

Burlington County | River Route Corridor Study



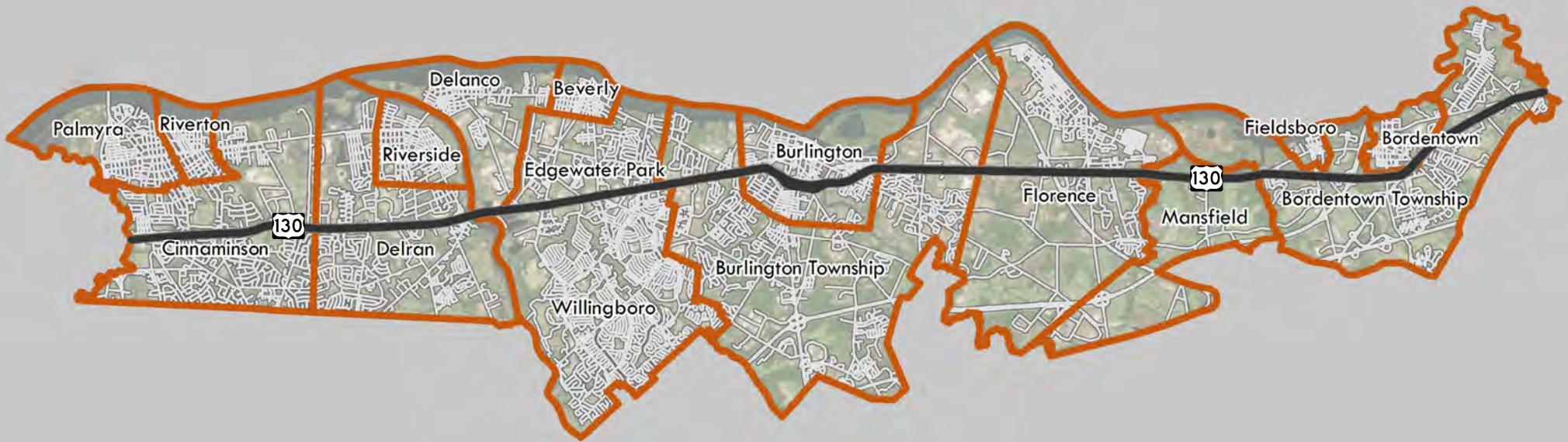
June 29th, 2018 - Final Draft

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INTRODUCTION



Study Advisory Committee Meeting #1, November 2nd, 2017



Final Study Advisory Committee Meeting, June 11th, 2018

U.S. Route 130 is a primary transportation corridor traversing Burlington County, connecting the region's major destinations, residential areas, and employment centers, and the cities of Camden, Burlington, Bordentown, and Trenton. Running parallel to the Delaware River and NJ Transit's River Line to the west and I-295 to the east, Route 130's role among River towns' quality of life, mobility, and economic activity is both essential and challenging: north-south mobility and through travel are virtually impossible without it, deficiencies in its roadway geometrics and design are well-known and well-documented, and it is frequently cited for its high ranking in the tri-state area as a hot-spot for pedestrian crashes and fatalities.

This final report summarizes priority locations (intersections and corridors) along the River Route Corridor, stretching from Cinnaminson to Bordentown City and Township. A total of 41 locations are included. For each location, the report includes summaries of existing conditions (location, current design and geometric configuration, crash data, traffic volumes, and local and regional context), notable previous studies and findings, issues and deficiencies, recommended improvements, and concept diagrams.

A series of meetings have been held with municipal decision makers and professionals to identify and evaluate critical issues and needs, proposed and planned development, and review the proposed concepts and improvements, including:

- Study Advisory Committee Meeting # 1 - November 2nd, 2017
- Municipal Stakeholder Meeting #1 - December 7th, 2017
- Municipal Stakeholder Meeting #2 - December 7th, 2017
- Municipal Stakeholder Meeting #3 - December 12th, 2017
- Municipal Stakeholder Meeting #4 - May 29th, 2018
- Municipal Stakeholder Meeting #5 - May 29th, 2018
- Municipal Stakeholder Meeting #6 - May 30th, 2018
- Final Study Advisory Committee Meeting - June 11th, 2018

The attached appendix is the Review of Previous Studies & Overall Existing Conditions

U.S. 130 AT HIGHBRIDGE RD, BORDENTOWN TOWNSHIP, MP 57.4

Configuration

This four-leg intersection is controlled by a side street stop sign. U.S. 130 carries two travel lanes in each direction plus shoulders. There are dedicated left-turn lanes in both directions along U.S. 130, but no dedicated right-turn lanes. Highbridge Road carries one lane in each direction on the westbound approach. A large abandoned parcel connected by an access road is situated to the west of the intersection, forming the eastbound approach to U.S. 130. This approach is currently closed to all traffic. Traffic control devices at the intersection are limited to stop signs along Highbridge Road.

Crashes

- 2 Crashes between 2014-2016; no injuries reported

AADT

- U.S. 130 – 30,090 in 2014, 25,982 in 2011
- Highbridge Road – Data not available

Considerations

Located approximately one mile north of the U.S. 130/U.S. 206 split, the intersection with Highbridge Road lies in a suburban context. There are several commercial land uses to the north of the intersection along U.S. 130, such as motels, a rental car shop, a marine supply store and a ballet studio. Residential developments are scattered throughout the area, including the Borden's Crossing development just south of the intersection. In addition, Highbridge Road is a primary entry point for visitors and employees of Garden State Youth Corrections Facility. Bordentown Regional High School is located just south of the intersection along Hogback Road, which connects to Highbridge Road. A new mixed-use development, in the final planning stage, will be located at the southeast corner of Crescent Drive and U.S. 130. There are plans to signalize the Crescent Drive intersection.

Issues

- Severely limited visibility of Highbridge Road approach due to trees, vegetation, poor lighting and signage, resulting in difficult left-turns



- out of Highbridge Road and right-turns into Highbridge Road from northbound U.S. 130.
- Position of fire hydrant on eastbound approach of Highbridge Road at the southeast corner; proximity to utility poles and environmentally sensitive land cover.
- Although legal for vehicles weighing under four tons, U-turns made at the median break for Highbridge Road from southbound U.S. 130 can be problematic due to an uphill slope just south of the intersection, which limits sight distances along U.S. 130.
- Residential cul-de-sac development on the south-east quadrant of the intersection does not interconnect Highbridge Road with Crescent Drive and Ward Avenue through a grid, as per DVRPC's 1997 plan U.S. 130 Corridor Study.

Previous Studies and Recommendations

Delaware Valley Regional Planning Commission's (DVRPC) 2012 Safety Action Plan report, "U.S. 130/ U.S. 206 Road Safety Audit," made the following recommendations for this intersection:

- Increase signage to restrict U-turn movement on southbound U.S. 130 at Highbridge Road; and
- Install intersection ahead warning signs or a flashing beacon for Highbridge Road and additional street lighting to improve visibility.



The DVRPC's 1997 U.S. 130 Corridor Study made the following recommendations:

- Encourage drivers to use alternate routes to the correctional facility, such as Groveville Road or Ward Avenue;
- Increase the turning radius for northbound U.S. 130 right-turns onto Highbridge Road;
- Improve internal circulation by connecting Highbridge Road and Hogback Road through the future residential development on the south-east quadrant of the intersection; and
- Connect the intersection to Old Amboy Road by utilizing the internal roadways within the vacant parcel to the west of U.S. 130.

The residential development on the southeast quadrant has since been built, however it is not connected to Hogback Road or Highbridge Road, as was recommended in the 1997 plan. In addition, U-turns for vehicles weighing under four tons are now permitted along both sides of U.S. 130.

Recommendations

- Add a dedicated right-turn lane to northbound U.S. 130 for right-turns to Highbridge Road.
- Add directional signs from Hogback Road to encourage alternate

routes through Ward Avenue and Livingston Lane to U.S. 130 through a signalized intersection, especially if signalization at Highbridge Road is not a possibility.

- Install advance signs about the upcoming intersections with Highbridge Road and Crescent Drive on northbound U.S. 130 before the uphill climb.
- Add road markings to indicate left-turn and U-turn lanes from southbound U.S. 130 to Highbridge Road.
- Signalize the Crescent Drive intersection to connect the proposed mixed-use development with the vacant property on the western side of U.S. 130.
- Upon signalization of Crescent Drive intersection, remove left-turn and U-turn provisions from northbound U.S. 130 to the vacant property to the west of the intersection.
- Investigate future trail along utility ROW to connect the Bordentown Regional High School and Borden's Crossing residential development to the proposed Amboy Rd Rail Trail, including a spur connection to the proposed mixed-use development.
- Redevelop the abandoned property to the west of U.S. 130 and connect U.S. 130 to Amboy Road/ U.S. 206 through an internal road, as per the 1997 Corridor Study. (This requires an at-grade railroad crossing)



Vacant property driveway located west of the Highbridge Road intersection



Limited visibility, lack of deceleration lanes, and poor advance signage at the intersection

US 130 at Highbridge Rd, Bordentown Twp

Transportation Improvements



Signalize Crescent Drive intersection to connect the proposed mixed-use development with the vacant property on the western side of US 130



Add road markings to indicate left-turn and U-turn lanes



Remove left-turns and U-turns upon signalization of Crescent Drive intersection



Install dedicated right-turn deceleration lane to reduce speed differentials and improve overall visibility at the intersection



Potential Improvements

 Signalize Intersection



0' 50' 100' 200' Feet

US 130 at Highbridge Rd, Bordentown Twp

Transportation Improvements

 Signalize Crescent Drive intersection to connect the proposed mixed-use development with the vacant property on the western side of US 130

 Redevelopment of abandoned parcel

 Add directional signage for alternate routes through Ward Ave and Livingston Ln to US 130

206

FUTURE MIXED-USE DEVELOPMENT

 Create a more interconnected roadway network to improve travel efficiency

Garden State Youth Correctional Facility

 Install advance signs about the upcoming intersections with Highbridge Road and Crescent Drive before the uphill climb.

 Connection to proposed Amboy Rd Rail Trail

 Investigate future trail along utility ROW to connect the Bordentown Regional High School and Borden's Crossing residential development to the proposed Amboy Rd Rail Trail, including a spur connection to the proposed mixed-use development

Bordentown Regional High School

Potential Improvements

-  Proposed Roadway Connections
-  Proposed Trail Connection





Source: WSP additions to US 130 Corridor Study, 1997 by DVRPC

U.S. 206 AT AMBOY RD/PARK ST (CR 662), BORDENTOWN CITY, MP 36.5

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 206 carries two travel lanes in both directions along with a shoulder. There are no dedicated turn lanes on U.S. 206 and exit ramps in both directions are located north of the intersection. Northbound vehicles on U.S. 206 must take the far-side jug-handle onto Amboy Road to make a left-turn to CR 662 or a U-turn and southbound vehicles on U.S. 206 must take the exit ramp onto the near-side jug-handle to make a left-turn onto Amboy Road or for a U-turn. Both westbound Amboy Road and eastbound Park Street (CR 662) have one travel lane in each direction, with no marked shoulders. There are dedicated left-turn lanes on both approaches to the intersection. The northbound U.S. 206 stop bar is set back approximately 100 feet from the intersection to accommodate the irregular placement of the signal due to the location of the railroad bridge.

Crashes

- 24 Crashes between 2014-2016; 1 reported fatality and 2 moderately injured
- Cluster of crashes also occurred along eastbound Park Street crossing U.S. 206

AADT

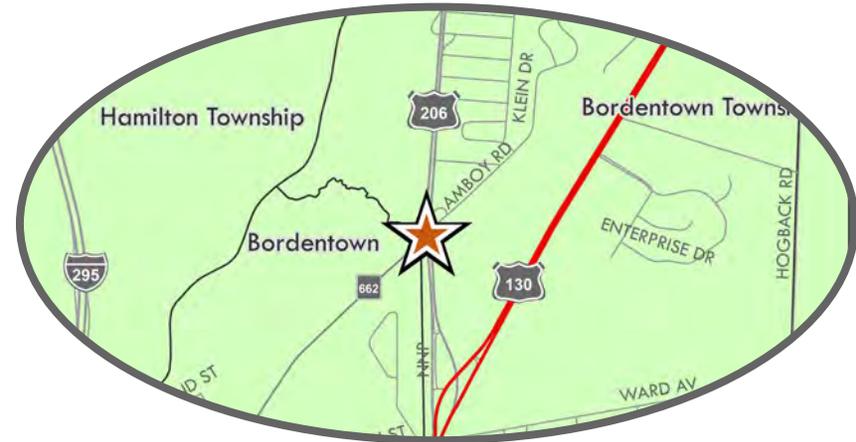
- U.S. 206 – 20,659 in 2015, 22,294 in 2012
- CR 662 – 3,953 in 2010

Considerations

Located about half a mile north of the U.S. 130/206 concurrency, the intersection provides access to suburban residential developments to the east and Bordentown City to the west. Westbound CR 662 also provides direct access to the Bordentown Beach, as well as the Bai Brands distribution center. The intersection serves as the primary access point to Bordentown City from southbound U.S. 206.

