skewed alignment and substandard sight distance, and the intersection of CR 614 and New Albany Road has been identified as a high crash location in the Highway Safety Improvement Program (HSIP) eligibility rankings. This LCD study will develop concepts for improving safety and operational deficiencies associated with the three-intersection triangle for motorists, bicyclists, and pedestrians.

As part of the Data Collection Task within the LCD study, an environmental screening was performed to identify regulated resources within the vicinity of the study area. The study area is defined as a 300-foot buffer around the project limits, unless otherwise specified. Environmental parameters related to the project were assessed by performing a review of available information, which included maps and publications by various government agencies and non-government organizations. The database review was augmented by a field view to confirm database information and to document other resources not identified in the database review. Constraints examined included cultural resources, wetlands, surface water resources, floodplains, threatened and endangered species habitat, air and noise quality, hazardous materials, community facilities, and open space and parkland. Please refer to Figures 1 and 2 in Appendix A for location maps of the study area. Additionally, environmental justice constraints were addressed according to Greenman-Pedersen, Inc.'s LCD Study for CR 614, CR 603 and New Albany Road Community Profile Memorandum (dated October 25, 2021). A copy of the community profile memorandum is located in Appendix C.

The purpose of this report is to provide an inventory of existing environmental conditions that the alternative improvement concepts should take into consideration. The information presented will assist the DVRPC in evaluating the improvement concepts and the potential environmental implications of each alternative.

Although regulated resources were identified within the study area, it is not anticipated that any of the identified resources pose an overwhelming environmental challenge that would preclude the project from advancing through preliminary engineering, the environmental documentation process, final design, regulatory permitting, and construction.

#### 2.0 CULTURAL RESOURCES

The National Historic Preservation Act (NHPA) of 1966 was created to protect and maintain historic places composed of districts, sites, buildings, structures, or objects significant to American history, architecture, archaeology, engineering, and cultures. Section 106 of the NHPA applies to federally funded projects and requires consideration of effects to significant historic properties and archeological resources.

The New Jersey Register of Historic Places Act of 1970 created an official list of the State's historic resources of local, state, and national interest. The New Jersey State Historic Preservation Office's (SHPO) Cultural Resources Information System (CRGIS) was examined in an effort to identify any recorded and known archaeological and historic architectural resources within the study area. According to information provided by the CRGIS, there are no historic properties located within the study area.



**Environmental Screening Report** 

#### 3.0 SECTION 4(F) PROPERTIES - PUBLICLY OWNED PARKS AND RECREATIONAL AREAS

Section 4(f) of the United States Department of Transportation Act of 1966 provides for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development. The New Jersey Department of Environmental Protection (NJDEP) Green Acres Program was created in 1961 to preserve and enhance New Jersey's natural environment and its historic, scenic, and recreational resources for public use and enjoyment; it serves as an agent for the NJDEP to manage the acquisition of land when it becomes part of the system of state parks, forests, natural areas, and wildlife areas, including Section 4(f) resources.

Available geospatial data from the NJDEP Green Acres Program Recreation and Open Space Inventory (ROSI) and aerial photography were reviewed to identify public parkland, including recreation facilities, publicly owned open space, wildlife refuges and wildlife management areas, school athletic fields, or community parks within the study area. Based on this review, there are no existing Section 4(f) parkland resources within the study area. There are no neighborhood playgrounds, pocket parks, or passive recreational areas located within 2,000 feet of the project study area. As such, the project will not result in the use of Section 4(f) parkland resources.

#### 4.0 AIR QUALITY/NOISE

Sensitive receptors are locations where people reside or where the presence of unwanted sound or increased levels of air pollution could adversely affect the use of the land. For noise, a sensitive receptor is generally an exterior location of a property, which is considered to contain a noise-sensitive land use, such as picnic areas, recreation areas, playgrounds, active sports areas, residences, guest lodges, schools, churches, libraries and hospitals. For air quality, a sensitive receptor is identified as an exterior location outside the mixing zone of uniform emissions and turbulence, which typically includes residences, bus stops, parks, and other public places to which the general public has access.

Using available aerial photography and geospatial data, the presence or absence of sensitive receptors to air quality and noise was evaluated within the study area. Based on interpretation of available information, it was determined that numerous sensitive receptors exist within the study area, including multiple residential dwelling units. The proposed project is exempt as an "Increasing site distance" project under Table 2 of the *Transportation Conformity Rule in the Clean Air Act Amendments* (CAAA). As such, the proposed project is exempt from the conformity requirement of the CAAA, including a PM 2.5 analysis, per 40 CFR 93.126 and is not anticipated to have adverse air quality impacts.

It is anticipated that the project would be classified as a Type III project under 23 CFR 772.7 and would not require analysis for highway traffic noise impacts. Type III projects do not involve added capacity, construction of new through lanes or auxiliary lanes, substantial changes in the horizontal or vertical alignment of the roadway or exposure of noise sensitive land uses to a new existing highway noise source.

#### **5.0 ECOLOGICAL CONSTRAINTS**

#### 5.1 Wetlands and Vernal Pools

Activities proposed in wetlands and their associated transition areas are regulated by the NJDEP Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A) and the Clean Water Act as administered by the United States Army Corps of Engineers (USACE). The NJDEP 2012 Land Use/Land Cover data and United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) geospatial data were reviewed to identify potential wetlands within the study area. According to this review, there are no wetlands



**Environmental Screening Report** 

located within the study area. In addition, the NJDEP Landscape Project Version 3.3 Vernal Habitat geospatial data layer did not identify any vernal habitats or potential vernal habitats in the study area.

#### 5.2 Surface Waters

The closest surface water to the study area is Pompeston Creek Unnamed Tributary (UNT), located approximately one-quarter mile northeast of the study area. According to the New Jersey Surface Water Quality Standards (N.J.A.C. 7:9B), Pompeston Creek UNT is classified as a Freshwater 2 – Non-Trout (FW2-NT) waterway. The study area is located in the Lower Delaware Watershed Management Area (WMA 18) and is completely contained within the Pompeston Creek (above Route 130) Hydrologic Unit Code (HUC)-14 sub-watershed (No. 02040202090020).

#### 5.2.1 Riparian Zones

The NJDEP Flood Hazard Area Control Act Rules (N.J.A.C. 7:13) establishes jurisdiction over riparian zones. Riparian zones are defined as the land and vegetation within and adjacent to a regulated water. As discussed above, Pompeston Creek UNT is a FW2-NT waterway located approximately one-quarter mile northeast of the study area. Since Pompeston Creek UNT is located more than 300 feet away from the study area, proposed project activities will be located outside of the NJDEP regulated riparian zone.

#### 5.2.2 Sole-Source Aquifers

Sole-source aquifers are those aquifers that contribute more than 50% of the drinking water to a specific area whereby the water would be impossible to replace if the aquifer were contaminated. Sole-source aquifers are defined with guidelines set forth by the United States Environmental Protection Agency (USEPA) as authorized in Section 1424(e) of the Safe Drinking Water Act of 1974.

Based on available data from the New Jersey Geological and Water Survey (NJGWS), the study area is located in the New Jersey Coastal Plain Sole-Source Aquifer System. Although the proposed project is located within the limits of the USEPA mapped sole-source aquifer, a Groundwater Quality Assessment (GQA) will not be required since this type of project does not meet the criteria set forth in the USEPA and Federal Highway Administration (FHWA) *Memorandum of Understanding on Sole-Source Aquifers* dated 7/8/1984. Please refer to Appendix B – Agency Correspondence for the USEPA and FHWA *Memorandum of Understanding*.

#### 5.2.3 Tidelands

Tidelands, as defined by the NJDEP, are all lands now or formerly flowed by the mean high tide of a natural waterway. Tidelands are owned by all of the people of the State of New Jersey and require permission from the State for the primary use of these lands in the form of a tidelands license, lease or grant. Available spatial data depicting tidelands claims were examined to determine the presence of tidelands within the study area. Based on this review, tidelands are not located within the study area.

#### 5.2.4 Well Head Protection Areas

In New Jersey, a Well Head Protection Area (WHPA) is a mapped area calculated around a public Community Water Supply (CWS) well or a Non-Community Water Supply (NCWS) that delineates the horizontal extent of ground water captured by a well pumping at a specific rate over a two-, five-, and twelve-year period of time. Through the regulation of land use, physical facilities and other activities within WHPAs, the potential for groundwater contamination can be reduced.



**Environmental Screening Report** 

According to available data from the NJDEP, no portions of the study area are located within a public CWS WHPA. It is not likely that proposed project activities will result in changes to land use or adversely affect groundwater quality.

#### 5.2.5 Wild and Scenic Rivers

The Wild and Scenic Rivers Act establishes a national policy that selected rivers and their immediate environments that possess pristine scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values shall be preserved in a free-flowing condition and protected for the benefit and enjoyment of present and future generations. The National Park Service (NPS) Wild and Scenic River System was consulted to determine if the Pompeston Creek UNT is designated as a Wild and Scenic River. According to the NPS Scenic River System, Pompeston Creek UNT is not designated as a Wild or Scenic River. Additionally, according to the NJDEP Environmentally Sensitive Areas Guidance Document (Revised October 2017), Pompeston Creek UNT is not listed on the New Jersey Wild and Scenic Rivers System.

#### 5.3 Floodplains

All regulated waters with drainage areas of fifty acres or greater have flood hazard areas regulated by the NJDEP Flood Hazard Area Control Act Rules (N.J.A.C. 7:13). Available Federal Emergency Management (FEMA) Flood Insurance Rate Map (FIRM) data was reviewed to determine if project activities are proposed within the regulated Flood Hazard Area (FHA). According to FIRM Panel No. 340005C0227F, the entire study area is located in Zone X (Area of Minimal Flood Hazard). The project is not located within the NJDEP regulated FHA or Floodway; therefore, proposed project activities are not subject to the NJDEP Flood Hazard Area Control Act Rules.

Please refer to Appendix A – Figure 6 for FEMA flood hazard mapping underlain by regional light detection and ranging (LiDAR) data of the study area.

#### 5.4 Stormwater Management and Water Quality

The NJDEP Stormwater Management Rules (N.J.A.C. 7:8) require that any project classified as a "major development" meets certain standards for water quality, water quantity, and groundwater recharge. A major development is defined as any development that, individually or collectively, results in the disturbance of one or more acres of land, the creation of one-quarter acre or more of regulated impervious surface, or the creation of one-quarter acre or more of regulated motor vehicle surface. A project that qualifies as a major development must implement Best Management Practices (BMPs) to reduce adverse effects to water quality, water quantity, and groundwater recharge. If the PPA is classified as a major development, the project will be designed to meet the criteria set forth in the Stormwater Management Rules.

Stormwater Management Rules (N.J.A.C. 7:8) requires that projects meeting the definition of a major development maintain 100% of the average annual pre-construction groundwater recharge or that the increase of stormwater runoff volume from pre-construction to post-construction for the two-year storm is infiltrated. The groundwater recharge requirements are waived for Urban Redevelopment Areas, which include Metropolitan Planning Areas, Designated Centers, Cores, or Nodes. Since the study area is delineated on the State Plan Policy Map (SPPM) as a Metropolitan Planning Area, it is anticipated that the project will be exempt from the groundwater recharge requirement. It is not anticipated that the PPA would introduce more than one net acre of disturbance, one-quarter net acre of regulated impervious surface, nor one-quarter net acre of motor vehicle surface. As such, the project would not be required to provide additional water quality treatment per the NJDEP Stormwater Management Rules (N.J.A.C. 7:8-



**Environmental Screening Report** 

5.5). Additionally, since net new impervious would not significantly increase, it is assumed that the post development runoff hydrograph would be equal to that of the pre-development hydrograph and, consequently, the water quantity control criterion (N.J.A.C. 7:8-5.4) would be satisfied. The Stormwater Management requirements for the project will be reevaluated as part of the alternatives analysis and selection of the PPA.

#### 5.5 Soil Erosion and Sediment Control

If the project will result in more than 5,000 ft<sup>2</sup> of ground disturbance, water quality degradation concerns during construction will be addressed by implementing soil erosion and sediment control measures designed in accordance with *The Standards for Soil Erosion and Sediment Control in New Jersey*. A Soil Erosion and Sediment Control application will be submitted to the Burlington County Soil Conservation District for certification. Upon receipt of the certification, Request for Authorization under the New Jersey Pollution Discharge Elimination System (NJPDES) General Stormwater Permit for Construction (5G3) will be required, assuming the project exceeds the one acre threshold for ground disturbance.

The National Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) database for Burlington County, New Jersey was examined to identify hydric soils within the project area. Appendix A – Figure 5 depicts the location of the project with respect to NRCS SSURGO Soils.

#### 5.6 Threatened and Endangered Species

#### 5.6.1 State Species

The New Jersey Natural Heritage Program (NHP) maintains a computer database of reported sightings of rare plants, animals, and natural communities in the State. Correspondence from the NHP dated October 26, 2021 indicates that there are no known records of threatened or endangered species documented within the project study area. However, foraging habitat for the black-crowned night-heron (*Nycticorax nycticorax*, State Threatened) was documented as occurring within the immediate vicinity (1/4 mile) of the study area. Black-crowned night-herons forage along the edges of freshwater ponds and creeks, as well as within coastal salt marshes, shallow tide pools, tidal channels, mudflats, and vegetated marshes. The study area is a medium density residential neighborhood and does not contain the preferred habitat for the black-crowned night-heron. Please refer to Appendix B for the NHP correspondence document.

#### 5.6.2 Federal Species

The USFWS New Jersey Field Office also maintains records of federally listed species in the State. The USFWS Information, Planning, and Conservation (IPaC) system was reviewed to determine if any species protected by the Endangered Species Act are documented within the study area. Based on the results from the USFWS IPaC Species List, generated September 29, 2021, the following species may occur within the study area or could potentially be affected by proposed project activities: northern long-eared bat (NLEB) (*Myotis septentrionalis*, Federally Threatened) and swamp pink (*Helonias bullata*, Federally Threatened). Please refer to the USFWS *Official Species List* located in Appendix B – Agency Correspondence.

The NLEB maternity habitat is defined as suitable summer habitat used by juveniles and reproductive (pregnant, lactating, or post-lactating) females. Suitable summer habitat for NLEB consists of a wide variety of forested/wooded habitats where they roost, forage, and travel, and may also include some adjacent and interspersed non-forested habitats, such as emergent wetlands and adjacent edges of agricultural fields, old fields, and pastures. This includes forests and woodlots containing potential roosts. During summer, NLEB roost singly or in colonies in cavities, underneath bark, crevices, or hollows of both



**Environmental Screening Report** 

live and dead trees and/or snags (typically ≥3 inches diameter at breast height). The NLEB overwinters in caves and abandoned mines. As previously mentioned, the study area consists primarily of residential dwelling units and does not provide suitable summer or winter habitat for the NLEB.

Any incidental take of the NLEB is not prohibited by the final 4(d) rule as long as the activity does not occur within 0.25 mile of a known hibernaculum, and/or tree clearing does not occur within a 150-foot radius from maternity roost tree during the pup season from June 1 through July 31. The USFWS Online Determination and Consistency Key for the NLEB was utilized to determine if project activities are consistent with the 4(d) rule. Based on the results of determination and consistency key, the project complies with the 4(d) rules and was issued a 4(d) Consistency Letter. Clearing of trees  $\geq$ 3 inches diameter at breast height will be restricted from June 1 through July 31 to protect NLEB maternity roost habitat. Please refer to the USFWS 4(d) Rule Consistency Letter in Appendix B.

In New Jersey, swamp pink is found in red-maple-dominated or Atlantic-white-cedar-dominated swamps with a mucky substrate and variable canopy. Due to the developed nature of the study area, there is no characteristic swamp pink habitat present in the study area. Furthermore, according to the NJDEP Division of Land Resource Protection's *Attachment C – Known Locations of Swamp Pink in New Jersey*, there are no documented occurrences for swamp pink in Moorestown Township, Burlington County.

#### 6.0 ENVIRONMENTAL JUSTICE AND SOCIOECONOMIC

The Environmental Justice Policy Executive Order assists in the establishment of the State's commitment to ensure that minority populations and low-income communities are afforded fair treatment and meaningful involvement in decision-making regardless of race, color, ethnicity, religion, income or education level.

The LCD Study for CR 614, CR 603 and New Albany Road Community Profile Memorandum, completed by GPI and dated October 25, 2021, was reviewed to determine the presence or absence of minority and/or low-income populations within the study area. The study area used in the memorandum was delineated as a 500-foot buffer around the three-intersection triangle of CR 614, CR 603, and New Albany Road. To collect the 2010 Census data, areas were divided into census tracts, then block groups (three block groups in total). Data collected from these block groups were tabulated into summary files.

Available demographic and economic data from 2010 Census, in conjunction with the 2013-2017 American Community Survey (ACS) five year estimates, were used to determine the presence or absence of minority populations within the study area. Based on this information, it was determined that the population within the study area is 7,977 persons and 1% of this population are limited English speaking households. The percentage of minority individuals within this population was 15% (Block Group 1), 27% (Block Group 2), and 16% (Block Group 3). Information from the 2015-2019 ACS five year estimates were used to determine if low-income population exist within the study area, according to this data approximately 5% of the population live below the federal poverty level. Please refer to the *Memorandum*, under separate cover, for more detailed information.

Although low-income and minority populations are present, the proposed work will not isolate any residential neighborhoods or adversely impact community cohesion in the study area. The proposed project is not anticipated to alter access to public transportation, negatively impact pedestrian, bicyclist, and/or motorist safety, or involve a disproportionately high and adverse effect to any minority or low income population. Coordination with property owners is recommended during the design phase of the



**Environmental Screening Report** 

project to maintain accessibility during construction. In addition, multilingual public outreach may be necessary to engage residents.

#### 7.0 HAZARDOUS WASTE

Available geospatial data from the NJDEP were obtained, including the NJDEP's known contaminated sites, New Jersey Environmental Management System (NJEMS), and mapped historic fill, to determine the potential for involvement with hazardous materials. A review of these datasets revealed that there are no NJDEP known contaminated sites located within 300 feet of the proposed project location or historic fill identified within the study area. If historic fill or contaminated material is encountered, it should be handled according to NJDEP Site Remediation Program Historic Fill Material Technical Guidance (April 2013) and the NJDEP Linear Construction Technical Guidance (January 2012). There was one NJEMS site, 904 Fernwood Road, identified within the study area. According to the NJDEP, this site is classified with the remedial level of C1, with cited groundwater contamination due to an underground storage tank that was remediated.

Should any properties be acquired and demolished or disturbed by construction activities, contaminated material containment, cleanup, and removal measures may be required.

#### 8.0 ZONING AND LAND USE

According to the Moorestown Township, Burlington County Zoning Map, the three-intersection triangle of CR 614, CR 603 and New Albany Road is primarily zoned as Residence District R-1-A (residential dwelling, lot size not less than 25,000 ft²) within the study area, with a small portion zoned as a Residence District R-1 (residential dwelling, lot size not less than 1.5 acres, for agricultural use). The land use within the study area is primarily single-family residential and agricultural. The agricultural land use is situated within the northeast corner end of the study area. Please refer to Appendix A – Figure 4 for a figure depicting existing land use within the study area.

Implementation of the proposed project will be consistent with the existing land use and will not create a conflict with zoning regulations, change the intensity of the land use, or impact the character or quality of the existing community.

#### 9.0 ANTICIPATED APPROVALS AND AUTHORIZATIONS

#### 9.1 Federal Permits/Approvals/Coordination

There is the potential for the project to acquire federal funding from the Federal Highway Administration (FHWA). If the project receives federal funding, then the project is considered a federal action and is subject to review per the National Environmental Policy Act (NEPA) of 1969. NEPA requires federal agencies to consider environmental issues prior to making any major decisions on projects that have federal involvements (e.g. funding or permitting). To determine a project's potential benefit or harm to the environment, NEPA requires an assessment of environmental impacts and an evaluation of alternatives to avoid identified impacts to the environment. There are three classes of action which prescribe the level of documentation required in the NEPA process: Class I (Environmental Impact Statement); Class II (Categorical Exclusion); and Class III (Environmental Assessments). The specific level of documentation will be determined as part of the CD process.

In addition to NEPA, the following federal authorizations or permits may be required for the project:

Compliance with the Federal Clean Air Act Amendments of 1990; and



**Environmental Screening Report** 

 Compliance with 23 CFR §772, Procedures for Abatement of Highway Traffic Noise and Construction Noise.

#### 9.2 State Permits/Approvals/Coordination

- Demonstrated compliance with the NJDEP Stormwater Management Rules;
- NJDEP Water Quality Certificate;
- NJ Pollutant Discharge Elimination System (NPDES) General Stormwater Permit for Construction (5G3) if the project results on greater than (1) acre of ground disturbance;
- Certification from the Burlington Soil Conservation District; and
- Compliance with the NJDEP Technical Requirements for Site Remediation and LSRP Program for potential involvement with historic fill or regulated material.



**Environmental Screening Report** 

#### **10.0 REFERENCES**

New Jersey Department of Environmental Protection, Bureau of Geographic Information Systems. Land Use/Land Cover 2015, Wetlands (2012).

New Jersey Department of Environmental Protection, Division of Fish & Wildlife. *Black-crowned Night-heron, Nycticorax*. Accessed from https://www.njfishandwildlife.com/tandespp.htm.

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New Jersey Department of Environmental Protection, New Jersey Geological Survey. *NJDEP 14-Digit Hydrologic Unit Code delineation for New Jersey (DEPHUC14)*. 2006.

New Jersey Department of Environmental Protection, New Jersey Geological Survey. *NJDEP Sole-Source Aquifers in New Jersey*. June 1998.

New Jersey Department of Environmental Protection. *Flood Hazard Area Control Act Rules (N.J.A.C. 7:13).* Amended July 8, 2021.

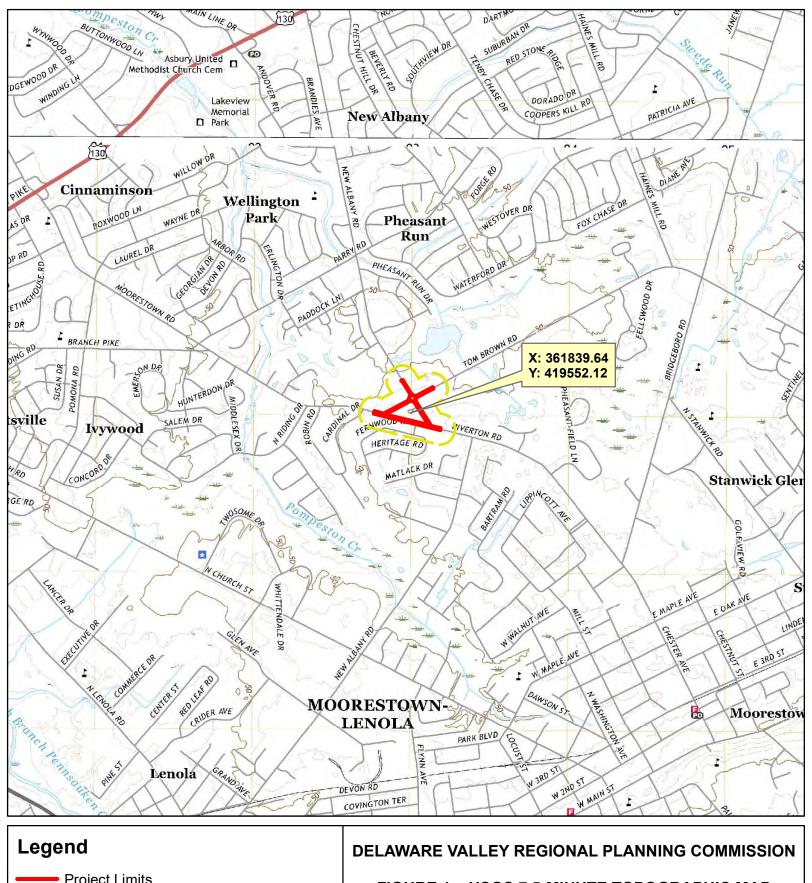
New Jersey Department of Environmental Protection. *Freshwater Wetland Protection Act Rules (N.J.A.C. 7:7A)*. Amended October 5, 2021.

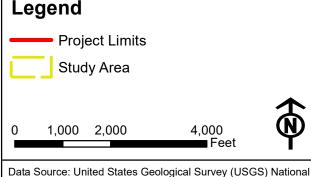
New Jersey Department of Environmental Protection. *New Jersey Register of Historic Places Act Rules* (*N.J.A.C. 13:4*). Effective July 2, 2015.

New Jersey Department of Environmental Protection. *Surface Water Quality Standards (N.J.A.C. 7:9B).* Amended April 6, 2020.

United States Department of Homeland Security, Federal Emergency Management Agency. *Flood Insurance Rate Map Panel No. 34005C0227F.* December 21, 2017.

## Appendix A Figures





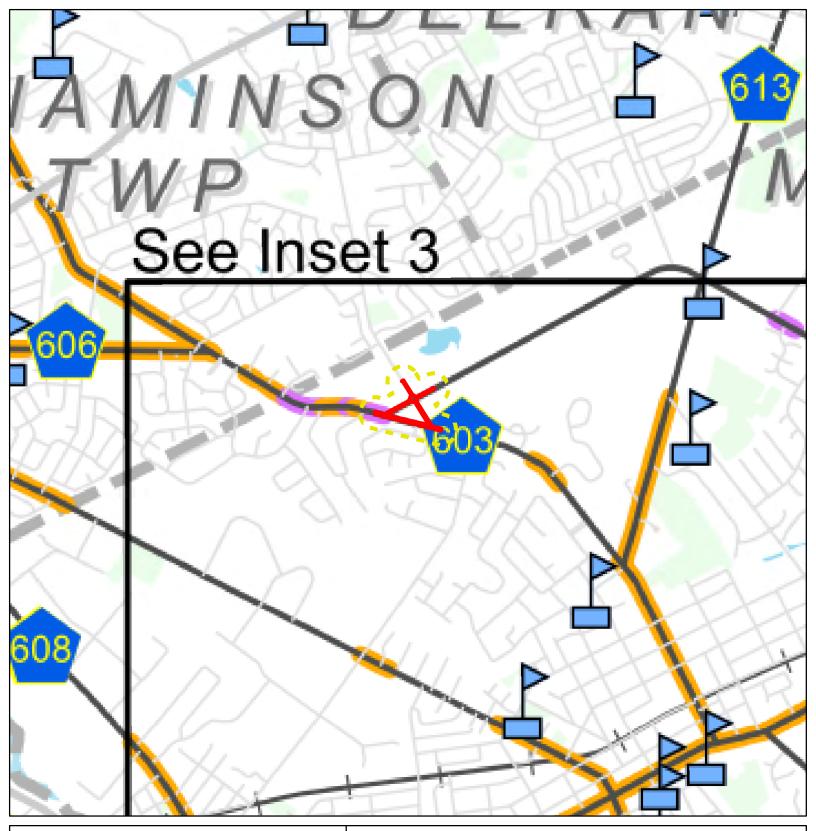
Geologic Map Database (NGMDB), 2019.

FIGURE 1 – USGS 7.5-MINUTE TOPOGRAPHIC MAP MOORESTOWN, NJ & BEVERLY, NJ QUADRANGLES

Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road







# Legend Project Limits Study Area 1,000 2,000 4,000 Feet

Data Source: New Jersey Department of Transportation.

#### **DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

FIGURE 2 – COUNTY ROAD MAP

Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road

Burlir No

& dvrpc







# Legend Project Limits Stream NJEMS Site Study Area NJDEP Mapped Wetlands 0 250 500 1,000

Base Map: New Jersey High Resolution Orthophotography, 2015.

Data Source: NJDEP, Bureau of GIS Digital Data Downloads.

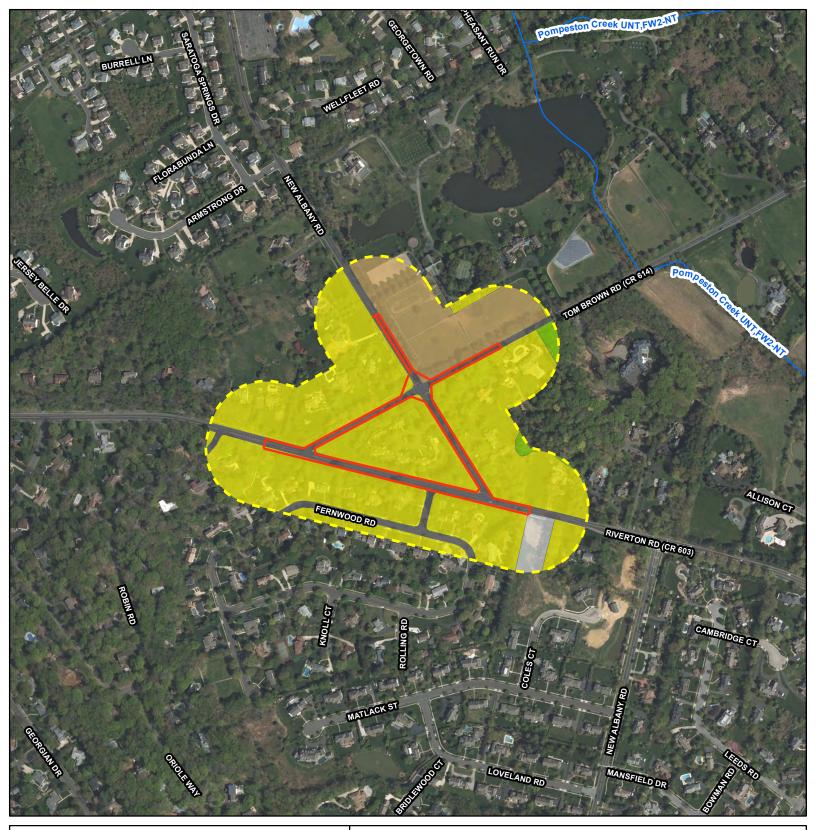
#### DELAWARE VALLEY REGIONAL PLANNING COMMISSION

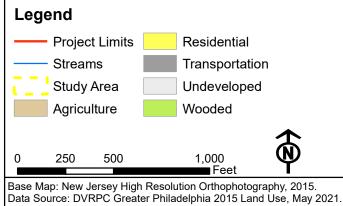
#### FIGURE 3 - ENVIRONMENTAL CONSTRAINTS MAP

Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road









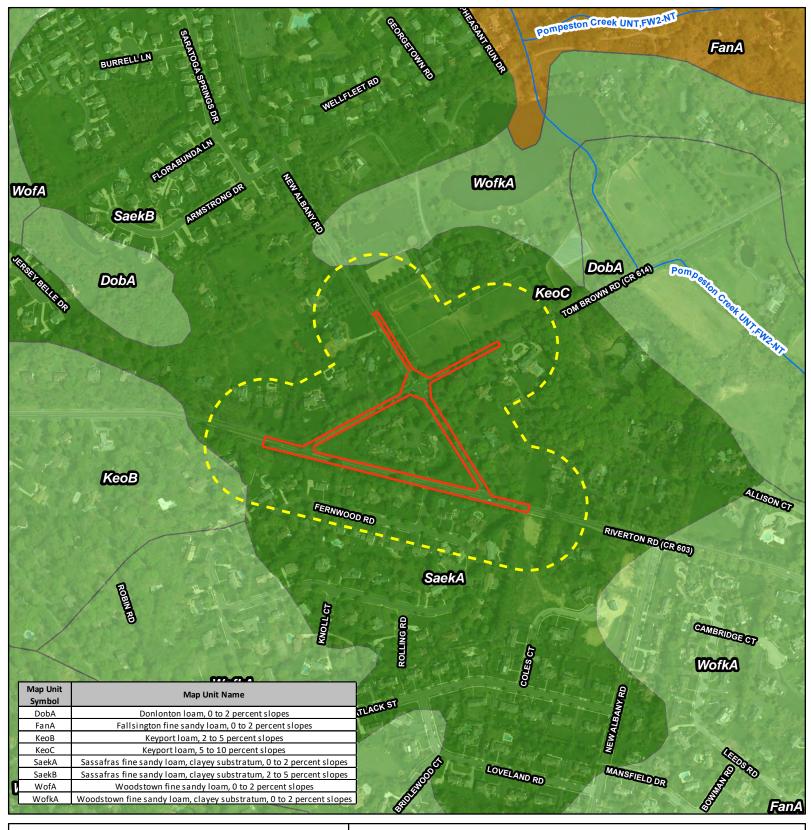
#### **DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

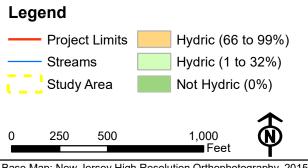
#### FIGURE 4 - EXISTING LAND USE

Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road









Base Map: New Jersey High Resolution Orthophotography, 2015
Data Source: United States Department of Agriculture (USDA), Natural
Resources Conservation Service (NRCS) Soil Survey Geographic
(SSURGO) Database, 2021

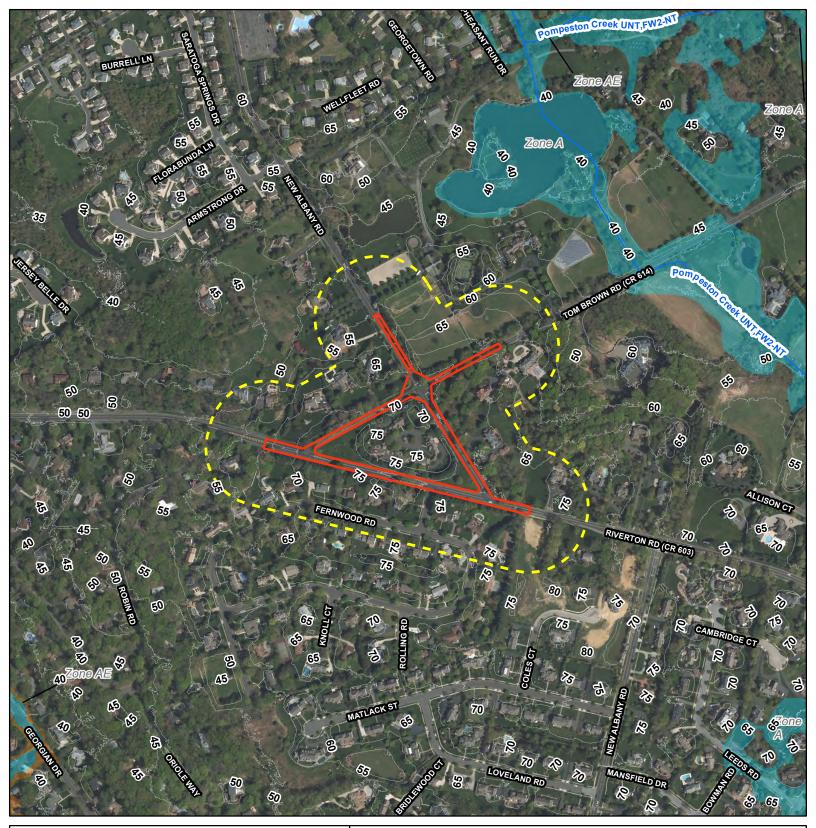
#### **DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

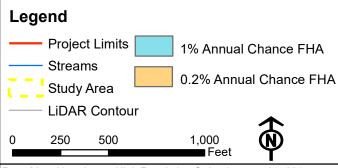
#### FIGURE 5 - NRCS SSURGO SOILS MAP

Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road









Base Map: New Jersey High Resolution Orthophotography, 2015.
Data Source: National Oceanic & Atmospheric Administration (NOAA)
2015 DVRPC Lidar: Delaware Valley (NJ, PA); Federal Emergency
Management Agency (FEMA) National Flood Hazard Layer.

