APPENDIX J

Project Fact Sheet

Mercer County Route 634 (Parkway Avenue)
Scotch Road (CR 611) to Pennington Road (NJ31)
Concept Development Study
Draft Project Fact Sheet

Ewing Township, City of Trenton, Mercer County, New Jersey

New Jersey Department of Transportation
Office of Bicycle and Pedestrian Programs
Highway Safety Improvement Program
Agreement 2015 SWP 017

Prepared by:

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Introduction

Michael Baker International, Inc. (Michael Baker) was tasked by the New Jersey Department of Transportation (NJDOT) Office of Bicycle and Pedestrian Programs (OBPP) to perform a Concept Development (CD) Study on Mercer County Route (CR) 634 (Parkway Avenue) from milepost (MP) 2.20 to MP 4.40 (eastbound and westbound) in Ewing Township and the City of Trenton in Mercer County, NJ.

The study will review and assess existing roadway conditions, identify opportunities and deficiencies, develop and evaluate improvement alternatives, and select a preferred alternative to advance to design and construction. The goal of this study is to recommend, advance, and implement safety improvements along Parkway Avenue within the project limits. The study corridor will be evaluated to maximize substantive safety for all roadway users (pedestrians, bicyclists and vehicles). Safety countermeasures will be evaluated even if significant improvements are required, regardless of right-of-way needs, permitting and/or substandard design exception needs.

The project limits and study area for this study is shown in Figure 1.

Figure 1 – Project Location Map

General Information

A. Funding Source: Reference NJDOT STIP FY 2018 Draft Transportation Capital Program
NJDOT DB Number: 16308 / UPC Number: 163080

- DVRPC PE: STATE
- DVRPC DES: STATE
- DVRPC CON: NHPP

B. Type of Project:
Safety Improvement Concept Development Study

C. Highway Classification:
Urban Minor Arterial – Mercer County Route 634

D. Project Limits:
The project extends from the intersection of Scotch Road (CR 611) at MP 2.20 to the intersection of Pennington Road (NJ 31) at MP 4.40 (eastbound and westbound) in Ewing Township and the City of Trenton, Mercer County.

E. Project Origin:

Prior to the initiation of this Safety CD Study, Parkway Avenue has been the focus of several safety and mobility improvement studies, plans, and projects. Documentation, results, and goals from these initiatives were reviewed and considered during the development of alternatives within the study limits. These initiatives are summarized below:

- In January 2013, a General Motors/Naval Air Warfare Center - Parkway Avenue Redevelopment Plan was completed and adopted by Ewing Township. The redevelopment plan will regulate the former
- In October 2013, a Trenton Senior Mobility Workshop was conducted at the ECHO, Inc. Senior Center in Trenton. The workshop resulted in a final report which identified safety concerns along Parkway Avenue between Parkside Avenue and Pennington Road and at Parkway Avenue and Olden Avenue along with a matrix of high-level improvement recommendations.
- In July 2014, the Parkway Avenue Redevelopment Area Transportation Study was completed for Mercer County in partnership with Ewing Township under the Delaware Valley Regional Planning Commission (DVRPC) Transportation and Community Development Program. The purpose of the study was to develop a staged transportation plan to meet the mobility needs of the proposed Parkway Avenue Redevelopment Plan and culminated with recommended build concepts that included improvements which impact the Parkway Avenue corridor:
  - Install southbound left-turn lane at Parkway Avenue and Lower Ferry Road
  - Extend Silvia Street, linking the proposed Ewing Town Center to Parkway Avenue
  - Implement road diet along Parkway Avenue
  - Signalized or Roundabout Improvement at Parkway Avenue and Scotch Road/Silvia Street

- Corridor-wide bicycle and pedestrian improvements, including bike lanes along Parkway Avenue

- In November 2015, the New Jersey Department of Transportation (NJDOT) in conjunction with the Metropolitan Planning Organizations in New Jersey initiated a Road Diet Pilot Program. The program evaluated corridors in New Jersey to identify non-state maintained roadways as possible candidates for road diet projects. Parkway Avenue (CR 634) was selected as the candidate in the Delaware Valley Regional Planning Commission region to advance for a full safety analysis.
- In September 2017, a section of Parkway Avenue between Lower Ferry Road, MP 2.67, and Olden Avenue, MP 3.25, was converted from a four-lane undivided cross section with two through lanes in each direction to a four-lane cross section with a two-way left turn lane (TWLTL), two eastbound lanes, and one westbound lane.

F. Existing Conditions:

Roadway

There are two travel lanes in each direction west of Parkside Avenue and one travel lane in each direction east of Parkside Avenue. Shoulder and median are not present within the project limits. Sidewalks is present along a majority of the project limits, there is a small segment between Lower Ferry Road and Gold Street where sidewalk is not provided. Guiderails are not present within the project limits

Mileposts	Pavement Width	Typical Cross Section
MP 2.20 – 2.67	48’	Two (2) – 12’ thru lanes in each direction, no shoulders, no median
MP 2.67 – 3.25	48’	Two (2) – 12’ EB thru lanes, One (1) – 12’ WB thru lane, One (1) – 12’ TWLTL, No shoulders, No median
MP 3.25 – 4.11	44’	Two (2) – 11’ thru lanes in each direction, no shoulders, no median
MP 4.11 – 4.40	30’	One (1) – 15’ thru lane in each direction, no shoulders, no median

Levels of Service

Traffic counts and analyses were performed for each of the six signalized intersections within the project limits.