Issues

- Poor visibility of the jug-handle merge for westbound traffic on



Amboy Road due to trees and vegetation.

- There is insufficient clearance for right-turning vehicles from northbound U.S. 206 to Amboy Road.
- Left-turns from westbound Amboy Road onto southbound U.S. 206 conflict with the median barrier due to lack of proper sight distance and/or visibility.
- There are no existing pedestrian or bicycle facilities at the intersection.
- An excessive number of rear-end crashes are occurring on the northbound approach to the intersection.

Previous Studies and Recommendations

The 2012 Road Safety Audit made the following recommendations for this intersection:

- Provide pedestrian accommodations that are missing like sidewalks, crosswalks, curb ramps, and pedestrian signal heads; long term improvement to complement ground level access would involve utilizing the adjacent freight rail line ROW to provide east-west pedestrian access.
- Re-stripe the approaches for narrower lanes on Amboy Road to create a small shoulder for bicyclists. A long-term improvement to complement ground-level access involves utilizing the adjacent freight rail line ROW to provide east-west bike access.
- Cut back vegetation on Amboy Road's westbound approach to the

intersection and install warning signs and pavement markings in advance of jug-handle to warn of entering traffic.

- Move the stop bar back (east) on westbound Amboy Road approaching the intersection to provide needed clearance for right-turns from U.S. 206.
- Upgrade crash attenuators under bridge, provide extra warning if necessary, and add lane extension markings for left-turns from westbound Amboy Road to southbound U.S. 206.
- Add signs to better communicate that left-turns on northbound U.S. 206 must be made via far-side jug-handle; add lane marking in the leftmost lane to indicate through movements only.

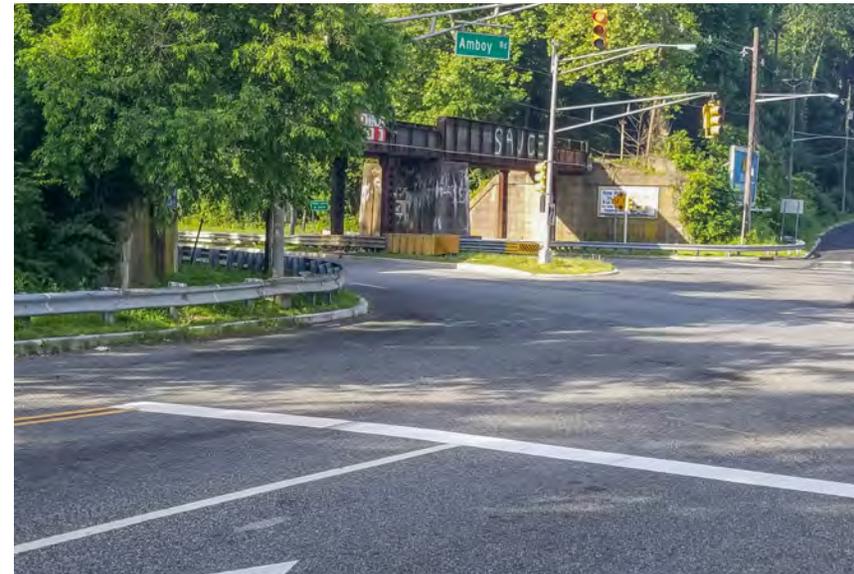
Recommendations

- Improve visibility along westbound Amboy Road approaching the jug-handle by trimming vegetation.
- Stripe lane extension markings for left-turns from westbound Amboy Road to southbound U.S. 206 and from eastbound Park Street to northbound U.S. 206.

- Move stop bar back at the westbound Amboy Road approach to improve clearance for right-turning vehicles from northbound U.S. 206.
- Improve turn markings and advance signage for the northbound U.S. 206 approach to the intersection.
- Investigate installing dedicated left-turn phases for both approaches to U.S. 206
- Add pedestrian signal heads, a sidewalk and a crosswalk to the north side of Amboy Road across the intersection and along northbound U.S. 206.
- Investigate converting the existing rail line to a rail-trail to provide grade separated bicycle and pedestrian access across the intersection.
- Investigate a future trail along the utility right-of-way from the Bordentown Regional High School to the proposed Amboy Road Rail Trail and/or to the proposed at-grade pedestrian facilities at the intersection.



Poor visibility of the jug-handle merge for westbound traffic on Amboy Road due to excess vegetation



Insufficient clearance for right-turning vehicles from northbound U.S. 206 to Amboy Road

US 206 at Amboy Ave & Park St, Bordentown City

Transportation Improvements

 Trim vegetation to improve visibility between Amboy Road and the jug handle

 Investigate installing dedicated left-turn phases for both approaches to US 206

 Move stop bar back to accommodate right turning vehicles from northbound US 206

 Install sidewalks, crosswalks, ADA curb ramps and pedestrian signal heads to enable pedestrian crossings

 Convert rail line to rail-trail and use existing utility right-of-way to create trail connection to High School

 Paint right turn markings and improve advance signage for the northbound approach to the intersection

 Stripe lane extension markings for eastbound and westbound left turns

Potential Improvements

-  Clear Vegetation
-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp
-  Proposed Rail Trail
-  Proposed Trail Connection





U.S. 130/U.S. 206 CONCURRENCY, ELIZABETH ST/WARD AVE TO SOUTHERN SPLIT, BORDENTOWN CITY, MP 55.8-56.5

Configuration

U.S. 130 and U.S. 206 run concurrently for approximately 0.8 miles in Bordentown City, from Ward Avenue and Elizabeth Street in the north to just north of Farnsworth Avenue in the south. In the northbound direction, U.S. 130/206 carries four travel lanes without shoulders to Crosswicks Street and then drops a lane to carry three travel lanes without shoulders. There are four travel lanes without shoulders in the southbound direction for the entire stretch. Right-turn lanes operate at Crosswicks Street for both directions of U.S. 130/206 which provide access to all turning movements at the intersection. Intersections at Elizabeth Street and Ward Avenue operate as right-in and right-out and lack access to the opposing direction of U.S. 130/206



Crashes

- 142 Crashes between 2014-2016; 6 injuries with 1 fatality and 1 incapacitation reported
- Primarily occurred along U.S. 130/ U.S. 206 northbound

AADT

- U.S. 130/ U.S. 206 – 50,637 in 2013

Considerations

The corridor is lined with commercial establishments on both sides. Unmet pedestrian demand has been documented along the corridor. This corridor has experienced a decline in traffic since the completion of I-295 through Bordentown in the 1990s.

Issues

- Frequent driveways and access points along the corridor cause unsafe driver behavior, reduce sight distances and introduce unnecessary conflict points with large speed differentials
- Crash rates are higher along the corridor than the state average for similar cross-sections

- U.S. 206 MP 36.27-36.80 - 2.93 crashes per million VMT for 2009
- U.S. 130 MP 55.44-55.77 - 4.43 crashes per million VMT for 2009
- U.S. 206 MP 34.98-35.61 - 2.98 crashes per million VMT for 2009
- Right of way encroachment is evident throughout the corridor.
- There is no formal pedestrian accommodation on southbound U.S. 130 between Farnsworth Avenue and Crosswicks Street. The sidewalk from Farnsworth Avenue to Crosswicks Street along northbound U.S. 130 is discontinuous, while no sidewalks exist from Elizabeth Street to Farnsworth Avenue along southbound U.S. 130 or southbound U.S. 206.
- There is no bicycle accommodation along the corridor.
- Advance warning signs are missing from southbound U.S. 130 for Elizabeth Street, which currently can only be accessed by merging onto U.S. 206 just north of the intersection.

Previous Studies and Recommendations

The 2012 Road Safety Audit made the following recommendations for this corridor:

- Install/upgrade all crossings with striping, ADA-compliant curb ramps, and signal heads, and extend medians into crosswalks.
- Add “no turn on red when pedestrians are present” sign to give



U.S. 130/206 concurrency currently consists of 3-4 lanes in each direction with minimal pedestrian accommodations

pedestrians priority, and consider traffic calming to slow right-turning vehicles.

- Revisit signal timing and coordination for Farnsworth Avenue, Crosswicks Street, and Butts Avenue; Conduct a left-turn capacity analysis from westbound Farnsworth Avenue to northbound U.S. 130.
- Improve pedestrian and bicyclist accommodations along U.S. 130/ U.S. 206 between Farnsworth Avenue and Crosswicks Street.
- Investigate a capacity reduction on U.S. 130 northbound between the I-295 northbound off ramps and Farnsworth Avenue.
- Improve pedestrian and bicyclist accommodations along Crosswicks Street.
- Add lane extension markings for left-turn movements at the Crosswicks Street intersection.
- Redesign the lane geometry for the Crosswicks Streets westbound slip ramp onto U.S. 130/206 northbound.
- Implement access management along U.S. 130/206 at specific driveways by narrowing the opening and eliminating duplicates.
- Consider a road diet along southbound U.S. 130/206 from four lanes to three and add a shoulder between the northern merge and Crosswicks Street.
- Evaluate sign placement, adequacy of advance warning, and messaging to improve the use of jug-handles for proper turning movements and reducing illegal left-turns from U.S. 130/206.
- Improve signage near Mastoris Diner to provide advance warning signs of driveway ahead; supplement with a flashing beacon and clearing of sight distances; in the longer term, relocate the cross-over to a location with better sight distance, and possibly narrow the passage to one lane of traffic.
- Install advance warning signs just before the northern merge for southbound U.S. 130 that guides vehicles to Elizabeth Street.

The 2017 DVRPC Traffic Calming Alternatives for Routes 130 & 206 study made the following recommendations for this corridor:

- Convert existing paved shoulders near access points with dedicated deceleration lanes.
- Redesign median breaks in the concurrency with elements that clarify permitted movements and provide additional queue storage

wherever necessary.

- Implement a road diet:
 - Remove one southbound through lane on U.S. 206 from the northern merge area (which extends south to the Ward Avenue and Elizabeth Street intersection).
 - Remove one through lane in each direction for the concurrency around the Crosswicks Street intersection.
 - Remove one through lane on northbound U.S. 206 south of Crosswicks Streets to the southern merge.

Recommendations

- Implement a road diet:
 - Remove one southbound through lane on U.S. 206 from the northern merge area (which extends south to the Ward Avenue and Elizabeth Street intersection).
 - Remove one through lane in each direction for the concurrency around the Crosswicks Street intersection.
 - Remove one through lane on northbound U.S. 206 south of Crosswicks Streets to the southern merge.
- Manage access to U.S. 130/206 by consolidating and removing duplicate driveways.
- Investigate traffic calming design elements to reduce travel speeds along the corridor, including:
 - Narrow lane widths to retain support for large trucks while also reducing excess widths.
 - Restructure the median and plant trees along the roadway to introduce a tunnel effect to naturally slow vehicles.
 - Install speed feedback signs to warn drivers of excessive speeding.
- Provide a connected network of pedestrian accommodations throughout the corridor by installing sidewalks, crosswalks, ADA curb ramps and pedestrian signal heads throughout the concurrency in both directions.

US 130/US 206 Concurrency, Bordentown City

Transportation Improvements



Investigate traffic calming design elements to reduce travel speeds along the corridor



Remove one through lane in each direction for the concurrency around the Crosswicks Street intersection



Remove one southbound through lane on US 206 from the northern merge area



Manage access to US 130/ US 206 by consolidating and removing duplicate driveways



Install sidewalks, crosswalks, ADA curb ramps and pedestrian signal heads throughout the concurrency in both directions



Remove one through lane on northbound US 130/ US 206 south of Crosswicks Streets to the southern merge



RT 130 AT ELIZABETH ST/WARD AVE, BORDENTOWN CITY, MP 56.4

Configuration

This pair of right-in right-out intersections is controlled by stop controls in each direction of U.S. 130/ 206. U.S. 206 and U.S. 130 run concurrently at this intersection separated by a median barrier, which does not allow interconnectivity between Ward Avenue on the east and Elizabeth Street on the west. U.S. 206 and U.S. 130 each carry two southbound lanes without shoulders to a point just south of the intersection where they merge to become a concurrent four lane roadway. U.S. 206 and U.S. 130 northbound run concurrently through the intersection carrying three travel lanes without shoulders to a point just north of the intersection before splitting into separate roadways with two travel lanes each with shoulders. There is a dedicated right-turn lane for vehicles on southbound U.S. 206 turning right onto Elizabeth Street through a channelized right-turn. Vehicles traveling northbound on U.S. 130/206 making a right-turn onto Ward Avenue must use the shared right-turn lane which is also channelized. Ward Avenue carries one travel lane in each direction without marked shoulders and westbound vehicles on Ward Avenue making a right-turn onto U.S. 130/206 northbound have a channelized right-turn lane with stop control. Elizabeth Street carries one travel lane in each direction without marked shoulders and has a channelized right-turn onto southbound U.S. 206 with a stop control.