#### **DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

#### FIGURE 6 - FEMA FLOOD HAZARD AREA

Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road





## Appendix B

**Agency Correspondence** 

USEPA and FHWA Memorandum of Understanding on Sole Source Aquifers dated 7/8/1984



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### REGION II 26 FEDERAL PLAZA NEW YORK, NEW YORK 10278

11 11

Mr. John G. Bestgen
Regional Administrator
Federal Righway Administration
Region One
Room 729
Leo W. O'Brien Building
Albany, New York 12207

Dear Mr. Bestgen:

I have reviewed your transmittal of June 1, 1984 containing a partially executed Memorandum of Understanding between our two agencies regarding project reviews for the Sole Source Aquifer (SSA) program and have signed where appropriate. I have enclosed a fully executed copy for your files.

Our agency looks forward to a cooperative effort with the FRWA in the review of any highway projects that may impact an SSA area so that we can insure adequate protection to the associated ground water.

If you need any further assistance on this matter, please have your staff contact Mr. Walter Andrews, Chief of the Drinking/Ground Water Protection Branch, at 212-264-1800.

- 1 74 -

经制度证据 數本 医二醇 化氯盐氯酸

Sincerely Jours,

Richard T. Dewling

Acting Regional Administrator

cc: Bruce Mattson

1.2

Federal Highway Administration

#### MEMORANDUM OF UNDERSTANDING

#### Between

FEDERAL HIGHWAY ADMINISTRATION, REGION I and ENVIRONMENTAL PROTECTION AGENCY, REGION II

This memorandum represents an agreement between the regional offices of the Environmental Protection Agency (EPA) and the Federal Highway Administration (FHWA) concerning the review of projects for which Federal financial assistance is sought that may affect sole source aquifers designated pursuant to Section 1424(e) of the Safe Drinking Water Act (P.L. 93-523). This memorandum serves two primary purposes: (1) to set forth the types of projects that will necessitate review, (2) to describe the notification and review procedures that will be employed.

Pursuant to Section 1424(e), EPA has determined that the aquifer systems listed on Attachment No. 1 are the principal sources of drinking water for its residents. As such, no commitment for Federal financial assistance may be entered into for any project which EPA determines may contaminate an aquifer through its recharge zone as to create a significant hazard to public health.

The EPA will notify FHWA of all future 1424(e) aquifer designations in EPA Region II. This memorandum will apply to all future sole source aquifer designations in EPA Region II.

#### Goal and Definitions

The goal of this memorandum is to ensure that each project that is to receive Federal financial assistance is designed in a manner that will prevent the introduction of contaminants into the aquifer in quantities that may create a public health hazard, or otherwise contaminate a sole source aquifer to a level which would require additional treatment facilities by an existing or planned public water system in order to meet the National Interim Primary Drinking Water Regulations.

A "significant hazard to public health" will be deemed to occur if the level of contaminants in an aquifer would:

- (a) exceed any maximum contaminant level set forth in any promulgated National Primary Drinking Water Standard at any point where the water may be used for drinking purposes, or
- (b) otherwise threaten public health.

In determining whether a level of contaminant would threaten public health, the following factors at a minimum shall be considered:

(1) the toxicity of the contaminants involved;

- (2) the volume of contaminants which may enter the aquifer; and
- (3) aquifer characteristics, i.e., geochemical, hydrological, geological, etc., and attenuation capability of the aquifer.

#### Early Notification

In order to achieve the above goal, the FHWA, at the time of Intergovernmental Review per Executive Order 12372, or when preliminary engineering funds are authorized, will provide EPA with early notification of projects for which one of the following criteria apply:

- Construction of additional through-traffic lanes, or interchanges, or rotaries on existing roadways.
- Construction of a two or more lane highway on new alignment.
- 3. Construction of rest areas with on-site sewage disposal facilities.
- 4. Other projects which, in the opinion of FHWA, may have an effect on the water quality of the aquifer to the extent that the goal outlined above would not be achieved.

This early notification will serve to initiate consultations to determine the scope of study for any required water quality assessment.

#### 1424(e) Review

For those projects requiring a 1424(e) review, FHWA will provide EPA with a ground water quality assessment as soon as practicable following the early notification to permit EPA to make an early determination on the impact of the project on the quality of the ground water. If a determination has not been made prior to the circulation of the draft environmental impact statement (DEIS), the 1424(e) review will be performed by EPA concurrently with the National Environmental Policy Act NEPA review. For those projects which do not require an EIS, EPA agrees to complete the 1424(e) review within 45 days after receipt of the ground water quality assessment. For those projects being considered for Federal-aid highway funding at the time of the sole source determination, the liaison officers will meet to determine the information needed for review (scope) and EPA agrees in turn to complete any needed reviews within 30 days after receipt of this information.

The FHWA and EPA will each assign a representative to serve as liaison. The liaison officers are:

FHWA Director, Office of Planning and Program Development Region I - U.S.Department of Transportation Federal Highway Administration Leo W. O'Brien Federal Building, 7th Floor Albany, New York 12207

3

EPA - Chief, Drinking/Ground Water Protection Branch Region II Environmental Protection Agency, Region II 26 Federal Plaza, Room 907 New York, New York 10278

Representatives will meet as needed to update this memorandum. This memorandum is subject to revision upon agreement of both parties.

Federal Highway Administration

U.S. Environmental Protection Agency

Regional Administrator

Date:

Regional Administrator

Date.

1984

New Jersey Department of Environmental Protection Natural Heritage Program Data Request



DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF PARKS & FORESTRY
PHILIP D. MURPHY

REW JERSEY FOREST SERVICE
OFFICE OF NATURAL LANDS MANAGEMENT
P.O. BOX 420
SHEILA Y. OLIVER

TRENTON, NJ 08625-0420

SHAWN M. LATOURETTE Commissioner

Tel. (609) 984-1339 Fax (609) 984-0427

October 26, 2021

Amanda Burgeson KMA Consulting Engineers 1010 Berlin Road Cherry Hill, NJ 08034

Lt. Governor

Re: Burlington County Local Concept Development Intersection Study for CR 614, CR 603 and New Albany Road

Block(s) - 5001, Lot(s) - 1 and 2

Moorestown Township, Burlington County

Dear Ms. Burgeson:

Thank you for your data request regarding rare species information for the above referenced project site.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.3) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the map(s) submitted with the Natural Heritage Data Request Form into our GIS. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for occurrences of rare wildlife species or wildlife habitat in the immediate vicinity (within ¼ mile) of the referenced site. Additionally, the Natural Heritage Database was checked for occurrences of rare plant species or ecological communities within ¼ mile of the site. Please refer to Table 2 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented within the immediate vicinity of the site. Detailed reports are provided for all categories coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

We have also checked the Landscape Project habitat mapping and Biotics Database for all occurrences of rare wildlife species or wildlife habitat within one mile of the referenced site. Please refer to Table 3 (attached) to determine if any rare wildlife species or wildlife habitat is documented within one mile of the project site. Detailed reports are provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on the project site.

For requests submitted in order to make a riparian zone width determination as part of a Flood Hazard Area Control Act (FHACA) rule application, we report records for all rare plant species and ecological communities tracked by the Natural Heritage Program that may be on, or in the immediate vicinity of, your project site. A subset of these plant species is also covered by the FHACA rules when the records are located within one mile of the project site. One mile searches for FHACA plant species will only report precisely located occurrences for those wetland plant species identified under the FHACA regulations as being critically dependent on the watercourse. Please refer to Table 3 (attached) to determine if any precisely located rare wetland plant species covered by the FHACA rules have been documented. Detailed reports are

provided for each category coded as 'Yes' in Table 3. These reports may include species that have also been documented on, or in the immediate vicinity of, the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1, 2 and 3 (attached) to determine if any priority sites are located on, in the immediate vicinity, or within one mile of the project site.

A list of rare plant species and ecological communities that have been documented from the county (or counties), referenced above, can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes\_2010.pdf.

Beginning May 9, 2017, the Natural Heritage Program reports for wildlife species will utilize data from Landscape Project Version 3.3. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive web application at the following URL, https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7, or contact the

https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf/39953cb4d4c/, or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

For additional information regarding any Federally listed plant or animal species, please contact the U.S. Fish & Wildlife Service, New Jersey Field Office at http://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,

Robert J. Cartica Administrator

c: NHP File No. 21-3907488-23119

Table 1: On Site Data Request Search Results (6 Possible Reports)

Report Name	<u>Included</u>	Number of Pages
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites On Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	No	0 pages included
4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

Page 1 of 1

Tuesday, October 26, 2021 NHP File No.: 21-3907488-23119

# Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program

Scientific Name	Common Name	Federal Protection Status	<b>State Protection Status</b>	Grank	Srank
Invertebrate Animals					
Metarranthis pilosaria	Coastal Bog Metarranthis			G3G4	S3S4
Total number of records: 1					

Tuesday, October 26, 2021 NHP File No.: 21-3907488-23119

Table 2: Vicinity Data Request Search Results (6 possible reports)

Report Name	<u>Included</u>	Number of Pages
1. Immediate Vicinity of the Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites within the Immediate Vicinity	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat In the Immediate Vicinity of Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat In the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

Page 1 of 1

Tuesday, October 26, 2021

#### Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
Aves								
	Black-crowned Night- heron	- Nycticorax nycticorax	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N

## Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program

Scientific Name	Common Name	Federal Protection Status	<b>State Protection Status</b>	Grank	Srank
Invertebrate Animals					
Metarranthis pilosaria	Coastal Bog Metarranthis			G3G4	S3S4
Total number of records: 1					

Tuesday, October 26, 2021 NHP File No.: 21-3907488-23119

Table 3: Within 1 Mile for Riparian Zone Width Determination (6 possible reports)

Report Name	<u>Included</u>	Number of Pages
1. Rare Plant Species Occurrences for Riparian Zone Width Determination (Flood Hazard Area Control Act Rule Appplication) - Within One Mile of the Project Site Based on Search of Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites for Riparian Zone Width Determination - Within One Mile of the Project Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species for Riparian Zone Width Determination - Within One Mile of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

NHP File No.: 21-3907488-23119

## Rare Wildlife Species or Wildlife Habitat for Riparian Zone Width Determination Within One Mile of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
Aves								
	Black-crowned Night-heron	Nycticorax nycticorax	Foraging	3	NA	State Threatened	G5	S2B,S3N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N
	Wood Thrush	Hylocichla mustelina	Breeding Sighting	2	NA	Special Concern	G4	S3B,S4N

#### Vernal Pool Habitat for Riparian Zone Width Determination Within One Mile of the Project Site Based on Search of Landscape Project 3.3

Vernal Pool Habitat Type	Vernal Pool Habitat ID

1248

Vernal habitat area 2807

Total number of records: 2

Potential vernal habitat area

Page 1 of 1 NHP File No.: 21-3907488-23119

#### Other Animal Species for Riparian Zone Width Determination Within One Mile of the Project Site **Based on Additional Species Tracked by Endangered and Nongame Species Program**

Scientific Name	Common Name	Federal Protection Status	<b>State Protection Status</b>	Grank	Srank
Invertebrate Animals					
Datana ranaeceps	A Hand-maid Moth			G3G4	S3S4
Metarranthis pilosaria	Coastal Bog Metarranthis			G3G4	S3S4
Total number of records: 2					

Page 1 of 1

Tuesday, October 26, 2021 NHP File No.: 21-3907488-23119

### United States Fish and Wildlife Service Official Species List



### United States Department of the Interior



#### FISH AND WILDLIFE SERVICE

New Jersey Ecological Services Field Office 4 E. Jimmie Leeds Road, Suite 4 Galloway, NJ 08205

Phone: (609) 646-9310 Fax: (609) 646-0352

http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

In Reply Refer To: September 29, 2021

Consultation Code: 05E2NJ00-2021-SLI-1684

Event Code: 05E2NJ00-2021-E-04225

Project Name: Burlington County Local Concept Development Intersection Study for CR 614,

CR 603 & New Albany Road

Subject: List of threatened and endangered species that may occur in your proposed project

location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species that may occur in your proposed action area and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*)

If the enclosed list indicates that any listed species may be present in your action area, please visit the New Jersey Field Office consultation web page as the next step in evaluating potential project impacts: <a href="http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html">http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html</a>

On the New Jersey Field Office consultation web page you will find:

- habitat descriptions, survey protocols, and recommended best management practices for listed species;
- recommended procedures for submitting information to this office; and
- links to other Federal and State agencies, the Section 7 Consultation Handbook, the Service's wind energy guidelines, communication tower recommendations, the National Bald Eagle Management Guidelines, and other resources and recommendations for protecting wildlife resources.

The enclosed list may change as new information about listed species becomes available. As per Federal regulations at 50 CFR 402.12(e), the enclosed list is only valid for 90 days. Please return to the ECOS-IPaC website at regular intervals during project planning and implementation to obtain an updated species list. When using ECOS-IPaC, be careful about drawing the boundary of your Project Location. Remember that your action area under the ESA is not limited to just the

footprint of the project. The action area also includes all areas that may be indirectly affected through impacts such as noise, visual disturbance, erosion, sedimentation, hydrologic change, chemical exposure, reduced availability or access to food resources, barriers to movement, increased human intrusions or access, and all areas affected by reasonably forseeable future that would not occur without ("but for") the project that is currently being proposed.

We appreciate your concern for threatened and endangered species. The Service encourages Federal and non-Federal project proponents to consider listed, proposed, and candidate species early in the planning process. Feel free to contact this office if you would like more information or assistance evaluating potential project impacts to federally listed species or other wildlife resources. Please include the Consultation Tracking Number in the header of this letter with any correspondence about your project.

### Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

### **Official Species List**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

09/29/2021

New Jersey Ecological Services Field Office 4 E. Jimmie Leeds Road, Suite 4 Galloway, NJ 08205 (609) 646-9310

### **Project Summary**

Consultation Code: 05E2NJ00-2021-SLI-1684

Event Code: Some(05E2NJ00-2021-E-04225)

Project Name: Burlington County Local Concept Development Intersection Study for

CR 614, CR 603 & New Albany Road

Project Type: TRANSPORTATION

Project Description: Greenman-Pedersen, Inc. (GPI) has been retained by the Delaware Valley

Regional Planning Commission (DVRPC) to perform Concept Development (CD) Phase services to address safety and operational deficiencies associated with the three-intersection triangle of CR 614 (Tom Brown Road), CR 603 (Riverton Road) and New Albany Road

located in Moorestown Township, Burlington County.

### **Project Location:**

Approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@39.98432889999994">https://www.google.com/maps/@39.98432889999994</a>,-74.96531181391336,14z



Counties: Burlington County, New Jersey

Threatened

Candidate

Threatened

### **Endangered Species Act Species**

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an
office of the National Oceanic and Atmospheric Administration within the Department of
Commerce.

### **Mammals**

NAME STATUS

### Northern Long-eared Bat *Myotis septentrionalis*

No critical habitat has been designated for this species.

This species only needs to be considered under the following conditions:

• The specified area occurs within the range of the northern long-eared bat.

Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>

#### Insects

NAME STATUS

### Monarch Butterfly Danaus plexippus

No critical habitat has been designated for this species.

Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>

### Flowering Plants

NAME STATUS

### Swamp Pink *Helonias bullata*

No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4333">https://ecos.fws.gov/ecp/species/4333</a>

### **Critical habitats**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the <u>National Wildlife Refuge</u> system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

DDEEDING

### **Migratory Birds**

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The Migratory Birds Treaty Act of 1918.
- 2. The Bald and Golden Eagle Protection Act of 1940.
- 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the <u>USFWS</u> <u>Birds of Conservation Concern</u> (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ <u>below</u>. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the <u>E-bird data mapping tool</u> (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Oct 15 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythropthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9399">https://ecos.fws.gov/ecp/species/9399</a>	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

### **Probability Of Presence Summary**

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### **Probability of Presence (■)**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

- 1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- 2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
- 3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### **Breeding Season** (

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

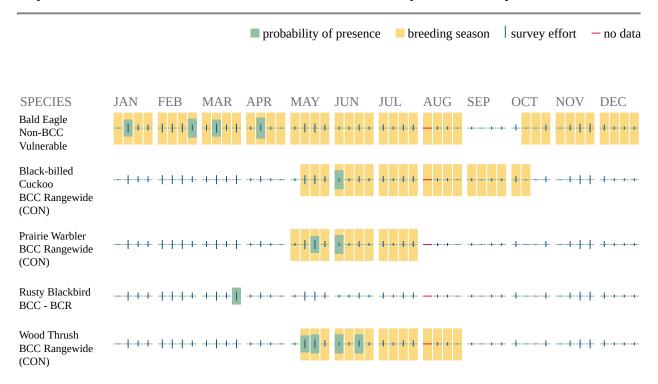
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

### No Data (-)

A week is marked as having no data if there were no survey events for that week.

### **Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <a href="http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php">http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php</a>
- Measures for avoiding and minimizing impacts to birds <a href="http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php">http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php</a>
- Nationwide conservation measures for birds <a href="http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf">http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf</a>

### **Migratory Birds FAQ**

# Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

## What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS <u>Birds of Conservation Concern</u> (<u>BCC</u>) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the <u>Avian Knowledge Network (AKN)</u>. The AKN data is based on a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u> and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (<u>Eagle Act</u> requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the <u>AKN Phenology Tool</u>.

# What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the <u>Avian Knowledge Network (AKN)</u>. This data is derived from a growing collection of <u>survey</u>, <u>banding</u>, <u>and citizen science datasets</u>.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

# How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your

5

### What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

- 1. "BCC Rangewide" birds are <u>Birds of Conservation Concern</u> (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
- 2. "BCC BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
- 3. "Non-BCC Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the <a href="Eagle Act">Eagle Act</a> requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the <a href="Northeast Ocean Data Portal">Northeast Ocean Data Portal</a>. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the <a href="NOAA NCCOS Integrative Statistical Modeling">NOAA NCCOS Integrative Statistical Modeling</a> and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic <a href="Outer Continental Shelf">Outer Continental Shelf</a> project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the <u>Diving Bird Study</u> and the <u>nanotag studies</u> or contact <u>Caleb Spiegel</u> or <u>Pam Loring</u>.

### What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to <u>obtain a permit</u> to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no

data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

### Wetlands

Impacts to <u>NWI wetlands</u> and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local <u>U.S. Army Corps of Engineers District</u>.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

# United States Fish and Wildlife Service 4(d) Rule Consistency Letter



### United States Department of the Interior



### FISH AND WILDLIFE SERVICE

New Jersey Ecological Services Field Office 4 E. Jimmie Leeds Road, Suite 4 Galloway, NJ 08205

Phone: (609) 646-9310 Fax: (609) 646-0352

http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

IPaC Record Locator: 151-106135119 September 29, 2021

Subject: Consistency letter for the 'Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road' project indicating that any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

### Dear Amanda Burgeson:

The U.S. Fish and Wildlife Service (Service) received on September 29, 2021 your effects determination for the 'Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take" of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

Monarch Butterfly Danaus plexippus Candidate

•	Swamp	Pink	Helonias	bullata	Threatened
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You may coordinate with our Office to determine whether the Action may cause prohibited take of the animal species listed above.

[1] Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

### **Action Description**

You provided to IPaC the following name and description for the subject Action.

#### 1. Name

Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road

### 2. Description

The following description was provided for the project 'Burlington County Local Concept Development Intersection Study for CR 614, CR 603 & New Albany Road':

Greenman-Pedersen, Inc. (GPI) has been retained by the Delaware Valley Regional Planning Commission (DVRPC) to perform Concept Development (CD) Phase services to address safety and operational deficiencies associated with the three-intersection triangle of CR 614 (Tom Brown Road), CR 603 (Riverton Road) and New Albany Road located in Moorestown Township, Burlington County.

Approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@39.98432889999994">https://www.google.com/maps/@39.98432889999994</a>,-74.96531181391336,14z



#### **Determination Key Result**

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

### Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

### **Determination Key Result**

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

### **Qualification Interview**

- Is the action authorized, funded, or being carried out by a Federal agency?

  No
- 2. Will your activity purposefully **Take** northern long-eared bats?

No

3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

#### Automatically answered

No

4. [Semantic] Is the project action area located within 0.25 miles of a known northern long-eared bat hibernaculum?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

#### Automatically answered

No

5. [Semantic] Is the project action area located within 150 feet of a known occupied northern long-eared bat maternity roost tree?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency

### Automatically answered

No

### **Project Questionnaire**

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31  $\,$ 

0

# If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

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6. If known, estimated acres of timber harvest from June 1 to July 31

0

# If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31  $\,$ 

0

# If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

### **Appendix C**

LCD Study for CR 614, CR 630 and New Albany Road Community Profile
Memorandum by Greenman-Pedersen, Inc.



### Memorandum

To: DVRPC, Burlington County

**From:** Greenman-Pedersen, Inc.

**Date:** 10/25/2021

Re: LCD Study for CR 614, CR 603 and New Albany Road

Community Profile

The purpose of this memo is to identify the community demographics for safety and operational improvements surrounding the intersections of CR 614, CR 603 and New Albany Road in Moorestown Township, Burlington County, New Jersey. The Community Profile was prepared to identify potential project-related impacts regarding the Environmental Justice, Community Cohesion, Quality of Life, Aesthetics, Land Use Patterns/Zoning, Business, Public Mobility and Access, and Public Facilities.

### **Project Area Description**

The project area includes the stop-controlled intersection of CR 614 (Tom Brown Road) and New Albany Road as well as the intersections of Tom Brown Road/CR 603 (Riverton Road) and New Albany Road/CR 603 (Riverton Road). New Albany Road (MP 1.55-1.78) in the project area runs north-south with one travel lane in each direction with a posted speed of 35 mph. New Albany Road is an undivided Urban Major Collector with no shoulders in the project area. Tom Brown Road (CR 614) (MP 3.4-3.64) runs east-west with one travel lane in each direction with a posted speed of 45 mph. Tom Brown Road is an undivided Urban Minor Arterial with narrow shoulders in the project area. Riverton Road (CR 603) (MP 6.35-6.74) runs south-north with one travel lane in each direction with a posted speed of 40 mph. Riverton Road is an undivided Urban Minor Arterial with shoulders in the project area. The project area is located within an urban, residential environment.

### **Identification of Populations**

For the purpose of this Community Profile, federal regulations on Environmental Justice were utilized as the basis for defining and evaluating area demographics.

Legislation: The concept of Environmental Justice is rooted in Title VI of the Civil Rights Act of 1964, which prohibited discrimination based on race, color and national origin, and the National Environmental Policy Act (NEPA) of 1969 which requires federal agencies to integrate environmental values into their decision making processes. Presidential Executive Order 12898 (EO 12898) of February 11, 1994 further focused federal agency attention on these issues with respect to minority and low-income populations.

The U.S. Department of Transportation (DOT) and the Federal Highway Administration (FHWA) provide guidance to ensure compliance with EO 12898 in the following documents. Both orders generally describe the process for incorporating environmental justice principles into all existing programs, projects and activities under their respective authorities.

- Final DOT Environmental Justice Order (Order 5610.2(a)), updates to original 1997 Order 5610.2
- FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Order 6640.23A), updates to original 1998 Order 6640.23

Evaluation Process & Definitions: Minority population is defined as "any readily identifiable groups of minority persons who live in geographic proximity of a project who will be similarly affected by the proposed project or activity". This population also includes geographically dispersed or transient persons, such as migrant workers or Native Americans, if circumstances warrant. Order 5610.2(a) defines minorities as any persons belonging to any of the following groups:

- Black, Not of Hispanic Origin A person having origins in any of the black racial groups of Africa.
- Hispanic a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race.
- Asian American a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.
- American Indian and Alaskan Native a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition.

Order 5610.2(a) defines low-income as those having "household income at or below the Department of Health and Human Services poverty guidelines", which is comparable to an annual income below the annual statistical poverty threshold as determined by the U.S. Census Bureau's Current Population Reports, Series on Income and Poverty.

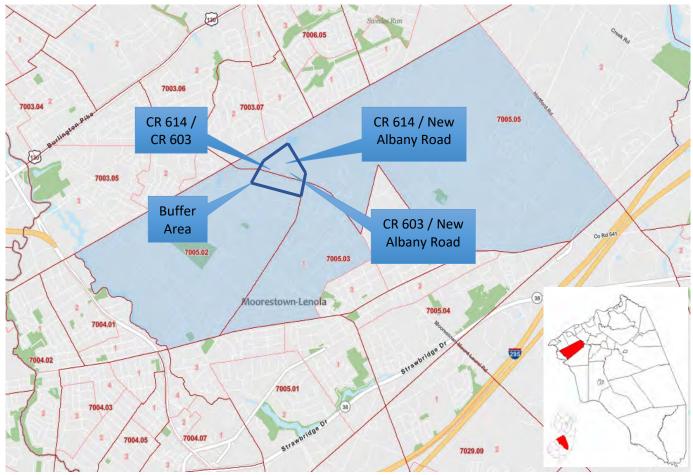
In identifying minority and low-income populations, care should be taken that "pockets" of minorities and low-income individuals are not masked by aggregated data. Every reasonable effort should be made to determine the existence and location of minority and low-income communities within the project's reaches. In addition, neighborhood and community boundaries should be considered in all project development activities, whether or not minority or low-income populations are present.

Census Data: Population and income characteristics from the 2010 Census (U.S. Census Bureau <a href="http://www.census.gov">http://www.census.gov</a>) were used to identify minority populations and low-income populations. To collect the 2010 Census data, areas were divided into census tracts, and block groups. Blocks are subdivisions generally bounded by streets, legal boundaries and other features, and are the smallest geographic unit for which the Census Bureau tabulates data. Block groups are a collection of census blocks within a census tract. Census tracts are small statistical subdivisions of counties that average about 4,000 persons per tract. They generally have stable boundaries and, when first established, were designed to have relatively homogeneous demographic characteristics. Data collected from these subdivisions were tabulated into summary files.

The 2010 Census data currently consists of two summary files, one of which was utilized for this study. Summary File 1 (SF1) contains information such as age, sex and race from all people and housing units. Data in SF1 is available down to the block level for most tabulations, and therefore gives exact numbers for very small groups and areas. Additional information including poverty, education, and journey to work is not currently tabulated down to the block level. Updates to the 2010 Census were performed by the Census Bureau through the American Community Survey (ACS) estimate. The ACS collects and produces population and housing information every year by surveying about three million housing unit addresses annually, from across every county in the nation. The latest ACS for this study area is a five-year estimate from 2013 through 2017.

Study Area: To determine the impacts of the project on minority and low-income populations, analysis for the study area was done using an approximate 500-foot buffer as shown in Figure 1. In addition, Figure 1 depicts the U.S. Census Bureau Block Groups and Tracts from the 2010 Census within the project area utilized in this evaluation.





Source: U.S. Census Bureau, American Fact Finder - 2019 Boundaries

Figure 1 – Census Block Group Study Area (Blue)

#### **Demographics & Growth Trends**

This Memorandum does <u>not</u> make any conclusions about environmental justice or Title VI issues; rather it serves to alert the project team of the presence of protected populations within the project area using the Environmental Justice minority and low-income definitions. A more detailed impact analysis may be conducted to evaluate potential environmental justice issues as the project progresses.

Minority Populations: For the purpose of this study, populations for the following racial categories were identified for each geographical area: White, African American, American Indian and Alaska Native, Asian and Other (all Non-Hispanic). Other includes individuals who identified themselves as 'Native Hawaiian or Pacific Islander', 'Some Other Race Alone' or 'Two or More Races'. The Hispanic or Latino ethnic category was also included without a breakdown into aforementioned racial categories, as they are still considered a minority. The Census Bureau notes that Hispanic origin is considered an ethnicity, not a race, and that Hispanics may be of any race.

2010 Census data from the SF1 was used to determine whether minority populations are located within the project area. The minority population percentages and associated geographical areas are shown in Figure 2 based on the data shown in Table A1. As indicated, the study area has some concentrations of the Asian American, African American, and Hispanic populations.



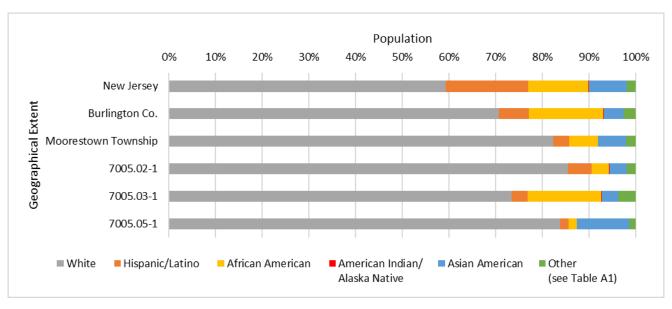


Figure 2 – Minority Percentages (2010 Census)

Table A1 – Composition of Minority Populations within Block Groups (2010)

Geographical Extent	Total Population	White	Hispanic / Latino	African American	American Indian/ Alaska Native	Asian American	Other*
New Jersey	8,791,894	59%	18%	13%	0.1%	8%	2%
Burlington Co.	448,734	71%	6%	16%	0.1%	4%	3%
Moorestown	20,726	82%	3%	6%	0.1%	6%	2%
7005.02-1	2,215	85%	5%	4%	0.1%	4%	2%
7005.03-1	1,727	73%	3%	16%	0.2%	4%	4%
7005.05-1	4,035	84%	2%	2%	0.0%	11%	1%

Since the 2010 Census, and as shown in Figure 3, the Block Groups within the study area saw a marginal increase in the population of the Asian American minority. Figure 4 depicts the Census blocks and the respective total minority population percentage from the 2010 Census where potential impacts resulting from the proposed project could occur (see Table A2 for additional information).

