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TCDI Planning Grant Support
# EXECUTIVE SUMMARY

# PLANNING HISTORY OF THE BRUNSWICK PIKE

1. Existing Conditions, Constraints and Opportunities
2. Design Principles
3. Streetscape Concepts
4. Streetscape Elements and Furnishings

# APPENDICES

A. Concept Applied to the Entire Corridor
B. Streetscape Implementation Guidance
The Brunswick Pike has been the subject of several studies and projects over the past two decades. Lawrence Township has committed considerable resources to evaluating and analyzing Brunswick Pike in an effort to redevelop and revitalize the area into a lively mixed-use boulevard. In 1995 a Master Plan Amendment identified the area as a Redevelopment Area. In 2007 a Vision Statement was prepared for the study area which proposed multi-story and mixed-use buildings along the sidewalk. The Vision Plan identified that Brunswick Pike formed a barrier between surrounding neighborhoods and commercial uses. In addition, the study noted the lack of sidewalks and crosswalks within the corridor. In 2010, a Transportation and Community Development Initiative (TCDI) from the Delaware Valley Regional Planning Commission (DVRPC) funded a study to evaluate how redevelopment and form-based codes could facilitate transformation of the existing auto-oriented development patterns into a framework to support a more vibrant constellation of residential and non-residential uses. Among other outcomes, the 2010 study found that the Brunswick Pike roadway was still an impediment to moving forward with a new vision for the corridor. Lawrence Township had pursued NJDOT consideration of the boulevard design concept as part of a 2015 design for construction of the Whitehead Road Roundabout and Brunswick Pike Boulevard Plan. The NJDOT project included curbing for the center median, curbing and curb "bump-outs", ADA compliance ramps at intersections and crosswalks to promote accessibility; however, there are no sidewalk improvements, plantings, walkway illumination, or hardscape elements to humanize and transform the spatial and visual character of the corridor. The state construction project is completed and upon final project acceptance, Brunswick Pike will revert to Lawrence Township jurisdiction. Funded by an additional DVRPC TCDI Grant, Lawrence Township, with the assistance of Clarke Caton Hintz, has developed a conceptual streetscape design plan illustrated in this document. The goals of the Brunswick Pike Streetscape design are based on the Brunswick Pike revitalization goals including:

- Integrate the commercial corridor with the surrounding residential neighborhoods;
- Create safe pedestrian connections;
- Transform a highway to a more pedestrian oriented "place";
- Honor the history of this transportation corridor; and
- Engage community in design development.

This guide for the development of a new, unified approach to the design of the corridor was led by an advisory committee of Lawrence Township municipal officials and staff. The committee reviewed the existing conditions, evaluated options, considered input from two public forums and settled on the concept that is articulated herein. The conceptual streetscape design and the elements that comprise the design are to be used to inform the next phases of design and construction. The following pages of this document details in images, plans and drawings the results of this conceptual design process for the entire Brunswick Pike corridor. This document is separated into 4 chapters and 2 appendices.

Chapter 1 highlights the corridor’s existing conditions as well as potential opportunities and constraints which informed the final design principles. Chapter 2 details the corridors core design principles. With the design principles finalized, a proposed conceptual streetscape section design, typical plans and roundabout gateway treatment was developed and is illustrated in Chapter 3. Chapter 4 highlights potential site furnishings, planting palette and lighting fixtures.

The appendices provide more detailed information, plans, and details for the entire corridor. During the analysis phase, it was readily apparent that a standard streetscape treatment may not be possible on each block. Each block has unique conditions which require a slight deviation from the standard section. Appendix A applies the proposed generic streetscape concept to the entire corridor and accounts for the variations in conditions. Appendix B provides more detailed concepts regarding the potential streetscape elements and furnishings, including potential construction methods that could be used for low maintenance materials and long term survivability.
THE PLANNING HISTORY OF THE BRUNSWICK PIKE AREA

- Lawrence Township commitment to redevelop and revitalize Brunswick Pike into a vibrant mixed-use boulevard.
  - 1995 – Area was identified as a Redevelopment Area
  - 2007 – Vision Plan for the corridor introduces a boulevard concept
  - 2010 – TCDI Grant funded for a study for redevelopment options
  - 2015 – NJDOT completed plans for a Boulevard; however, plans exclude sidewalk improvements, plantings, walkway illumination or furnishings
  - 2019 – TDCI grant from DVRPC obtained to develop a concept for the completion of the streetscape
EXISTING CONDITIONS, OPPORTUNITIES + CONSTRAINTS
SUMMARY : EXISTING CONDITIONS, CONSTRAINTS AND OPPORTUNITIES

Constraints:
• Overhead power lines
• Limited R.O.W. to curb
• On-street parking and maintain driveway cuts
• Maintain DOT improvements
• Limited opportunities for street trees