Crashes

- 15 Crashes between 2014-2016; no serious injuries were reported
- Primarily occurred along eastbound Ward Avenue leaving the intersection

AADT

- U.S. 130 – 50,637 in 2013
- Ward Avenue – 3,564 in 2014, and 3,559 in 2011
- Elizabeth Street – 723 in 2016, 749 in 2012

Considerations

The Bordentown Regional High School is located just east of the intersection and many of its students reside to the west of the



intersection. Crosswicks Street is the only vehicular connection along the entire concurrency of U.S. 130/206. Ward/Elizabeth Street is a primary contender for a second crossing.

Issues

- The disconnect between Elizabeth Street and Ward Avenue forces drivers, pedestrians and bicyclists to seek less direct routes to cross U.S. 130/206, reducing routing efficiency in the area.
- The sidewalk network is discontinuous around the intersection, especially to the Bai Brands distribution center.
- This incomplete intersection is a barrier to access between Bordentown Regional High School and Bordentown City.

Previous Studies and Recommendations

The 2012 Road Safety Audit made the following recommendations for this intersection:

- Implement access management along U.S. 130/ U.S. 206 at specific driveways by narrowing the opening and eliminating duplicates.
- Consider road dieting southbound U.S. 130/ U.S. 206 from four lanes to three and adding a shoulder between the northern merge and Crosswicks Street.
- Advance warning signs just before the northern merge for southbound U.S. 130 that guides vehicles for Elizabeth Street right-turn.

The 2017 Traffic Calming Alternatives for Routes 130 & 206 study evaluated several scenarios for implementing traffic calming along the U.S. 130/206 concurrency. Using Vissim modeling software, the project team analyzed four possible reconfigurations for the intersection of U.S. 130/206 and Ward Avenue/ Elizabeth Street: a roundabout, a T-intersection, left-turn signals, and solely a reduction in travel lanes (keeping the intersection right-in right-out) in both directions of U.S. 130/206. Based on the results of the analysis, the following recommendations were made for the intersection:

- Signalize the existing intersection to provide all turning movements. Stripe dedicated left-turn lanes from Elizabeth Street and Ward Avenue to northbound and southbound U.S. 130/206 respectively. Stripe dedicated left-turn lanes from U.S. 130/206 to both streets.
- Stripe crosswalks, install pedestrian signal heads and ADA curb ramps to provide pedestrian access across U.S. 130/206.
- Relocate the merge of southbound U.S. 130 and U.S. 206 further to the north to allow drivers on U.S. 130 to make the right-turn to Elizabeth Street.

Recommendations

- Signalize the existing intersection to provide all turning movements. Stripe dedicated left-turn lanes from Elizabeth Street and Ward Avenue to northbound and southbound U.S. 130/206 respectively. Stripe dedicated left-turn lanes from U.S. 130/206 to both streets.
- Stripe crosswalks, install pedestrian signal heads and ADA curb ramps to provide pedestrian access across U.S. 130/206. Investigate ways to daylight pedestrian crossings to make pedestrians more visible to drivers.
- Relocate the merge of southbound U.S. 130 and U.S. 206 further to the north to allow drivers on U.S. 130 to make the right-turn to Elizabeth Street.
- Install advance electronic red light ahead sign along southbound U.S. 130 approaching the U.S. 206 merge to warn drivers of the upcoming signalized intersection.
- Close the existing turning movement onto southbound U.S. 206 adjacent to the Jade Island Restaurant.



Existing westbound Ward Avenue approach to U.S. 130/206

US 130 at Elizabeth St/ Ward Ave, Bordentown City

Transportation Improvements



Relocate the merge of southbound US 130 and US 206 further to the north to allow drivers on US 130 to make the right turn to Elizabeth Street. Close existing turning movement onto southbound US 206 adjacent to the Jade Island Restaurant



Stripe dedicated left turn lanes from Elizabeth Street and Ward Avenue to northbound and southbound US 130/206 respectively. Stripe dedicated left turn lanes from US 130/206 to both streets.



Install advance electronic red light ahead sign to warn drivers of the upcoming signalized intersection



Install advance truck restriction signage to prohibit trucks beyond the Bai Brands Distribution Center along Elizabeth Ave



Signalize the existing intersection to provide all turning movements



Stripe shared lane markings along Ward Avenue and Elizabeth Street to encourage bicycling throughout the neighborhood



Stripe crosswalks, install pedestrian signal heads and ADA curb ramps to provide pedestrian access across US 130/206. Investigate ways to daylight pedestrian crossings to make pedestrians more visible to drivers

Potential Improvements

- Stripe shared lane markings
- Install Sidewalk
- Stripe Crosswalk
- Install ADA Curb Ramp



U.S. 130 AT CROSSWICKS STREET (CR 528), BORDENTOWN CITY, MP 56.1

Configuration

This modified four-leg intersection is controlled by multiple traffic signals. This concurrent segment of the combined U.S. 130/U.S. 206 alignments carries four travel lanes in each direction south of the intersection with a lane drop for the northbound approach leaving the intersection. Geometrics, constraints, and inconsistent and obsolete design elements sometimes make navigation difficult and circuitous. Left-turning vehicles from southbound U.S. 130/U.S. 206 to Crosswicks Road must use a far-side jug-handle, while left-turning northbound U.S. 130/U.S. 206 traffic must turn right onto Crosswicks Road and proceed to a modified jug-handle to travel westbound on Crosswicks Street into Bordentown City. Drivers approaching the intersection at Crosswicks Road from the east must either turn right via a channelized right-turn lane onto U.S. 130/U.S. 206, or follow the through-left lanes to the south of the intersection where they can continue onto Butts Avenue and into Bordentown City. There are two dedicated left-turn lanes and two through lanes on the eastbound approach of Crosswicks Street. Drivers must use Butts Avenue to make a right-turn onto U.S. 130/206 southbound.

Crashes

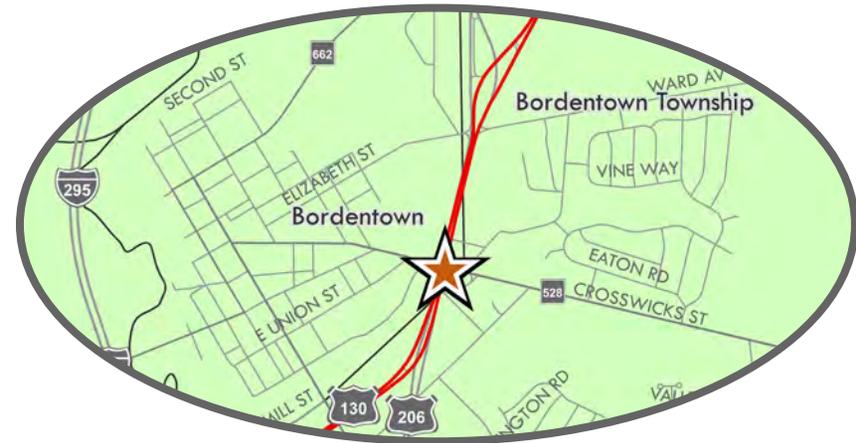
- 42 Crashes between 2014-2016; 3 injuries reported, one resulting in an incapacitation
- Primarily occurred along southbound U.S. 130/206 at the intersection with Crosswicks Street

AADT

- U.S. 130 – 50,637 in 2013
- Crosswicks Street – 2,701 in 2015, 2,931 in 2012

Considerations

Located within the U.S. 130 and U.S. 206 concurrency one mile north of I-295, Crosswicks Street is the only intersection along the concurrency providing access to both sides of U.S. 130/206 for vehicles and pedestrians. Crosswicks Street directly serves Bordentown City as well as regional traffic bound for New Egypt and Joint Base McGuire-Dix-Lakehurst, reflecting the complex configuration of the existing



intersection for maximum throughput. Commercial activity lines both sides of U.S. 130/206 around the intersection.

Issues

- A substantial number of illegal turns take place from U.S. 130/206 to Crosswicks Street due to congestion, driver confusion, and other factors
- There are no pedestrian signal heads at the intersection.
- Sidewalks are discontinuous on the north side of Crosswicks Street.
- Access management is lacking around the intersection, resulting in redundant access points and conflicting turning movements.
- Grade changes along U.S. 130 reduce visibility on the approaches to the intersection.
- Excessive vehicular speeds along the U.S. 130/206 corridor were documented in the 2017 Traffic Calming Alternatives for Routes 130 & 206 calming study.

Previous Studies and Recommendations

The 2012 Road Safety Audit made the following recommendations for this intersection:

- Install and/or upgrade all crossings with striping, ADA-compliant curb ramps, and signal heads. Extend medians into crosswalks.
- Add “no turn on red when pedestrians are present” sign to give

pedestrians priority, and consider traffic calming to slow right-turning vehicles.

- Revisit signal timing and coordination for Farnsworth Avenue, Crosswicks Street, and Butts Avenue.
- Redesign the lane geometry for the westbound Crosswicks Street slip ramp onto northbound U.S. 130/ U.S. 206.
- Implement access management along U.S. 130/ U.S. 206 at specific driveways by narrowing the opening and eliminating duplicates.
- Consider a road diet along southbound U.S. 130/ U.S. 206 from four lanes to three and add a shoulder between the northern merge and Crosswicks Street.
- Evaluate advance sign placement to improve the use of jug-handles for proper turning movements and to reduce illegal left-turns from U.S. 130/206.

The 2017 Traffic Calming Alternatives for Routes 130 & 206 study evaluated several scenarios for implementing traffic calming along the U.S. 130/206 concurrency. Using Vissim modeling software, the project team analyzed four possible reconfigurations for the intersection of U.S. 130/206 and Crosswicks Street; A roundabout, a T-intersection, left-turn signals and solely a reduction in travel lanes in both directions of U.S. 130/206. Based on the results of the analysis, the following recommendations were made for the intersection:

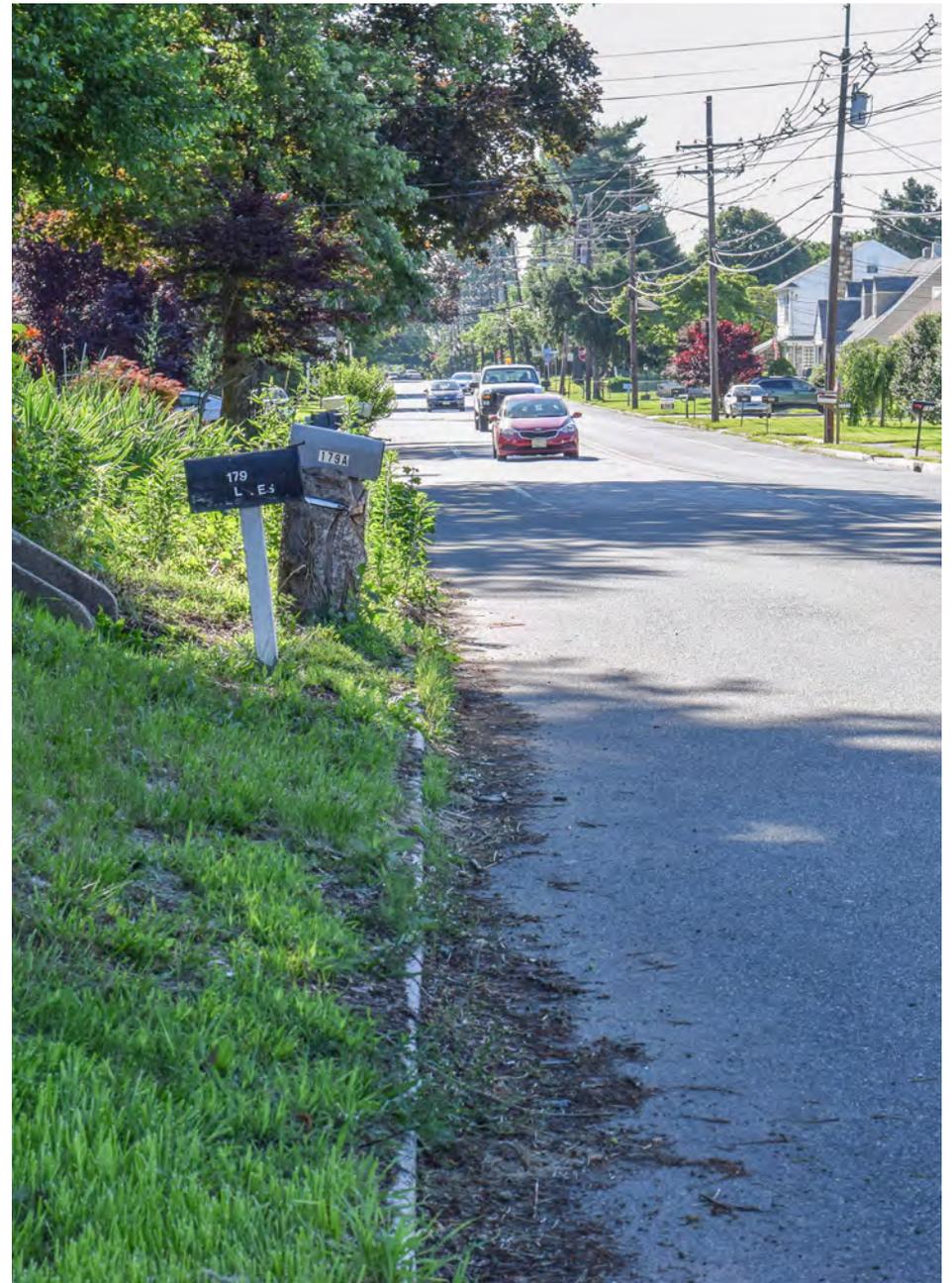
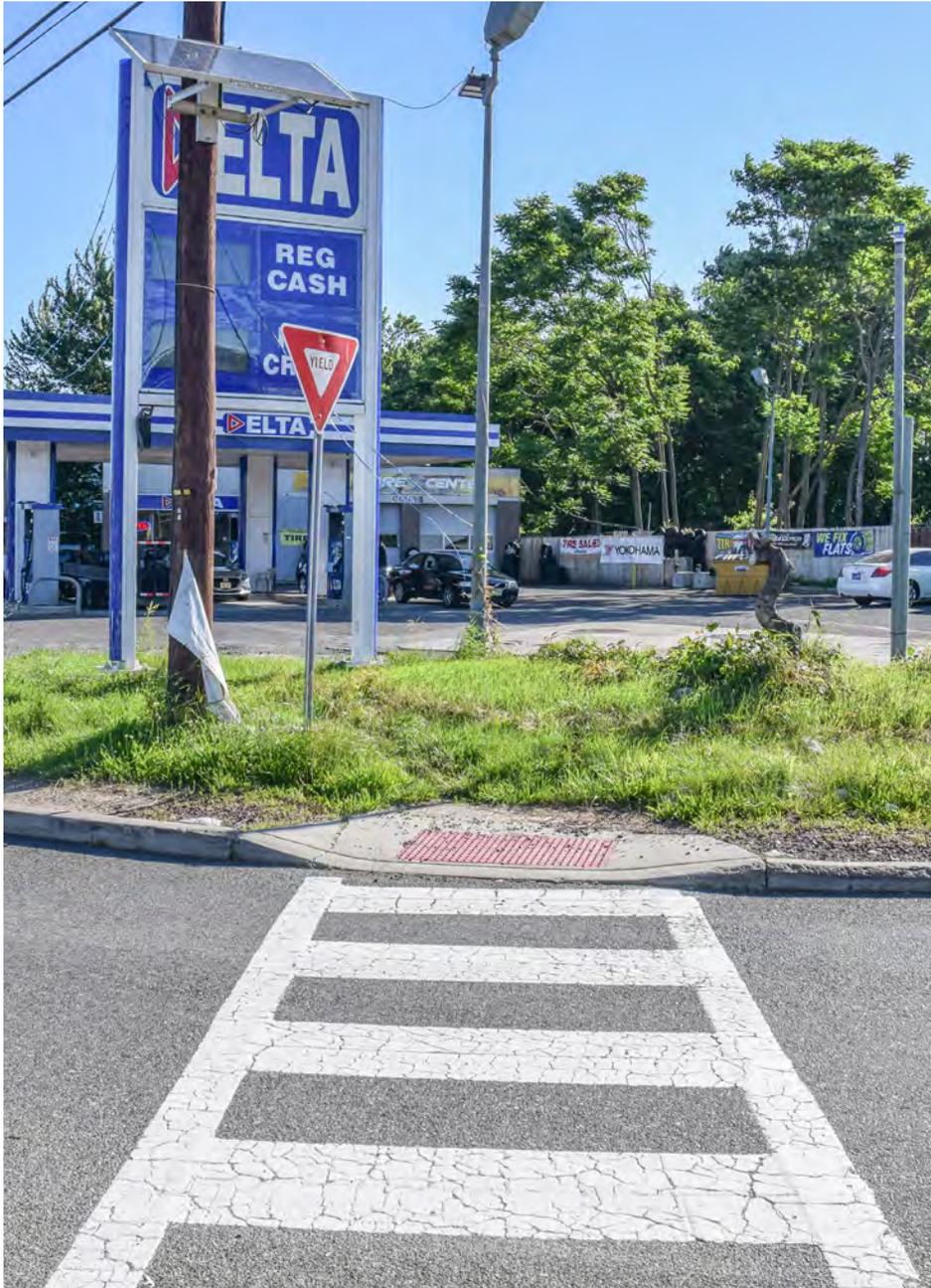
- Remove one through lane in each direction of U.S. 130/206 for the entire concurrency, including the Crosswicks Street intersection
- Remove one through lane on northbound U.S. 206 south of Crosswicks Streets to the southern merge.
- Realign the southbound U.S. 130/206 far-side jug-handle to create a larger merge area with Butts Avenue to reduce vehicular conflicts.
- Route all westbound through traffic to the far-side southbound U.S. 130/206 jug-handle rather than the existing alignment along Butts Avenue.

Recommendations

- Implement a road diet along the entire concurrency of U.S. 130/206 by removing one through lane in each direction, including the portion that runs through the intersection with Crosswicks Street.
- Route all westbound through traffic to the far-side southbound U.S.

130/206 jug-handle rather than the existing alignment along Butts Avenue. Realign the jug-handle to create a larger merge area with Butts Avenue to reduce vehicular conflicts.

- Improve directional and warning sign placement to clarify all turning movements at the intersection.
- Stripe lane extension markings on Butts Avenue to southbound U.S. 130/206 and from Crosswicks Street to northbound U.S. 130/206.
- Interconnect sidewalks on the north-west and north-east corners of U.S. 130/206 and Crosswicks Street. Stripe a mid-block crosswalk just east of the Butts Avenue turning movements on the west side of U.S. 130/206 to provide pedestrian access to Thorntown Lane and commercial establishments north of the intersection. Stripe a shared crosswalk at Gilder Park Road to establish a bicycle connection between the east and west side of Crosswicks Street at the U.S. 130/206 intersection. Investigate ways to daylight pedestrian crossings to make pedestrians more visible to drivers.
- Investigate installing oversize traffic signal heads to improve visibility due to grade changes and sight-lines.
- Improve lighting at the intersection for pedestrians and motorists.
- Replace the eastbound sidewalk along Crosswicks Street with a wider, bi-directional multi-use path to accommodate bicyclists and pedestrians. All bicyclists will use the proposed path to cross U.S. 130/206 in either direction. Bicyclists making the eastbound crossing will be routed along the proposed path across the intersection, with shared-lane markings guiding them further east. All westbound bicyclists will cross Crosswicks Street at the intersection adjacent to the existing pedestrian crosswalks, then continue along the proposed path until crossing to the westbound side again using the proposed crosswalk at Gilder Park Road.



Incomplete pedestrian network at intersection and along approach roadways reduces pedestrian mobility across U.S. 130/206

US 130 at Crosswicks St, Bordentown City

Transportation Improvements



Realign jug handle to increase merge area with Butts Ave and route westbound traffic through jug handle



Remove one through lane in each direction of the US 130/206 concurrency



Interconnect pedestrian network at the intersection by installing sidewalks, crosswalks, ADA curb ramps, pedestrian signal heads, and improving lighting. Investigate ways to daylight pedestrian crossings to make pedestrians more visible to drivers



Investigate installing oversize traffic signal heads to improve visibility due to grade changes and sightlines



Stripe lane extension markings from Butts Avenue to southbound US 130/206 and from Crosswicks Street to northbound US 130/206



Install a two-way shared-use path to accommodate bicyclists across the intersection. Stripe bicycle crossings adjacent to sidewalks and paint shared lane markings along Crosswicks Street

Potential Improvements



Stripe Shared Lane Markings



Install Sidewalk



Stripe Crosswalk



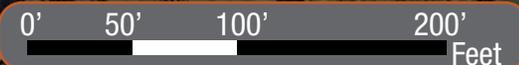
Install ADA Curb Ramp



Install Multi-Use Path



Stripe Bicycle Crossing



U.S. 130 AT FARNSWORTH AVE (CR 545), BORDENTOWN TOWNSHIP, MP 55.5

Configuration

This four-leg intersection is controlled by a traffic signal. U.S. 130 carries two travel lanes in each direction plus shoulders. The approaches are supplemented by center turn lanes in each direction. Farnsworth Avenue carries one lane in each direction with an additional left-turn lane on the eastbound approach only. U.S. 130 has a dedicated left-turn lane in both directions.

Crashes

- 39 Crashes between 2014-2016; one moderate injury reported

AADT

- U.S. 130 - 34,201 in 2015, 29,058 in 2012
- Farnsworth Ave - 6,322 in 2016, 5,630 in 2013

Considerations

The downtown business district of Bordentown City lies just north of the intersection. A sizable number of bicyclists and pedestrians access the major commercial services that are located at this intersection, including Aldi, Dunkin Donuts, McDonalds, a planned CVS pharmacy, and 7/11 convenience store.

Issues

- Trucks making right-turns from northbound U.S. 130 to eastbound Farnsworth Ave have limited space to make the turn due to a tight curb radius.
- Significant sidewalk gaps exist along both roadways leading up to the intersection, which also lacks ADA curb ramps and striped crosswalks.
- The left-turn lane from northbound U.S. 130 to westbound Farnsworth Ave lacks the necessary capacity to support vehicle queues.
- Right-on-red turning vehicles from both directions of Farnsworth Ave to U.S. 130 pose a hazard to pedestrians in the crosswalks.



- Driveway encroachment is evident along southbound U.S. 130 just north of the intersection.

Previous Studies and Recommendations

Delaware Valley Regional Planning Commission's (DVRPC) 2012 Safety Action Plan report, "U.S. 130/U.S. 206 Road Safety Audit," made the following recommendations for this intersection:

- Improve pedestrian connectivity, including crosswalks, sidewalks, ADA curb ramps, and signage;
- Add left-turn capacity from U.S. 130 northbound to Farnsworth Avenue northbound; and
- Improve the turning radius from U.S. 130 northbound to southbound Farnsworth Avenue.

Recommendations

- Extend sidewalks along both roadways from the intersection to fill gaps in the network.
- Connect the sidewalks with striped crosswalks and ADA curb ramps, where necessary. Where curbs are not present, utilize highly visible textured materials to distinguish pedestrian right-of-way from driveways. Investigate ways to daylight pedestrian crossings to make pedestrians more visible to drivers.

- Extend the left-turn queue lane from northbound U.S. 130 to westbound Farnsworth Avenue to accommodate more vehicles and to keep the northbound U.S. 130 travel lanes clear.
- Alter the curb geometry of the right-turn from northbound U.S. 130 to eastbound Farnsworth Avenue to allow large commercial vehicles to perform right-turns with greater ease and without obstructing adjacent travel lanes. This is the major truck route from southbound I-295 to the truck stops located along Rising Sun Road. These improvements will discourage trucks from using Dunns Mill Road to navigate to the truck stops until the planned connector road is

constructed between Rising Sun Road and Dunns Mill Road, just east of U.S. 130.

- Provide a five second lead time for pedestrians crossing U.S. 130. This will make them more visible to drivers turning onto U.S. 130 from Farnsworth Avenue. Due to the limited number of travel lanes, it is not advisable to restrict right-turns on red from Farnsworth Avenue. In order to preserve pedestrian safety while allowing maximum throughput along Farnsworth Avenue, the pedestrian lead time will improve conditions at the intersection.



Right-turning trucks from northbound U.S. 130 to eastbound Farnsworth Avenue have limited space due to a tight curb radius

US 130 at Farnsworth Ave, Bordentown Twp

Transportation Improvements

 Install missing ADA curb ramps and stripe missing crosswalks at all crossings around the intersection. Investigate ways to daylight pedestrian crossings to make pedestrians more visible to drivers

 Extend sidewalks from intersection along US 130 and Farnsworth Ave to fill network gaps

 Extend left turn queue to accomodate more left turning vehicles

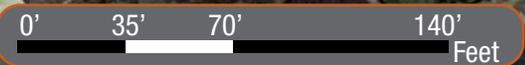
 Provide 5-second lead for pedestrian walk light across US 130 to reduce vehicular conflict

 Alter curb geometry to provide adequate space for commercial vehicles to make right turn

Potential Improvements

-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp





U.S. 130 AT DUNNS MILL RD, BORDENTOWN TOWNSHIP, MP 54.6

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries 3 travel lanes plus a shoulder in each direction. There are no dedicated turn lanes on U.S. 130. Vehicles traveling northbound on U.S. 130 must take the jug-handle to make a right-turn onto Dunns Mill Road, a left-turn to Washington Street or a U-turn. Vehicles traveling southbound on U.S. 130 must use the far-side jug-handle south of the intersection to make a left-turn on to Dunns Mill Road or a U-turn. Westbound Dunns Mill Road and eastbound Washington Street both carry one travel lane in each direction and have one additional dedicated left-turn lane each. There are no dedicated left-turn cycles, rather the intersection operates on 2 phases. The eastbound Washington Street through lane is shared by those making right-turns onto southbound U.S. 130, while westbound Dunns Mill Road has a through lane and a channelized right-turn onto northbound U.S. 130 that is controlled by a traffic signal.