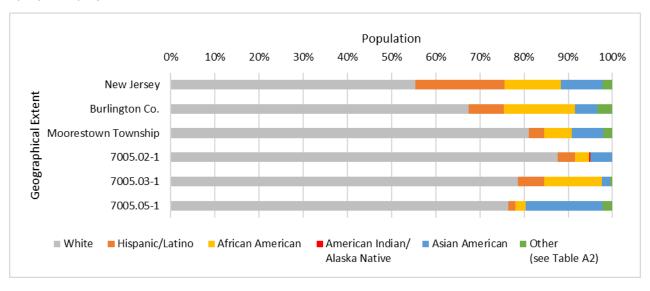
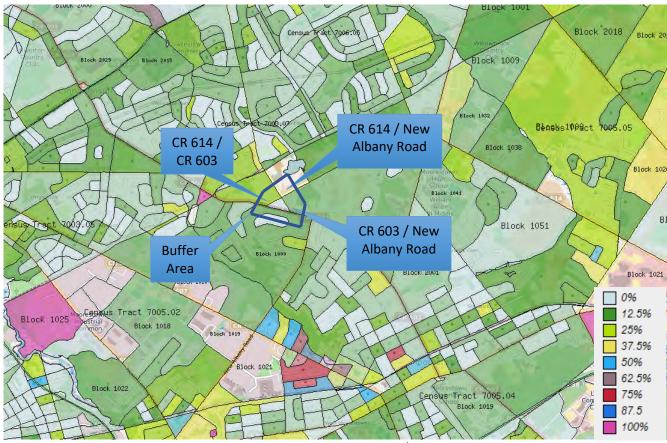




Figure 3 – Updated Minority Percentages (ACS)

Table A2 – Composition of Minority Populations within Block Groups (2015-2019 ACS)

Geographical Extent	Total Population	White	Hispanic / Latino	African American	American Indian/ Alaska Native	Asian American	Other*
New Jersey	8,878,503	55%	20%	13%	0.1%	9%	2%
Burlington Co.	445,702	67%	8%	16%	0.0%	5%	3%
Moorestown	20,449	81%	3%	6%	0.0%	7%	2%
7005.02-1	1,975	88%	4%	3%	0.3%	5%	0%
7005.03-1	1,607	79%	6%	13%	0.0%	2%	0%
7005.05-1	3,975	76%	2%	2%	0.0%	17%	2%



Source: CensusViewer online application <newjersey.us.censusviewer.com/client>

Figure 4 – Concentration of Total Minority Populations by Block

Growth Trends: As of the 2010 Census, Moorestown Town population was 20,726 reflecting an increase of 8% from the 19,017 counted in the 2000 Census, which in turn increased by 18% from the 16,158 counted in the 1990 Census. The Census Bureau estimated a population decrease to 20,449 (1%) in 2019. The Delaware Valley Regional Planning Commission (DVRPC) forecast a population of 21,505 in 2045, an increase of 5% from the 2019 estimate.

Language Spoken: Minority populations were identified within the study area. As a result, it was determined whether languages other than English were spoken at home for all populations within the study area. Census data from 2011-2015 ACS was available down to the Block Group level, as shown in Figure 4. The data does not



distinguish whether English is a second language for the minority populations. As indicated in the chart, most of the study area speak English languages. 5% of the population in the study area speak Indo-European languages, 4% speak Asian/Pacific Island languages, and 2% speak Spanish. Approximately 1% of the population are limited English speaking households.

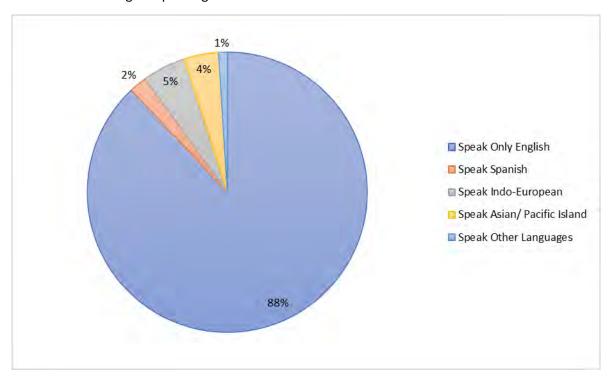


Figure 5 – Languages Spoken at Home within the Study Area

Low-Income Populations: Information from the 2015-2019 ACS was used to determine if low-income populations exist in the block groups within the project area. Income data by household was evaluated to establish the percentage of households with annual income below the annual poverty threshold of \$20,335 in 2019 for a three-person household, which is the average household size within the study area. Within the study area Block Groups, approximately 5% of the population is below the poverty level, which is similar to the County level of 6%.

*Median Income:* According to the Census Bureau, median household income for the U.S. was \$68,703 in 2019. The median household income for each geographic area is shown in Figure 6. As indicated, median household income in the study area is above the poverty guideline.



Figure 6 – Median Household Income



Table A3 demonstrates the poverty status for households from the 2015-2019 ACS. As indicated, the highest concentration of low-income households is in Block Group 7005.03-1 within the study area. Table A3 – Poverty Status within Block Groups (2015-2019 ACS)

Geographical Extent	Total Households	Income in the past 12 months below poverty level	Income in the past 12 months below poverty level	% Households Below Poverty Level
New Jersey	3,231,874	323,772	2,908,102	10%
Burlington Co.	166,391	9,686	156,705	6%
Moorestown Township	7,145	302	6,843	4%
7005.02-1	718	40	678	6%
7005.03-1	596	53	543	9%
7005.05-1	1,250	44	1,206	4%

Means of Transportation to Work: For workers over 16 years of age, it was determined what their primary mode of transportation to work was based on 2015-2019 ACS information. Figure 7 shows that most workers within the study area use passenger vehicles. The majority of households within the study area have 2 vehicles available (Figure 9). In addition, approximately 55% of those surveyed spend between 5 to 29 minutes commuting (Figure 8).

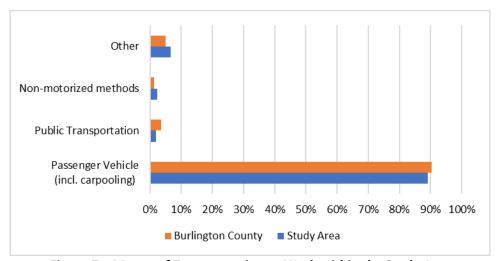


Figure 7 – Means of Transportation to Work within the Study Area

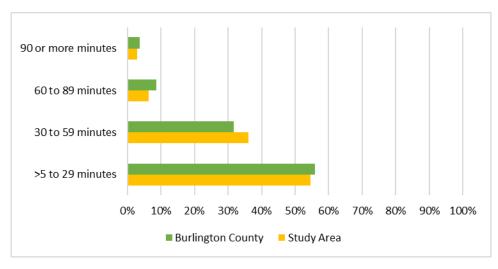


Figure 8 – Travel Time to Work within the Study Area



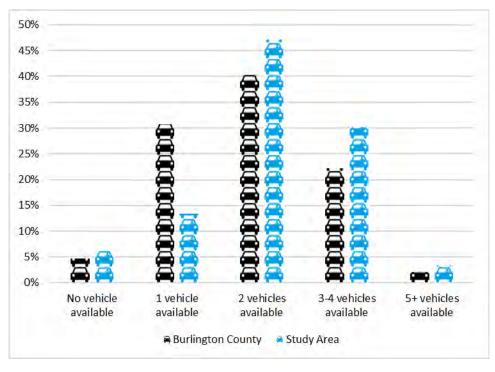


Figure 9 – Percentage of Household Vehicles Available

Community Cohesion, Quality of Life, Aesthetics & Cultural Resources: Consideration will be given to design elements that will best serve the community and its transportation needs. Public involvement in defining "neighborhood" and "community" will be incorporated through the public involvement process. This project will seek to improve roadway and traffic operations while minimizing negative impacts on quality of life in the study area. Consideration will be given to incorporating elements of the Complete Streets Policy and the Moorestown Bicycle Circulation and Safety Plan where applicable. The aesthetic impacts of this project will be considered during Concept Development. Any potential modifications to the roadway will seek to preserve and enhance surrounding aesthetics.

Land Use / Zoning / Public Facilities: Land use surrounding the intersections of intersections of CR 614, CR 603 and New Albany Road is primarily residential. The project area consists of single-family homes and condominiums. Moorestown High School, New Albany Elementary School, the George Baker Elementary School, and a number of churches are located within a mile of the study limits. Potential land use or zoning changes and the evaluation of the same are not anticipated during Concept Development.

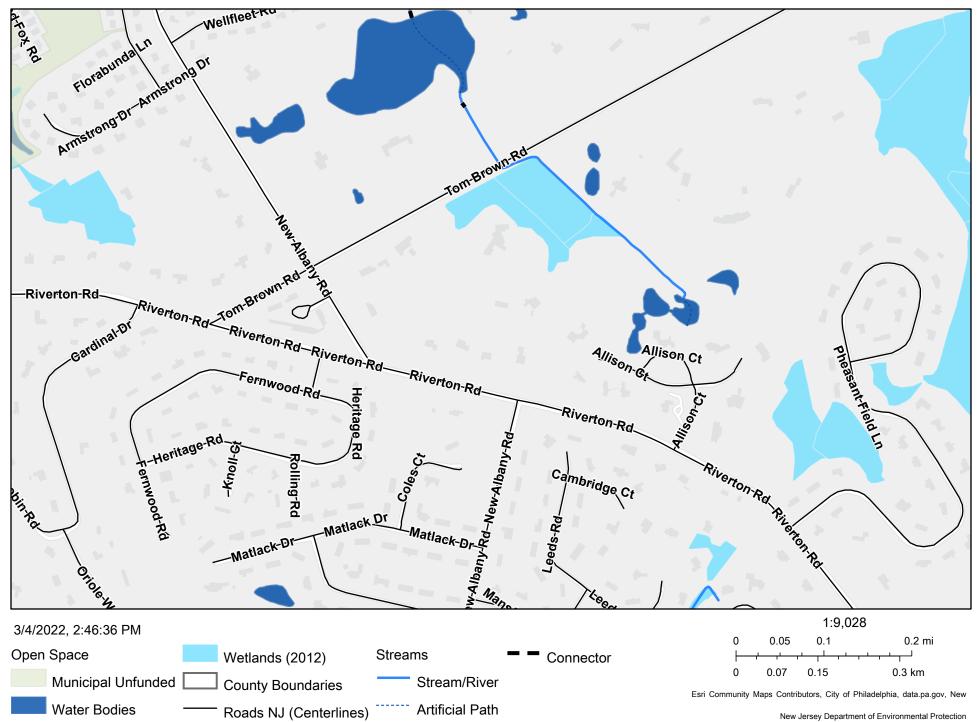
#### Conclusion

This evaluation determined that the study area has concentrations of the Asian American, African American, and Hispanic populations. Other minority populations are interspersed throughout. The small percentage of population below the poverty level is interspersed in the study area. The majority of commuters use passenger vehicles for commuting, with a small population utilizing public transportation, and non-motorized means. Efforts will be made to reach out to these communities during the scoping process to obtain their input.

The development and evaluation of conceptual solutions for improvements surrounding the intersections of intersections of CR 614, CR 603 and New Albany Road will consider impacts to the aforementioned communities and the general population of Moorestown Township. Disproportionately high and adverse human health or environmental effects to the population will be avoided or minimized to the greatest extent possible and would be conducted in coordination with the affected communities.

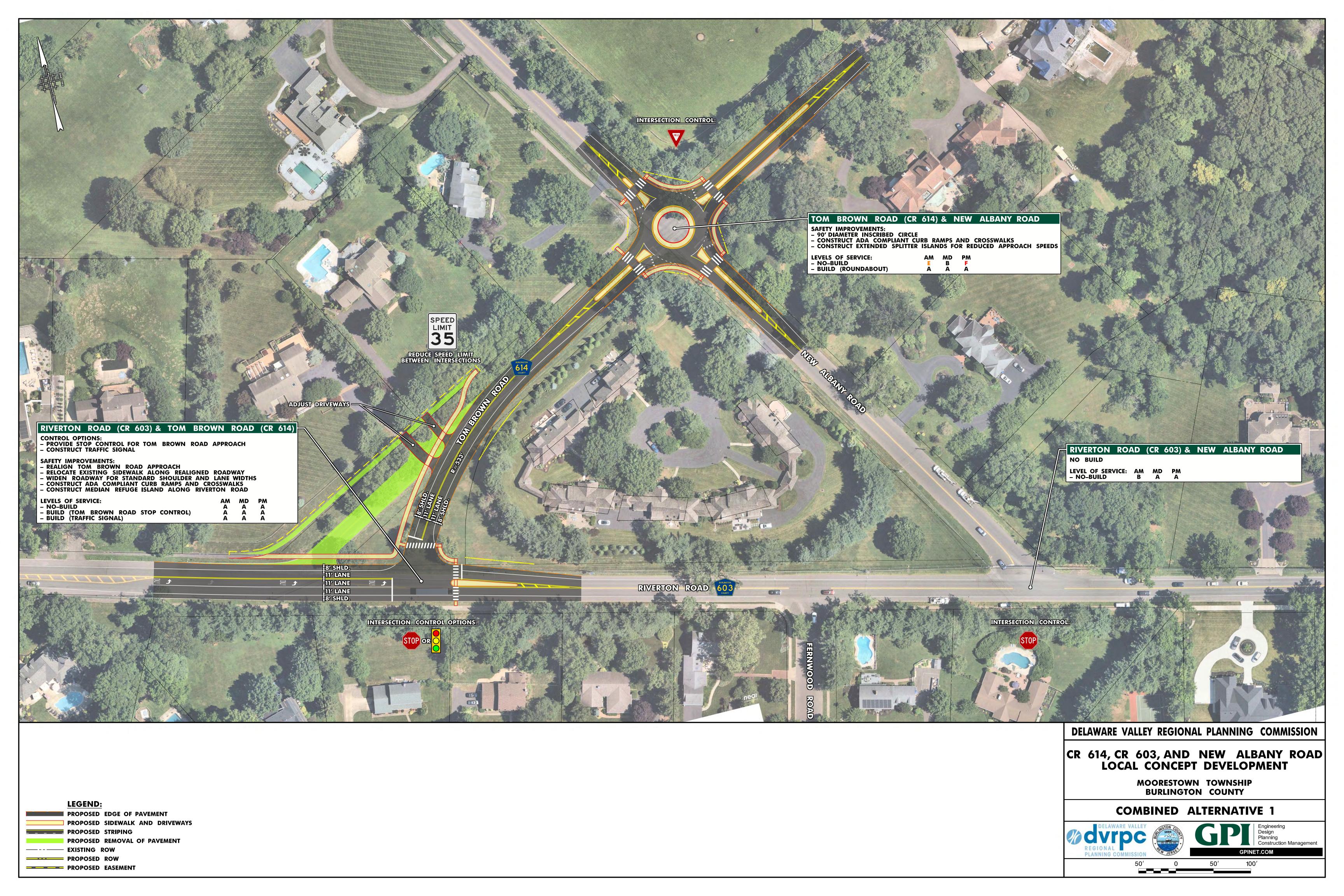


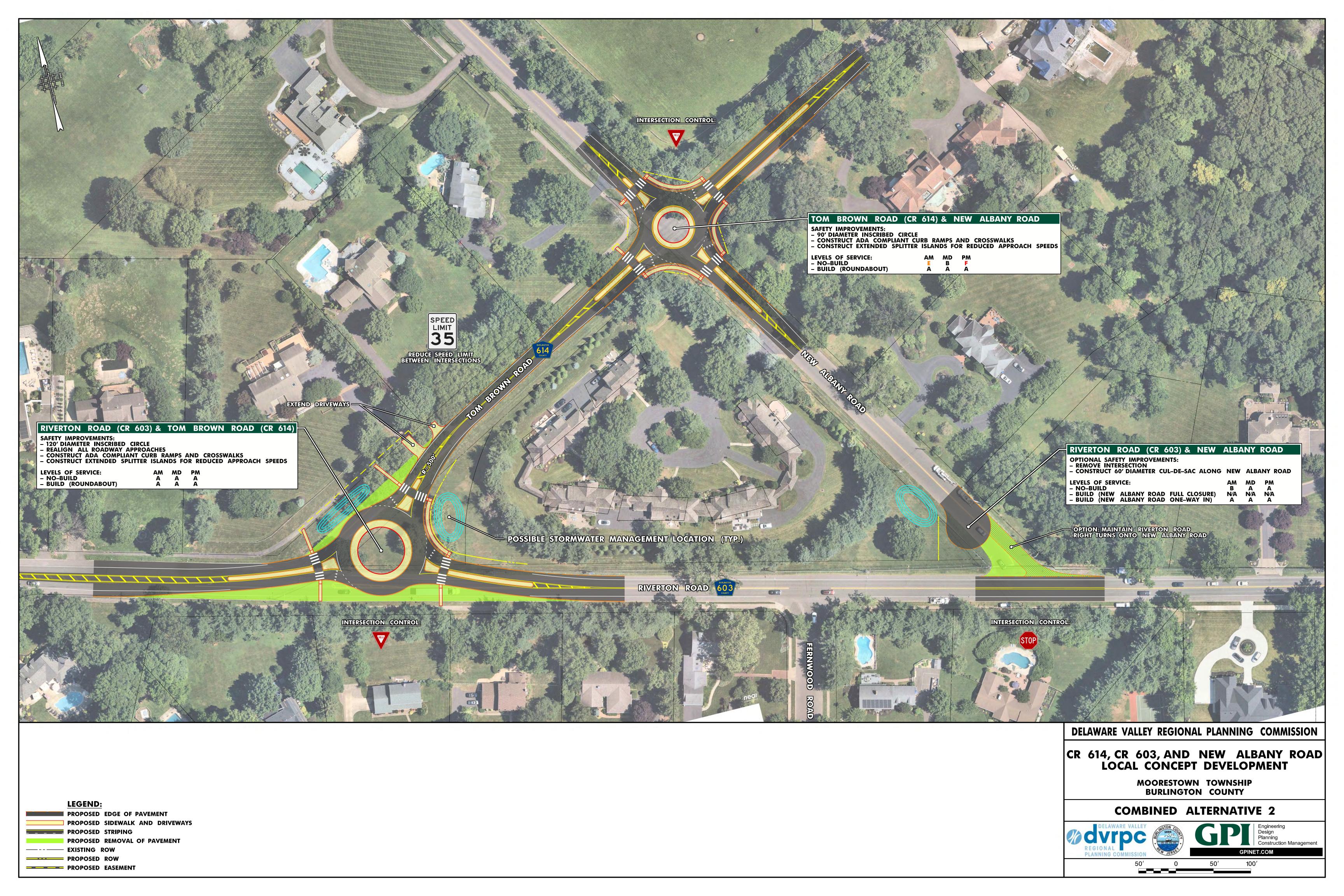
### NJ-GeoWeb

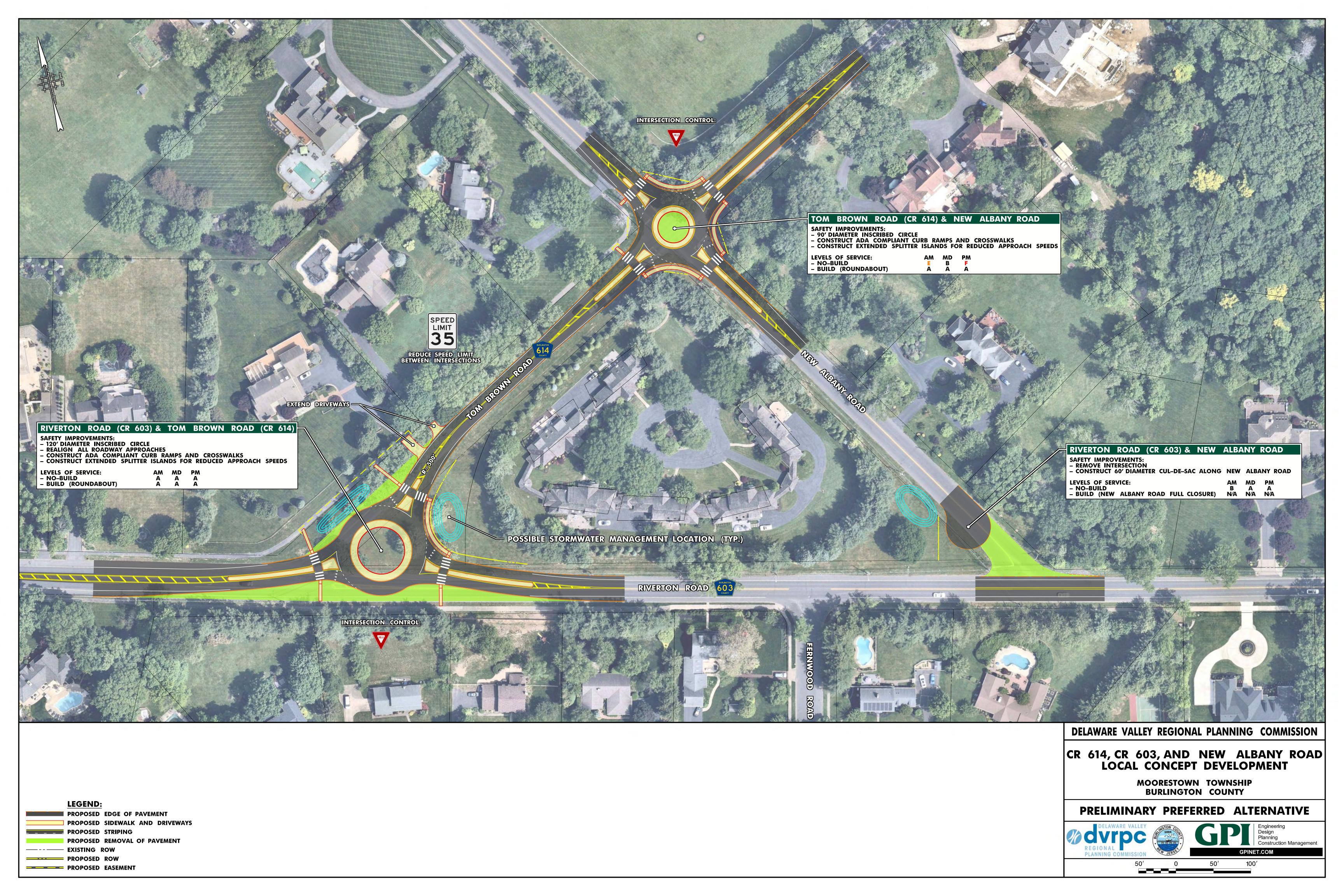


## APPENDIX H

### ALTERNATIVES AND PPA









CR 614, CR 603, AND NEW ALBANY ROAD LOCAL CONCEPT DEVELOPMENT

MOORESTOWN TOWNSHIP BURLINGTON COUNTY

STAGING PLANS



BUFFER ZONE
WORK ZONE
TEMPORARY STRIPING
TEMPORARY PAVEMENT
CONSTRUCTED FEATURES



# CR 614, CR 603, AND NEW ALBANY ROAD LOCAL CONCEPT DEVELOPMENT

MOORESTOWN TOWNSHIP BURLINGTON COUNTY

STAGING PLANS



LEGEND

BUFFER ZONE

WORK ZONE

TEMPORARY STRIPING

TEMPORARY PAVEMENT

CONSTRUCTED FEATURES



# CR 614, CR 603, AND NEW ALBANY ROAD LOCAL CONCEPT DEVELOPMENT

MOORESTOWN TOWNSHIP BURLINGTON COUNTY

STAGING PLANS



LEGEND

BUFFER ZONE

WORK ZONE

TEMPORARY STRIPING

TEMPORARY PAVEMENT

CONSTRUCTED FEATURES



# CR 614, CR 603, AND NEW ALBANY ROAD LOCAL CONCEPT DEVELOPMENT

MOORESTOWN TOWNSHIP BURLINGTON COUNTY

STAGING PLANS



LEGEND

BUFFER ZONE

WORK ZONE

TEMPORARY STRIPING

TEMPORARY PAVEMENT

CONSTRUCTED FEATURES



CR 614, CR 603, AND NEW ALBANY ROAD LOCAL CONCEPT DEVELOPMENT

MOORESTOWN TOWNSHIP BURLINGTON COUNTY

STAGING PLANS



LEGEND

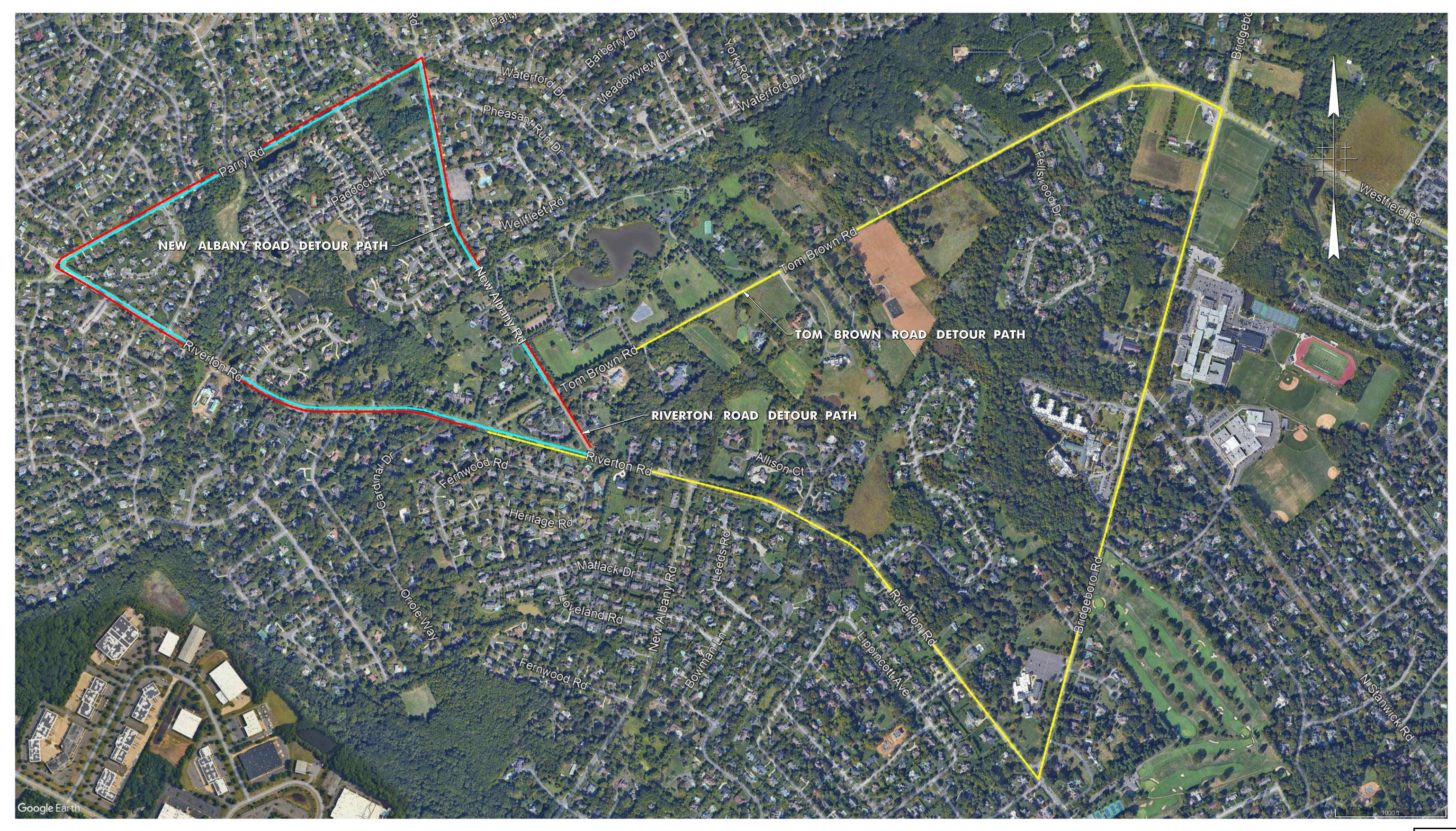
BUFFER ZONE

WORK ZONE

TEMPORARY STRIPING

TEMPORARY PAVEMENT

CONSTRUCTED FEATURES



STAGE 5 OF 5

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

CR 614, CR 603, AND NEW ALBANY ROAD LOCAL CONCEPT DEVELOPMENT

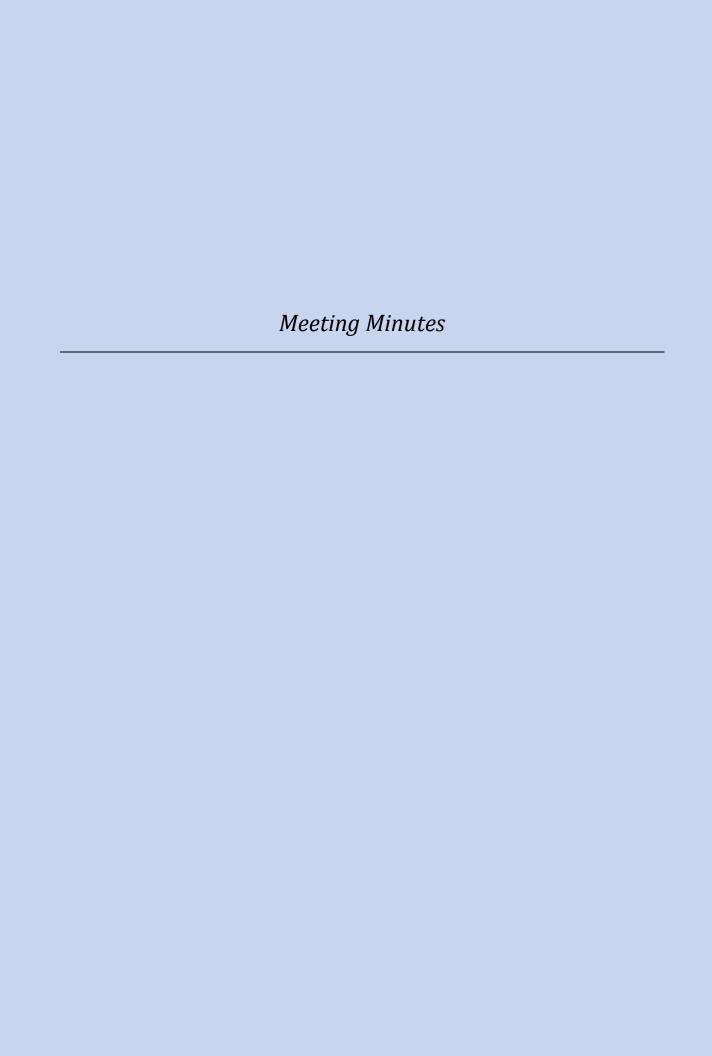
MOORESTOWN TOWNSHIP BURLINGTON COUNTY

STAGING PLANS - DETOURS



# **APPENDIX I**

# COMMUNICATIONS





### MINUTES OF MEETING OF Local Officials #1 – March 15, 2022

FY2021 Burlington County Local Concept Development (LCD) Study Intersection Study for CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County, NJ NJX-2021690.00

**DATE PREPARED:** March 21, 2022 (Revised April 12, 2022)

**LOCATION:** Teams Meeting (Virtual)

### ATTENDEES:

Joseph Brickley	Burlington County Engineer	856 642-3700
William Sheaffer	Burlington County - Principal Engineer Traffic	856 642-3700
Deanna Drumm	Burlington County – Traffic Engineer	856 642-3700
Kevin Aberant	Moorestown – Township Manager	856 235-0912
Kenneth Shine	Moorestown – Engineer (Pennoni)	not listed
Nancy Jamanow	Moorestown – Community Development	856 235-0912
Donald Lloyd	Moorestown – Public Works	856 235-3520
John Coscia, Jr.	DVRPC*, Manager, Office of Project Implementation	215 238-2859
Kwan Hui	DVRPC, Manager, NJ Capital Programs	215 238-2894
Bernie Boerchers	Greenman-Pedersen, Inc. (GPI)	908 236-9001
Julia Steponanko	GPI	908 236-9001
Christopher Marra	GPI	908 236-9001

<sup>\*</sup> Delaware Valley Regional Planning Commission (DVRPC)

**PURPOSE:** To present the existing conditions along with the draft Purpose and Need to the local officials and solicit their comments and/or concerns on the same. In addition, to discuss some potential alternatives to address the draft Purpose and Need.

**DISCUSSION:** Ms. Steponanko presented the Project Team, the project delivery process, the existing conditions and constraints, the draft Purpose and Need and some potential alternatives via a PowerPoint presentation. The following summarizes the key points of discussion between the attendees:

- 1. Mr. Aberant stated that the only proposed alternative shown in the presentation was a roundabout. He inquired if the Project Team is investigating other alternatives.
  - Ms. Steponanko replied that only a roundabout at the intersection of CR 614 (Tom Brown Road) and New Albany Road was shown as it would more than likely have the greatest impact. She added that various alternatives, as indicated in the presentation, will be investigated for each of the three intersections within the project limits, including but not limited to, roundabouts, traffic signals, stop control, clearing of sight triangles, MUTCD compliant signing and striping, high visibility crosswalks, and enhanced lighting.
  - Mr. Boerchers stated that the first meeting with the local officials is to typically confirm the
    project's Purpose and Need. He noted that the Project Team decided prior to the meeting
    that it would be beneficial to discuss some of the potential solutions at this meeting to expedite
    the LCD process. He added that the Project Team would continue the development of
    alternatives after receiving input from this meeting.