Opportunities:
• Large median
• Whitehead Road roundabout area
• Curb extensions
SUMMARY: EXISTING CONDITIONS, CONSTRAINTS AND OPPORTUNITIES

Constraints:
1. Overhead power lines
2. Limited R.O.W. to curb
3. On-street parking and maintain driveway cuts
4. Maintain DOT improvements
5. Limited opportunities for Street Trees

Opportunities:
6. Large median
7. Whitehead Road roundabout area
8. Curb Extensions
2

DESIGN PRINCIPLES
• Increase pedestrian safety
• Develop a sense of place and identity through unified materials, plantings and furnishings
• Incorporate low-maintenance durable shade trees + plantings
• Integrate green infrastructure where possible (non-structural stormwater management mechanisms)
• Increase Pedestrian Safety

• Enhance pedestrian crossing visibility as perceived by drivers

• More visible painted crosswalks. (Existing stamped asphalt already showing wear)
• Develop a Sense of Place and Identity
  • Unified median design – cobblestone pavers, plantings, street lights, bollards
  • Street lighting – pedestrian and vehicular
  • Sidewalk design – low-maintenance wet-laid curb pavers and new concrete walkways
  • Street furnishings – benches, bus shelters, bollards
**Low-Maintenance and Durable Plantings**

- Plantings and trees will be native (or native adapted) to the region, low-maintenance and tolerant of roadside conditions.
- Groundcovers in median will fill-in quickly to minimize maintenance once established.
- Green Infrastructure: Use stormwater runoff to sustain plant material and recharge where possible through non-structural methods.
STREETSCAPE CONCEPT
STREETScape CONCEPT: TYPICAL PLAN AND SECTION
New street trees
New concrete walk, cobblestone and curb
Cobblestone median ends with vehicular street light (typ.)
Enhanced plantings at median ends
Pedestrian street light
Bollard on cobblestone (typ.)
Bus stop with bench and litter receptacle.
Green infrastructure in enhanced curb extension
This concept suggests an opportunity for a dramatic and positive change to the streetscape along this block. It is dependent on a partnership between the Township and the property owners.
Accent plantings (Typ.)
Pathway on mound
Shade tree grove backdrop and low-maintenance understory plantings
Evergreen backdrop planting
Pedestrian lights along pathway (Typ.)
Accent plantings (Typ.)
Pedestrian light at crosswalk (Typ.)
Typical median end design – cobblestones, light poles and bollards (typ)
Roundabout monument/sculpture

STREETSCAPE CONCEPT: SECTION 5 - WHITEHEAD ROAD ROUNDABOUT
STREETSCAPE CONCEPT: WHITEHEAD ROAD ROUNDABOUT – EXISTING CONDITIONS
THE BOULEVARD AT BRUNSWICK PIKE – A UNIFIED STREETSCAPE DESIGN CONCEPT

- New concrete walk, cobblestone and curb
- Enhanced plantings in median at crosswalks
- Cobblestone at median crosswalks with vehicular street light, crosswalk flashing signs and bollards (typ.)
- Pedestrian street light
- Bus stop with shelter and litter receptacle
- Bollards on cobblestone (typ.)
- Green infrastructure in enhanced curb extension
- Enhanced plantings in median at crosswalks

STREETSCAPE CONCEPT: SECTION 6 – MAYFLOWER AVE.

Location
4

STREETSCAPE ELEMENTS AND FURNISHINGS
STREETScape ELEMENTS AND FURNISHINGS

• Plant Palette
• Tree Planting
• Hardscape Treatment
• Street Lights
• Street Furnishings
STREETSCAPE ELEMENTS AND FURNISHINGS: SHADE TREES

- Ginkgo Biloba (Fall)
- Black Tupelo (Fall)
- Scarlet Oak (Fall)
- Ginkgo Biloba Princeton Sentry (Fall)
- Sugar Maple (Fall)
- London Plane Tree
- Ginkgo Biloba Princeton Sentry (Fall)
- Scarlet Oak
- Scarlet Oak (Fall)
STREETSCAPE ELEMENTS AND FURNISHINGS: ORNAMENTAL TREES

Amelanchier x grandiflora (Fall)
Amelanchier canadensis (Fall)
Amelanchier canadensis (Spring)
Seven Sons Tree (Spring)
Seven Sons Tree (Fall)
Seven Sons Tree (Spring)
STREETSCAPE ELEMENTS AND FURNISHINGS: LOW GROWING SHRUBS

- Parsons Juniper
- Rhus Aromatica Grow Low
- Dwarf Mugo Pine
- Dwarf Weigela
- Rhus Aromatica Grow Low (Fall)
- Dwarf Blue Spruce
STREETSCAPE ELEMENTS AND FURNISHINGS: HERBACEOUS (GRASSES, SEDGES + PERENNIALS)