Crashes

- 15 Crashes between 2014-2016; no serious injuries reported

AADT

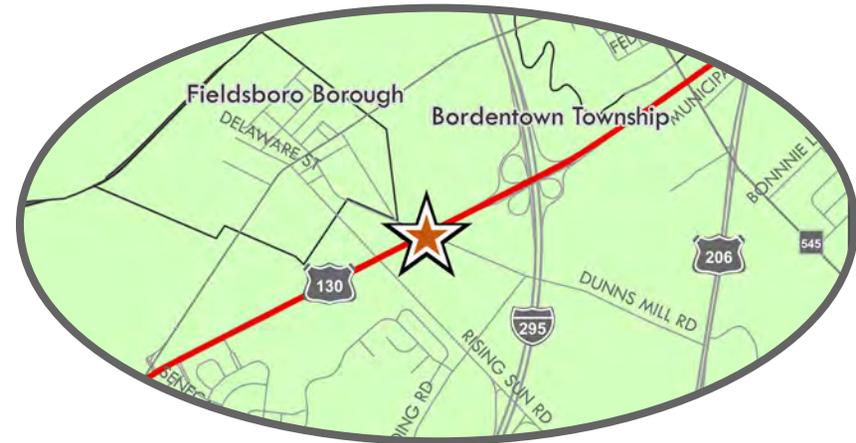
- U.S. 130 – 32,183 in 2012
- Dunns Mill Road – 8,634 in 2016, and 8,338 in 2012
- Washington Street – 7,145 in 2010

Considerations

A major shopping center borders the intersection to the west, featuring an Acme grocery store and other retail and service-oriented uses. Due to the low density of residential development surrounding the intersection and a lack of access points to the commercial establishments from U.S. 130, the prevalence of bicyclists and pedestrians is low. There is also a New Jersey State Police station on Dunns Mill Road with a driveway within 150 feet of the intersection.

Issues

- Trucks and other heavy vehicles on southbound U.S. 130 frequent



the jug-handle to westbound Dunns Mill Road to reach the major Bordentown truck stops. Dunns Mill Road is a weight-restricted municipal roadway designed for local traffic.

- Left-turning vehicles from Dunns Mill Road and Washington Street have little room to pass due to irregular alignment of the cross streets and the lack of dedicated left-turn signal phases.
- There are no pedestrian facilities at the intersection.

Previous Studies and Recommendations

Delaware Valley Regional Planning Commission's (DVRPC) 2014 report, "Bordentown Township Redevelopment, Proposed Connector Road" identified ways to improve truck circulation between southbound I-295 and the Bordentown truck stops. The study team identified several routes that truckers frequented to reach the truck stops and noted the length of each alternative. With the completion of the proposed connector road, truckers will have a viable alternative to Farnsworth Avenue (CR 545), which forces them to make a tight turn against multiple lanes of traffic.

The DVRPC study made the following recommendations for this intersection:

- Construct a roundabout on Dunns Mill Road east of U.S. 130 and a new connector road to Rising Sun Road; and
- Close the intersection of Rising Sun Road and U.S. 130 to traffic to avoid conflicts at the Dunns Mill Road intersection.

Short-Term Recommendations

- Pull back the stop bar and median divider on U.S. 130 to improve the geometry of the left-turn movements from Dunns Mill Road and Washington Avenue.
- Stripe line extension markings to help guide drivers making left-turns at the intersection.

Long-Term Recommendations

- Reconfigure the alignment of the intersection closer to 90 degrees to

mitigate geometric irregularities as they relate to turning movements, especially for larger vehicles.

- Move forward with the construction of a connector road between Dunns Mill Road and Rising Sun Road to eliminate the illegal use of Dunns Mill Road by large trucks.
- Close the intersection of Rising Sun Road and U.S. 130 to traffic to avoid conflicts at the Dunns Mill Road intersection.
- Provide pedestrian facilities between adjacent residential developments and commercial establishments at the intersection, including sidewalks, crosswalks and ADA curb ramps.



Left-turning vehicles from Dunns Mill Road and Washington Street regularly form queues in the middle of the intersection due to poor visibility of through-traffic

US 130 at Dunns Mill Rd, Bordentown Twp

Transportation Improvements

Short-Term



Stripe line extension markings through intersections along opposing left turning movements to guide drivers entering US 130



Push back stop bars and median divider to create more space for safer opposing left turns

Potential Improvements

- Stripe Line Extensions Markings
- Push Back Stop Bars

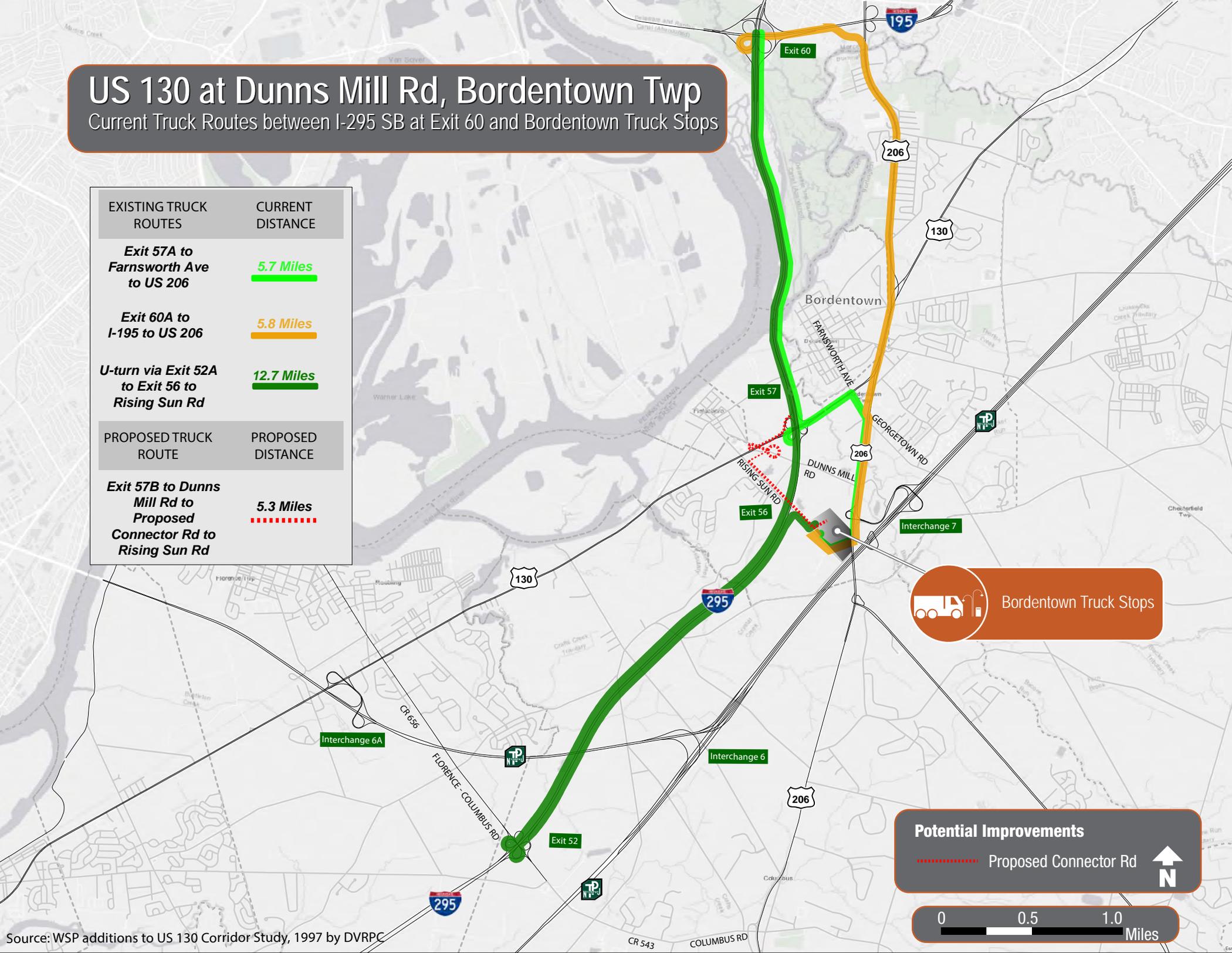


0' 35' 70' 140' Feet

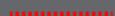
US 130 at Dunns Mill Rd, Bordentown Twp

Current Truck Routes between I-295 SB at Exit 60 and Bordentown Truck Stops

EXISTING TRUCK ROUTES	CURRENT DISTANCE
<i>Exit 57A to Farnsworth Ave to US 206</i>	5.7 Miles
<i>Exit 60A to I-195 to US 206</i>	5.8 Miles
<i>U-turn via Exit 52A to Exit 56 to Rising Sun Rd</i>	12.7 Miles
PROPOSED TRUCK ROUTE	PROPOSED DISTANCE
<i>Exit 57B to Dunns Mill Rd to Proposed Connector Rd to Rising Sun Rd</i>	5.3 Miles



 Bordentown Truck Stops

Potential Improvements
 Proposed Connector Rd



US 130 at Dunns Mill Rd, Bordentown Twp

Transportation Improvements

Long-Term



Provide pedestrian facilities between adjacent residential developments and commercial establishments at the intersection, including sidewalks, crosswalks and ADA curb ramps



Stripe line extension markings through intersections along opposing left turning movements to guide drivers entering US 130



Reconfigure intersection geometry to improve ease of simultaneous left turn movements onto US 130



Push back stop bars and median divider to create more space for a safer left turn

Potential Improvements

- Stripe Line Extension Markings
- Install Sidewalk
- |||| Stripe Crosswalk
- ▼ Install ADA Curb Ramp

A white arrow pointing upwards, with the letter 'N' below it, enclosed in a white square.

US 130 at Dunns Mill Rd, Bordentown Twp

Transportation Improvements

Long-Term



Reconfigure intersection alignment geometry to improve ease of simultaneous & opposing left turn movements onto US 130



Provide pedestrian facilities between adjacent residential developments and commercial establishments at the intersection, including sidewalks, crosswalks and ADA curb ramps



New connector road with roundabout to replace the existing northbound jug handle



Add right turn only lane to US 130 NB



Close-off access to Rising Sun Rd from US 130 to mitigate intersection conflicts at Dunns Mill Rd and US 130

Potential Improvements

- Stripe Line Extension Markings
- Install Sidewalk
- |||| Stripe Crosswalk
- ▭ Install ADA Curb Ramp



0' 100' 200' 400' Feet

U.S. 130 AT KINKORA RD (CR 678), MANSFIELD TWP, MP 52.7

Configuration

This three-legged intersection is controlled by side street stop signs. U.S. 130 carries two travel lanes plus shoulders in each direction, while Kinkora Road carries two travel lanes with small, variable shoulders in each direction. There are dedicated left-turn lanes from southbound U.S. 130 to southbound Kinkora Road but no deceleration lane from northbound U.S. 130 to southbound Kinkora Road. U-turns for all vehicles under 4-tons are permitted on southbound U.S. 130 at the intersection but prohibited in the northbound lanes. Left-turning movements are permitted from northbound Kinkora Road to southbound U.S. 130.

Crashes

- 6 Crashes between 2014-2016; one injury reported

AADT

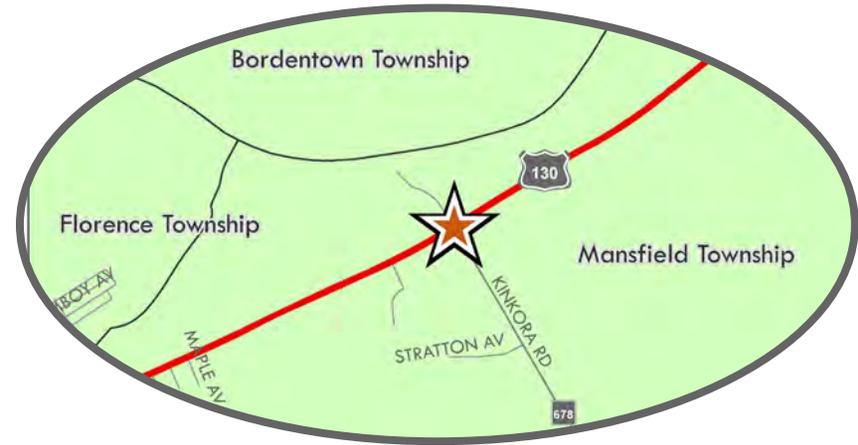
- U.S. 130 – 24,002 in 2014, and 25,699 in 2011
- Kinkora Rd (CR 678) – 1,385 in 2011, and 639 in 2014

Considerations

Kinkora Road provides a connection between U.S. 130 and U.S. 206 within Mansfield Township, serving the small communities of Columbus and Hedding. The roadway provides the primary access to nearby Crystal Lake Park and to the Columbus Civic and Athletic Club. The Delaware River Heritage Trail's proposed alignment will circumvent the intersection on either side through Crystal Lake Park and pass underneath U.S. 130 near the Trap Rock Industries property, before proceeding towards Roebing. A bus stop along the NJ Transit Route 409 bus route is located on the southbound side of the intersection. The corresponding northbound stop is located just south of the intersection, adjacent to the Liberty Diner.