- 2. Mr. Aberant stated that the County had recently constructed a roundabout in Cinnaminson Township. He inquired if there was any before and after crash data for this roundabout or any other of the roundabouts that had been constructed by the County.
  - Mr. Sheaffer stated that the County had constructed five (5) roundabouts and that the before
    and after crash data for each roundabout indicated a significant decrease in the number and
    severity of crashes at each location.
  - Ms. Hui also posted a link in the chat box to FHWA safety statistics regarding roundabouts.
  - Mr. Boerchers stated that a roundabout significantly reduces the number of conflict points compared to a typical intersection with the most important being the elimination of the angle type crash which has a much higher rate for injuries and fatalities. He added that a roundabout also reduces the speed differential between vehicles thus also reducing the severity of the crash should one occur.
- 3. Mr. Aberant stated that local safety data will be important in obtaining public support for a roundabout. Mr. Sheaffer stated that County roundabout data can be added to the next meeting which will be held with the project stakeholders.
- 4. Mr. Brickley stated that there was some resistance to the recently constructed roundabout in Cinnaminson Township, but that the residents are now very pleased with the roundabout in their community. He recommended that Moorestown Township contact Cinnaminson Township to get their input on the process and on the roundabout.
- 5. Mr. Aberant stated that given the remote location of the roundabout that lighting will be needed so that motorists can see it as they approach and navigate through the roundabout. He added that there may be some local opposition to the lighting. Ms. Steponanko agreed that lighting will be required for a roundabout, should it be the selected alternative at any of the three intersections, but that light shields on the luminaires could be installed to reduce light trespass.

## **ACTION ITEMS:**

1. GPI will further investigate and develop potential alternatives for each of the three intersections within the project limits.

This memorandum of record is believed to be an accurate record of the discussions at this meeting. If any of the attendees disagree with the documented discussion, please contact <u>Julia Steponanko</u> at (908) 236-9001 within 10 days of receipt of minutes. If no comments are received, then this memorandum will be considered a true and accurate record of this meeting.





### MINUTES OF MEETING OF Local Officials #2 – March 20, 2023 (DRAFT)

FY2021 Burlington County Local Concept Development (LCD) Study Intersection Study for CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County, NJ NJX-2021690.00

**DATE PREPARED:** March 28, 2023

**LOCATION:** Teams Meeting (Virtual)

### ATTENDEES:

ATTENDELS.		
Joseph Brickley	Burlington County Engineer	856 642-3700
William Sheaffer	Burlington County - Principal Engineer Traffic	856 642-3700
Kevin Aberant	Moorestown – Township Manager	856 235-0912
Kenneth Shine	Moorestown – Engineer (Pennoni)	not listed
Donald Lloyd	Moorestown – Public Works	856 235-3520
Eric Schubiger	Cinnaminson – Township Administrator	856-829-6000
Kevin Gauntt	Cinnaminson – Public Works	856-829-6000
Joseph Barbadoro	Remington and Vernick (Cinnaminson Engineer??)	
Chief Rich Calabrese	Cinnaminson – Police Department	856-829-6667
Bernie Boerchers	Greenman-Pedersen, Inc. (GPI)	908 236-9001
Julia Steponanko	GPI	908 236-9001
Christopher Marra	GPI	908 236-9001

**PURPOSE:** To present the alternatives at each intersection along with the recommended overall alternative and its associated impacts to the local officials and solicit their comments and/or concerns on the same.

**DISCUSSION:** Ms. Steponanko presented the Project Team, the project delivery process, the existing conditions and constraints, the Purpose and Need, alternatives, recommended alternative, and impacts via a PowerPoint presentation. The following summarizes the key points of discussion between the attendees:

- 1. Mr. Aberant inquired if the roundabout size would be similar to the existing roundabout at the intersection of Riverton Road and Branch Pike. Mr. Scheaffer stated the proposed roundabout at Riverton Road and Tom Brown Road has a similar diameter while the proposed roundabout at Tom Brown Road and New Albany Road is smaller in order to minimize right-of-way impacts.
- 2. Mr. Aberant inquired if stormwater management could be addressed with underground facilities within the central island of the proposed roundabouts.
- 3. Mr. Aberant inquired about the timing for the next meetings. It was stated that the second stakeholders meeting, and Public Information Center (PIC) would be held over the next few months. It was also stated that a Resolution of Support would be provided after the PIC.
- 4. Mr. Aberant asked if the PIC would be in-person. It was noted that the first PIC was held virtually, recorded, and posted to the project website for those who could not attend, whereas an in-person PIC would be an open house format. Mr. Brickley stated that the County would get back to the Township on the format.
- **5.** The local officials concurred with the recommended alternative.





### **ACTION ITEMS:**

1. GPI will prepare for the second stakeholders meeting.

This memorandum of record is believed to be an accurate record of the discussions at this meeting. If any of the attendees disagree with the documented discussion, please contact <u>Julia Steponanko</u> at (908) 236-9001 within 10 days of receipt of minutes. If no comments are received, then this memorandum will be considered a true and accurate record of this meeting.





### MINUTES OF MEETING OF NJDOT Subject Matter Experts (SME): May 17, 2023 (DRAFT)

FY2021 Burlington County Local Concept Development (LCD) Study Intersection Study for CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County, NJ NJX-2021690.00

**DATE PREPARED:** May 18, 2023

**LOCATION:** Teams Meeting (Virtual)

### **ATTENDEES**:

William Sheaffer	Burlington County – Principal Engineer Traffic	856-642-3700
John Coscia, Jr.	DVRPC, Manager, Office of Project Implementation	215-238-2859
Alka Shah	NJDOT – Local Aid	856-486-6710
Thomas Berryman	NJDOT – Local Aid	609-963-2007
Arun Kumar	NJDOT – Local Aid	not listed
Frank Kasprzak	NJDOT – Local Aid	856-486-6780
Tyrell Villegas	NJDOT – Local Aid	not listed
Tausif Islam	NJDOT – Structures	609-963-1386
Austin Gould	NJDOT – Bureau of Traffic Engineering	609-963-1795
Bilkis Islam	NJDOT – Pavement Design	not listed
Anne Sunican	NJDOT	not listed
Jeff Gendek	NJDOT – BEPR	609-963-2064
Bernie Boerchers	Greenman-Pedersen, Inc. (GPI)	908 236-9001
Julia Steponanko	GPI	908 236-9001

**PURPOSE:** To present the alternatives at each intersection along with the recommended overall alternative and its associated impacts to the NJDOT SMEs and solicit their comments and/or concerns on the same.

**DISCUSSION:** Ms. Steponanko presented the Project Team, the project delivery process, the existing conditions and constraints, the Purpose and Need, alternatives, recommended alternative, and impacts via a PowerPoint presentation. Mr. Sheaffer stated that the County has five (5) existing roundabouts that all resulted in a crash reduction at their respective intersection. The following summarizes the key points of discussion between the attendees:

- 1. Mr. Gould inquired if the speed limit would be reduced along all approaches to each roundabout. Mr. Sheaffer stated that the County generally reduces the speed limit to 35 mph in advance of all roundabout approaches.
- 2. Mr. Gould inquired if the roundabouts could accommodate large vehicles. Ms. Steponanko stated that GPI uses TORUS software to design the roundabout, which incorporates AutoTurn, to ensure the design of a roundabout meets the needs of each applicable design vehicle, controls the approach, circulating, and exiting speeds (fastest paths), and provides safe and accessible pedestrian crossings.
- 3. Mr. Shah inquired if tribal consultation is required for this project. Mr. Glendek stated that it is not likely required for this project since it is not near a waterway or other features considered very significant, possibly to pass tribes, for example, Arney's Mount, the highest elevation in Burlington County. Mr. Glendek added that there will be an archaeological component since there will be ground disturbance.





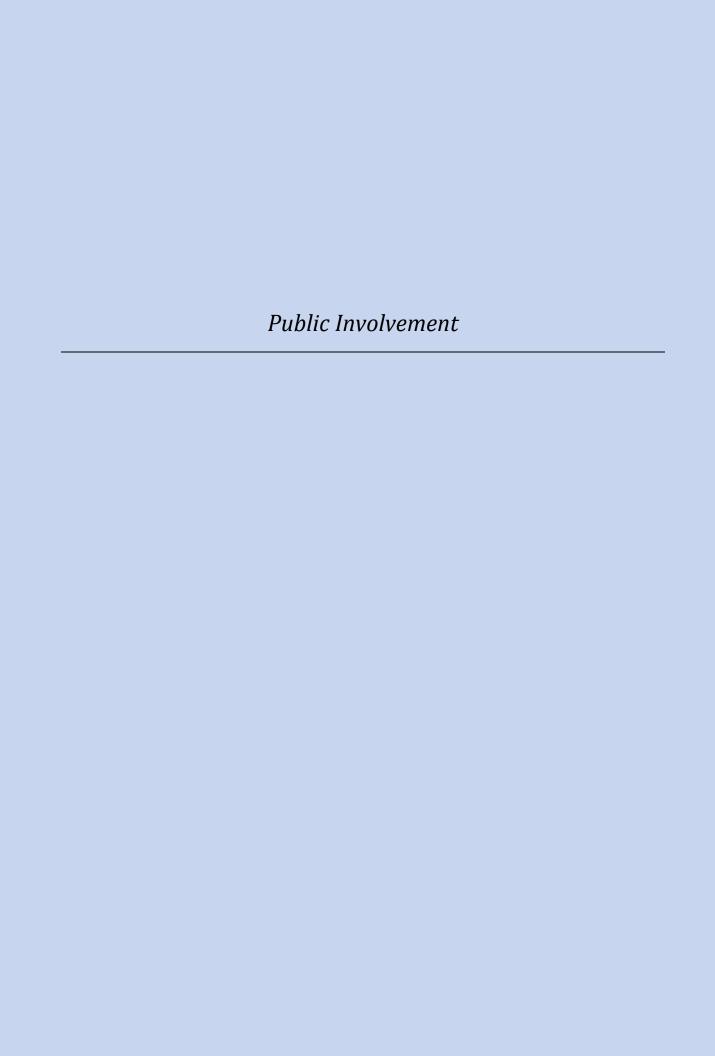
- 4. Mr. Kumar inquired about the right-of-way cost. Mr. Boerchers stated that a right-of-way cost has not yet been determined; however, no full acquisitions or relocations are anticipated, and no structures will be impacted by the preferred alternative.
- 5. Subsequent to the meeting, Mr. Kumar inquired via email if any design exceptions are anticipated for the preferred alternative. Mr. Boerchers replied that we will be finalizing our investigation of all the design elements shortly, and if we have any substandard design elements that cannot be rectified, the Project Team will inform Local Aid.

### **ACTION ITEMS:**

1. GPI will prepare for the second stakeholders meeting.

This memorandum of record is believed to be an accurate record of the discussions at this meeting. If any of the attendees disagree with the documented discussion, please contact <u>Julia Steponanko</u> at (908) 236-9001 within 10 days of receipt of minutes. If no comments are received, then this memorandum will be considered a true and accurate record of this meeting.







### MINUTES OF MEETING OF Stakeholders #1 – May 17, 2022

FY2021 Burlington County Local Concept Development (LCD) Study Intersection Study for CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County, NJ NJX-2021690.00

DATE PREPARED: May 19, 2022

**LOCATION:** Teams Meeting (Virtual)

### ATTENDEES:

Joseph Brickley	Burlington County Engineer	856 642-3700
William Sheaffer	Burlington County – Principal Engineer Traffic	856 642-3700
Deanna Drumm	Burlington County – Traffic Engineer	856 642-3700
John Coscia, Jr.	DVRPC*, Manager, Office of Project Implementation	215 238-2859
Kwan Hui	DVRPC, Manager, NJ Capital Programs	215 238-2894
Bernie Boerchers	Greenman-Pedersen, Inc. (GPI)	908 236-9001
Julia Steponanko	GPI	908 236-9001
Christopher Marra	GPI	908 236-9001
Kevin Aberant	Moorestown – Township Manager	856 235-0912
Donald Lloyd	Moorestown – Public Works	856 235-3520
Eric Schubiger	Cinnaminson – Township Administrator	856 829-6000
Chief Walter Walczak	Moorestown Police Chief	856 235-1405
Sgt. Craig Ruggiano	Moorestown – Police Department	856 914-3049
John Boyle	Bicycle Coalition of Greater Philadelphia	not listed
Earnest McGill	Cinnaminson – Committeeman	856 829-6000
Maurice (Mick) Weeks	Moorestown – Board of Education	856 778-6600

<sup>\*</sup> Delaware Valley Regional Planning Commission (DVRPC)

**PURPOSE:** Solicit comments and/or concerns from the stakeholders on the project purpose and need.

**DISCUSSION:** Ms. Steponanko presented the Project Team, the project delivery process, the existing conditions and constraints, the draft Purpose and Need and some potential alternatives via a PowerPoint presentation. She also presented information on roundabouts and before and after crash data for the Cinnaminson roundabout. The following summarizes the key points of discussion between the attendees.

- Mr. Lloyd asked about adding sidewalk and stormwater management. The Team noted that the project would include connections to existing sidewalk networks and that stormwater management will be brought up to current standards.
- 2. Mr. Boyle noted that Moorestown has bike circulation plan and inquired if there are planned bike accommodations for Tom Brown and Riverton Roads. The Team noted that the shared use path along Tom Brown and Riverton Roads can accommodate bicyclists, in addition to shoulders.
- 3. Mr. Aberant inquired at what point do we engage with the property owners. The Team noted that per FHWA rules, the Team cannot coordinate with property owners individually. Local residents will be invited to the virtual Public Information Center (PIC). A physical mailer would





be sent to property owners adjacent to the project limits and a link to the meeting can be put on county website. Flyers can also be sent to the municipalities.

- 4. Ms. Hui asked if the residents would favor this project? Mr. Aberant stated that it depends on the residents; some people may be upset that there is a change in near term. He added that he was surprised at the number of crashes at this area and stated that people will support the project if it supports traffic flow.
- 5. The attendees noted that some mature oak trees within or in the vicinity of the project limits may be removed. Stakeholders recommended planting new trees as part of the design.

A copy of the presentation and meeting invitation is provided herein.

This memorandum of record is believed to be an accurate record of the discussions at this meeting. If any of the attendees disagree with the documented discussion, please contact <u>Julia Steponanko</u> at (908) 236-9001 within 10 days of receipt of minutes. If no comments are received, then this memorandum will be considered a true and accurate record of this meeting.



# Julia Steponanko

Stakeholders Meeting - LCD Intersection Study for CR 614, CR 603 and New Albany Rd

**Location:** Microsoft Teams Meeting

**Start:** Tue 5/17/2022 3:30 PM **End:** Tue 5/17/2022 5:00 PM

**Show Time As:** Tentative

**Recurrence:** (none)

Meeting Status: Not yet responded

**Organizer:** Julia Steponanko

**Required Attendees**Bernard Boerchers; Christopher Marra; Deanna Drumm; John Coscia Jr; Kwan Hui; William Sheaffer **Optional Attendees:**ecullinan@co.burlington.nj.us; commissioners@co.burlington.nj.us; jbrickley@co.burlington.nj.us;

ngille spie@moorestown.nj.us; smammarella@moorestown.nj.us; jvdyken@moorestown.nj.us;

dzipin@moorestown.nj.us; lrusso@moorestown.nj.us; kaberant@moorestown.nj.us; dlloyd@moorestown.nj.us; njamanow@moorestown.nj.us; KShine@Pennoni.com;

wwalczak@moorestownpd.com; SVandy@MoorestownPD.com; john@bicyclecoalition.org; mweeks@mtps.com; msnyder@mtps.com; salberti@mtps.com; marcaroburns@mtps.com;

 $Iromano@mtps.com; \ mvillanueva@mtps.com; \ cmorano@mtps.com; \ jfallowsmacaluso@mtps.com; \\$ 

cmakopoulos@mtps.com; mvolpe@mtps.us; mkeith@mtps.com; aseibel@mtps.com; skravil@cinnaminsonnj.org; emcgill@cinnaminsonnj.org; rhorner@cinnaminsonnj.org; pconda@cinnaminsonnj.org; asegrest@cinnaminsonnj.org; eschubiger@cinnaminsonnj.org;

zonal@cinnaminson.com

Burlington County, in cooperation with the Delaware Valley Regional Planning Commission (DVRPC) will be hosting an initial Stakeholders Meeting regarding Intersection Improvements for CR 614, CR 603 and New Albany Road on Tuesday, May 17, 2022 from 3:30-5:00 PM. This meeting will be held virtually.

This initial Stakeholders Meeting will be held to introduce the Local Concept Development (LCD) Study, present project information, discuss existing conditions, and obtain stakeholders' input on community interests and issues toward developing a draft Purpose and Need Statement.

This Stakeholders Meeting is by invitation only, but there will be a Public Information Center scheduled shortly for all members of the community to participate and voice their opinions on this project.

Please see the below meeting notice for additional detail on how to join the meeting.

# Microsoft Teams meeting

Join on your computer or mobile app

Click here to join the meeting

Join with a video conferencing device

780687616@t.plcm.vc

Video Conference ID: 119 580 685 5

# **Alternate VTC instructions**

# Or call in (audio only)

<u>+1 631-339-0571,,918989085#</u> United States, Brentwood

(877) 284-0719,,918989085# United States (Toll-free)

Phone Conference ID: 918 989 085#

Find a local number | Reset PIN

<u>Learn More</u> | <u>Meeting options</u>

Julia Steponanko, P.E.

Engineer

100 Corporate Drive, Suite 301, Lebanon, NJ 08833 o 908.236.9001 | d 908.287.2720 jsteponanko@gpinet.com | www.gpinet.com



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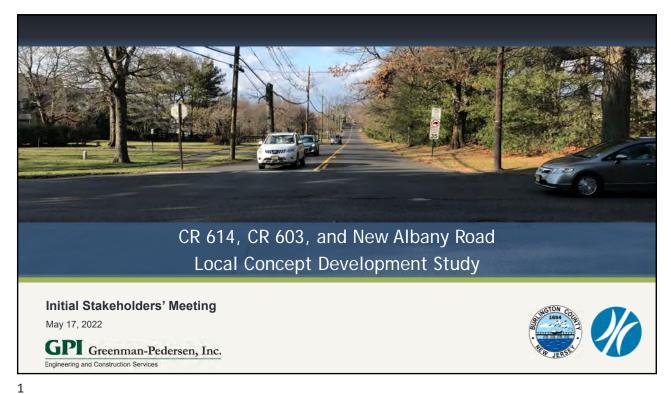












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# Agenda

- Project Team
- Project Delivery Process
- Project Location
- Existing Conditions
- Environmental Constraints
- Purpose and Need
- Potential Alternatives
- Next Steps
- Questions



# William E. Sheaffer – Project Manager, County Engineer's Office Deanna B. Drumm, PE, PP, PTOE – County Engineer's Office John J. Coscia Jr. – Manager, Office of Transportation Services Kwan Hui – Manager, NJ Capital Programs Thomas Berryman – Local Aid Alka Shah – Local Aid Sean Warren – Bureau of Environmental Program Resources Bernard Boerchers, PE, PTOE – Project Manager Julia Steponanko, PE – Deputy Project Manager

**Project Delivery Process Local Capital Project Delivery Program** Final Design / **Local Concept Local Preliminary** Right of Way Construction Development **Engineering** Acquisition Purpose and Need Statement Approved Design Exception Report Completed Construction Construction Contract Document and PS&E Package Cost Estimates (Final Design ROW Data Collection and As-Builts **Environmental Screening Report** and Construction) **Environmental Reevaluations** Update and Finalize Design Selection of Preliminary Preferred Approved Environmental **Environmental Permits** Communications Report Alternative Document Acquisition of ROW Close-Out Documentation **NEPA Classification** Approved Project Plan Update Design Concept Development Report Preliminary Engineering Report Communications Report Create Design Communications **Update Design Communications** Report Report **GPI** 



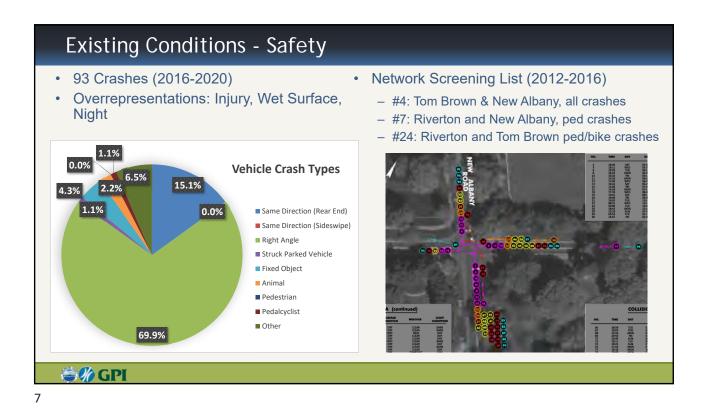
# **Existing Conditions**

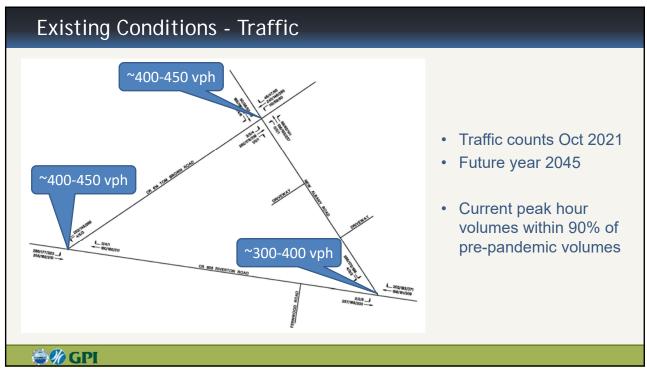
# Overview

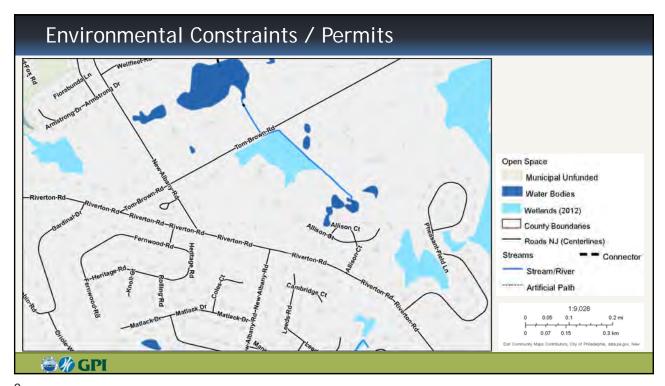
- 2-lane roadways, 25-35 ft wide
- 35-45 mph posted speeds
- No marked shoulders on New Albany Rd
- Substandard sight distance
- Skewed 'T' intersections



**⊕%** GPI







# Draft Purpose and Need



# **Purpose**

The purpose of this project is to enhance safety and improve integrated operations to provide safe, efficient, and reliable intersections for all modes of transportation.



# Need

- ✓ Ranked as high crash location/crash history
- √ Substandard sight distance
- √ Skewed intersections

# **Goals and Objectives**

- Enhance bicycle / pedestrian compatibility
- Avoid or minimize social, economic and environmental impacts
- Minimize impacts to road users during construction

**◎ %** GPI

# Pedestrians/Bicycles Crosscutting FHWA Proven Safety Countermeasures (PSC) 28 Countermeasures Categories Speed Management Roadway Departure Intersections Pedestrians/Bicycles SPEED SPEED

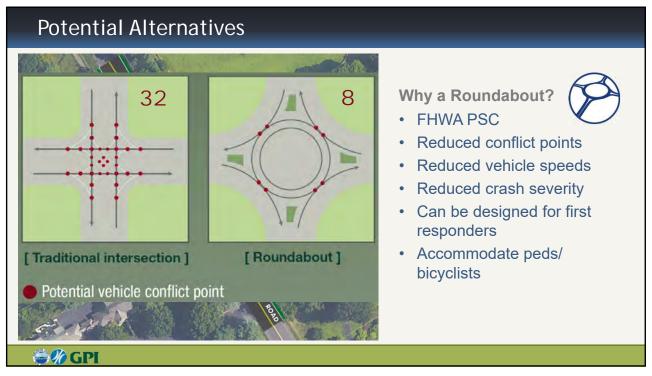
11

# Potential Alternatives

- No-Build
- Roundabout
- Traffic signals (all intersections)
- Stop control (Riverton Rd intersections)
- Other Safety Improvements / PSC
  - Remove/trim vegetation to increase sight distance
  - MUTCD compliant signs/striping (high visibility crosswalks)
  - Enhanced intersection lighting















### MINUTES OF MEETING OF Public Information Center #1 – August 16, 2022

FY2021 Burlington County Local Concept Development (LCD) Study Intersection Study for CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County, NJ NJX-2021690.00

**DATE PREPARED:** August 20, 2022

**LOCATION:** Teams Meeting (Virtual)

# **ATTENDEES**:

Joseph Brickley	Burlington County Engineer	856 642-3700
William Sheaffer	Burlington County – Principal Engineer Traffic	856 642-3700
Deanna Drumm	Burlington County – Traffic Engineer	856 642-3700
John Coscia, Jr.	DVRPC*, Manager, Office of Project Implementation	215 238-2859
Julia Steponanko	Greenman-Pedersen, Inc. (GPI)	908 236-9001
Christopher Marra	GPI	908 236-9001
Kevin Aberant	Moorestown – Township Manager	856 235-0912
Nancy Jamanow	Moorestown – Community Development	856 235-0912

<sup>\*</sup> Delaware Valley Regional Planning Commission (DVRPC)

### **PUBLIC PARTICIPANTS:**

- Janel Miller
- Tracey Whitesell
- Brian Deam
- John DeBernardis
- Patrick Craven
- 18562076601 (name not provided)
- Terrance Huettl
- Peter M.
- Mindy Elkins
- Stephen Bornholdt
- Matt Walsh
- 18566304792 (name not provided)

**PURPOSE:** Solicit comments and/or concerns from the public on the project purpose and need.

**DISCUSSION:** Ms. Steponanko presented the Project Team, the project delivery process, the existing conditions and constraints, the draft Purpose and Need and some potential alternatives via a PowerPoint presentation. She also presented information on roundabouts and before and after crash data for the Cinnaminson roundabout. The following summarizes the key points of discussion between the attendees. Questions and comments were generally entered into the chat box and may be edited for clarity.

- 1. It was noted that the County constructed five (5) roundabouts to date and that the before and after crash data for each roundabout indicated a significant decrease in the number and severity of crashes at each location.
- 2. A roundabout significantly reduces the number of conflict points compared to a typical intersection with the most important being the elimination of the angle type crash which has a much higher rate for injuries and fatalities. A roundabout also reduces the speed differential between vehicles thus also reducing the severity of the crash should one occur.
- 3. <u>Question</u>: I have a lot of experience with the roundabout in Riverton as a frequent pedestrian at that intersection. I have had many times where cars almost hit me. Can you comment on the expected pedestrian safety?





<u>Answer</u>: It's important that we make sure we have crosswalks at the channelized islands, so pedestrians can cross the shortest path. Additional signing could be implemented to alert motorists.

- 4. <u>Question</u>: How long does it typically take to complete the first phase, Concept Development?
  - Answer: Concept Development averages one to one and a half years for a project of this size.
- 5. <u>Question</u>: How much land will be needed from neighbors at the intersection? The one in Cinnaminson seems quite large.
  - <u>Answer</u>: The amount of land that we will need is going to depend on our alternatives analysis and whether we can accommodate the improvements and the existing right away.
- 6. <u>Question</u>: Do you have plans for focus groups, additional community involvement as this project advances?
  - <u>Answer</u>: The Local Concept Development phase includes two (2) PICs today and later in this phase once alternatives are developed. Focus groups are not anticipated.
- 7. <u>Comment</u>: There are several driveways near the intersection. The home owners need safe gaps to pull out due roundabouts create more or less gaps than traffic lights.
  - <u>Response</u>: At a traffic signal, at some point there will be some sort of a queue at the red light. Roundabouts in their general operation, you're yielding to circulating traffic, but generally there's more time to be in in motion. Another thing that we would be looking at is whether if we put in a traffic signal, what will the queues be, would they extend past driveways near the intersection? And is that going to pose a problem to the homeowners?
- 8. <u>Question</u>: How would you remediate the 'T' intersections that connect to Riverton Rd? These are extremely dangerous during rush hour.
  - <u>Answer</u>: we're going to be looking at all the different options that I mentioned before. Let me just go back to that slide. So we would look at traffic signals at each of the intersections. We would look at always stops. We would look at Maybe a roundabout makes sense, so maybe restricting turns makes sense.
- 9. <u>Comment</u>: Traffic lights produce gaps in the traffic so cars can pull out from nearby driveways. Roundabouts result in a more continuous flow, with fewer gaps for homeowners to pull out, creating a safety hazard.
  - <u>Response</u>: Roundabouts do provide a more continuous flow at the intersection, but there would still be gaps assuming that there's not just a lot of continuous cars all the time. Also, roundabouts would improve visibility which would benefit driveways. Operations would be analyzed to ensure sufficient gaps to safely enter and exit their driveways.
- 10. Question: How will right of way be obtained purchase or condemnation?
  - <u>Answer</u>: Note that full property acquisitions are not anticipated; takings would be limited to a small corner or road frontage, and some may be construction or sidewalk easements. Generally, we start out with a purchase. There is a process to acquire right of way that is followed. Condemnation would be a last resort. In addition, as part of alternatives analysis, we seek to minimize right of way impacts to the surrounding areas.
- 11. <u>Question</u>: Both Tom Brown and New Albany appear to have space to change the intersections with Riverton Rd from angled approach to perpendicular. Is that being considered?
  - <u>Answer</u>: Realignment of the roads to make the 'T' intersections meet at more of a right angle can be considered.





- 12. <u>Question</u>: New Albany Road and Tom Brown Road both extend to Riverton Road, but both are not necessary. One of the two intersections could be eliminated. Has this been considered?
  - <u>Answer</u>: Closure of one of the two intersections can be considered. We would have to look at how the traffic would then be rerouted
- 13. <u>Comment</u>: Bikes generally triumph travel on the right side of the road, cars exiting the roundabout want the same space. This seems to like a conflict.
  - Response: Roundabouts reduce the travel speed to 25 mph or less, which is about the speed of a bicyclist. The idea is for the bicyclist to be able to safely navigate the roundabout. However, if people do not feel comfortable riding their bike within the roundabout, sidewalks will be provided so bicyclists can dismount the bike and walk around.
- 14. <u>Question</u>: How do we stay informed of schedules for public comment opportunities and meetings? Can you set-up a mailing list that residents can subscribe to in order to be notified?
  - <u>Answer</u>: The best way to stay informed is to go to the project website and any information that we have will be posted to the same (www.tombrownroadintersection.com). A mailing list option will be added to the site.
  - It was noted that property owners in the vicinity of the intersections were provided advanced notice of the PIC via physically mailed flyer; however, several attendees indicated that the meeting was not well advertised.

A copy of the presentation and meeting invitation flyer is provided herein.

This memorandum of record is believed to be an accurate record of the discussions at this meeting. If any of the attendees disagree with the documented discussion, please contact <u>Julia Steponanko</u> at (908) 236-9001 within 10 days of receipt of minutes. If no comments are received, then this memorandum will be considered a true and accurate record of this meeting.



# ONLINE PUBLIC INFORMATION CENTER MEETING



Tuesday, August 16, 2022 | 5:00 PM - 7:00 PM



Please join the meeting from your computer, tablet or smartphone.

https://surl.ms/Bp7

Meeting ID: 268 968 260 067 | Passcode: Ux28UJ



You can also dial in using your phone.

877-284-0719 (U.S. Toll-free)

647 237 165#

Please see the opposite side for additional detail on how to join the meeting.

Burlington County, in cooperation with the Delaware Valley Regional Planning Commission (DVRPC), is conducting a Local Concept Development (LCD) study to determine appropriate improvements to CR 614 (Tom Brown Road), CR 603 (Riverton Road), and New Albany Road. The project goals are to enhance safety and improve operations for all modes of transportation.

This initial Public Information Center will be held online to introduce the LCD Study, present project information, discuss existing conditions, and obtain stakeholders' input on community interests and issues to develop a draft Purpose and Need Statement, which defines and justifies the primary transportation need to be addressed. It also sets the stage for consideration of the alternatives and is a fundamental requirement in the development of a project that will require future NEPA documentation.

All members of the public are encouraged to attend this online meeting to learn about the study and ask questions about the project. If you cannot attend the meeting but would still like to participate in the study, please visit the project website, fill out a comment form, or send us an email. Comments can also be sent to:

Burlington County Engineer's Office Traffic Section 1900 Briggs Road, Mt. Laurel, NJ 08054 P: 856-642-3720

E: Traffic@co.burlington.nj.us





# ONLINE PUBLIC INFORMATION CENTER MEETING

# CR 614, CR 603, and New Albany Road Local Concept Development Study

This meeting will be held via Microsoft Teams. The log-in details are below. Please log on five to ten minutes early to ensure your connection works. Your options for participation are:

- 1. on a computer or tablet without a mic, using your phone to call-in for audio \*
- 2. on a computer or tablet with a mic \*\*
- 3. on a smartphone by installing and using the Microsoft Teams app (download from the Apple App Store for iPhone / Google Play Store for Android)
- 4. on a phone for audio only (no app required)

If you use option 1 or 2 you can choose to either join on the web or download the desktop app. If you already have the Teams app, the meeting will open there automatically.