- Feather Reed Grass
- Pink Muhly Grass
- Hameln Fountain Grass
- Switchgrass
- Pennsylvania Sedge
- Prairie Drop Seed mixed with Cone Flower
- Creeping Red Fescue
STREETSCAPE ELEMENTS AND FURNISHINGS: MORTARED COBBLESTONE ON CONCRETE BASE
STREETSCAPE ELEMENTS: SITE FURNISHINGS AND LIGHTING

Bench

Bollards

Bus Shelter

Litter Receptacle

Lighting
1. New sidewalk treatment
2. Enhanced planted curb extension
3. Enhanced planted median
4. New street trees
5. Existing trees
6. Existing on-street parking
7. Bus stop with bench
1. New sidewalk treatment
2. Enhanced planted curb extension
3. Enhanced planted median
4. New shade trees
5. Existing trees
6. Existing on-street parking
7. Bus stop with bench
8. Soil cell tree planting
1. New sidewalk treatment
2. Enhanced planted curb extension
3. Enhanced planted median
4. New street trees
5. Existing trees
6. Existing on-street parking
7. Bus stop with bench
8. Soil cell tree planting
9. Bus stop with shelter
1. New sidewalk treatment
2. Enhanced planted curb extension
3. Enhanced planted median
4. New shade trees
5. Existing trees
6. Existing on-street parking
7. Soil cell tree planting
8. Bus stop with shelter

STREETScape concept: Section 4 - Putnam Ave to Heritage Village Driveway
1. New sidewalk treatment
2. Enhanced planted curb extension
3. Enhanced planted median
4. New shade trees
5. Existing trees
1. New sidewalk treatment
2. Enhanced planted curb extension
3. Enhanced planted median
4. New shade trees
5. Existing trees
6. Existing on-street parking
7. Bus stop with bench
9. Bus stop with shelter
STREETSCAPE CONCEPT: SECTION 7 - BUNKER HILL AVE. TO LAKE DRIVE

1. New sidewalk treatment
2. Enhanced planted curb extension
3. Enhanced planted median
4. New shade trees
5. Existing trees
6. Existing on-street parking
7. Bus stop with bench
APPENDIX: STREETSCAPE IMPLEMENTATION GUIDANCE
STREETSCAPE IMPLEMENTATION GUIDANCE: PEDESTRIAN CROSSING

NOTE:
1. CROSSWALKS SHALL CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES BY THE FEDERAL HIGHWAY COMMISSION.
2. WIDTH MAY BE INCREASED BEYOND 6'-0".
3. CONTROL POINT FOR CROSSWALK ALIGNMENT SHALL BE CENTER OF RAMP.

TYPICAL CROSSWALK DETAIL - DOUBLE RAMP CONFIGURATION
N.T.S.

TYPICAL CROSSWALK DETAIL - SINGLE RAMP CONFIGURATION
N.T.S.
Vehicular scale light fixtures to be located along the median at regular intervals for a uniform lighting design. This is an example of the type and scale of fixture to be used along at the medians. Lights will be placed at optimal locations for vehicular safety. Final lighting levels to be determined during final design phase.

Fixtures should be programmable and dimmable LED fixtures with warm color temperature.
Traffic Signals should be replaced and located on similar decorative pole as median vehicular scale lighting.

2 Intersections have traffic signals:
- Lake Dr at Brunswick Pike
- Cherry Tree Lane/Slack Ave at Brunswick Pike

Note:
All elements shall be designed to accommodate loadings specific to individual circumstances.
Pedestrian crossing flashing lights visible in the day and night times to be located at every crosswalk traveling across Brunswick Pike.

Pedestrian-scale light fixtures to be located along the sidewalks at the intersections. This is an example of the type and scale of fixture to be used along the sidewalks. Lights will be placed at optimal locations for pedestrian safety at intersections and crosswalks. Final lighting levels to be determined during final design phase.

Windsor Pole, 11’ 6 1/2”, Color: Black, Ultra Marine Finish as mfg. by VALMONT MODEL# 110636504VWA-DBL**

13” mounting height

Pedestrian-scale light fixtures to be located along the sidewalks at the intersections. This is an example of the type and scale of fixture to be used along the sidewalks. Lights will be placed at optimal locations for pedestrian safety at intersections and crosswalks. Final lighting levels to be determined during final design phase.
STREETSCAPE IMPLEMENTATION GUIDANCE: BENCHES AND BUS SHELTERS

Benches to be located at strategic points along Brunswick pikes more residential areas. Typically these locations are at bus stops located within the curb extensions on the northbound sidewalk or along the southbound sidewalk or around the Whitehead road circle.