Issues

- Visibility of all turning movements is compromised at the intersection due to vegetation and elevation changes along U.S. 130.
- There is insufficient left-turn lane capacity on southbound U.S. 130



for vehicles to safely decelerate while approaching the intersection down the hill. This results in heavy last second braking and rear end collisions.

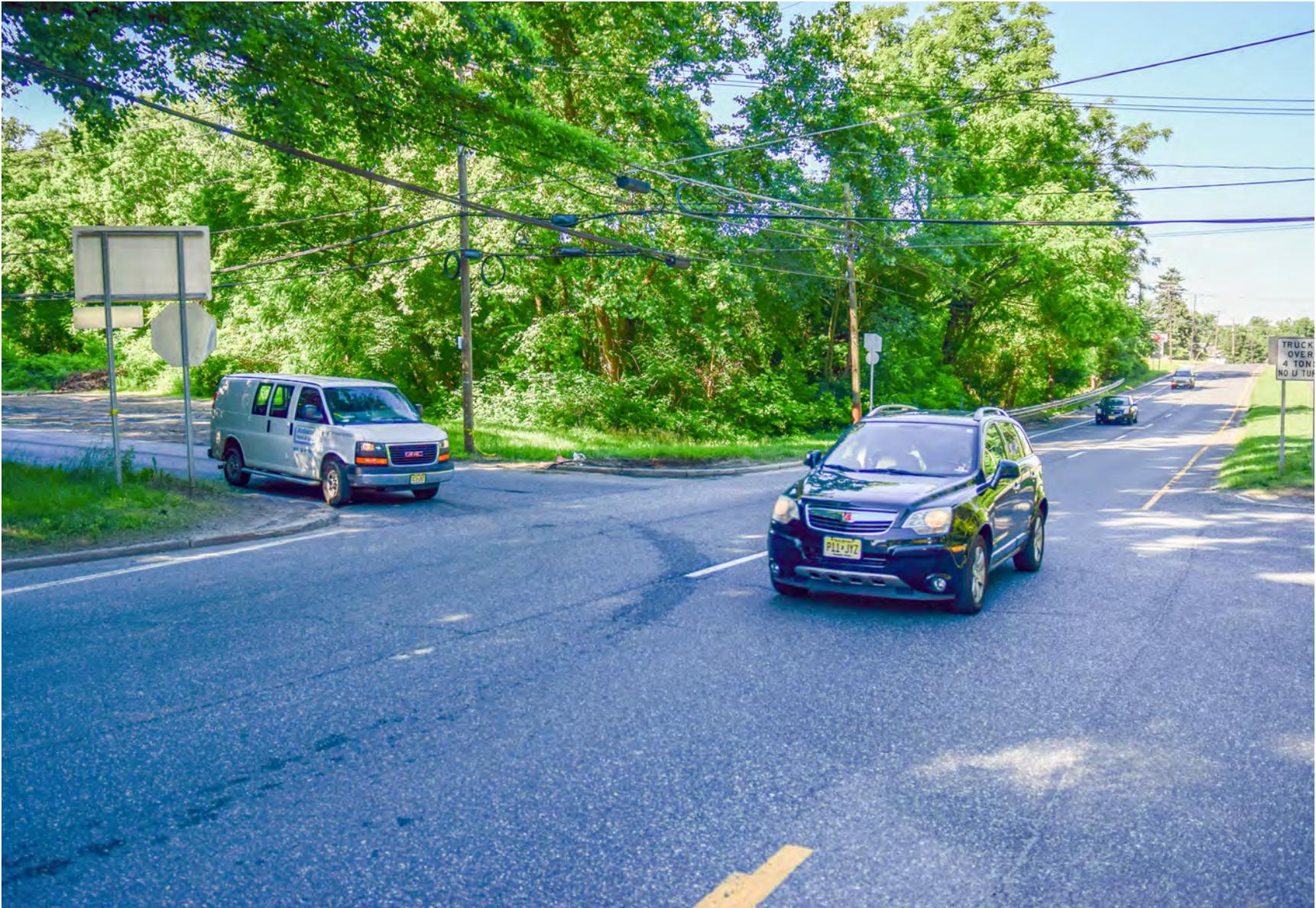
- The lack of a deceleration lane along northbound U.S. 130 results in heavy braking and rear-end collisions on the approach to the intersection.
- A lack of advance signage on both U.S. 130 approaches to the intersection result in dangerous last second merges.
- The intersection is missing crosswalks, ADA ramps, and continuous sidewalk facilities.

Recommendations

- Extend the left-turn bay along southbound U.S. 130 to Kinkora Road to increase turning capacity and to facilitate safer downhill braking.
- Stripe a deceleration lane along northbound U.S. 130 to provide a direct turning movement to southbound Kinkora Road.
- Smooth out the turning radius for the right-turning movement from northbound U.S. 130 to southbound Kinkora Road to increase comfortable turning speeds to reduce rear-end collisions.
- Install advance signage to warn motorists traveling in either direction of U.S. 130 of the upcoming intersection.
- Trim excess vegetation at the southwest corner of the intersection to improve visibility for right-turning vehicles onto Kinkora Road and left-turning vehicles to northbound U.S. 130.

- Stripe high visibility crosswalks and install sidewalks and ADA curb ramps to connect the southbound U.S. 130 bus stop with Kinkora

Road. Install a high visibility flashing beacon with supplemental pedestrian crossing signs to facilitate the unsignalized crossing.



Visibility of all turning movements is compromised at the intersection due to vegetation and elevation changes along U.S. 130

US 130 at Kinkora Rd (CR 678), Mansfield Twp

Transportation Improvements



Install advance signage to warn motorists travelling in either direction of US 130 of the upcoming intersection.



Extend the left-turn bay along southbound US 130 to Kinkora Road to increase turning capacity and to facilitate safer downhill braking



Stripe high visibility crosswalks and install sidewalks and ADA curb ramps to connect the southbound US 130 bus stop with Kinkora Road. Install a high visibility flashing beacon with supplemental pedestrian crossing signs to facilitate the unsignalized crossing



Smooth out the turning radius for the right turning movement to facilitate safer turns and trim excess vegetation to improve visibility



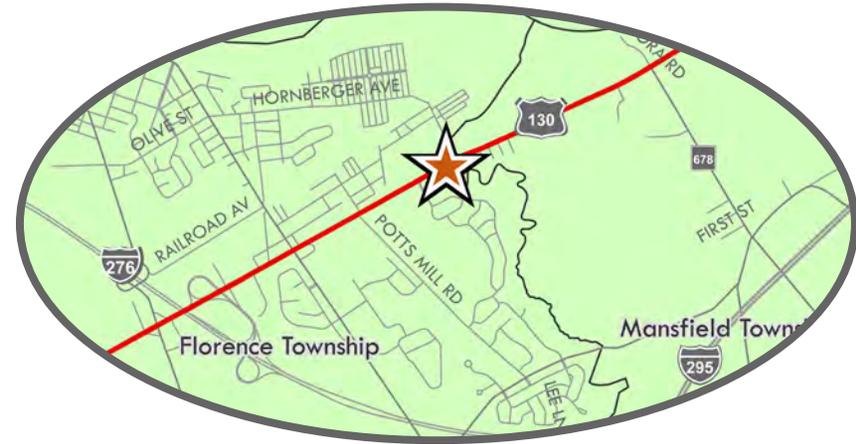
Stripe a deceleration lane along northbound US 130 to provide a direct turning movement to southbound Kinkora Road



U.S. 130 AT HORNBERGER AVE, FLORENCE TOWNSHIP, MP 51.7

Configuration

This three-legged intersection is controlled by a traffic signal. U.S. 130 carries two travel lanes plus a shoulder in each direction, in addition to a dedicated left-turning lane for northbound vehicles and dedicated right-turning lane for southbound vehicles on U.S. 130. The northbound left-turn lane is approximately 270 feet in length while the dedicated right-turn lane in the southbound direction is approximately 300 feet in length. Hornberger Avenue carries one travel lane in each direction with no dedicated turn lanes for the eastbound approach. All eastbound turning movements are made from the single lane at the intersection. Left-turning vehicles from northbound U.S. 130 onto Hornberger Avenue have a dedicated left-turn signal phase and are otherwise restricted from making the turn.



Crashes

- 14 Crashes between 2014-2016; 1 moderate injury reported

AADT

- U.S. 130 – 23,865 in 2016, 25,245 in 2012
- Hornberger Avenue –Data not available

Considerations

The NJ Transit Roebing River Line Station is located less than one-half a mile north of the intersection. A single NJ Transit bus stop along Route 409, which operates between Trenton and Philadelphia, is located directly north of the intersection along northbound U.S. 130. The bus stop is currently unsigned and contains no passenger facilities. Several residential developments are located within walking distance of the intersection. A gas station along southbound U.S. 130 and a small business along northbound U.S. 130 are the only active uses at the intersection. About 800 feet south of the intersection is a small cluster of commercial establishments, all accessed from Fairbrook Drive. Significant industrial redevelopment is planned for the Roebing section of Florence Township to the north of the intersection. Vehicular and pedestrian volumes are generally expected to increase at the intersection after the new developments open.

Issues

- Sight distances to Fairbrook Drive from northbound U.S. 130 are limited due to grade.
- Left-turning vehicle volumes from northbound U.S. 130 to Hornberger Avenue will increase as the slated redevelopment in Roebing takes place. The existing left-turn capacity may not be sufficient for future operations.
- Vehicular capacity at the eastbound approach to U.S. 130 is limited due to the existing single lane design, which supplies both right and left-turning movements.
- There is no sidewalk or bicycle network to connect the residential developments along U.S. 130 to the Roebing Light Rail station on Hornberger Avenue.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Either extend the left-turn lane or construct a near-side jug-handle for the northbound left-turns, or relocate the intersection approximately 200 feet south to construct a reverse jug-handle for northbound left-turns and provide a southbound right-turn lane.
- Widen and straighten Hornberger Avenue between U.S. 130 and the rail line to provide an attractive access road to serve the expected



increases in auto and truck traffic due to the potential development and redevelopment in this area of the township.

- Relocate the existing NJ Transit Route 409 bus stop to the near-side of the intersection, which would connect to the pedestrian facilities.

The Burlington County Bridge Commission has proposed the following changes for the intersection:

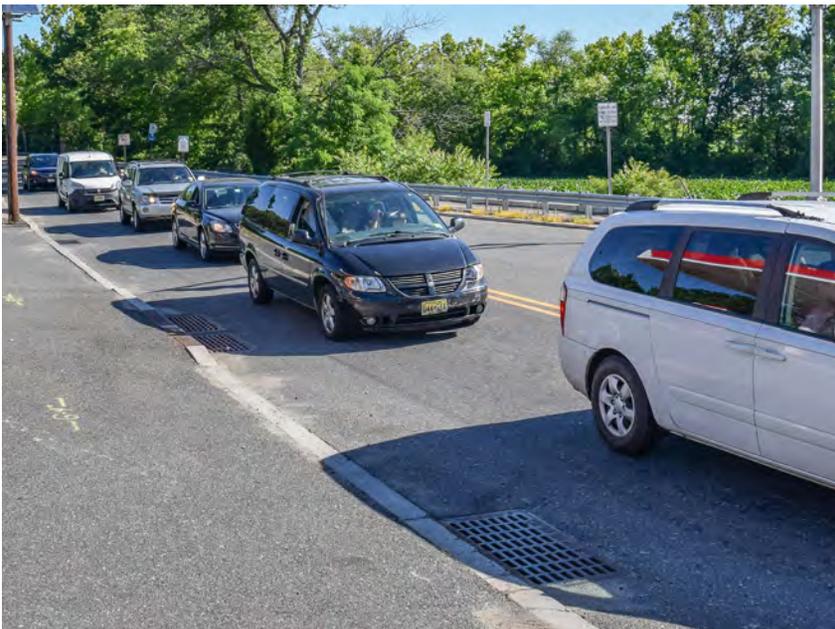
- Widen Hornberger Avenue between U.S. 130 and Alden Avenue.
- Extend left-turn stacking lane on northbound U.S. 130 for Hornberger Avenue.
- Construct left-turn and right-turn lanes from Hornberger Avenue to U.S. 130.

Recommendations

- Provide a second left-turn lane for northbound left-turns on U.S. 130 for faster intersection clearance and a faster signal cycle. This will

likely require moving a section of the U.S. 130 median to the north to accommodate the extra width of the proposed lane.