- \* If you use option 1 (computer/tablet and call-in), log-in to your computer first, enter your name, and select "Phone audio" to listen on your phone. Dial the number to join and enter the code when prompted. Note that your phone number will appear in the participants list.
- \*\* If you use option 2 (computer/tablet with mic), choose "computer audio" to listen/talk. You will join the meeting on mute.

Further information is available on the Microsoft Teams Meetings Quick Start Guide .



Please join the meeting from your computer, tablet or smartphone.

https://surl.ms/Bp7

Meeting ID: 268 968 260 067 | Passcode: Ux28UJ



You can also dial in using your phone.

877-284-0719 (U.S. Toll-free) 647 237 165#







CR 614, CR 603, and New Albany Road
Local Concept Development Study

Public Information Center 1
August 16, 2022

GPI Greenman-Pedersen, Inc.
Engineering and Construction Services

# Agenda

- Project Team
- Project Delivery Process
- Project Location
- Existing Conditions
- Environmental Constraints
- · Purpose and Need
- Potential Alternatives
- Next Steps
- Questions



3

# Project Team



William E. Sheaffer – Project Manager, County Engineer's Office Deanna B. Drumm, PE, PP, PTOE – County Engineer's Office



John J. Coscia Jr. - Manager, Office of Transportation Services



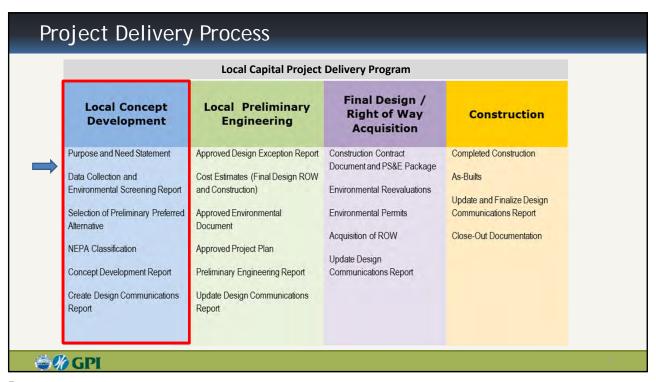
Thomas Berryman – Local Aid Alka Shah – Local Aid Sean Warren – Bureau of Environmental Program Resources



**Bernard Boerchers, PE, PTOE** – Project Manager **Julia Steponanko, PE** – Deputy Project Manager

**⊜%** GPI

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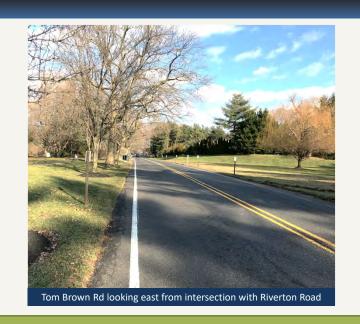




# **Existing Conditions**

### Overview

- 2-lane roadways, 25-35 ft wide
- 35-45 mph posted speeds
- No marked shoulders on New Albany Rd
- Substandard sight distance
- · Skewed 'T' intersections

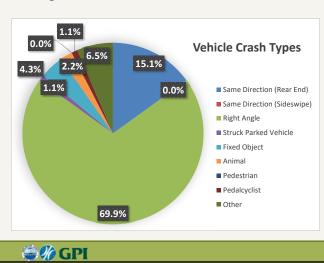




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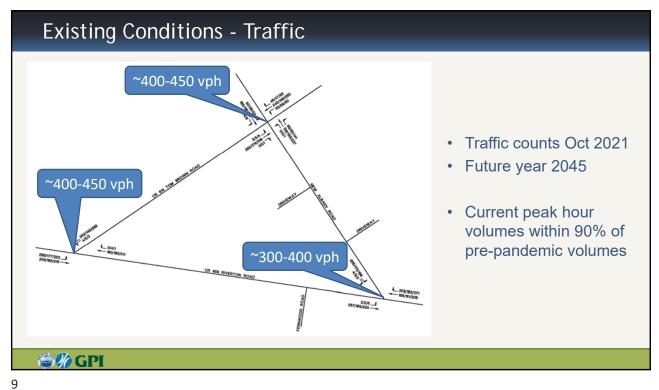
# **Existing Conditions - Safety**

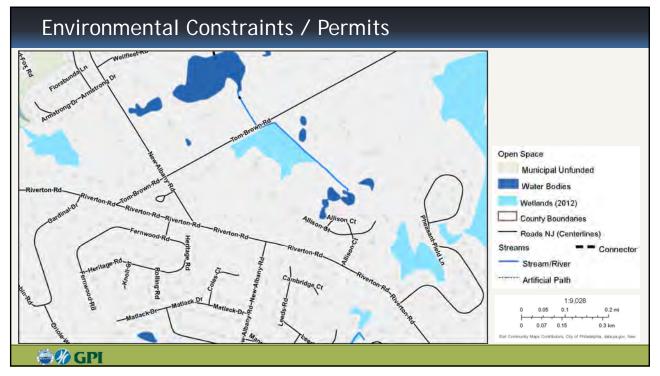
- 93 Crashes (2016-2020)
- Overrepresentations: Injury, Wet Surface, Night



- Network Screening List (2012-2016)
  - #4: Tom Brown & New Albany, all crashes
  - #7: Riverton and New Albany, ped crashes
  - #24: Riverton and Tom Brown ped/bike crashes







### **Draft Purpose and Need**



#### **Purpose**

The purpose of this project is to enhance safety and improve integrated operations to provide safe, efficient, and reliable intersections for all modes of transportation.



#### Need

- ✓ Ranked as high crash location/crash history
- ✓ Substandard sight distance
- √ Skewed intersections

#### **Goals and Objectives**

- Enhance bicycle / pedestrian compatibility
- Avoid or minimize social, economic and environmental impacts
- Minimize impacts to road users during construction

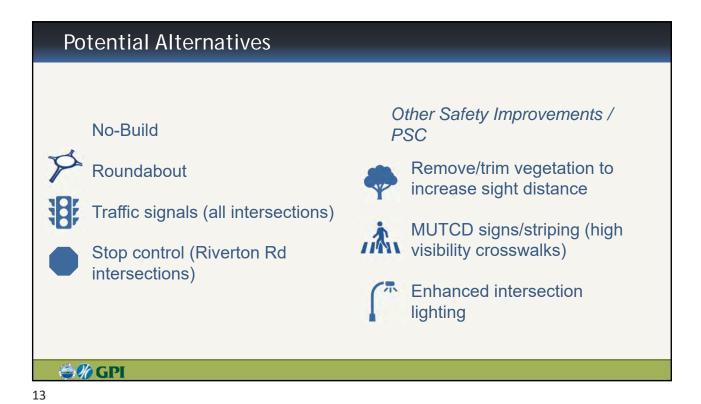


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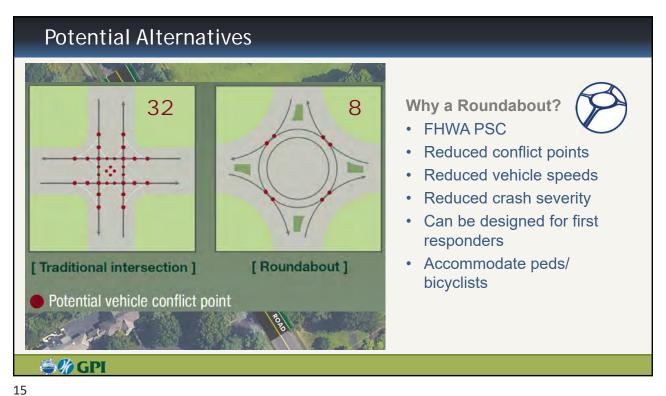
# 28 Countermeasures Categories Speed Management Roadway Departure Intersections Pedestrians/Bicycles Crosscutting

12

**GPI** 















MINUTES OF MEETING: Stakeholder Meeting, Public Information Center #2 – October 17, 2023

FY2021 Burlington County Local Concept Development (LCD) Study Intersection Study for CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County, NJ NJX-2021690.00

**DATE PREPARED:** October 30, 2023

**LOCATION:** Teams Meeting (Virtual)

#### ATTENDEES:

Joseph Brickley	Burlington County Engineer	856 642-3700
William Sheaffer	Burlington County – Principal Engineer Traffic	856 642-3700
John Matos Ramos	Burlington County	856 642-3700
John Coscia, Jr.	DVRPC*, Manager, Office of Project Implementation	215 238-2859
Bernard Boerchers	Greenman-Pedersen, Inc. (GPI)	908 236-9001
Christopher Marra	GPI	908 236-9001
Julia Steponanko	GPI	908 236-9001
Kevin Aberant	Moorestown – Township Manager	856 235-0912

<sup>\*</sup> Delaware Valley Regional Planning Commission (DVRPC)

#### STAKEHOLDER AND PUBLIC PARTICIPANTS:

- Gabrielle Canuso
- Joseph Canuso
- Patrick Craven
- Brian Deam
- John DeBernardis
- Evan Heitzman

- Terrance Huettl
- Elizabeth Litten
- Christopher Salvatico
- Bob Thompson
- Andrew Vernaza
- Tracey Whitesell

**PURPOSE:** Solicit comments and/or concerns from stakeholders and the public on the recommended preferred alternative. The stakeholder meeting and Public Information Center were held from 3:30-4:30PM and 5:00-7:00PM, respectively.

**DISCUSSION:** Ms. Steponanko presented the Project Team, the project delivery process, the existing conditions and constraints, the Purpose and Need and the recommended preferred alternative via a PowerPoint presentation. The following summarizes the key points of discussion between the attendees. Questions and comments were generally entered into the chat box and may be edited for clarity.

- 1. The attendees noted that some mature oak trees within or in the vicinity of the project limits may be removed. Stakeholders recommended planting new trees as part of the design.
- 2. The attendees discussed drainage and stormwater management for this project. Survey information was not available in Concept Development; basin locations shown are based on contours and field investigations. During the next project phases, additional information will be available to evaluate drainage conveyance systems that would connect to the basins.
- 3. The attendees discussed the sidewalk, specifically at the Tom Brown Road and New Albany Road proposed roundabout, and that each quadrant does not have a sidewalk network. While not required, it is desirable to include ADA ramps and sidewalk at each end of the crosswalks to provide pedestrian accessibility around the roundabout.



4. Question: Do you plan to reduce the speed limit on Riverton Road near the roundabout?

<u>Answer</u>: Riverton Road to the east and west is posted 40 mph and 35 mph, respectively. The design of the roundabout approaches and the splitter islands will reduce speeds further entering the roundabout to about 25 mph. In general, the County reduces the speed limit on approach roadways to 35 mph in the vicinity of a roundabout.

5. Question: Could the county lower the speed limit on Tom Brown Road?

<u>Answer</u>: See response to question 1. Note that speed limit changes are constrained to the project limits shown.

6. Question: Can you please confirm if the presentations will be available?

<u>Answer</u>: A recording of the presentation as well as a copy of the slides will be posted to the project website.

7. Question: Will the speed limit on New Albany Road be reduced lower than 35 miles an hour?

<u>Answer</u>: See response to question 1. Note that speed limit changes are constrained to the project limits shown.

8. <u>Comment</u>: Four way stop is safer for bikes and pedestrians than circles or roundabouts. Bikes get forced to the sides by cars and cut off bikes when they turn off the circle. This is an in town location with a lot of bikes and pedestrians. What are you doing to make this safe for non-cars?

<u>Response</u>: A roundabout significantly reduces the number of conflict points compared to a typical intersection (reduction from 32 to 8) with the most important being the elimination of the angle type crash which has a much higher rate for injuries and fatalities. A roundabout also reduces the speed differential between vehicles thus also reducing the severity of the crash should one occur. Roundabouts are proven to be safer for all road users than a four way stop or traffic signal.

At a four way stop, you have more conflict points and some of those conflict points tend to be right angle points. Those right angle points create more serious injury type crashes and it is why the Federal Highway Administration (FHWA) recommends roundabouts.

- 9. Question: How much land is going to be taken away from property owners at the roundabouts?
- 10. <u>Answer</u>: Full property acquisitions are not anticipated; takings would be limited to a small corner or road frontage, and some may be construction or sidewalk easements. The County Solicitors Office would reach out to property owners where we need to purchase easements or acquisitions in subsequent design phases.
- 11. Comment: When will construction start?

Response: The project delivery process generally takes about 5 years to get to construction, depending on funding availability. The current estimate is construction would begin in 2027 or 2028.

12. <u>Question</u>: What is the cost comparison for installation of roundabout versus traffic light traffic? Seems preferable in terms of safety for both drivers and pedestrians and cyclists.

<u>Answer</u>: See response to question 6. A traffic signal costs approximately \$250k-300k per intersection. Roundabout costs vary depending on size, road realignment, etc.

13. <u>Comment</u>: The Riverton Road roundabout does not create much of a curve for traffic heading from Cinnaminson into Riverton.

Response: The current speed limit along Riverton Road is 35 mph. The deflection of the approach, splitter island, and narrowing of the lanes helps reduce speeds as they approach the roundabout.



- 14. <u>Question</u>: How long will the estimated amount of construction time be from start to finish? <u>Answer</u>: It is anticipated that this work could be done in one construction season.
- 15. <u>Question</u>: Did you study the safety impact of simply reducing speed limits down to 30 miles an hour on Riverton and New Albany? Did you also study the impact of reducing the speeds along Tom Brown Road? People routinely speed even as they approach the intersection of Tom Brown Road and New Albany Road.

Response: Note that speed limit changes are constrained to the project limits shown. Speed limit reduction is only as effective as the roadway design and context. Typically a speed study is conducted to find the 85th percentile speed, the speed that 85% of people travel at. The roadway geometrics influence the 85th percentile speed – a straight and open roadway is conducive to higher speeds because motorists are comfortable driving faster. Speed reduction requires traffic calming measures. Roundabouts actually serve as traffic calming measure as well – the approach curvatures, splitter islands, and narrowing of the lanes result in slower speeds.

16. <u>Comment</u>: In response to the question about safety for bikes and pedestrians, you said roundabout slow down traffic, I believe you said the speed limit would be 35 mile per hour in the vicinity of the circle. This is far, far faster than 0 mph when all vehicles stop at a four way stop unless you were stopping traffic for bikes and pedestrians.

Response: see response to questions 3 and 7. With a four way intersection, there are still multiple (32) conflict points that an individual crossing has to look for different types of traffic, so they may come to a stop, but there are more conflict points to check. In the roundabout, there are only 8 conflict points, and everyone is travelling in the same direction at a slow rate of speed to reduce the speed differential. When the speed differential is reduced, the chance for severe injury or fatalities is also reduced. This was from empirical data derived from all over the country.

Roundabouts reduce the travel speed to 25 mph or less, which is about the speed of a bicyclist. The idea is for the bicyclist to be able to safely navigate the roundabout. However, if people do not feel comfortable riding their bike within the roundabout, sidewalks will be provided so bicyclists can dismount the bike and walk around.

17. <u>Comment</u>: Reason why removing left turn onto Riverton Rd is good. Cars turning right from Fernwood onto Riverton or often not seen by cars getting ready to turn left from New Albany onto Riverton. very short distance and cars accelerate live at the corner of Riverton and Fernwood and make that turn frequently experience a number of instances of cars turning from New Albany onto Riverton in front of me. So many near misses.

<u>Response</u>: That's great information to know because when we do the crash analysis, you know we're using reported data. We don't typically get information on the near misses unless we talk to stakeholders.

18. <u>Question</u>: Did you consider making the triangle one large single circle with the condos in the middle?

<u>Answer</u>: A full circle as noted would increase the approach lengths, so speed can vary between each of the links, creating crash problems.

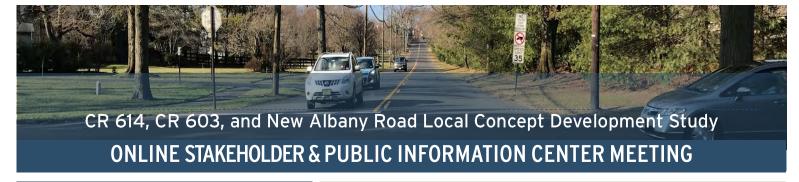
19. <u>Question</u>: Is there concern of traffic backing up on the small section of Tom Brown Rd between New Albany Rd and Riverton?

<u>Answer</u>: A thorough analysis was conducted of these two roundabouts operating together because if one roundabout should create queues, it could go back to the other roundabout and thus create gridlock. The analysis for the recommended preferred alternative indicates exceptional levels of service and simulations show minimal queuing.



A copy of the presentation and meeting invitation flyer is provided herein.

This memorandum of record is believed to be an accurate record of the discussions at this meeting. If any of the attendees disagree with the documented discussion, please contact <u>Julia Steponanko</u> at (908) 236-9001 within 10 days of receipt of minutes. If no comments are received, then this memorandum will be considered a true and accurate record of this meeting.



You're Invited!

Tuesday, October 17, 2023

Stakeholder Meeting 3:30 PM - 4:30 PM

Public Information Center 5:00 PM - 7:00 PM

> Please see the opposite side for details on how to join.

Burlington County, in cooperation with the Delaware Valley Regional Planning Commission (DVRPC), is conducting a Local Concept Development (LCD) study to determine appropriate improvements to CR 614 (Tom Brown Road), CR 603 (Riverton Road), and New Albany Road. The project goals are to enhance safety and improve operations for all modes of transportation.

This Stakeholder Meeting and Public Information Center (PIC) will be held online to introduce the LCD Study, present project information, existing conditions, and Preliminary Preferred Alternative (PPA); and obtain stakeholders' input on community interests and issues on the same.

All members of the public are encouraged to attend this online meeting to learn about the study and ask questions about the project.



For more information, please visit

tombrownroadintersection.com



Please use the links or QR codes below on your computer, tablet or smartphone.

Register for the stakeholder meeting: http://tiny.cc/kuobvz



Attend the PIC: <a href="http://tiny.cc/ywobvz">http://tiny.cc/ywobvz</a>



If you cannot attend these meetings but would still like to participate in the study, please visit the project website, fill out a comment form, or send us an email.

Comments can also be sent to: Burlington County Engineer's Office Traffic Section 1900 Briggs Road, Mt. Laurel, NJ 08054 P: 856-642-3720

E: Traffic@co.burlington.nj.us





CR 614, CR 603, and New Albany Road
Local Concept Development Study

Stakeholder Meeting & Public Information Center 2
October 17, 2023

GPI Greenman-Pedersen, Inc.
Engineering and Construction Services

# Agenda

- Project Team
- Project Delivery Process
- Project Location
- Existing Conditions
- Environmental Constraints
- · Purpose and Need
- Recommended Alternative
- Next Steps
- Questions



3

# Project Team



William E. Sheaffer – Project Manager, County Engineer's Office



John J. Coscia Jr. – Manager, Office of Transportation Services



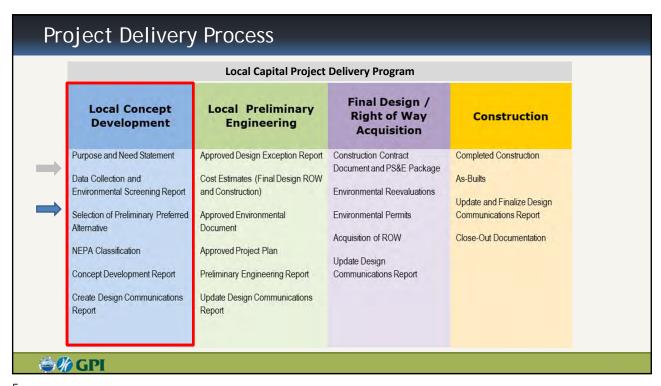
Thomas Berryman – Local Aid Alka Shah – Local Aid Sean Warren – Bureau of Environmental Program Resources



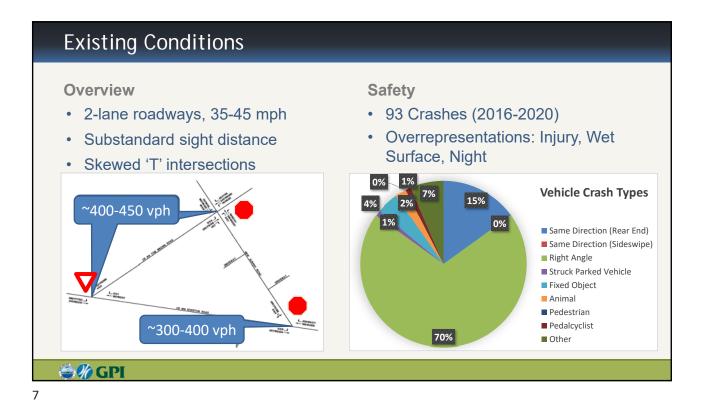
**Bernard Boerchers, PE, PTOE** – Project Manager **Julia Steponanko, PE, RSP**<sub>1</sub> – Deputy Project Manager

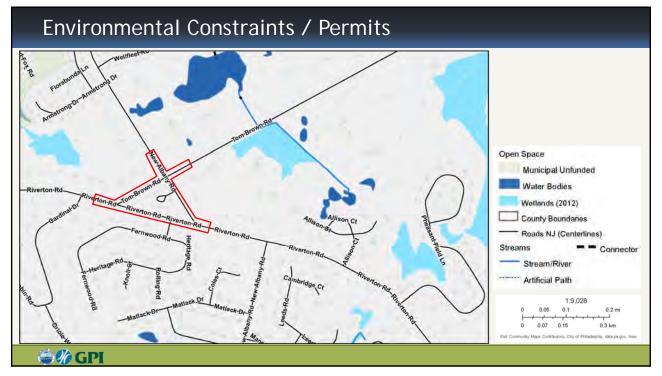


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## Purpose and Need



#### **Purpose**

The purpose of this project is to enhance safety and improve integrated operations to provide safe, efficient, and reliable intersections for all modes of transportation.



#### Need

- ✓ Ranked as high crash location/crash history
- ✓ Substandard sight distance
- √ Skewed intersections

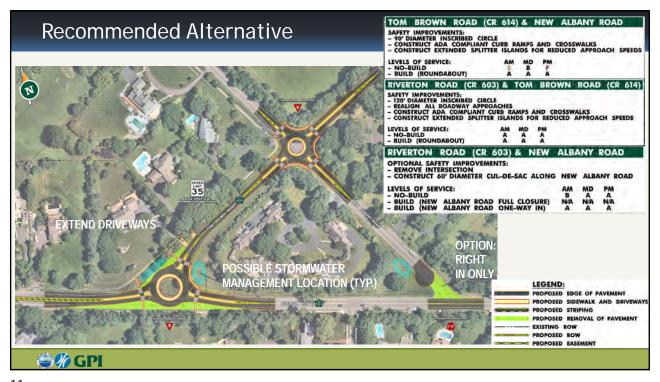
#### **Goals and Objectives**

- Enhance bicycle / pedestrian compatibility
- Avoid or minimize social, economic and environmental impacts
- Minimize impacts to road users during construction



9











# **Recommended Alternative**

#### **Impacts**

Category	No-Build	Recommended Alternative
ROW	n/a	Yes (6 partial)
Access	n/a	Yes (2 driveways)
Utilities	None	Yes
SWM	n/a	Yes
Cost*	\$0	\$4.5M

<sup>\*</sup> Construction cost excludes ROW, utilities, inspection

#### **Advantages**

- √ Addresses Purpose and Need
- ✓ Proven Safety Countermeasures
- √ Improves operations
- ✓ Provide standard lane / shoulder widths where appropriate
- ✓ ADA compliant curb ramps / crosswalks
- ✓ Realignment improves intersection sight triangles

**●%** GPI

15







#### WEBSITE CONTACT US FORM SUBMISSIONS

FY2021 Burlington County Local Concept Development (LCD) Study Intersection Study for CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County, NJ NJX-2021690.00

LOCATION: https://www.tombrownroadintersection.com/

DATE RECEIVED	NAME	DO YOU LIVE OR WORK IN THE PROJECT AREA?
8/16/2022	Patrick Craven	Yes
	EMAIL	WHAT IS YOUR AFFILIATION?
	pcraven@outlook.com	Resident
	ADDRESS	DO YOU SUPPORT THE PROJECT?
	264 N Riding Dr	Yes
PLEASE PROVIDE	ANY QUESTIONS OR COMMENTS.	
l attended the first	public session, and I was the individua	l who made the comment about establishing an email
mailing list as futu	e events pop up. This intersection is or	ne I travel through multiple times a day, and I would like to
be in a position to	offer hopefully helpful feedback as the	project advances.
DATE RECEIVED	NAME	DO YOU LIVE OR WORK IN THE PROJECT AREA?
8/18/2022	Elizabeth G Litten	Yes
	EMAIL	WHAT IS YOUR AFFILIATION?
	elitten@foxrothschild.com	Resident
	ADDRESS	DO YOU SUPPORT THE PROJECT?
	916 Fernwood Road	Yes
PLEASE PROVIDE	ANY QUESTIONS OR COMMENTS.	
I am strongly in fav	or of installation of traffic lights at the i	ntersection of Riverton and Tom Brown Rds. The back of
• .	_	ntersection of Riverton and Tom Brown Rds. The back of ersection. I'm aware of 3 crashes in past 2 years, two in
my property is imn	_	
my property is imn	nediately behind the Tom Brown Rd inte	
my property is imn daylight with no ha	nediately behind the Tom Brown Rd inte	
my property is imn daylight with no ha DATE RECEIVED	nediately behind the Tom Brown Rd inte zardous conditions.	ersection. I'm aware of 3 crashes in past 2 years, two in
my property is imn daylight with no ha DATE RECEIVED	nediately behind the Tom Brown Rd integrated in the zardous conditions.	prsection. I'm aware of 3 crashes in past 2 years, two in  DO YOU LIVE OR WORK IN THE PROJECT AREA?
my property is imn	nediately behind the Tom Brown Rd integrated as a conditions.  NAME Chris Salvatico	DO YOU LIVE OR WORK IN THE PROJECT AREA?
my property is imn daylight with no ha DATE RECEIVED	nediately behind the Tom Brown Rd integrated and in	DO YOU LIVE OR WORK IN THE PROJECT AREA? Yes WHAT IS YOUR AFFILIATION?
my property is imn daylight with no ha DATE RECEIVED	nediately behind the Tom Brown Rd integrated and several Rd integrated	DO YOU LIVE OR WORK IN THE PROJECT AREA? Yes WHAT IS YOUR AFFILIATION? Resident

	600 Tournament Drive, Moorestown, NJ	No
	ADDRESS	DO YOU SUPPORT THE PROJECT?
	odin08075@yahoo.com	Resident
	EMAIL	WHAT IS YOUR AFFILIATION?
8/21/2022	Stephen Simensen	No
DATE RECEIVED	NAME	DO YOU LIVE OR WORK IN THE PROJECT AREA?

#### PLEASE PROVIDE ANY QUESTIONS OR COMMENTS.

My suggestion is to eliminate Tom Brown Road as a through road and fix the New Albany/Riverton Road so that it meets at a 90 degree angle and put a light there.



DATE RECEIVED	NAME	DO YOU LIVE OR WORK IN THE PROJECT AREA?
10/30/2023	Peter McLoone	Yes
	EMAIL	WHAT IS YOUR AFFILIATION?
	peter.mcloone@gmail.com	Resident
	ADDRESS	DO YOU SUPPORT THE PROJECT?
	211 Westminster Ave, Merchantville, NJ	Yes
	08109	

#### PLEASE PROVIDE ANY QUESTIONS OR COMMENTS.

Please improve the safety of Riverton Rd (CR 603) between the two New Albany Rd intersections. For cyclists going east, the shoulder disappears before the right-turn lane appears creating a dangerous road configuration. At the very least, CR 603 should have its surface repaired in this area and the shoulder expanded.

# **APPENDIX** J

# RESOLUTIONS OF SUPPORT



# **Burlington County Board of Commissioners**

49 Rancocas Road, Mount Holly, NJ, 08060 P.O. Box 6000, Mount Holly, NJ, 08060 (609) 265-5020 • www.co.burlington.nj.us

Eve A. Cullinan, County Administrator Erin M. Kelly, Clerk of the Board

# Burlington County Commissioners

Felicia Hopson, Director Daniel J. O'Connell, Deputy Allison Eckel Tom Pullion Balvir Singh

#### AGENDA, REGULAR MEETING, BOARD OF COMMISSIONERS, COUNTY OF BURLINGTON

Date: Mar 13, 2024 - 7:00 PM

Location: County Administration Building

Commissioner's Board Room

49 Rancocas Road Mount Holly, NJ 08060

Agenda: AUTHORIZATION OF A RESOUTION OF SUPPORT FOR THE LOCAL CONCEPT DEVELOPMENT PRELIMINARY PREFERRED ALTERNATIVE FOR INTERSECTION IMPROVEMENTS OF TOM BROWN ROAD (CR 614), RIVERTON ROAD (CR 603) AND NEW ALBANY ROAD IN MOORESTOWN TOWNSHIP FOR THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF ENGINEERING

Official Resolution#			2024-00140					
Meeting Date		03/13/2024						
Introduced Date		03/13/2024						
Adopted Date			03/	13/2	202	4		
Agenda Item			h-2	9				
CAF#								
Purchase Req. #								
Result			Adopted					
COUNTY COMMISSIONER	litt (A		MOVE	SEC	AYE	NAY	ABST.	RECU.
Hopson, Director	~				~			
O'Connell,   Deputy			~	~				
Eckel -				~				
Pullion	Pullion ~				~			
Singh	~				~			

I HEREBY CERTIFY THAT THIS DOCUMENT IS A TRUE, COMPLETE AND ACCURATE COPY OF THIS RESOLUTION, ADOPTED BY THE BOARD MEMBERS OF THE COUNTY OF BURLINGTON, NJ AT THE MEETING REFERENCED THEREON

CLERK OF THE BOARD

WHEREAS the Board of County Commissioners of the County of Burlington (the "Board") is concerned with the health, safety, and welfare of all County residents; and

WHEREAS the Board is particularly concerned with the safety of the travelling public on all roads within Burlington County; and

WHEREAS, the Board is responsible for improving and the maintenance of Tom Brown Road (CR 614), Riverton Road (CR 603) and New Albany Road; and

WHEREAS, the three (3) intersections included in this project are a four-way stop control and two (2) two-way stop control intersections; and

WHEREAS, the proposed improvements will enhance safety of the traveling public at these intersections, including vehicles, pedestrians, and cyclists; and

WHEREAS, the Delaware Valley Regional Planning Commission, on behalf of the County of Burlington, has chosen Greenman-Pedersen, Inc. ("GPI") as the consultant for the Local Concept Development Study; and

WHEREAS, GPI and the County of Burlington have studied numerous alternatives to assure the public safety, including two-way stop control, all-way stop control, traffic signalization, roundabouts, and realignment of skewed intersections; and

WHEREAS, each alternative includes complaint signing and striping, pedestrian accommodations, and lighting, the following alternatives we decided for this study:

- Alternative 1
  - o Roundabout at Tom Brown Road & New Albany Road
  - Realigned intersection at Tom Brown Road and Riverton Road that is controlled by a traffic signal or stop control
  - o No improvements at New Albany Road and Riverton Road
- Alternative 2
  - o Roundabout at Tom Brown Road & New Albany Road
  - o Roundabout at Tom Brown Road and Riverton Road
  - Cul-de-sac at New Albany Road and Riverton Road, with an option to maintain right-turns on New Albany Road only
- Alternative 3
  - o No build; and

Introduced on: March 13, 2024 Adopted on: March 13, 2024 Official Resolution#: 2024-00140 WHEREAS, it has been determined that the proposed preferred alternative is Alternative 2 which is to construct roundabouts at the intersection of Tom Brown Road (CR 614) and New Albany and at the intersection of Tom Brown Road (CR 614) and Riverton Road (CR 603), and restrict the movement of vehicles at the intersection of Riverton Road (CR 603) and New Albany Road by constructing a cul-de-sac; now, therefore, be it

RESOLVED, by the Board of County Commissioners of the County of Burlington, that Board does endorse the intersection improvements for Tom Brown Road (CR 614), Riverton Road (CR 603), and New Albany Road with the proposed preferred alternative (Alternative 2) as described above.

Introduced on: March 13, 2024 Adopted on: March 13, 2024 Official Resolution#: 2024-00140

Box.