Intersections	Peak	2017 Existing		No-Build			
				2020		2040	
		Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
Scotch Road	AM	22.6	C	23.0	C	24.8	C
	PM	55.6	E	55.6	E	66.9	E
Lower Ferry Road	AM	23.1	C	22.1	C	38.6	D
	PM	22.3	C	20.7	C	30.5	C
Farrell Avenue	AM	11.0	B	7.6	A	13.5	B
	PM	9.7	A	8.4	A	10.6	B
N Olden Avenue	AM	23.1	C	29.5	C	31.5	C
	PM	28.3	C	28.3	C	30.8	C

Parkside Avenue	AM	16.7	B	16.7	B	17.5	B
	PM	18.6	B	18.6	B	19.9	B
Pennington Road	AM	24.8	C	30.7	C	26.8	C
	PM	24.8	C	26.3	C	27.0	C

Controlling Substandard Design Elements (CSDEs)

The identification of the existing Controlling Substandard Design Elements (CSDEs) was limited to the availability of as-built plans and field information. Further review of CSDEs is required during the design phase when detailed survey and mapping will become available. There are seven CSDE locations within the project limits

- Stopping Sight Distance on Vertical Curves - 0 locations
- Stopping Sight Distance on Horizontal Curves - 3 locations
- Cross Slope - 0 locations
- Superelevation - 0 locations
- Minimum Radius of Curve - 1 location
- Lane Width (Through and Auxiliary) - 2 locations
- Shoulder Width - 1 locations
- Through Lane Transition Length - 0 locations
- Stopping Sight Distance at Non-Signalized Intersections - 0 locations
- Vertical Clearance - 0 location (railroad bridge)

Utilities

Utility poles are located along both sides of the roadway. There are numerous utility companies with overhead and underground facilities within the project limits. Utility Contact Letters were sent to the utilities list below to verify the existing facilities within the project limits.

- Comcast
- Ewing Lawrence Sewerage Authority
- Public Service Electric and Gas Company
- Trenton Sewer Utility
- Trenton Water Works
- Verizon Communications – NJ

Drainage

A field investigation was performed to confirm the watershed boundaries, and to assess the presence of drainage structures. The field investigation was performed in the morning of 10/24/2017, with weather conditions at 52o F and intermediate rain events with about +/-1 in of rainfall. Detailed information from the field investigation is included in the Drainage and SWM management memorandum attached.

During Preliminary Engineering, additional survey of the project area will be recommended to clearly identify drainage structure locations and elevations, and sizes and connections of pipe systems. lastly, some of the curb-openings throughout the project site do not follow the NJDEP Eco requirements.

Intelligent Transportation Systems (ITS)

There are no ITS conduits or components along Parkway Avenue within the project limits.

Environmental

The Environmental Screening Report identified cultural resources within the project's area of potential effects. There were no undisturbed areas, old foundations, or building rubble present, and the project study area does not fall within an archeological grid or contain a known archeological site. While no historic districts are present within the vicinity of the project, three historic properties were identified. Since there are multiple known contaminated sites identified within the project area, there is potential for involvement with regulated material or contaminated sites. The extent of involvement depends on the proposed project activities and ROW acquisition. Limited ROW acquisition may only be necessary in areas of curb ramp and roundabout improvements. If no ROW acquisition is required, additional studies may not be warranted. It is anticipated that oversight from a Licensed Site Remediation Professional (LSRP) may be required during construction per the NJDEP Linear Construction Technical Guidance.

ADA Compliance

Assessment of existing curb ramps and pedestrian control features at intersections within the project limits were performed for ADA compliance according to the NJDOT Guidance for ADA Project Evaluation and Inventory. Findings are summarized in the ADA compliance memorandum attached.

G. Proposed Improvements:

Overall improvement may include:

Corridor-wide

- Re-stripe 4-lane sections as 3-lane sections (road diet)
- Install bicycle lanes
- Install shared use paths
- Sidewalk improvements determined to be necessary
- Curb ramp improvements at intersections to meet ADA compliance
- Drainage improvements as needed
- Striping improvements at intersections
- Signal head upgrades as needed

H. AADT:

AADT for different segments within the Parkway Avenue project limits were obtained from NJDOT's Traffic Monitoring Program. A summary of AADTs utilized is provided below:

Location	MP	AADT	Year
Parkway Avenue, east of Lower Ferry Road	2.71	17,410	2015
Parkway Avenue, between Saratoga Avenue and Olden Avenue	3.12	16,915	2016
Parkway Avenue between Hillcrest Avenue and Gardner Avenue	3.97	9,559	2017
Parkway Avenue, east of Pennington Road	4.65	5,165	2015

Using the NJDOT Annual Background Growth Rate table and the demographic forecasts identified above, the growth percentages summarized below, were used to calculate the traffic volumes for the construction year (2020) and the design year (2040). As the majority of the project falls within Ewing Township, and considering the planned Ewing Town Center, the most conservative growth rate of 0.36%/year was used for years 2020-2040.

Year	Annual Growth Rate	Number of Years	Growth
Construction Year 2020	1.0%	3 (2017-2020)	3.03%
Design Year 2040	0.36 %	20 (2020-2040)	7.45%

I. Posted Speed:

The posted speed limit on Parkway Avenue is 40 MPH between Scotch Road and Parkside Avenue and 35 MPH between Parkside Avenue and Pennington Road. The design speed is 45 MPH.

J. Predictive Safety Analysis:

Using the Highway Safety Manual Part C predictive method for urban and suburban arterials, a predictive crash rate was calculated for the existing conditions. See the HSM Memo for results of the existing conditions predictive safety analysis.