- Widen Hornberger Avenue between U.S. 130 and Alden Avenue to facilitate a smooth merge between the two proposed left-turn movements from northbound U.S. 130 and to accommodate the proposed right and left-turn lanes to U.S. 130.
- Stripe a dedicated 450-foot merge lane along southbound U.S. 130 from the intersection to limit right-turn queuing at the intersection.
- Improve pedestrian accommodation by building sidewalks to connect the residential developments near the intersection with the Roebling River Line Station and by installing crosswalks, ADA curb ramps, and appropriate signage.
- Install advance signage on northbound U.S. 130 to warn drivers of the Fairbrook Drive intersection and stripe “right-turn only” onto the dedicated right-turn lane to deter last-second left merges by through traffic.



Off-peak queuing regularly occurs at the intersection due to a lack of dedicated turn lanes



Unmet pedestrian demand just south of the intersection

US 130 at Hornberger Ave, Florence Twp

Transportation Improvements

 Build sidewalks to connect the residential developments near the intersection with the Roebing River Line Station and install crosswalks, ADA curb ramps, and appropriate signage

 Widen Hornberger Avenue between US 130 and Alden Avenue to facilitate a smooth merge between the two proposed left-turn movements from northbound US 130 and to accommodate an additional turning lane to US 130

Existing Gas Station

 Stripe a dedicated 450-foot merge lane along southbound US 130 from the intersection to limit right turn queuing at the intersection

 Relocate NJ Transit Route 409 bus stop to near side of the intersection to improve access to pedestrian facilities

 Provide a second left-turn lane for northbound left turns on US 130 for faster intersection clearance and a faster signal cycle

Potential Improvements

-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp





HORNBERGER AVE AT DELAWARE AVE (CR 656), FLORENCE TWP, MP 5.5

Configuration

This four-legged intersection has a two-way stop control for the eastbound and westbound approaches on Hornberger Avenue. Delaware Avenue, Olive Street, and Hornberger Avenue each carry one travel lane in each direction. There are dedicated left-turning lanes in each direction of Delaware Avenue only, in addition to striped shoulders. Crosswalks are striped across Hornberger Avenue and Delaware Avenue on east the north side of the intersection.

Crashes

- 7 Crashes between 2014-2016; 1 moderate injury

AADT

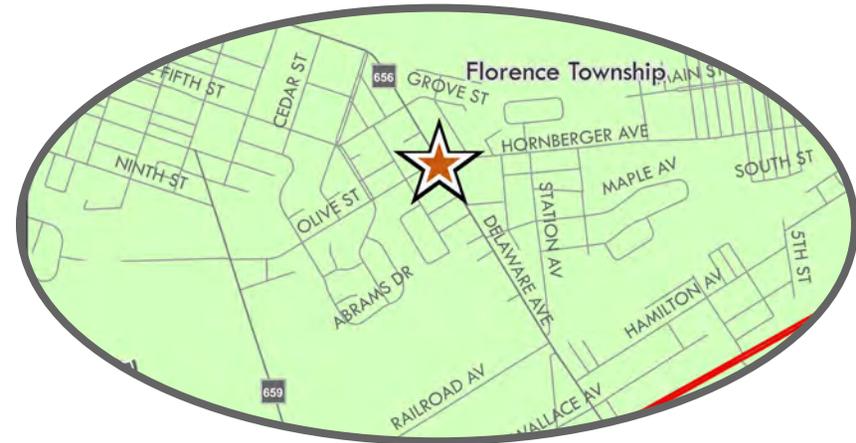
- Hornberger Avenue – Data not available
- Delaware Avenue – Data not available

Considerations

Located midway between the Florence Village and Roebling sections of Florence Township, this intersection experiences significant bicycle and pedestrian activity due to the proximity of two churches and two schools on Hornberger Avenue. In addition, there are multiple retail and commercial services located within a 5-minute walking distance from the intersection on Hornberger Avenue, including a tavern, bakery and Roebling Town Market. There are two NJ Transit bus stops within 300 feet of the intersection, one on Hornberger Avenue and another on southbound Delaware Avenue approaching the intersection. Florence Township’s consolidated fire department uses Olive Street to access Roebling, in Florence Village.

Issues

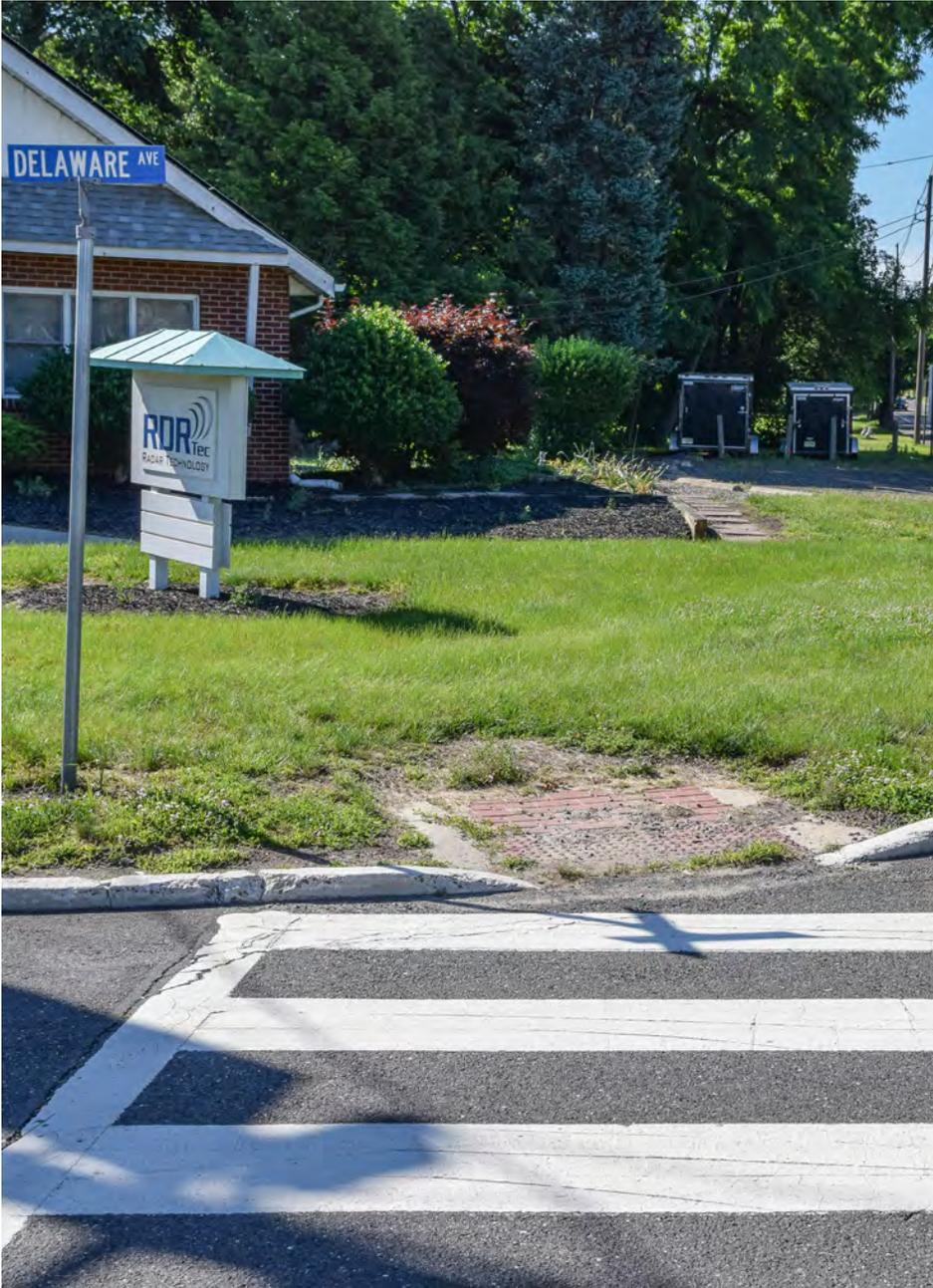
- Two of the four crossings at the intersection lack crosswalks.
- Alignment of Olive Street reduces sight distance and visibility of vehicles traveling northbound on Delaware Avenue approaching the intersection.
- Sidewalks are discontinuous at the intersection, especially along the eastbound side of Hornberger Avenue.



- There are no dedicated bicycle facilities at the intersection or on either of the associated roadways.

Recommendations

- Fill in the sidewalk gap at the intersection and along both associated roadways to connect residential areas with schools and local businesses.
- Stripe bicycle lanes along Delaware Avenue from Florence Township Riverfront School to the intersection by utilizing the existing shoulder space.
- Install pedestrian crossing lights for all legs of the intersection to improve driver visibility.
- Stripe shared lane markings along Hornberger Avenue between the intersection and the Roebling River Line Station to encourage bicycling throughout the neighborhood.
- Stripe all missing crosswalks at the intersection.



Incomplete pedestrian network at intersection



Delaware Avenue is a prime candidate for bicycle lanes

Hornberger Ave at Delaware Ave, Florence Twp

Transportation Improvements



Stripe bicycle lanes along Delaware Avenue from Florence Township Riverfront School to the intersection by utilizing the existing shoulder space.



Complete sidewalk network connectivity at the intersection and for the surrounding area. Fill in the sidewalk gap and stripe the two missing crosswalks at the intersection



Install pedestrian crossing lights for all the legs of the intersection to improve driver visibility



Stripe shared lane markings along Hornberger Avenue between the intersection and the Roebing River Line Station to encourage bicycling throughout the neighborhood

Potential Improvements



Stripe shared lane markings



Stripe Bicycle Lanes



Install Sidewalk



Stripe Crosswalk



Install ADA Curb Ramp



U.S. 130 AT FLORENCE-COLUMBUS RD (CR 656), FLORENCE TWP, MP 50.9

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries two travel lanes in each direction with shoulders. Northbound vehicles on U.S. 130 turning right onto southbound Florence-Columbus Road have a dedicated right-turn lane, as do southbound vehicles on U.S. 130 turning left onto southbound Florence-Columbus Road. Northbound vehicles on U.S. 130 destined for westbound Delaware Avenue must take the far-side jug-handle north of the intersection onto Florence-Columbus Road, cross U.S. 130, and continue to Delaware Avenue. The historic First Baptist Church of Florence Cemetery is located inside this jug-handle and directly abuts U.S. 130 and Florence-Columbus Road. Delaware Avenue and Florence-Columbus Road both carry one travel lane in each direction without shoulders. There are dedicated left-turn lanes on both Delaware Avenue and Florence-Columbus Road. In addition, Delaware Avenue also has a shared lane permitting all movements.

Crashes

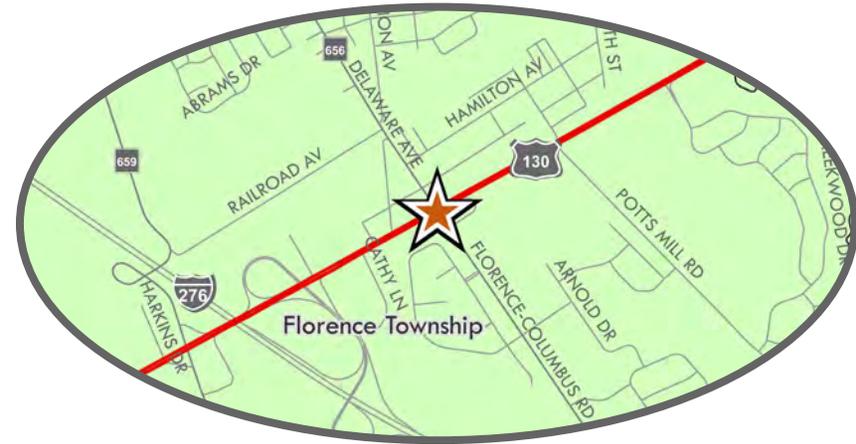
- 19 Crashes between 2014-2016; no serious injuries reported
- Primarily occurred on northbound Florence-Columbus Road (CR 656) approaching the intersection

AADT

- U.S. 130 – 21,999 in 2015, 24,626 in 2012
- Florence-Columbus Road – Data not available

Considerations

Located one-half mile from New Jersey Turnpike Extension Interchange 6A and two miles from I-295, this intersection serves as a major access point to the Roebling neighborhood of Florence Township in addition to industrial land uses along Railroad Avenue. Florence-Columbus Road is the most direct link to I-295 from the major Florence industrial parks, which results in a significant truck load on the intersection. In addition, there are multiple commercial uses surrounding the intersection with numerous driveways, especially along southbound U.S. 130. Several residential developments surround the intersection, all within walking distance of the commercial activity along U.S. 130.