#### TOWNSHIP OF MOORESTOWN

#### **RESOLUTION NO. 73-2024**

#### SUPPORTING THE COUNTY OF BURLINGTON'S PREFERRED ALTERNATIVE FOR THE INTERSECTION IMPROVEMENTS FOR CR 614 TOM BROWN ROAD, CR 603 RIVERTON ROAD, AND NEW ALBANY ROAD

**WHEREAS**, the County of Burlington is responsible for improving and the maintenance of CR 614 Tom Brown Road and CR 603 Riverton Road; and

WHEREAS, the three (3) intersections included in this project are a four-way stop control and two (2) two-way stop control intersections; and

WHEREAS, the proposed improvements will enhance safety of the traveling public at these intersections, including vehicles, pedestrians, and cyclists; and

WHEREAS, the Delaware Valley Regional Planning Commission ("DVRPC"), on behalf of the County of Burlington, has chosen Greenman-Pedersen, Inc. ("GPI") as the consultant for the Local Concept Development Study; and

WHEREAS, GPI and the County of Burlington have studied numerous alternatives to assure the public safety, including two-way stop control, all-way stop control, traffic signalization, roundabouts, and realignment of skewed intersections; and

WHEREAS, each alternative includes complaint signing and striping, pedestrian accommodations, and lighting; the following alternatives were studied:

- Alternative 1
  - o Roundabout at CR 614 Tom Brown Road & New Albany Road
  - o Realigned intersection at CR 614 Tom Brown Road and CR 603 Riverton Road that is controlled by a traffic signal or stop control
  - o No improvements at New Albany Road and CR 603 Riverton Road
- Alternative 2
  - o Roundabout at CR 614 Tom Brown Road & New Albany Road
  - o Roundabout at CR 614 Tom Brown Road and CR 603 Riverton Road
  - Cul-de-sac at New Albany Road and CR 603 Riverton Road, with an option to maintain right-turns on New Albany Road only
- Alternative 3
  - o No build

WHEREAS, the County of Burlington's proposed preferred alternative is Alternative 2 which is to construct roundabouts at the intersection of CR 614 Tom Brown Road and New Albany and at the intersection of CR 614 Tom Brown Road and CR 603 Riverton Road, and restrict the movement of vehicles at the intersection of CR 603 Riverton Road and New Albany Road by constructing a cul-de-sac; and

WHEREAS, the Township of Moorestown recognizes the need to improve safety of the traveling public at these three (3) intersections for CR 614 Tom Brown Road, CR 603 Riverton Road, and New Albany Road.

**NOW, THEREFORE, BE IT RESOLVED,** by the Township Council of the Township of Moorestown, County of Burlington, does hereby endorse the intersection improvements for CR 614 Tom Brown Road, CR 603 Riverton Road, and New Albany Road with the County of Burlington's preferred alternative (Alternative 2) as described above.

<u>VOTE</u> :				
GILLESPIE	YES			
LAW	YES			
KEATING	YES			
MAMMARELLA	YES			
ZIPIN	YES			

Certified to be a true and correct copy of a Resolution adopted by the Township Council at its meeting on February 12, 2024.

Patricia L. Hunt, RMC Township Clerk

# APPENDIX K

# CONSTRUCTION COST ESTIMATES



Project: DVRPC FY 2021 LCD - 614, 603, New Albany Rd

 Created by:
 CAM
 Date:
 03/13/23

 Checked by:
 JS
 Date:
 03/15/23

DVRPC FY 2021 Burlington County LCD - 614, 603, New Albany Rd

Moorestown Township, Burlington County

Class 2 South - Reconstruction, Widening and Dualization

**Combined Alternative 1** 

#### Unit costs based on NJDOT Construction Cost Estimating Guidelines & NJDOT Bid Price Reports

Std Pay Item	Item Description	Qty	Unit		Unit Cost	Estimate Cost
151006M	PERFORMANCE BOND AND PAYMENT BOND	1	DOLL	\$	25,000.00	\$25,000
153003P	PROGRESS SCHEDULE	1	LS	\$	7,000.00	\$7,000
153005M	PROGRESS SCHEDULE UPDATE	24	UNIT	\$	500.00	\$12,000
154003P	MOBILIZATION	1	LS	\$	214,000.00	\$214,000
157004M	CONSTRUCTION LAYOUT	1	DOLL	\$	50,000.00	\$50,000
158030M	INLET FILTER TYPE 2, 2' X 4'	10	UNIT	\$	150.00	\$1,500
158033M	INLET FILTER TYPE 2, 4' X 4'	10	UNIT	\$	300.00	\$3,000
158063P	CONCRETE WASHOUT SYSTEM	1	LS	\$	5,000.00	\$5,000
160004M	FUEL PRICE ADJUSTMENT	1	DOLL	\$	3,300.00	\$3,300
160007M	ASPHALT PRICE ADJUSTMENT	1	DOLL	\$	6,200.00	\$6,200
161003P	FINAL CLEANUP	1	LS	\$	10,000.00	\$10,000
201003P	CLEARING SITE	1	LS	\$	50,000.00	\$50,000
202009P	EXCAVATION, UNCLASSIFIED	1032	CY	\$	25.00	\$25,800
202021P	REMOVAL OF PAVEMENT	2222	SY	\$	10.00	\$22,220
302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	2428	SY	\$	15.00	\$36,420
401009P	HMA MILLING, 3" OR LESS	5277	SY	\$	5.00	\$26,385
401027M	POLYMERIZED JOINT ADHESIVE	4980	LF	\$	1.00	\$4,980
401030M	TACK COAT	1156	GAL	\$	1.00	\$1,156
401036M	PRIME COAT	850	GAL	\$	1.00	\$850
401042M	HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE	887	TON	\$	150.00	\$133,050
401072M	HOT MIX ASPHALT 12.5 M 64 INTERMEDIATE COURSE	559	TON	\$	100.00	\$55,900
401099M	HOT MIX ASPHALT 25 M 64 BASE COURSE	838	TON	\$	100.00	\$83,800
606003P	HOT MIX ASPHALT SIDEWALK, 2" THICK	330	SY	\$	100.00	\$33,000
606012P	CONCRETE SIDEWALK, 4" THICK	187	SY	\$	150.00	\$28,050
606036P	HOT MIX ASPHALT DRIVEWAY, 4" THICK	136	SY	\$	100.00	\$13,600
606036P 606075P	CONCRETE ISLAND, 4" THICK	271	SY	\$	125.00	
606073P	DETECTABLE WARNING SURFACE	22	SY	\$	300.00	\$33,875 \$6,600
	9" X 18" CONCRETE VERTICAL CURB		LF	\$		
607021P	12" X 13" CONCRETE SLOPING CURB	2294	1	\$	60.00	\$137,640
607030P	TRUCK APRON	176	LF	\$	100.00	\$17,600
NS600100	TRAFFIC STRIPES, 4"	106	SY		300.00	\$31,800
610003M		6892	LF	\$	2.00	\$13,784
610017M	TRAFFIC MARKING LINES, 24"	533	LF	\$	10.00	\$5,330
610060M	TRAFFIC MARKINGS SYMBOLS	159	SF	\$	7.00	\$1,113
612003P	REGULATORY AND WARNING SIGN	200	SF	\$	50.00	\$10,000
804000P	TOPSOIL SPREADING" THICK	3604	SY	\$	8.00	\$28,832
806006P	FERTILIZING AND SEEDING, TYPE A-3	3604	SY	\$	2.00	\$7,208
809003M	STRAW MULCHING	3604	SY	\$	2.00	\$7,208
	STORMWATER MANAGEMENT	1	LS	\$	500,000.00	\$500,000
	TRAFFIC SIGNAL - TOM BROWN ROAD & RIVERTON ROAD	1	LS	\$	250,000.00	\$250,000
	ROUNDABOUT LIGHTING (1 LOCATION)	1	LS	\$	250,000.00	\$250,000
	ROADWAY SUBTOTAL					\$2,153,201
	TRAFFIC CONTROL	10%	SUBTOTAL			\$215,320
		10/0	JODIOTAL			Ų21J,J2U
		-	ngingg-1- C	otu	ion Cost Estimate	¢2.200.524
	Engineer's Construction Cost E		<u> </u>	struct	cion Cost Estimate = 25%	\$2,368,521

#### **CONCEPT DEVELOPMENT PROJECT COST ESTIMATE SUMMARY**

DVRPC FY 2021 LCD - 614, 603, New Albany Rd	
Moorestown Township, Burlington County	
Class 2 South - Reconstruction, Widening and Dualization	
Combined Alternative 1	By/Date: CAM - 3-13-2023

Construction Cost Estimate Based on NJDOT Bid Price	
Report =	\$2,960,651
0% Inflation =	\$0
CONSTRUCTION COST ESTIMATE =	\$2,960,651

#### **CONTINGENCIES & ESCALATION**

**CONTINGENCIES & ESCALATION** 

Project Cost (Mil.)	Contingencies (C)	Average Construction Duration in Years
0-5	3.0%	1
5-20	2.5%	2
Over 20	2.09/	2

#### **CONSTRUCTION ENGINEERING (CE)**

	,	% of Construction
Project Cost (Mil.)	10	Cost
Less than 1.0		31.10%
1.0 to 5.0		20.30%
5.0 to 10.0		16.20%
10.0 & above		12.20%
CONSTRUCTION ENGINEERING	=	\$601,012

#### CONSTRUCTION CHANGE ORDER CONTINGENCIES

Total Federal Participating Items in Millions of \$

\$6,000

0.1 to 0.5

0.5 to 5.0

5.0 to 10.0

1.0 to 15.0

25,000 + 4% of amount in excess of \$500,000

205,000 + 3% of amount in excess of \$5,000,000

355,000 + 2% of amount in excess of \$10,000,000

15.0 and above

For State Funded Projects, Contingencies for Change orders = 0

CONSTRUCTION CHANGE ORDER CONTINGENCIES = \$123,400

#### UTILITIES RELOCATIONS BY COMPANIES/OWNERS

Construction Cost Estimate

Use % of overall construction cost x 0.12 or utilities detailed estimate

| \$2,960,651 | 12% urban/5.5% rural | Utility Relocation Cost for Initial Estimate | \$355,278 | \$12% urban/5.5% rural

UTILITIES RELOCATION COST = N/A County Project

If there are no utility relocations on the project indicate "No Utilities" in the box above.

RIGHT OF WAY COST =	=	N/A

If there is no ROW cost on the project indicate "No ROW" the box

#### SUMMARY

Construction Cost Estimate	\$2,960,651
Contingencies & Escalation	\$393,767
Construction Engineering (CE)	\$601,012
Construction Change Order Contingencies	\$123,400
Utilities Relocation Cost	N/A
Total Project Construction Cost	\$4,078,830
Right of Way Cost	N/A

\$393,767

DVRPC FY21 LCD - CR 614, 603 and New Albany Road

RIGHT OF WAY COST ESTIMATE SUMMARY - Alt 1	
RIGHT OF WAY COSTS 3 parcels	\$3,051,920.00
REPLACEMEMT HOUSING OWNER	
REPLACEMENT HOUSING TENANT 1 family	
RESIDENTIAL MOVING PAYMENT 1 family	
BUSINESS AND FARM PAYMENTS	
SIGNS & BILLBOARDS	
DEMOLITION COSTS	
LAST RESORT HOUSING	
APPRAISAL FEES (2) SPECIALIST(1) 3K per appraisal, 15K NRE	\$21,000.00
AWARDS & JUDGEMENTS 40K per parcel + 25%	\$100,000.00
CLOSING COSTS 5K per parcel + 25%	\$12,500.00
TOTAL	\$3,185,420.00
INCIDENTAL COSTS	\$66,000.00
GRAND TOTAL CAPITAL & INCIDENTAL	\$3,251,420.00

\$200.00 per square foot was selected for fee value, from a search of recent sales in the project area. 30% of fee value for construction easements.

Cost Summary - Alt 1	Estimated Cost (2022 Dollars)							
Phase/Item							Rοι	ınded
Preliminary Engineering								
Final Design				C&E				
Construction	\$	2,960,651	\$	393,767	\$	3,354,418	\$	3,354,400
Utilities	\$	-	\$	-	\$	-	\$	-
Construction Engineering*	\$	724,412	\$	-	\$	724,412	\$	724,400
Construction Inspection	\$	489,460			\$	489,460	\$	489,500
TOTAL	\$	3,685,063	\$	-	\$	3,685,063	\$	3,685,100
Other: ROW**	\$	3,051,920	,		\$	3,051,920	\$	3,052,000

<sup>\*</sup> Includes change orders assuming federal funds

#### Cost Summary, Rounded to Nearest \$10k

Cost Summary Alt 1					
Phase/Item	Estir				
Preliminary Engineering	\$	221,000			
Final Design	\$	369,000			
Construction	\$	3,354,400			
Utilities	\$	-			
Construction Engineering	\$	724,400			
Construction Inspection	\$	489,500			
Total Project Cost	\$	5,158,300			
ROW	\$	3,052,000			



Project: DVRPC FY 2021 LCD - 614, 603, New Albany Rd

 Created by:
 CAM
 Date:
 03/13/23

 Checked by:
 JS
 Date:
 03/15/23

DVRPC FY 2021 Burlington County LCD - 614, 603, New Albany Rd

Moorestown Township, Burlington County

Class 2 South - Reconstruction, Widening and Dualization

Combined Alternative 2 / PPA

#### Unit costs based on NJDOT Construction Cost Estimating Guidelines & NJDOT Bid Price Reports

Std Pay Item	Item Description	Qty	Unit		Unit Cost	Estimate Cost
151006M	PERFORMANCE BOND AND PAYMENT BOND	1	DOLL	\$	25,000.00	\$25,000
153003P	PROGRESS SCHEDULE	1	LS	\$	7,000.00	\$7,000
153005M	PROGRESS SCHEDULE UPDATE	24	UNIT	\$	500.00	\$12,000
154003P	MOBILIZATION	1	LS	\$	238,000.00	\$238,000
157004M	CONSTRUCTION LAYOUT	1	DOLL	\$	50,000.00	\$50,000
158030M	INLET FILTER TYPE 2, 2' X 4'	10	UNIT	\$	150.00	\$1,500
158033M	INLET FILTER TYPE 2, 4' X 4'	10	UNIT	\$	300.00	\$3,000
158063P	CONCRETE WASHOUT SYSTEM	1	LS	\$	5,000.00	\$5,000
160004M	FUEL PRICE ADJUSTMENT	1	DOLL	\$	3,400.00	\$3,400
160007M	ASPHALT PRICE ADJUSTMENT	1	DOLL	\$	6,300.00	\$6,300
161003P	FINAL CLEANUP	1	LS	\$	10,000.00	\$10,000
201003P	CLEARING SITE	1	LS	\$	50,000.00	\$50,000
202009P	EXCAVATION, UNCLASSIFIED	909	CY	\$	25.00	\$22,725
202021P	REMOVAL OF PAVEMENT	2982	SY	\$	10.00	\$29,820
302036P	DENSE-GRADED AGGREGATE BASE COURSE, 6" THICK	2482	SY	\$	15.00	\$37,230
401009P	HMA MILLING, 3" OR LESS	5277	SY	\$	5.00	\$26,385
401027M	POLYMERIZED JOINT ADHESIVE	6749	LF	\$	1.00	\$6,749
401030M	TACK COAT	1164	GAL	\$	1.00	\$1,164
401036M	PRIME COAT	869	GAL	\$	1.00	\$869
401042M	HOT MIX ASPHALT 9.5 M 64 SURFACE COURSE	893	TON	\$	150.00	\$133,950
401072M	HOT MIX ASPHALT 12.5 M 64 INTERMEDIATE COURSE	571	TON	\$	100.00	\$57,100
401099M	HOT MIX ASPHALT 25 M 64 BASE COURSE	856	TON	\$	100.00	\$85,600
606003P	HOT MIX ASPHALT SIDEWALK, 2" THICK	0	SY	\$	100.00	\$0
606012P	CONCRETE SIDEWALK, 4" THICK	264	SY	\$	150.00	\$39,600
606036P	HOT MIX ASPHALT DRIVEWAY, 4" THICK	73	SY	\$	100.00	\$7,300
606075P	CONCRETE ISLAND, 4" THICK	420	SY	\$	125.00	\$52,500
606084P	DETECTABLE WARNING SURFACE	28	SY	\$	300.00	\$8,400
607021P	9" X 18" CONCRETE VERTICAL CURB	4187	LF	\$	60.00	\$251,220
607030P	12" X 13" CONCRETE SLOPING CURB	437	LF	\$	100.00	\$43,700
NS600100	TRUCK APRON	339	SY	\$	300.00	\$101,700
610003M	TRAFFIC STRIPES, 4"	7985	LF	\$	2.00	\$15,970
610017M	TRAFFIC MARKING LINES, 24"	760	LF	\$	10.00	\$7,600
610060M	TRAFFIC MARKINGS SYMBOLS	84	SF	\$	7.00	\$588
612003P	REGULATORY AND WARNING SIGN	200	SF	\$	50.00	\$10,000
804000P	TOPSOIL SPREADING" THICK	3882	SY	\$	8.00	\$31,056
806006P	FERTILIZING AND SEEDING, TYPE A-3	3882	SY	\$	2.00	\$7,764
809003M	STRAW MULCHING	3882	SY	\$	2.00	\$7,764
		3002	j.	-	2.00	+.,
	STORMWATER MANAGEMENT	1	LS	\$	500,000.00	\$500,000
	ROUNDABOUT LIGHTING (2 LOCATIONS)	2	LS	\$	250,000.00	\$500,000
	,,				.,	, , 3
	ROADWAY SUBTOTAL					\$2,397,954
	TRAFFIC CONTROL	10%	SUBTOTAL			\$239,795
		20,0				+=35,753
		F	Ingineer's Cor	structi	ion Cost Estimate =	\$2,637,749
	Engineer's Construction Cost				25%	\$3,297,187

#### **CONCEPT DEVELOPMENT PROJECT COST ESTIMATE SUMMARY**

DVRPC FY 20	021 Burlington County LCD - 614, 603, New Albany Rd	
Moorestown T	ownship, Burlington County	
Class 2 South	- Reconstruction, Widening and Dualization	
Combined Alte	ernative 2 / PPA	By/Date: CAM - 3-13-2023

Construction Cost Estimate Based on NJDOT Bid Price	
Report =	\$3,297,187
0% Inflation =	\$0
CONSTRUCTION COST ESTIMATE =	\$3,297,187

#### **CONTINGENCIES & ESCALATION**

**CONTINGENCIES & ESCALATION** 

Y = Number of Years until midpoint of construction duration plus number of years until

construction start. If midpoint is less than 2 years from the date of this estimate, no

escalation is required. Maximum value = 10%

\$3,297,187

1.03

1.10

Engineer's Construction Cost Estimate (NJDOT BPR)

Contingencies (1 + C)

1 + [0.01 (Y+1) (Y-2)]

Project Cost (Mil.)	Contingencies (C)	Average Construction Duration in Years
0-5	3.0%	1
5-20	2 5%	2

2.0%

#### **CONSTRUCTION ENGINEERING (CE)**

		% of Construction
Project Cost (Mil.)		Cost
Less than 1.0		31.10%
1.0 to 5.0		20.30%
5.0 to 10.0		16.20%
10.0 & above		12.20%
CONSTRUCTION ENGINEERING	=	\$669,329

#### CONSTRUCTION CHANGE ORDER CONTINGENCIES

Over 20

 Total Federal Participating Items in Millions of \$
 Construction Change Order Contingency Amount

 \$0 to 0.1
 \$6,000

 0.1 to 0.5
 25,000

 0.5 to 5.0
 25,000 + 4% of amount in excess of \$500,000

 5.0 to 10.0
 205,000 + 3% of amount in excess of \$5,000,000

 10.0 to 15.0
 355,000 + 2% of amount in excess of \$10,000,000

 15.0 and above
 500,000

For State Funded Projects, Contingencies for Change orders = 0

CONSTRUCTION CHANGE ORDER CONTINGENCIES = \$136,900

#### UTILITIES RELOCATIONS BY COMPANIES/OWNERS

Construction Cost Estimate

Use % of overall construction cost x 0.12 or utilities detailed estimate

S3,297,187

Utility Relocation Cost for Initial Estimate

12.00%

\$395,662

UTILITIES RELOCATION COST = N/A County Project

If there are no utility relocations on the project indicate "No Utilities" in the box above.

RIGHT OF WAY COST	=	N/A
If there is no ROW cost on the project indicate "No ROW" the box		

SIIMMARY

\$3,297,187
\$438,526
\$669,329
\$136,900
N/A
\$4,541,941
N/A

\$438,526

DVRPC FY21 LCD - CR 614, 603 and New Albany Road

RIGHT OF WAY COST ESTIMATE SUMMARY - PPA	
RIGHT OF WAY COSTS 3 parcels	\$2,536,900.00
REPLACEMEMT HOUSING OWNER	
REPLACEMENT HOUSING TENANT 1 family	
RESIDENTIAL MOVING PAYMENT 1 family	
BUSINESS AND FARM PAYMENTS	
SIGNS & BILLBOARDS	
DEMOLITION COSTS	
LAST RESORT HOUSING	
APPRAISAL FEES (2) SPECIALIST(1) 3K per appraisal, 15K NRE	\$21,000.00
AWARDS & JUDGEMENTS 40K per parcel + 25%	\$100,000.00
CLOSING COSTS 5K per parcel + 25%	\$12,500.00
TOTAL	\$2,670,400.00
INCIDENTAL COSTS	\$66,000.00
GRAND TOTAL CAPITAL & INCIDENTAL	\$2,736,400.00

\$200.00 per square foot was selected for fee value, from a search of recent sales in the project area. 30% of fee value for construction easements.

Cost Summary - Alt 2 / PPA	Estimated Cost (2022 Dollars)							
Phase/Item						Rounded		
Preliminary Engineering								
Final Design				C&E				
Construction	\$	3,297,187	\$	438,526	\$	3,735,713	\$	3,735,700
Utilities	\$	-	\$	-	\$	-	\$	-
Construction Engineering*	\$	806,229	\$	-	\$	806,229	\$	806,200
Construction Inspection	\$	545,033			\$	545,033	\$	545,000
TOTAL	\$	4,648,449	\$	-	\$	4,648,449	\$	4,648,400
Other: ROW**	\$	2,536,900	•		•		\$	5,086,900

<sup>\*</sup> Includes change orders assuming federal funds

#### Cost Summary, Rounded to Nearest \$10k

cost summary, nounaca to nearest \$200						
Cost Summary - PPA (Alt 2)						
Phase/Item	Esti	Estimated Cost				
Preliminary Engineering	\$	270,000				
Final Design	\$	370,000				
Construction	\$	3,735,700				
Utilities	\$	-				
Construction Engineering	\$	806,200				
Construction Inspection	\$	545,000				
Total Project Cost	\$	5,726,900				
ROW	\$	2,536,900				

## APPENDIX L

## ALTERNATIVES MATRIX

			Alternative		
Item / Criteria		1	2 / PPA	3	
Alternative Description	Description	b. Tom Brown Rd/Riverton Rd: Realign Tom Brown Rd approach to Riverton Rd and convert to TWSC (or signal), pedestrian improvements/relocate sidewalk on new alignment	a. Tom Brown Rd/New Albany Rd: Construct roundabout, pedestrian improvements, roundabout lighting b. Tom Brown Rd/Riverton Rd: Construct roundabout, pedestrian improvements, roundabout lighting c. New Albany Rd/Riverton Rd: Cul-de-sac (option to maintain right turns onto New Albany Rd)	No-Build	
A. Advantages	Description	<ul> <li>Widen roadway for standard lane / shoulder widths</li> <li>ADA compliant curb ramps / crosswalks</li> <li>Clear vegetation from intersection sight triangles</li> </ul>	Provide standard lane / shoulder widths where appropriate ADA compliant curb ramps / crosswalks Clear vegetation from intersection sight triangles	• No cost	
B. Disadvantages	Description	<ul> <li>Median refuge island on Riverton Rd</li> <li>Speed limit reduced on Tom Brown Rd to 35 mph between</li> <li>New Albany Rd and Riverton Rd</li> </ul>	Speed limit reduced on Tom Brown Rd to 35 mph between New Albany Rd and Riverton Rd	Does not address the project purpose and need.	
Purpose & Need					
A. Enhance safety at 4-way stop Tom Brown Rd / New Albany Rd	Meets PN (Y/N)	Υ	Υ	N	
B. Improve overall safety and integrated operation with Riverton Rd intersections	Meets PN (Y/N)	Υ	Υ	N	
Goals & Objectives					
C. Minimize environmental, quality of life, access, right of way and utility impacts	Meets Element (Y/N)	Υ	Y	N	
D. Improve bicycle and pedestrian access	Meets Element (Y/N)	Y	Υ	N	
E. Minimize impacts to all road users during construction	Meets Element (Y/N)	Υ	Υ	N	
New Design Exception	Y/N, description as needed	N, existing only	N, existing only	N	
Community/EJ Impacts	Y/N	N	N	N	
Environmental Impacts					
A. Floodplain	Y/N	N	N .	None	
B. Wetlands / Waterways	area in acres	0	0	0	
C. Riparian Zone	area in acres	0	0	0	
D. Federal/State T&E	Y/N	N .	N Law	None	
E. Cultural/Historic Resource	Low/High	Low	Low	None	
F. Air/Noise	Y/N Y/N	N N	N N	None	
G. Hazardous Waste	•	N Y	N Y	None	
Stormwater Management  A. Total Disturbance	Major Development (Y/N)	2.760	2.566	N 0	
B. Net New Impervious	area in acres	0.304	0.235	0	
C. Motor Vehicle Surface	area in acres	0.398	0.235	0	
Multimodal	Pedestrian/bicycle compatible?	0.398 Y	υ.318 Υ	N N	
Right of Way Impacts <sup>1</sup>	Description, total area in acres	5 partial fee takes, construction easements may be required	6 partial fee takes, construction easements may be required	None	
Access Impacts	Number of driveways	2 modifications	2 modifications	None	
Access impacts	ivalliber of aliveways	Utility pole relocations	Utility pole relocations	None	
Utility Impacts	Description		Valves and manholes will require resets.	None	
Level of Service (LOS)	AM/MD/PM	<u>a.</u> = A/A/A <u>b.</u> = A/A/A <u>c.</u> = B/A/A	<u>a.</u> = A/A/A <u>b.</u> = A/A/A <u>c.</u> = A/A/A (right in only)	<u>a.</u> = E/B/F <u>b.</u> = A/A/A <u>c.</u> = B/A/A	
HSM Benefit/Cost Ratio	Number	HSM not conducted	HSM not conducted	HSM not conducted	
Estimated Cost by Phase/Item	Rounded to nearest				
1. Preliminary Engineering (PE) <sup>2</sup>	Dollars	\$210,000	\$250,000	\$0.00	
2. Final Design (FD) <sup>2</sup>	Dollars	\$360,000	\$370,000	\$0.00	
3. Construction (with contingencies and escalation)	Dollars	\$3,354,418	\$3,735,713	\$0.00	
4. Utility Relocation Cost	Dollars	\$0	\$0	\$0.00	
5. Construction Engineering (CE) <sup>3</sup>	Dollars	\$724,412	\$806,229	\$0.00	
6. Construction Inspection (CI) <sup>4</sup>	Dollars	\$489,460	\$545,033	\$0.00	
7. Total Construction Cost (3+4+5+6)	Dollars	\$4,568,290	\$5,086,975	\$0.00	
				· ·	
8. ROW Cost <sup>1</sup>	Dollars	\$3,051,920	\$2,536,900	\$0.00	
9. Total Project Cost (sum items 1-6)	Dollars	\$5,138,290	\$5,706,975	\$0.00	
Construction Duration	Number of months	18	18	N/A	

NOTES: <sup>1</sup> Areas based on tax maps and GIS data; cost based on available property tax assessments, recent sales data, and estimates from other projects as reference

<sup>&</sup>lt;sup>2</sup> PE+FD assumed to be 14-15% of the construction cost (3+4+5)

<sup>&</sup>lt;sup>3</sup> Includes change orders assuming federal funds

<sup>&</sup>lt;sup>4</sup> CI assumed to be 12% of the construction cost (3+4+5)

## **APPENDIX M**

## RISK REGISTER



#### **NJDOT RISK MANAGEMENT**

PROJECT RISK REGISTER

Project Name: DVRPC FY21 LCD - CR 614, CR 603, and New Albany Road

Project Manager: John Coscia, Jr., DVRPC

William Scheaffer, Burlington County

Designer: Greenman-Pedersen, Inc.
UPC No.: N/A

 NJDOT Project Job No.:
 N/A
 Initial Register Date:
 6/1/2023

 NJDOT UPC #:
 N/A
 Last Register Update:
 2/22/2024

Municipality(ies):

County(ies):

Moorestown Twp

Burlington

Risk R	ank & ID	Risk Statement & Category Risk Analysis Matrix Risk Response Strategy & Respons					esponse Planning								
			Risk Ca	ategory		Risk	Impact	1							
Risk Rank	Unique ID#	Risk Statement	Initial Risk Owner	Risk May Occur In	Risk Probability	Schedule	Cost	Schedule Score	Cost Score	Final Score	Risk Response Strategy	Risk Response Action Plan	Final Risk Owner	Action Plan Status	Risk Last Updated
1	1	As a result of uncertain quantities and unit costs during CD (and PE), variations to the cost estimate may occur which would lead to a lack of available funding.	Project Management	Preliminary Engineering	5 - Very High	4 - Moderate	4 - Moderate	20	20	40	Mitigate Threat	Development of the cost estimate using the CCEG and AASHTOWare, along with updates during each project phase, should help reduce quantity and unit cost uncertainty.	Designer and County	Plan To Be Developed	6/1/2023
2	11	External stakeholders may be opposed to the project or support may change, resulting in changes to the design.	Community Relations	Preliminary Engineering	4 - High	7 - High	2 - Low	28	8	36	Mitigate Threat	Public outreach should continue through design to improve public support of the PPA.	County	Plan Implemented	2/22/2024
3	5	Utility asset locations/utility plans may be inaccurate/incomplete, resulting in changes.	Utilities	Construction	4 - High	4 - Moderate	2 - Low	16	8	24	Mitigate Threat	Perform extensive subsurface utility engineering during Preliminary Engineering to identify and avoid utility conflicts.	Designer	Plan To Be Developed	2/22/2024
3	8	Contractor may encounter unforeseen subsurface or differing site conditions, which may require corrective action or change of plan prior to completing the	Construction	Construction	4 - High	4 - Moderate	2 - Low	16	8	24	Mitigate Threat	Perform subsurface utility engineering during design for proposed in-ground features and provide sufficient quantity and direction of test pits for the contractor	Designer	Plan To Be Developed	2/22/2024
5	7	Contract documents are interpreted incorrectly and/or Contractor's means and methods cause schedule impacts.	Construction	Construction	2 - Low	7 - High	4 - Moderate	14	8	22	Avoid Threat	Ensure contract documents clearly define intended finished product, sequence of construction, and construction constraints.	Designer and County	Plan To Be Developed	2/22/2024
6	3	ROW and/or access impacts to adjoining properties are not fully considered, resulting in changes.	Right of Way	Final Design	3 - Moderate	4 - Moderate	2 - Low	12	6	18	Avoid Threat	Identify all potential ROW and access impacts due to the proposed improvements or construction activities during Preliminary Engineering.	Designer and County	Plan To Be Developed	6/1/2023
6	13	As a result of environmental rule updates, changes to the project design may occur which would impact the schedule and cost.	Environmental	Preliminary Engineering	3 - Moderate	4 - Moderate	2 - Very Low	12	6	18	Mitigate Threat	The PPA should be evaluated in PE to determine impacts.	Designer and County	Plan To Be Developed	6/1/2023
8	6	Limitations on staging areas, site access, work-zones or equipment accommodation are not correctly or adequately identified, resulting in changes.	Construction	Construction	2 - Low	4 - Moderate	2 - Low	8	4	12	Mitigate Threat	Identify staging areas, site access, work zones, and equipment to be used during construction while preparing Traffic Control and Staging Plans	Designer	Plan To Be Developed	2/22/2024
8	10	As a result of supply chain issues or product availability, certain materials or equipment has significant lead times resulting in delays.	Construction	Construction	2 - Low	4 - Moderate	2 - Low	8	4	12	Mitigate Threat	Construction schedule and sequence should account for material lead times to reduce potential schedule impacts.	Designer, County, and Contractor	Plan To Be Developed	2/22/2024
10	9	The extent of meeting ADA requirements on a project may require a waiver, resulting in scope changes.	Geometric Design	Final Design	3 - Moderate	2 - Low	1 - Very Low	6	3	9	Mitigate Threat	Perform full ADA curb ramp design during Preliminary Engineering to identify locations which may require a Technically Infeasible Form.	Designer	Plan To Be Developed	2/22/2024
11	4	Maintaining adequate access during construction/ staging may be difficult, resulting in residential impacts.	Access	Final Design	2 - Low	1 - Very Low	2 - Low	2	4	6	Transfer Threat	Require the contractor to coordinate with all property owners and businesses to address concerns and identify appropriate working times and minimum access requirements prior to the commencement of construction activities.	Contractor	Plan To Be Developed	6/1/2023
11	12	As a result of weather or backlogs, delays obtaining supplemental field survey may occur which would lead to schedule delays.	Survey	Preliminary Engineering	2 - Low	2 - Low	1 - Very Low	4	2	6	Accept Threat	The schedule should be developed such that aerial/ground survey are performed concurrently in the fall. Include a schedule contingency to account for	Designer and County	Plan To Be Developed	6/1/2023

## APPENDIX N

## COMPLETE STREETS CHECKLIST

#### **Background**

The New Jersey Department of Transportation's Complete Streets Policy promotes a "comprehensive, integrated, connected multi-modal network by providing connections to bicycling and walking trip generators such as employment, education, residential, recreational and public facilities, as well as retail and transit centers." The policy calls for the establishment of a checklist to address pedestrian, bicyclist and transit accommodations "with the presumption that they shall be included in each project unless supporting documentation against inclusion is provided and found to be justifiable."