Bus shelters to be located at strategic points along Brunswick pikes commercial areas. These locations are at bus stops located within the curb extensions or along the northbound sidewalk.
Shorter bollards to be located at intersection with Brunswick Pike to aid in visually reducing the perceived road width as well as offer a sense of pedestrian safety from fast moving vehicles.

Taller illuminated bollards to be located around the Whitehead Road Circle at the median ends and on the wester edge near the roundabout.
Litter receptacles to be located at key points along the boulevard. Typically at seating areas or bus stops.

**TRASH RECEPTACLE**

**ANCHOR BOLTS SET IN CONC. (DEPTH AND SPACING PER MANUFACTURER’S SPECIFICATION)**

**CONC. FOOTING W/ REINF. PER MANUF. SPEC.**

**IN AREAS OF DECORATIVE PAVERS, FOOTING SHALL BE BELOW FINISHED PAVERS**

**LID SHALL HAVE VANDAL RESISTANT CONNECTION TO BASE**

**RECEPTACLE INFORMATION**

**MODEL:** NDSC-36

**AS MFG. BY:** Victor Stanley, Inc.

P.O. Drawer 330

Dunkirk, Maryland 20754 USA

Phone # 800.368.2573

**VERTICAL SOLID STEEL BARS 3/8” x 1”**

**SOLID STEEL TOP BAND 3/8” x 1-1/2”**

**SOLID STEEL SUPPORT BARS 1-1/4” x 2”**

**36-GALLON CAPACITY HIGH DENSITY PLASTIC LINER**

**FINISH:** VS BLACK HEAVY DUTY POWDERCOAT

**OPTIONAL FEATURE: VS RELAY**

Monitoring fill levels and weights so they can be collected at optimal times saving time and money on collection expenses.

More info: https://www.victorstanley.com/product/relay/
STREETScape Implementation Guidance: Street Tree Planting (Preferred Option)

Soil Support Module Plan

- (12) Soil cells, 20" x 20" each
- Rootball aeration piping system
- Ribbed root barrier, 12" depth, placed entire length of sidewalk in terraces where there are street trees
- Planting mixture extends root and water barrier, 40" depth, placed entire length of curb in terraces where there are street trees
- Curbing and gutter
- Surface inlet for rootball aeration system

Soil Support Module Section

- Collar trench compacted to 55% Proctor
- Soil cell filled with planting mixture
- Filter fabric
- Electric & fiber conduit, wrapped in 12" root barrier & water barrier
- Subgrade compacted to 55% Proctor

Notes:
1. Install with root flare at or slightly above grade. Do not place mulch within 2 inches of trunk.
2. Cut and completely remove all twine, burlap, and wire baskets from root ball prior to placing backfill material.
3. Refer to SUDS Figure 9.03.101 for additional tree planting information.

- Remove transit guard and/or wrap
- Provide 3" depth of bark mulch for the entire width of the terrace and extending along the terrace 3 feet in either direction as measured from the trunk of the tree. Finish mulch 1" inch below adjacent pavement surfaces to reduce migration.
- Surface inlet for rootball aeration system placed slightly above finished grade.
- Rootball aeration piping system
- Tree anchoring system
- Curb & gutter
- Root and water barrier, 40" depth
- Planting mixture
- Place root ball on compacted soil. Tamp soil around root ball base firmly with foot pressure so that root ball does not shift 4" aggregate base extending below planting mixture extends, compacted to 95% proctor.
STREETScape IMPLEMENTATION GUIDANCE : TREE GRATES FOR SIDEWALK PLANTINGS

Plan View

Sectional View

Edge-cap opened to show rib detail

Plan View

Optional Port Opening

THE BOULEVARD AT BRUNSWICK PIKE – A UNIFIED STREETScape DESIGN CONCEPT | B10
STREETSCAPE IMPLEMENTATION GUIDANCE: STREET TREE PLANTING (ALTERNATE OPTION)

Diagram:

- Building Face / R.O.W.
- Street Tree
- Tree Grate or Cobblestone Pavers
- Curb
- CU-Structural Soil Compacted in 6" Lifts
- Manufactured By: Country View INC.
  780 New Brunswick Road
  Somerset, NJ 08873
  Phone # (732)560-8000
- Sturdy, Tamped Mound to Receive Root Ball and Prevent Tree from Shifting or Leaning
- Geotextile
- 6" Dia. Perf. PVC Pipe; Wrap in Geotextile Continuous in Trench
- Tie In to Stormwater System
- Existing median soil is extremely compacted has a limited amount of topsoil for tree and shrub plantings.
- Previous road base is likely underneath topsoil.
- All existing soil should be removed and replaced in 6" lifts with planting medium at the specified depths and compacted to 85% proctor.
- Water will need to freely drain at the bottom of the median and connect to existing storm system for an outlet.
- Existing Fiber Optic Line may need to be moved if too shallow.