#### **Complete Streets Checklist**

The following checklist is an accompaniment to NJDOT's Complete Streets Policy and has been developed to assist Project Managers and designers develop proposed alternatives in adherence to the policy. Being in compliance with the policy means that Project Managers and designers plan for, design, and construct all transportation projects to provide appropriate accommodation for bicyclists, pedestrians, and transit users on New Jersey's roadways, in addition to those provided for motorists. It includes people of all ages and abilities. The checklist applies to all NJDOT projects that undergo the Capital Project Delivery (CPD) Process and is intended for use on projects during the earliest stages of the Concept Development or Preliminary Engineering Phase so that any pedestrian or bicycle considerations are included in the project budget. The Project Manager is responsible for completing the checklist and must work with the Designer to ensure that the checklist has been completed prior to advancement of a project to Final Design.

#### **Using the Complete Streets Checklist**

The Complete Streets Checklist is a tool to be used by Project Managers and designers throughout Concept Development and Preliminary Engineering to ensure that all developed alternatives reflect compliance with the Policy. When completing the checklist, a brief description is required for each "Item to be Addressed" as a means to document that the item has been considered and can include supporting documentation.

Page 1 of 5 Released: 10/2011

#### **CONCEPT DEVELOPMENT CHECKLIST**

#### **Instructions:**

For each box checked, please provide a brief description for how the item is addressed, not addressed or not applicable and include documentation to support your answer.

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
Existing Bicycle, Pedestrian and Transit Accommodations	Are there accommodations for bicyclists, pedestrians (including ADA compliance) and transit users included on or crossing the current facility?  Examples include (but are not limited to):  Sidewalks, public seating, bike racks, and transit shelters				Shared use path (SUP) New Albany Rd EB to Tom Brown Rd SB to Riverton Rd WB Sidewalk along Riverton Rd EB Lighting limited
Existing Bicycle and Pedestrian Operations	Has the existing bicycle and pedestrian suitability or level of service on the current transportation facility been identified?				Moorestown Bicycle Circulation and Safety Plan identified Tom Brown Rd as not being bike compatible Riverton Rd deemed bike compatible
	Have the bicycle and pedestrian conditions within the study area, including pedestrian and/or bicyclist treatments, volumes, important connections and lighting been identified?				See response to accommodations and suitability
	Do bicyclists/pedestrians regularly use the transportation facility for commuting or recreation?				Intermittent use
	Are there physical or perceived impediments to bicyclist or pedestrian use of the transportation facility?				Crossing from SUP to sidewalk not provided
	Is there a higher than normal incidence of bicyclist/pedestrian crashes within the study area?				1 bicyclist crash in 5 yrs

Page 2 of 5 Released: 10/2011

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
Addressed	Have the existing volumes of pedestrian and/or bicyclist crossing activity at intersections including midblock and nighttime crossing been collected/provided?				Ped/bike data collected during intersection traffic counts
Existing Transit Operations	Are there existing transit facilities within the study area, including bus and train stops/stations?		$\boxtimes$		No transit in project area
	Is the transportation facility on a transit route?		$\boxtimes$		No transit in project area
	Is the transportation facility within two miles of "park and ride" or "kiss and go" lots?		$\boxtimes$		No transit in project area
	Are there existing or proposed bicycle racks, shelters, or parking available at these lots or transit stations? Are there bike racks on buses that travel along the facility?				No transit in project area
Existing Motor Vehicle Operations	Are there existing concerns within the study area, regarding motor vehicle safety, traffic volumes/congestion or access?				Project purpose to address safety
Existing Truck/Freight Operations	Are there existing concerns within the study area, regarding truck/freight safety, volumes, or access?				No truck/freight concerns
Existing Access and Mobility	Are there any existing access or mobility considerations, including ADA compliance?				None identified
	Are there any schools, hospitals, senior care facilities, educational buildings, community centers, residences or businesses of persons with disabilities within or proximate to the study area?				None identified
*For the purpose of this checklist, since "high-density" is not defined,	Have you identified the predominant land uses and densities within the study area, including any historic districts or special zoning districts?				Residential low- density* 6 townhomes in Willow Point

Page 3 of 5 Released: 10/2011

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
high density is considered housing areas characterized by large multi-unit developments like high- rise apartment and condo complexes; medium-density housing areas are characterized by smaller multi-unit housing, such as townhomes, row houses, small two-to- four unit apartments, and single detached houses; and low-density areas is characterized by single detached houses on individual lots.	Is the transportation facility in a high-density land use area that has pedestrian/bicycle/motor vehicle and transit traffic?				Residential low-density*
Major Sites	Have you identified the major sites, destinations, and trip generators within or proximate to the study area, including prominent landmarks, employment centers, recreation, commercial, cultural and civic institutions, and public spaces?				Major sites located ½ mile away or more; none within project limits
Existing Streetscape	Are there existing street trees, planters, buffer strips, or other environmental enhancements such as drainage swales within the study area?				Area adjacent to road is mostly lawn with some large trees
Existing Plans	Are there any comprehensive planning documents that address bicyclist, pedestrian or transit user conditions within or proximate to the study area?  Examples include (but are not limited to):  SRTS Travel Plans  Municipal or County Master or Redevelopment Plan  Local, County and Statewide Bicycle and Pedestrian Plans  Sidewalk Inventories  MPO Transportation Plan				Moorestown Bicycle Circulation and Safety Plan (Dec 2010) Moorestown Master Plan (2002, latest reexamination Dec 2018)

Page 4 of 5 Released: 10/2011

Item to be Addressed	Checklist Consideration	YES	NO	N/A	Required Description
	NJDOT Designated Transit     Village				

## PROJECT MANAGER SIGN-OFF

Statement of Compliance	YES	NO	If NO, Please Describe Why (refer to Exemptions Clause)
The Preliminary Preferred Alternative (PPA) accommodates bicyclists and pedestrians as set forth in the New Jersey Department of Transportation's Complete Streets Policy.			

Page 5 of 5 Released: 10/2011

## **APPENDIX O**

## PUBLIC ACTION PLAN





# Burlington County CR 614, CR 603, and New Albany Road Moorestown Township Local Concept Development Study

#### **PURPOSE**

**Project History:** The Delaware Valley Regional Planning Commission (DVRPC) on behalf of Burlington County initiated Local Concept Development for CR 614 (Tom Brown Road), CR 603 (Riverton Road), and New Albany Road. The intersection of CR 614 and New Albany Road was identified by DVRPC as a high crash location in the HSIP eligibility rankings. This purpose of this study is to enhance the safety of the stop-controlled intersection of CR 614 and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of CR 614 and CR 603 and New Albany Road and CR 603.

**PAP Goals:** The Public Action Plan (PAP) is intended to serve as a framework to accomplish open, proactive and productive community and stakeholder discussions concerning the Local Concept Development (LCD) Study. Strategies and audiences identified during the study for public involvement may be incorporated into the subsequent Local Preliminary Engineering (LPE), Final Design/Right-of-Way (FD/ROW) and Construction (CON) phases.

The foundation for public outreach is set through the development and agreement of the PAP. The PAP considers the varying communication needs of elected and local officials, residents, businesses, resource agencies and personnel, and other stakeholders and special interest groups located throughout the study area. Through this process, specific goals, messages and deliverables will be matched with various audiences to ensure all are informed about the aspects of the study that are most pertinent to them and/or their constituencies. Stakeholder feedback resulting from the PAP will be an essential component in the formulation and evaluation of potential safety and operational improvements along the study corridor within the context of the community.

#### **PAP IMPLEMENTATION**

This project is currently in Local Concept Development (LCD). Although the PAP is organized by the project phase, it will be implemented in such a manner that the public views the project as one seamless process. The PAP is organized by project phase to allow for its integration with the engineering effort to facilitate the schedule of contingent activities. The project phases are as follows:

- Local Concept Development
- Local Preliminary Engineering
- Final Design
- Construction

The LCD phase includes X local officials briefings, two (2) stakeholder meetings, and two (2) Public Information Centers (PICs). Each local officials briefing may be held directly in advance of the stakeholders

September 2021

## PUBLIC ACTION PLAN (PAP)





meeting to provide officials with the latest information regarding the project prior to meeting with the stakeholders and the public. Stakeholder meetings, followed by PICs, will occur at the end of key activities (draft Purpose and Need and Alternatives Analysis) to vet the transportation issues that matter most to the community and will provide a forum to work with the stakeholders in resolving concerns while also meeting the needs of the project.

All public involvement activities will adhere to Title VI and Environmental Justice (EJ) statutes and Federal Transportation Legislation establishing equal access to information and the decision-making process. Title VI and EJ statues seek to avoid, minimize or mitigate disproportionately high and adverse human health, environmental, social and economic effects on minority and underserved populations. All stakeholder meetings, local officials briefings and Public Information Centers (PIC) will be conducted virtually, if not in person.

**Local Concept Development:** LCD for this project includes the collection, review and analysis of background data and existing physical features; the development of alternatives; and the selection of the Preliminary Preferred Alternative (PPA).

The proposed public involvement process during Local Concept Development is outlined as follows:

- Develop and maintain a contact/mailing list of key project stakeholders, including, but not limited to, County and Township officials, property owners, businesses, neighborhood associations, civic and cultural groups, environmental organizations, associations of low income, minority, elderly, and disabled constituents, etc. An initial stakeholders list can be found on the last page of this document. Stakeholders may be added throughout the project process as pertinent individuals/ groups become evident.
- 2. Develop visualization techniques, such as renderings, presentations, display boards, site photographs and traffic simulations prior to meetings to be utilized, where appropriate, to illustrate various concepts. Prepare handouts/fact sheets for distribution for each meeting summarizing the project status, various alternatives and eventually the PPA.
- 3. As part of the development of alternatives determine if any of the alternatives will have a disproportionately high or adverse effect on low income and/or minority communities and businesses adjacent to the project limits that may be impacted by each alternative and/or during construction. The possibility of adverse effects to low income and/or minority communities will be considered in the selection of the PPA.
- Identify and develop communication methods based on the results of the Community Profile and input from the DVRPC and Burlington County. This may include multilingual support and translation services.
- 5. After development of a draft Purpose and Need (P&N) Statement, hold a Local Officials Briefing to present the existing conditions and deficiencies and confirm the P&N. Subsequently, coordinate with DVRPC and Burlington County to schedule a stakeholders meeting and then PIC. The stakeholders meeting and PIC will present the same material, as well as obtain stakeholder and public concerns and input. Prepare the mailing list, PIC handout and presentation material as a means of distributing information to concerned citizens or groups. The mailing list will be comprised of the key project stakeholders listed on page 5, residents within a prescribed distance to the project limits,

September 2021

## **PUBLIC ACTION PLAN (PAP)**



GPI

neighborhood associations, civic and cultural groups, environmental organizations, associations of low income, minority, elderly, and disabled constituents, etc. Minutes of each meeting will be prepared and distributed for comment.

- 6. Once alternatives are developed and vetted with the project team, hold a Local Officials Briefing to present the alternatives for their acceptance. Associated impacts will also be presented at this meeting. Minutes of the meeting will be prepared and distributed to the attendees for comment.
- 7. Coordinate with DVRPC and Burlington County to schedule a second stakeholders meeting and then second PIC. The alternatives and associated impacts will be presented at these meeting. Hold the PIC to solicit public input and comments with regard to the alternatives and select a PPA. Minutes of the meeting will be prepared and distributed for comment.
- 8. Coordinate efforts with outside agencies if a detour plan is proposed for any legitimate alternatives. These outside agencies will include local and county officials and engineers. Documentation of support from the local and county officials for a specific detour route will be obtained and placed on file and in the Concept Development Report.
- 9. Request a Resolution of Support from each entity for the respective PPA. Failure to obtain a Resolution of Support from one or all of the local governing bodies does not necessarily preclude the advancement of the project if significant safety issues have been identified during the scoping process.
- 10. Reassess the PAP to ensure that the identified strategies still adequately address the public involvement effort given current project circumstances.

**Local Preliminary Engineering and Final Design:** Once the project is transferred, the Project Manager will review and revise the PAP, as necessary. The PPA will be furthered developed and the contract documents necessary to obtain the required environmental document and permits; and to bid the project for construction will be completed during these phases. Public involvement activities that may be undertaken during Preliminary and Final Design are as follows:

- 1. Hold a PIC to allow the public to view the PPA in its current status.
- 2. Utilize various agencies' websites to provide relevant information such as contact information, construction schedule, expected delays/lane closures, construction progress and to solicit feedback.
- 3. Reassess the PAP to ensure the identified strategies still adequately address the public involvement effort for this project.

**Construction:** The Project Manager will review and revise the PAP, as necessary. It is important to work closely with local officials and the business community during construction to ensure the least impact on traffic and business caused by construction. The following steps in the PAP will be important during Construction of the project:

- 1. Conduct pre-construction conferences and/or information centers to ensure maximum support for the construction schedule and minimal disruption to the community.
- 2. Utilize various agencies' websites to provide relevant information such as contact information, construction schedule, expected delays/lane closures, construction progress and to solicit feedback.

## 90

### **PUBLIC ACTION PLAN (PAP)**

**GPI** 

Notifying the public about traffic patterns and potential delays will be important during construction to facilitate the formation of positive public perception towards both the project and the NJDOT.

3. Review feedback provided by the public to determine if improvements can be instituted to construction activities.

#### STAKEHOLDER COORDINATION

**Key Stakeholders:** The following is a list of the key stakeholders identified to date for this project *as of September 2021.* 

#### **Burlington County**

49 Rancocas Road, Mount Holly, NJ 08060

- County Administrator Eve Cullinan
- Commissioner Felicia Hopson, Director
- Commissioner Daniel J. O'Connell, Deputy
- Commissioner Linda A. Hynes
- Commissioner Tom Pullion
- Commissioner Balvir Singh
- Joseph Brickley, PE, Director of Public Works & County Engineer

#### **Moorestown Township**

Town Hall, 111 W 2nd Street, Moorestown, NJ 08057

- Mayor Nicole Gillespie
- Deputy Mayor Sue Mammarella
- Council Member Quinton Law
- Council Member Jake Van Dyken
- Council Member David Zipin
- Kevin E. Aberant, Township Manager
- Don Lloyd, Public Works Director
- Nancy W. Jamanow, PE, CME, PP, Planning Board Secretary
- Chief Lee R. Lieber, Chief of Police

#### Bicycle Circulation and Safety Committee

- John Boyle, Bicycle Coalition of Greater Philadelphia
- Richard Calhoun, Member
- Bonnie MacMillan, Member
- Peter Sklarow, Member
- Michael Zickler, Member

#### Public Schools / Board of Education

- Caryn Shaw, President
- Lauren Romano, Vice President
- Sandra Alberti, Ed.D., Member
- Jack Fairchild, Member

## 10

### **PUBLIC ACTION PLAN (PAP)**

**GPI** 

- Mark Snyder, PhD, Member
- Mark Villanueva, Esq., Member
- Maurice Weeks, Member
- David Weinstein, Esq., Member
- Principal Matthew Keith, William Allen Middle School
- Principal Andrew Seibel, Moorestown High School

#### **Cinnaminson Township**

1621 Riverton Road, Cinnaminson NJ 08077

- Mayor Albert Segrest
- Deputy Mayor Stephanie Kravil
- Committee Member Ernest McGill
- Committee Member Ryan F. Horner
- Committee Member Paul Conda
- Eric J. Schubiger, Township Administrator
- Principal Valerie Jones, New Albany Elementary School

#### **Stakeholder Distribution List**

The stakeholder distribution list will include a directory of interested and affected parties. The list organizes stakeholder contact information and includes name, address, and email. It can also track meeting attendance. Stakeholders may include Willow Point residents, the Pheasant Run Swim Club, Cinnaminson Baptist Church, First Presbyterian Church of Moorestown, and others.

Stakeholders may be added throughout the project process as pertinent individuals/groups become evident.

#### VIRTUAL PUBLIC ENGAGEMENT

The Project Team will utilize Zoom, Go-To-Meeting or similar virtual meeting platform to conduct public outreach virtually if the COVID-19 pandemic or other restrictions continue to prevent in-person meetings. Virtual outreach efforts will have equitable approaches and be cognizant of potential digital gaps in project areas, especially among low-income and minority populations. Ensuring inclusive outreach will require mailing materials to residents in a study area, as well as providing call-in numbers for phone participation in virtual meetings if computer access is not possible.

A live virtual meeting will be conducted which includes a pre-recorded video followed by a live question and answer period. The entire meeting will be recorded and posted on a website suitable to DVRPC and Burlington County where the public can review and comment for a specified period of time. The Project Team would mail and e-blast invitations for the meeting, facilitate the introduction, pre-recorded presentation, and explain to viewers how to participate in the Q&A portion. It is anticipated that a six (6) week window would be provided for the viewers to submit questions.

These low-cost digital solutions will enable the project to obtain the necessary public involvement and feedback while keeping them on schedule. Additional logistics for a successful virtual meeting include the following:



### **PUBLIC ACTION PLAN (PAP)**

**GPI** 

- Presentation documents and files designed for optimal viewing online.
- A dedicated project website page to announce and house the presentation and comment forms.
- Process written comments/questions and send responses via email and post to FAQ page.

#### **PAP DELIVERABLES**

**Meeting Minutes:** Minutes will be prepared of all public involvement meetings. The minutes will be comprehensive and include an action item list. The minutes will be completed within five (5) business days of the meeting and distributed to all of the attendees.

**Project Fact Sheet:** A Project Fact Sheet will be prepared and distributed at all meetings with local officials. The Project Fact Sheet will include a brief project history, project issues, project location map, and proposed alternatives. The Project Fact Sheet will be updated as the project progresses to reflect the most up-to-date project information available.

**Renderings/Display Boards:** Display boards will be utilized to illustrate existing conditions and the proposed improvements to the local officials, key stakeholders and the public. Project display boards may include project aerials, a project process display, alternatives displays/renderings and a PPA display/renderings. The display boards will also be converted to .pdf files where possible so that they may be displayed via a projector, when appropriate.

**Recordings:** Virtual meetings will be recorded and posted on a website where the public can review and comment for a specified period of time. Presentation documents and files used in the recordings would also be available.

## APPENDIX P

## UTILITY COORDINATION



April 6, 2022

Mr. Wyatt Parrish Comcast 1250 Haddonfield-Berlin Rd Cherry Hill, NJ 08034

RE: Burlington County Local Concept Development Study CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County GPI Project Number 2021690 Initial Contact Letter - Comcast

Dear Mr. Parrish:

The County of Burlington has engaged Greenman-Pedersen, Inc. (GPI) to prepare a Local Concept Development Study for the subject project in the Township of Moorestown, Burlington County, NJ. The purpose of this study is to develop and evaluate alternatives to enhance the safety of the stop-controlled intersection of CR614 (Tom Brown Road) and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of Tom Brown Road/CR 603 (Riverton Road) and New Albany Road/CR 603 (Riverton Road). The location and approximate limits of the project are shown on the enclosed Project Location Map.

Our preliminary investigation disclosed that Comcast is franchised to operate within the proposed project limits that may be affected by the construction of the subject project. Should you have existing or <u>proposed</u> facilities within the project limits, it is necessary for us to verify your facilities and enter an engineering dialog with you.

Please find attached one (1) copy of a location map and one (1) copy of the Utility Verification Plan for your reference and use. Kindly mark and return the Utility Verification Plan indicating any facilities (overhead and/or underground) owned/operated by your company in the vicinity of the project (indicating the type, size, and limits of each), and provide any additional plans and information related to these facilities that would be helpful in our design process. Please also advise us of any proposed facilities within the project limits so provisions can be made, if possible, to accommodate any future utility work.

We would ask that you please complete and return the following questionnaire, and provide the requested utility information as soon as possible, but no later than **May 6**, **2022**.

( <u>x</u> ) We DO HAVE existing facilities within the project limits.	
They are () aerial, () underground, (x_) both aerial and underground. () We DO NOT HAVE existing facilities within the project limits.	
() We HAVE <u>PROPOSED</u> facilities planned within the project limits.	

(_x_) Owner	Engineer to be	contacted is:
	Name:	Wyatt Parrish
	Company:	Comcast
	Title:	Engineer
	Address:	1250 Haddonfield-Berlin Rd
		Cherry Hill, NJ 08034
	Telephone:	484-368-4391
	Fax: E-mail:	wyatt_parrish@cable.comcast.com
() The follo	wing companie 	s are tenants on/in our facilities within the project limits:
() We are t	enants within/a	ttached to the following companies' facilities within the project limits:

Should you have any questions or concerns about this project or our request, please contact me at 908-236-9001 or <a href="mailto:alevan@gpinet.com">alevan@gpinet.com</a>.

Thank you for your cooperation in this matter.

Sincerely,

GREENMAN-PEDERSEN, INC.

Amy R. Levan, P.E. Utility Engineer

\*Enclosures\*

Cc: William Schaffer, Burlington County

Deanna Drumm, Burlington County

Kwan Hui, DVRPC

John Coscia, Jr., DVRPC Julia Steponanko, P.E., GPI

Bernard Boerchers, P.E., PTOE, GPI

Richard Schroeder III, GPI Utility Manager

File - 2021690

MOORESTOWN TOWNSHIP COUNTY OF BURLINGTON NEW ALBANY ROAD NEW ALBANY ROAD NEW JERSEY DEPARTMENT OF TRANSPORTATION UTILITY VERIFICATION PLANS Comcast aerial strand / cables LOCAL CONCEPT DEVELOPMENT Comcast underground conduit / cables INSTERSECTION STUDY FOR CR 614, CR 603 AND NEW ALBANY ROAD Comcast aerial drop cables Comcast underground drop cables CERTIFICATION OF AUTHORIZATION NO. 24GA27959500 Location of underground facilities based on existing records always call 811 prior to excavation BRIAN W. MAUSERT NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04647900

STATE FEDERAL PROJECT NO. MOORESTOWN TOWNSHIP COUNTY OF BURLINGTON



Comcast underground conduit / cables

····· Comcast underground drop cables

Location of underground facilities based on existing records

Comcast aerial drop cables

always call 811 prior to excavation

UTILITY VERIFICATION PLANS

# LOCAL CONCEPT DEVELOPMENT

INSTERSECTION STUDY FOR CR 614, CR 603 AND NEW ALBANY ROAD

CERTIFICATION OF AUTHORIZATION NO. 24GA27959500

BRIAN W. MAUSERT

NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04647900







April 6, 2022

Mr. Don Lloyd Director, Public Works 601 E 3rd Street Moorestown, NJ 08057

RE: Burlington County Local Concept Development Study CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County GPI Project Number 2021690 Initial Contact Letter - Moorestown Water & Sewer

Dear Mr. Lloyd:

The County of Burlington has engaged Greenman-Pedersen, Inc. (GPI) to prepare a Local Concept Development Study for the subject project in the Township of Moorestown, Burlington County, NJ. The purpose of this study is to develop and evaluate alternatives to enhance the safety of the stop-controlled intersection of CR614 (Tom Brown Road) and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of Tom Brown Road/CR 603 (Riverton Road) and New Albany Road/CR 603 (Riverton Road). The location and approximate limits of the project are shown on the enclosed Project Location Map.

Our preliminary investigation disclosed that Moorestown Water and Sewer is franchised to operate within the proposed project limits that may be affected by the construction of the subject project. Should you have existing or proposed facilities within the project limits, it is necessary for us to verify your facilities and enter an engineering dialog with you.

Please find attached one (1) copy of a location map and one (1) copy of the Utility Verification Plan for your reference and use. Kindly mark and return the Utility Verification Plan indicating any facilities (overhead and/or underground) owned/operated by your company in the vicinity of the project (indicating the type, size, and limits of each), and provide any additional plans and information related to these facilities that would be helpful in our design process. Please also advise us of any proposed facilities within the project limits so provisions can be made, if possible, to accommodate any future utility work.

We would ask that you please complete and return the following questionnaire, and provide the requested utility information as soon as possible, but no later than May 6, 2022.

(	We DO HAVE existing facilities within the project limits.  They are () aerial, () underground, () both aerial and underground.  We DO NOT HAVE existing facilities within the project limits.	12"+8"	Water Mar
	They are () aerial, () underground, () both aerial and underground.	Server	manhole
(	We DO NOT HAVE existing facilities within the project limits.		
()	We HAVE PROPOSED facilities planned within the project limits.		
No. 25 March 1990	Construct Dataset Inc. 400 Occupant Disc 0 il 004	N. 1. 0.0.0.0	

Page 2 Burlington County LCD for CR603, CR614 and New Albany Road Initial Contact Letter – Moorestown Water & Sewer

(V) Owner	Engineer to be	e contacted is:	
	Name: Company: Title: Address:	Chris Noll Environmental Resolutions, Inc (ERI) President + CEO  815 East Gate Dr. Suite 103 Mt. Laurel, New Jersey 08054	
	Telephone: Fax:	856-235-7170 856-273-9239	,*
	E-mail:	Cholle ering com	1
		ttached to the following companies' facilities within the project limits:	
Should you havalevan@gpinet.c		ons or concerns about this project or our request, please contact me at 908-236-9001	or
Thank you for yo	our cooperation	in this matter.	
Sincerely, GREENMAN-PE	:DERSEN, INC	).	
ample	le		

Amy R. Levan, P.E. Utility Engineer

\*Enclosures\*

Cc:

William Schaffer, Burlington County Deanna Drumm, Burlington County

Deanna Drumm, Burlington Cour Kwan Hui, DVRPC

John Coscia, Jr., DVRPC

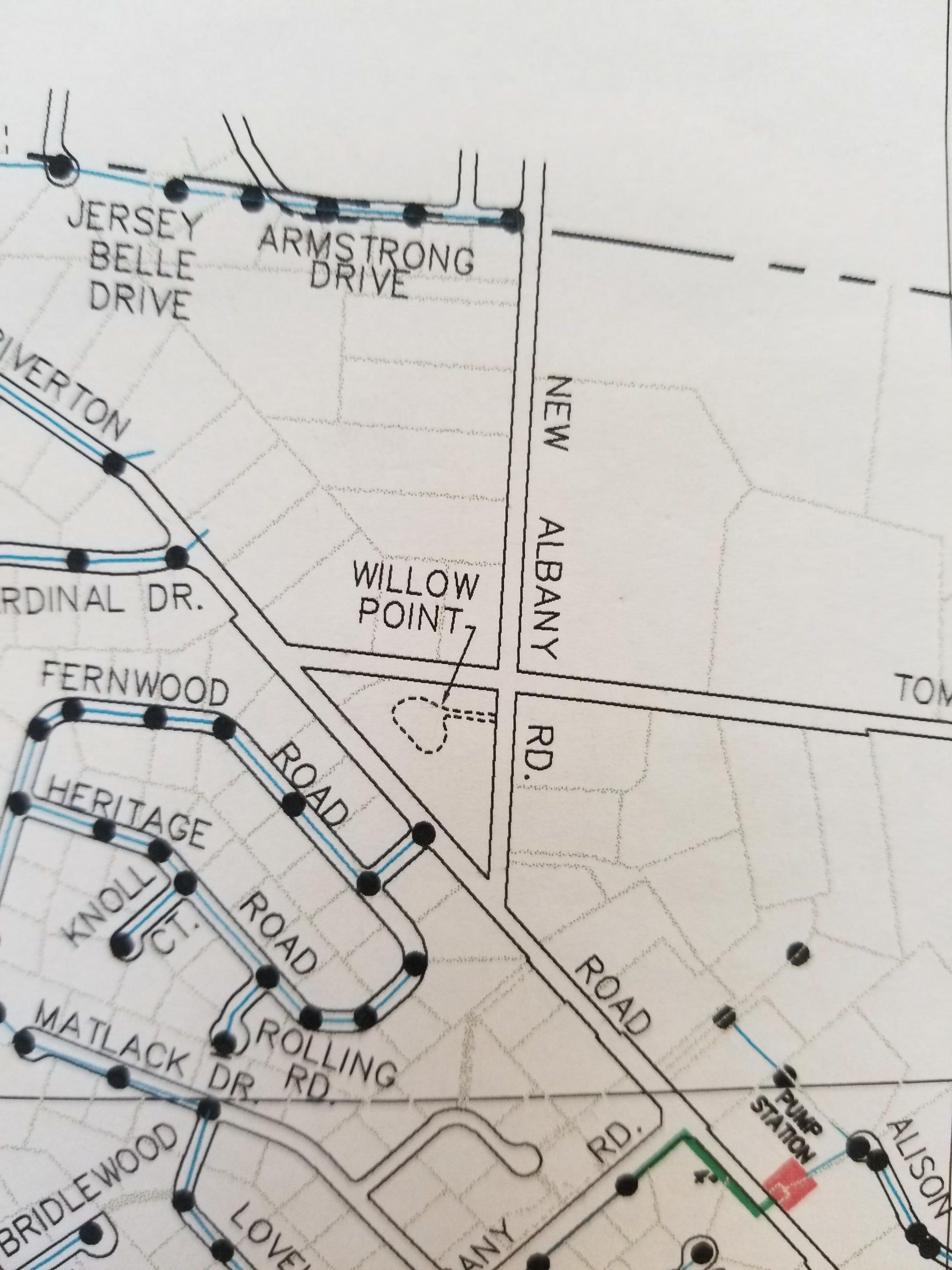
Julia Steponanko, P.E., GPI Bernard Boerchers, P.E., PTOE, GPI

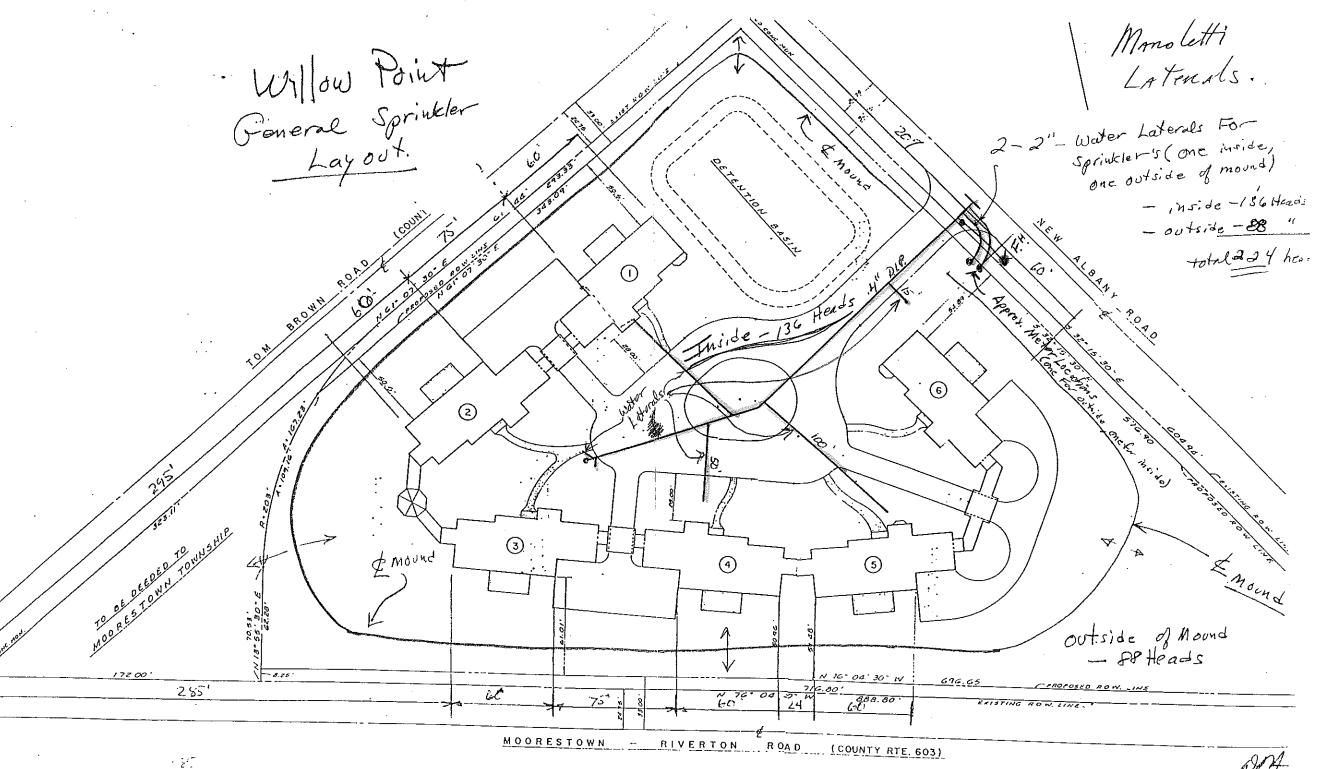
Richard Schroeder III, GPI Utility Manager

File - 2021690

Block 5000 "AS-BUILT" SKETCH N.T.S. WM. BOWMAN ASSOCIATES INC. L'Reserve SEWERS SANITARY SEPT 1986 DATE RESERVE LOCATION MODRESTOWN **PROJECT** NJ 5750- 03 JOB. NO. 2"pvc (20T 4" pvc 12 NOV 0 1 1986 MOORESTOWN DRIVE PUBLIC WORKS Brown TOM







DA





April 6, 2022

Armando Rosario Sr. Engineering Plant Supervisor PSE&G Electric 300 New Albany Rd Moorestown, NJ 08057

RE: Burlington County Local Concept Development Study CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County GPI Project Number 2021690 Initial Contact Letter – PSE&G Electric

Dear Mr. Rosario:

The County of Burlington has engaged Greenman-Pedersen, Inc. (GPI) to prepare a Local Concept Development Study for the subject project in the Township of Moorestown, Burlington County, NJ. The purpose of this study is to develop and evaluate alternatives to enhance the safety of the stop-controlled intersection of CR614 (Tom Brown Road) and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of Tom Brown Road/CR 603 (Riverton Road) and New Albany Road/CR 603 (Riverton Road). The location and approximate limits of the project are shown on the enclosed Project Location Map.

Our preliminary investigation disclosed that PSE&G Electric is franchised to operate within the proposed project limits that may be affected by the construction of the subject project. Should you have existing or <u>proposed</u> facilities within the project limits, it is necessary for us to verify your facilities and enter an engineering dialog with you.

Please find attached one (1) copy of a location map and one (1) copy of the Utility Verification Plan for your reference and use. Kindly mark and return the Utility Verification Plan indicating any facilities (overhead and/or underground) owned/operated by your company in the vicinity of the project (indicating the type, size, and limits of each), and provide any additional plans and information related to these facilities that would be helpful in our design process. Please also advise us of any proposed facilities within the project limits so provisions can be made, if possible, to accommodate any future utility work.

We would ask that you please complete and return the following questionnaire, and provide the requested utility information as soon as possible, but no later than **May 6**, **2022**.

() We DO HAVE existing facilities within the project limits.
They are () aerial, () underground, () both aerial and underground.
() We DO NOT HAVE existing facilities within the project limits.
() We HAVE PROPOSED facilities planned within the project limits.

Deanna Drumm, Burlington County
Kwan Hui, DVRPC
John Coscia, Jr., DVRPC
Julia Steponanko, P.E., GPI
Bernard Boerchers, P.E., PTOE, GPI
Richard Schroeder III, GPI Utility Manager
File – 2021690

Page 2



April 6, 2022

Mr. Ryan Morze PSE&G Layout and Planning Supervisor PSE&G Gas 300 Connecticut Drive Burlington Township, NJ 08016

RE: Burlington County Local Concept Development Study CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County GPI Project Number 2021690 Initial Contact Letter – PSE&G Gas

Dear Mr. Morze:

The County of Burlington has engaged Greenman-Pedersen, Inc. (GPI) to prepare a Local Concept Development Study for the subject project in the Township of Moorestown, Burlington County, NJ. The purpose of this study is to develop and evaluate alternatives to enhance the safety of the stop-controlled intersection of CR614 (Tom Brown Road) and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of Tom Brown Road/CR 603 (Riverton Road) and New Albany Road/CR 603 (Riverton Road). The location and approximate limits of the project are shown on the enclosed Project Location Map.

Our preliminary investigation disclosed that PSE&G Gas is franchised to operate within the proposed project limits that may be affected by the construction of the subject project. Should you have existing or <u>proposed</u> facilities within the project limits, it is necessary for us to verify your facilities and enter an engineering dialog with you.

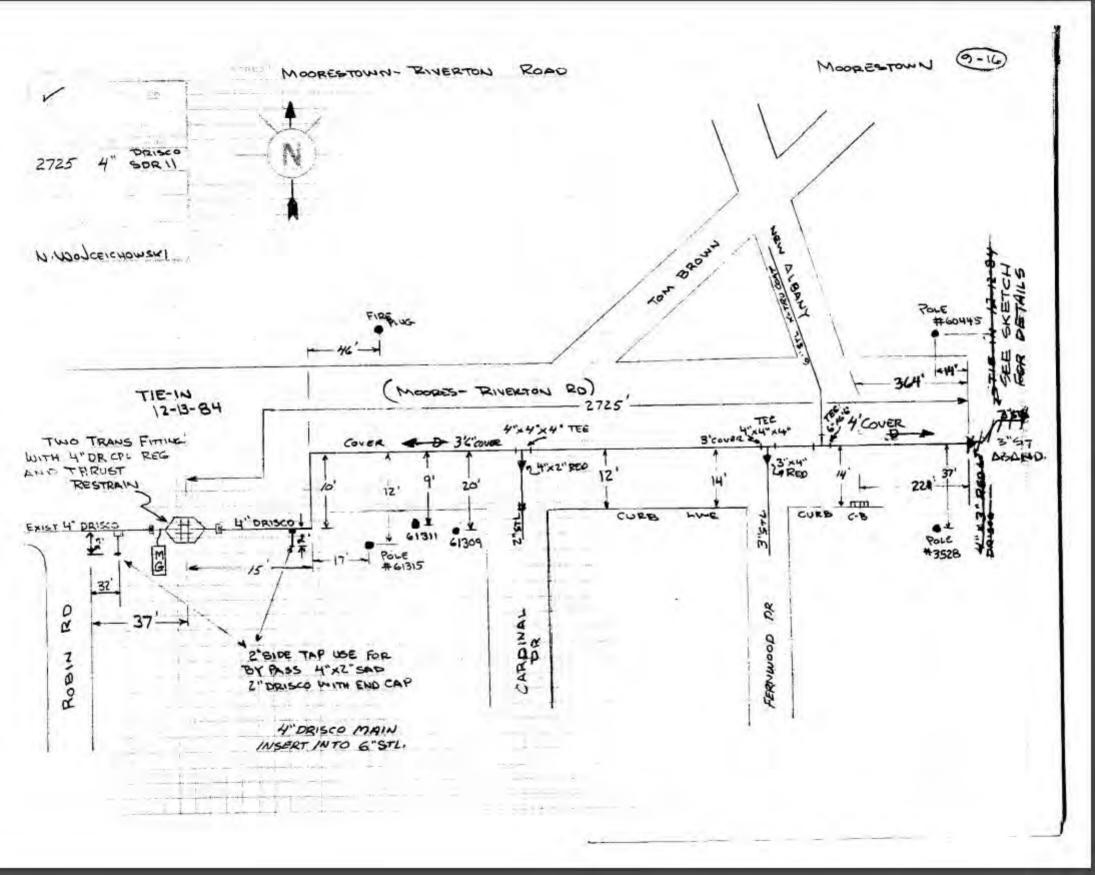
Please find attached one (1) copy of a location map and one (1) copy of the Utility Verification Plan for your reference and use. Kindly mark and return the Utility Verification Plan indicating any facilities (overhead and/or underground) owned/operated by your company in the vicinity of the project (indicating the type, size, and limits of each), and provide any additional plans and information related to these facilities that would be helpful in our design process. Please also advise us of any proposed facilities within the project limits so provisions can be made, if possible, to accommodate any future utility work.

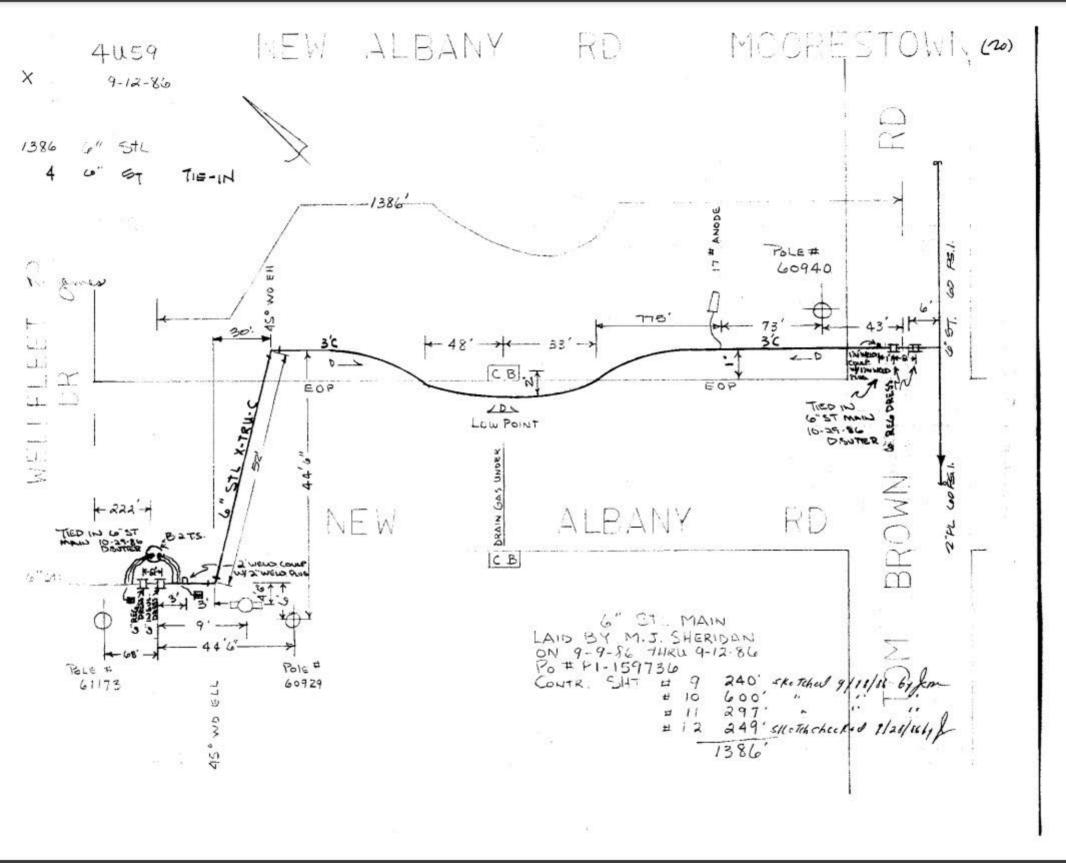
We would ask that you please complete and return the following questionnaire, and provide the requested utility information as soon as possible, but no later than **May 6**, **2022**.

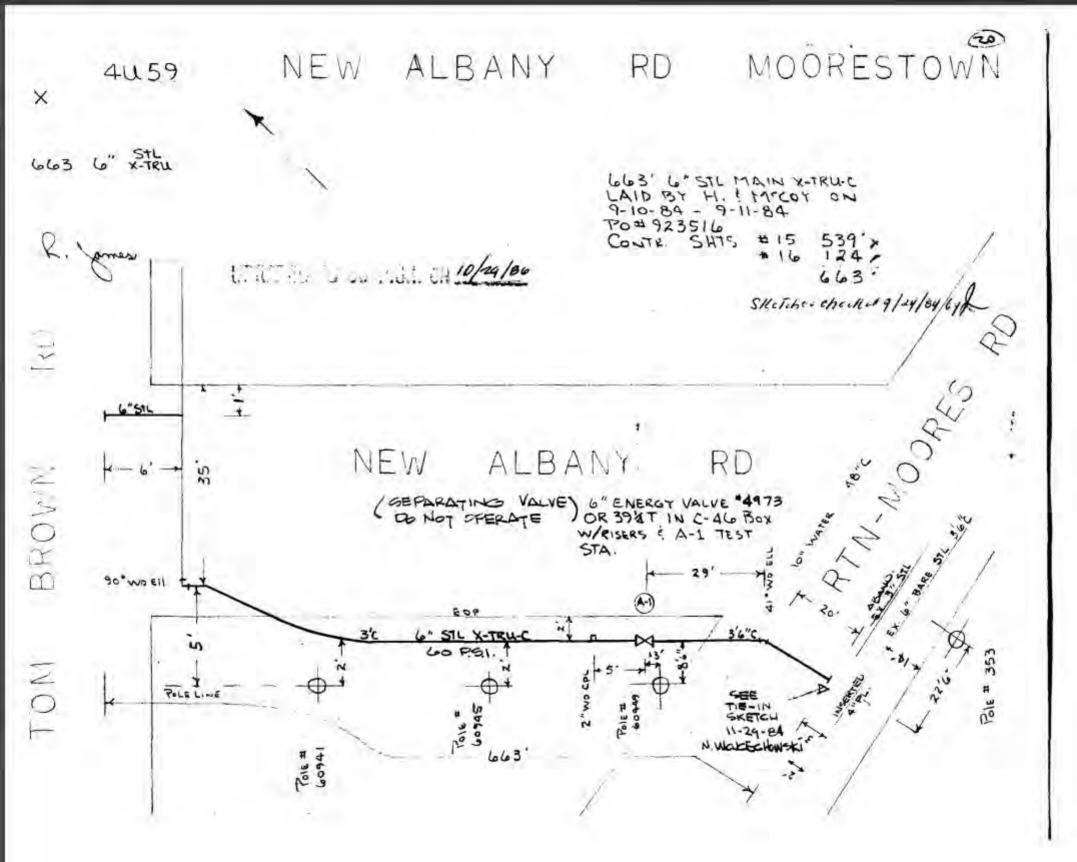
() We DO HAVE existing facilities within the project limits.
They are () aerial, () underground, () both aerial and underground.
() We DO NOT HAVE existing facilities within the project limits.
() We HAVE PROPOSED facilities planned within the project limits.

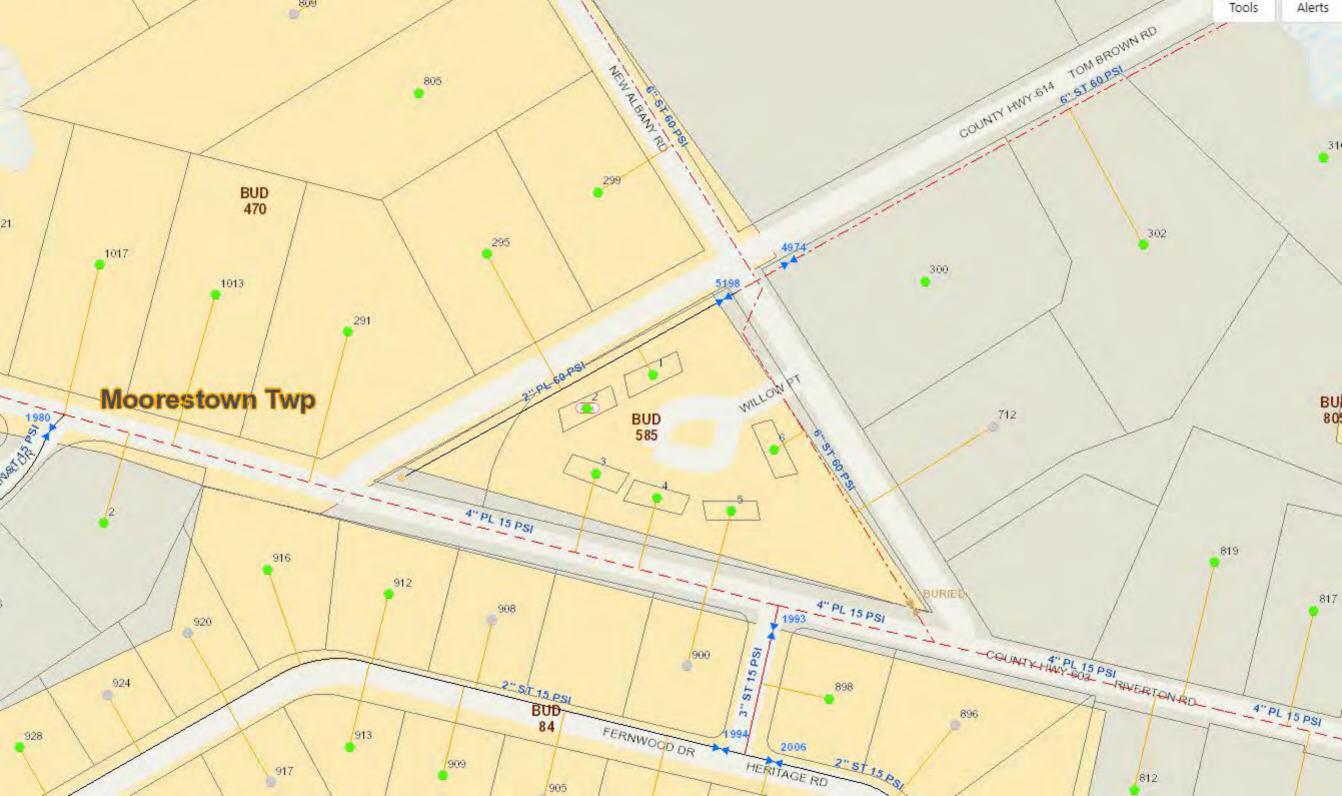
Deanna Drumm, Burlington County Kwan Hui, DVRPC John Coscia, Jr., DVRPC Julia Steponanko, P.E., GPI Bernard Boerchers, P.E., PTOE, GPI Richard Schroeder III, GPI Utility Manager File – 2021690

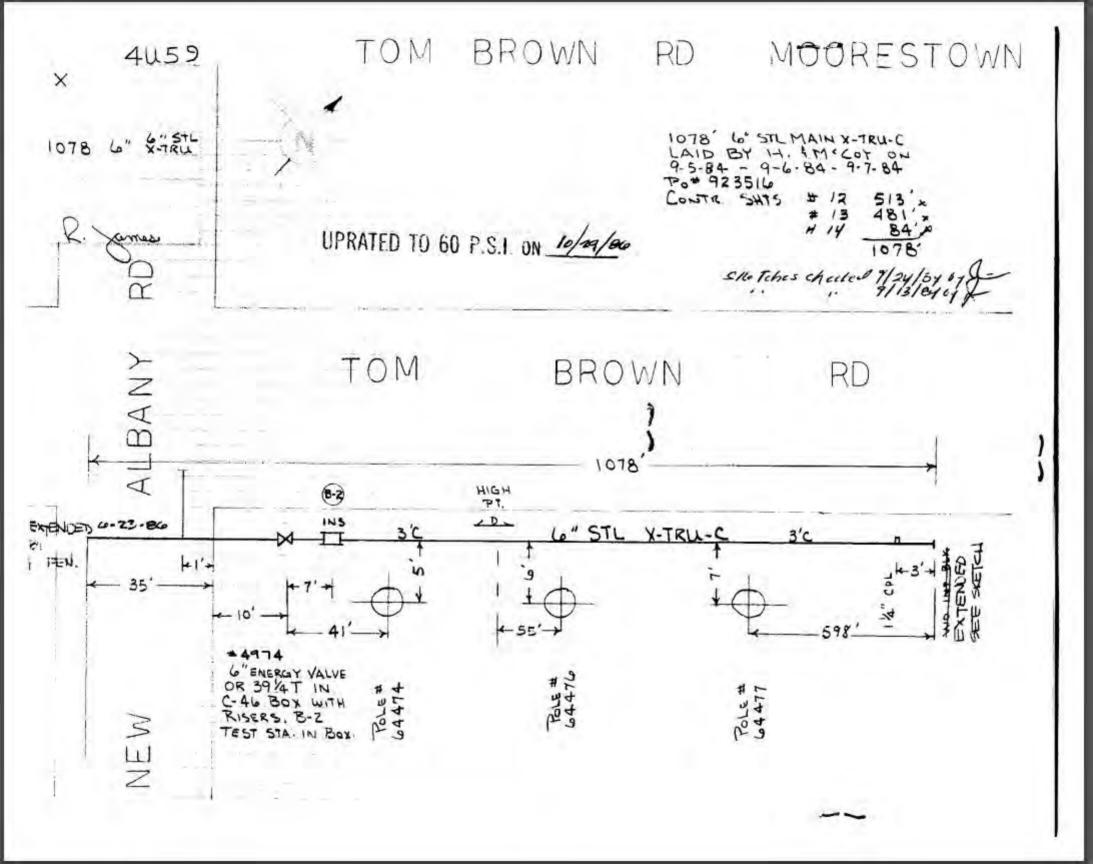
Page 2

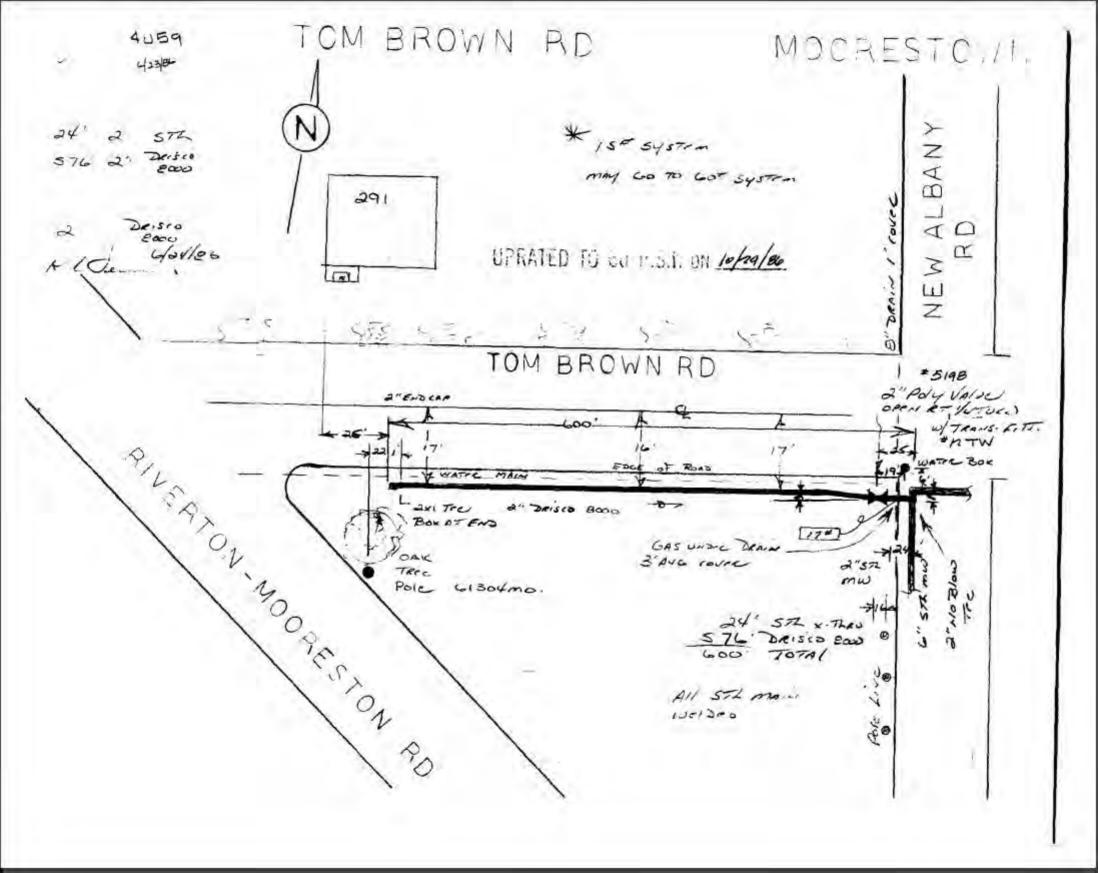














April 6, 2022

Bryan C. DePaul Sr. Manager Net Eng & Ops – Wireline Network Ops Verizon 999 W Main St, Flr 2 Freehold, NJ 07728

RE: Burlington County Local Concept Development Study CR 614, CR 603 and New Albany Road Township of Moorestown, Burlington County GPI Project Number 2021690 Initial Contact Letter - Verizon

Dear Mr. DePaul:

The County of Burlington has engaged Greenman-Pedersen, Inc. (GPI) to prepare a Local Concept Development Study for the subject project in the Township of Moorestown, Burlington County, NJ. The purpose of this study is to develop and evaluate alternatives to enhance the safety of the stop-controlled intersection of CR614 (Tom Brown Road) and New Albany Road as well as to improve the overall safety and integrated operation of this intersection and the intersections of Tom Brown Road/CR 603 (Riverton Road) and New Albany Road/CR 603 (Riverton Road). The location and approximate limits of the project are shown on the enclosed Project Location Map.

Our preliminary investigation disclosed that Verizon is franchised to operate within the proposed project limits that may be affected by the construction of the subject project. Should you have existing or <u>proposed</u> facilities within the project limits, it is necessary for us to verify your facilities and enter an engineering dialog with you.

Please find attached one (1) copy of a location map and one (1) copy of the Utility Verification Plan for your reference and use. Kindly mark and return the Utility Verification Plan indicating any facilities (overhead and/or underground) owned/operated by your company in the vicinity of the project (indicating the type, size, and limits of each), and provide any additional plans and information related to these facilities that would be helpful in our design process. Please also advise us of any proposed facilities within the project limits so provisions can be made, if possible, to accommodate any future utility work.

We would ask that you please complete and return the following questionnaire, and provide the requested utility information as soon as possible, but no later than **May 6, 2022**.

(_X) We DO HAVE existing facilities within the project limits.
They are () aerial, () underground, (X) both aerial and
underground. () We DO NOT HAVE existing facilities within the project limits.
() We HAVE <u>PROPOSED</u> facilities planned within the project limits.

() Owner Engineer to be	e contacted is:	
Name: Company: Title: Address:	Edward Gasko Sr Engr Spec-Outside Plant Wireline Network Ops & Eng Verizon New Jersey Inc. 10 Tansboro Rd, 2nd Flr	
Telephone: Fax: E-mail: () The following companie	Phone: (856) 306-8592  s are tenants on/in our facilities within the project limits:	
() We are tenants within/a	ttached to the following companies' facilities within the project limits:	

Should you have any questions or concerns about this project or our request, please contact me at 908-236-9001 or <a href="mailto:alevan@gpinet.com">alevan@gpinet.com</a>.

Thank you for your cooperation in this matter.

Sincerely,

GREENMAN-PEDERSEN, INC.

Amy R. Levan, P.E. Utility Engineer

\*Enclosures\*

Cc: William Schaffer, Burlington County

Deanna Drumm, Burlington County

Kwan Hui, DVRPC

John Coscia, Jr., DVRPC

Julia Steponanko, P.E., GPI

Bernard Boerchers, P.E., PTOE, GPI

Richard Schroeder III, GPI Utility Manager

File - 2021690

MOORESTOWN TOWNSHIP COUNTY OF BURLINGTON AERIAL VERIZON CABLE BURIED CABLE UG CABLE AND CONDUIT ONLY VERIZON FACILITIES SHOWN. EXACT LOCATIONS AND DEPTHS OF UG AND BURIED FACILITIES CAN ONLY BE DETERMINED BY UTILITY MARKOUT AND TESTHOLES WHERE NEEDED NEW ALBANY ROAD NEW ALBANY ROAD NEW JERSEY DEPARTMENT OF TRANSPORTATION UTILITY VERIFICATION PLANS LOCAL CONCEPT DEVELOPMENT INSTERSECTION STUDY FOR CR 614, CR 603 AND NEW ALBANY ROAD CERTIFICATION OF AUTHORIZATION NO. 24GA27959500 BRIAN W. MAUSERT NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE04647900



MATCH NEW ALBANY ROAD & STA. XX+XX
PLAN SHEET NO. UV-4

NEW JERSEY DEPARTMENT OF TRANSPORTATION

## UTILITY VERIFICATION PLANS

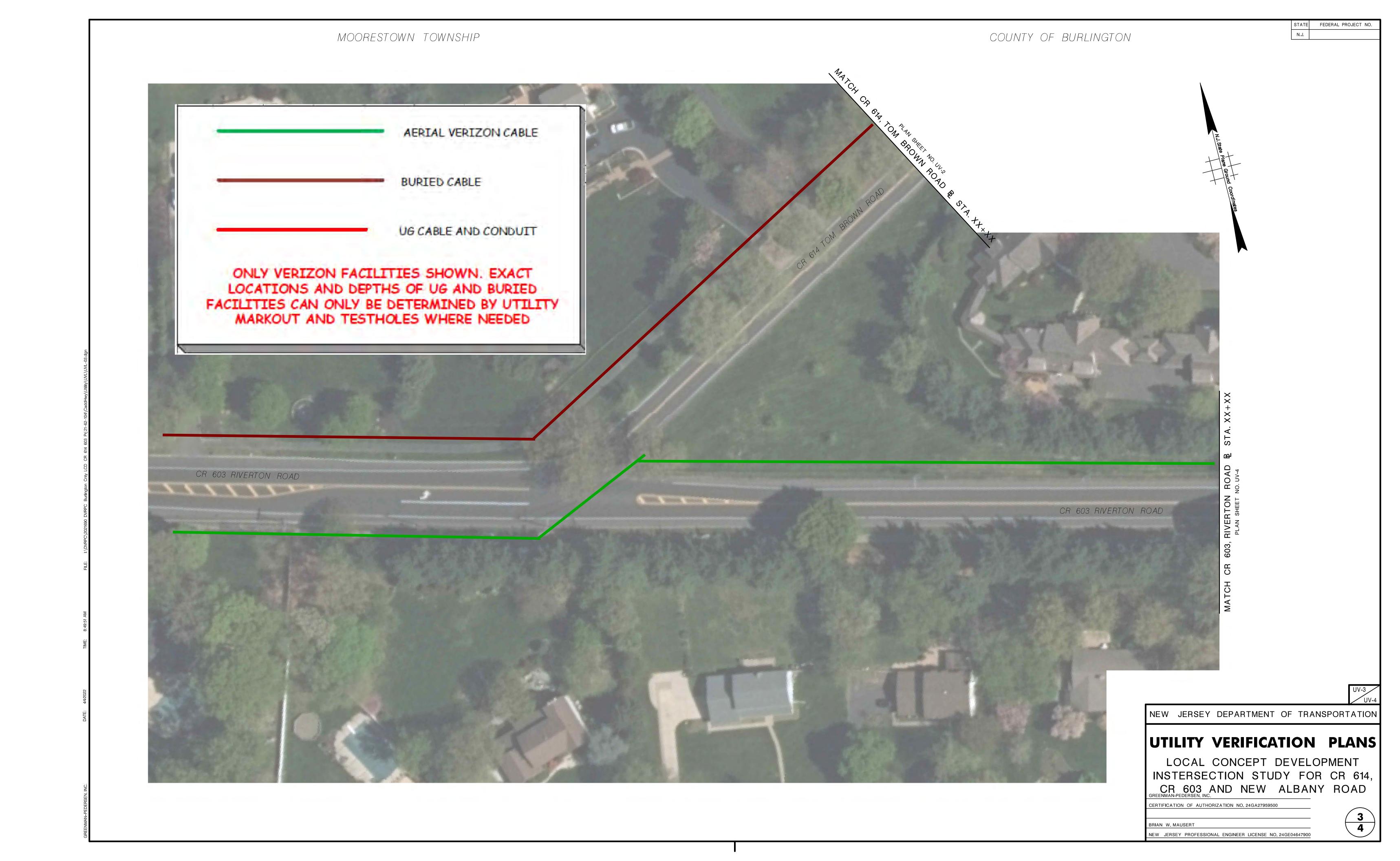
LOCAL CONCEPT DEVELOPMENT
INSTERSECTION STUDY FOR CR 614,
CR 603 AND NEW ALBANY ROAD

CERTIFICATION OF AUTHORIZATION NO. 24GA27959500

IEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 24GE0464790

BRIAN W. MAUSERT







## APPENDIX Q

## IRC APPROVAL



1035 Parkway Avenue P.O Box 600 Trenton, New Jersey 08625

PHILIP D. MURPHY

Governor

FRANCIS K. O'CONNOR

Acting Commissioner

TAHESHAL, WAY

Lt. Governor

June 18, 2024

John J. Coscia Jr.
Manager, Office of Project Implementation
Delaware Valley Regional Planning Commission
190 N. Independence Mall West
Philadelphia, PA 19106-1520

REF: Interagency Review Committee (IRC) CR 614, CR 603 and New Albany Road Moorestown Township, Burlington County

Dear Mr. Coscia:

On May 29, 2024, an Interagency Review Committee (IRC) meeting convened to determine the eligibility of advancing the subject project to the subsequent phase, Preliminary Engineering (PE). Please be advised that the IRC Committee approves the advancement of CR 614, CR 603 and New Albany Road contingent upon inclusion of all the proposed phases available in the STIP.

As a reminder for the PE phase, Burlington County must complete the first two sections of the Categorical Exclusion Document (CED) form and submit it to the Division of Local Aid and Economic Development along with plans and documentation of public outreach. The Department's Division of Environmental Resources will conduct the environmental analysis required to complete the document. Permits, if required, will be obtained by the County during Final Design.

Should you require any additional information, please contact Thomas Berryman, Manager District 4, at (856) 414-8413. Good luck with your project.

Sincerely,

Deval Desai, Director

Division of Local Aid and Economic Development

c: Steven Squibb - FHWA; Pamela Garrett - NJDOT