Issues

- High truck volumes limit the throughput of the intersection.
- Limited dedicated turn lanes create congestion at the intersection.
- No pedestrian connections exist between the major residential developments near the intersection and the commercial establishments along U.S. 130.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Construct a far-side jug-handle around the cemetery for northbound U.S. 130 left-turns.
- Eliminate the northbound center left-turn lane.
- Upgrade the shoulder on U.S. 130 to provide a northbound right-turn lane onto southbound Florence-Columbus Road and an additional northbound lane on the far-side of the intersection to access the far-side jug-handle.
- Widen both approaches of Florence-Columbus Road to provide a left-turn lane and a shared through and right-turn lane.

As of 2018, these recommendations have been implemented.

The Burlington County Bridge Commission has proposed the following additional changes to the intersection:

- Remove the existing far-side jug-handle and replace it with a larger jug-handle.
- Construct a ramp from Florence-Columbus Road to northbound U.S. 130 alongside the new jug-handle.
- Provide double-left lanes and a through lane from the northbound approach of Florence-Columbus Road.
- Provide double left-lanes from southbound U.S. 130 to southbound Florence-Columbus Road.
- Construct a slip ramp from northbound U.S. 130 to southbound Florence-Columbus Road.
- Improve overall geometry of curb returns at the intersection.

Recommendations

- Remove the existing far-side jug-handle and replace it with a larger jug-handle.
- Construct a ramp from Florence-Columbus Road to northbound U.S.

130 alongside the new jug-handle.

- Provide double left-lanes and a through lane from the northbound approach of Florence-Columbus Road.
- Provide double left-lanes from southbound U.S. 130 to southbound Florence-Columbus Road.
- Construct a channelized right-turn lane from northbound U.S. 130 to southbound Florence-Columbus Road.
- Investigate the future addition of a dedicated right-turn lane to southbound U.S. 130 from Delaware Avenue to improve circulation at the intersection. This may require additional right-of-way acquisition.
- Extend the right-turn lane leading to the proposed channelized right-turn lane to accommodate all turning vehicles.
- Improve overall geometry of curb returns at the intersection.
- Improve pedestrian facilities between adjacent residential developments and commercial establishments at the intersection, including sidewalks, crosswalks and ADA curb ramps.



Lack of a channelized right-turn lane from northbound U.S. 130 to Florence-Columbus Road results in truck congestion at the intersection

US 130 at Florence-Columbus Rd (CR 656), Florence Twp

Transportation Improvements



Investigate the future addition of a dedicated right-turn lane to southbound US 130 from Delaware Avenue to improve circulation at the intersection. This may require additional right-of-way acquisition.



Improve pedestrian facilities between adjacent residential developments and commercial establishments at the intersection, including sidewalks, crosswalks and ADA curb ramps



Remove the existing far-side jug handle and replace it with a larger jug handle.



Construct a ramp from Florence-Columbus Road to northbound US 130 alongside the new jug handle



Provide double-left lanes from southbound US 130 to southbound Florence Columbus Road



Construct a channelized right-turn lane from northbound US 130 to southbound Florence Columbus Road. Extend the right-turn lane leading to the proposed channelized right to accommodate all turning vehicles



Provide double left-lanes and a through lane from the northbound approach of Florence-Columbus Road

Potential Improvements

-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp



U.S. 130 AT CEDAR LN (CR 659)/FLORENCE-BUSTLETON RD, FLORENCE TWP, MP 50.2

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries two travel lanes in each direction plus shoulders. There are dedicated on and off-ramp lanes for near-side jug-handles in each direction of U.S. 130. Cedar Lane and Florence-Bustleton Road both carry one travel lane in each direction plus shoulders. There are dedicated left-turn lanes and signals on both Cedar Lane and Florence-Bustleton Road onto U.S. 130.

Crashes

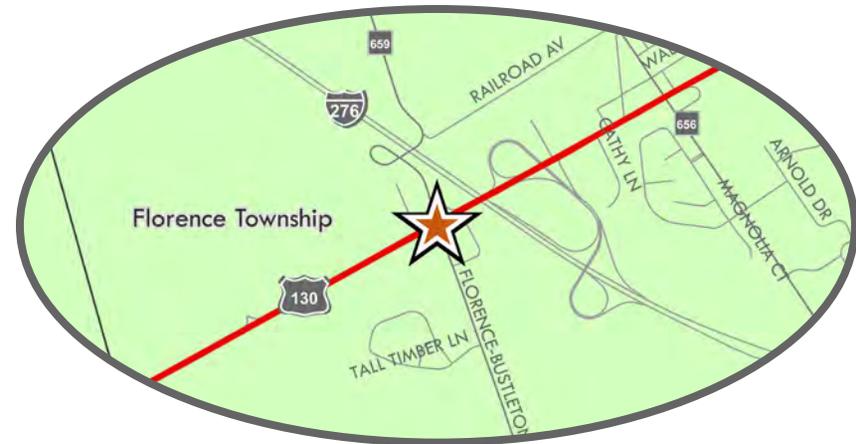
- 41 Crashes between 2014-2016; 1 moderate injury
- Primarily occurred along southbound Cedar Lane (CR 659) approaching the intersection and along U.S. 130 northbound approaching the intersection

AADT

- U.S. 130 – 29,143 in 2014, 25,412 in 2011
- Florence-Bustleton Road – 3,256 in 2015

Considerations

This intersection is located next to the exit and entry ramps to the New Jersey Turnpike Extension Interchange 6A and is surrounded by major warehousing and distribution centers, including a new Amazon facility. As a result, high truck volumes are typical at this intersection and require attention. There are commercial uses adjacent to the intersection as well, including a gas stations, convenience stores, fast food establishments, and more. The Florence Township Memorial High School is located just over half a mile south of the intersection. Cedar Lane and Florence-Bustleton Road are the primary connections between the school and the Roebling neighborhood of the Township. Sidewalks between the High School and the Tall Pines development are slated for construction in the near future. A mixed-use development, including a hotel, are proposed for the southwest corner of the intersection.



Issues

- High truck volumes limit the throughput of the intersection.
- There is inadequate left-turn capacity from southbound U.S. 130 to Florence-Bustleton Road.
- A high incidence of crashes has been documented along northbound U.S. 130 at the split with the right-turn lane to the near-side jug-handle.
- There is no pedestrian connection between the north and south side of U.S. 130 at the intersection.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Construct near-side jug-handles for both northbound and southbound U.S. 130 left and right-turns.
- Eliminate the center left-turn lanes on U.S. 130.
- Widen Florence-Bustleton Road to provide a left-turn lane and a shared through and right-turn lane on the northbound approach.
- Widen U.S. 130 to provide acceleration and deceleration lanes for the new interchange.

As of 2018, these recommendations have been implemented.

The Burlington County Bridge Commission has proposed the following additional changes to the intersection:

- Eliminate the northbound U.S. 130 jug-handle.
- Construct a roundabout on Florence-Bustleton Road to replace the existing jug-handle and to calm traffic.
- Widen southbound U.S. 130 jug-handle ramp to provide two lanes, one for each turning movement.

Recommendations

- Construct a roundabout on Florence-Bustleton Road to replace the existing jug-handle and to calm traffic. Provide direct access to the future mixed-use development via the proposed roundabout.
- Eliminate the near side jug handle and stripe a dedicated deceleration lane from northbound U.S. 130 to Florence-Bustleton

Road. Re-route access to Wawa via the proposed roundabout. Include signage for Cedar Ave and Wawa truck parking.

- Widen the southbound U.S. 130 jug-handle ramp to provide two lanes, one for each turning movement.
- Stripe “Right-turn Only” onto dedicated right-turn lane along northbound U.S. 130 to mitigate last second merges and to reduce side-swipe and rear-end collisions.
- Stripe “Do Not Block Box” graphic at the southbound jug-handle terminal to reduce vehicular conflicts at the intersection.
- Investigate the future addition of a dedicated right-turn lane to southbound U.S. 130 from Cedar Lane to improve circulation at the intersection. This may require additional right-of-way acquisition.
- Connect the pedestrian network between Wawa and the shopping center along southbound U.S. 130, including crosswalks, sidewalks, and ADA curb ramps.



Location of proposed roundabout

US 130 at Cedar Ln (CR 659) & Florence-Bustleton Rd, Florence Twp

Transportation Improvements

 Widen southbound US 130 jug handle ramp to provide two lanes, one for each turning movement

 Stripe DO NOT BLOCK BOX graphic

 Investigate the future addition of a dedicated right-turn lane to southbound US 130

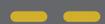
 Eliminate near side jug handle and stripe a dedicated deceleration lane from northbound US 130 to Florence Bustleton Rd. Re-route access to Wawa via the proposed roundabout. Include signage for Cedar Ave and Wawa truck parking

 Build roundabout to replace near-side left-turns, reducing queuing at the intersection. Provide access to future mixed-use development via the roundabout

 Stripe "right turn only" onto dedicated right-turn lane along northbound US 130 to mitigate last second merges and reduce side swipe and rear-end collisions

 Connect sidewalk network between Wawa and the shopping center along southbound US 130 by installing crosswalks, sidewalks, and ADA curb ramps

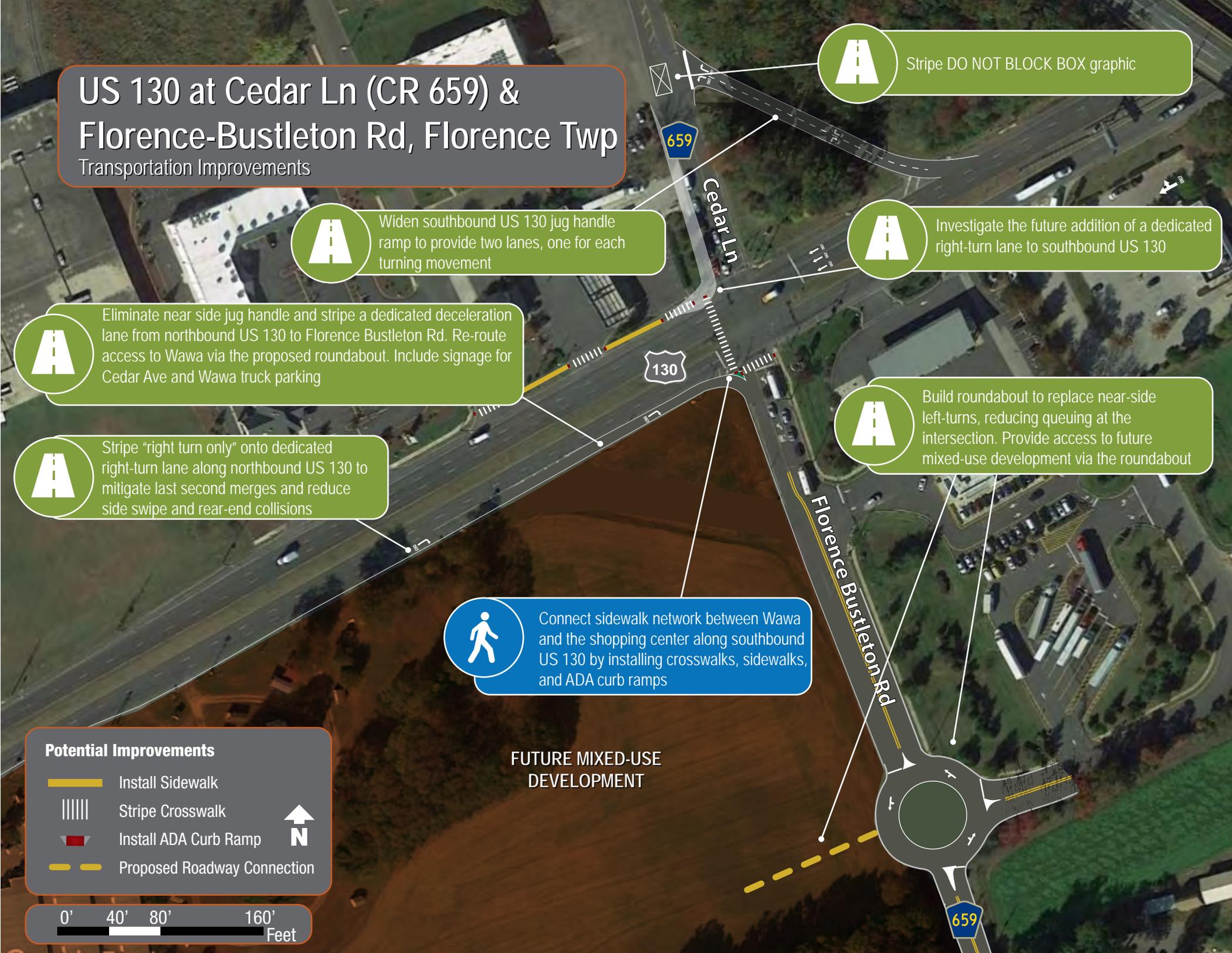
Potential Improvements

-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp
-  Proposed Roadway Connection





FUTURE MIXED-USE DEVELOPMENT



U.S. 130 AT JOHN GALT WAY, FLORENCE TWP, MP 49.6

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries three travel lanes, a dedicated right-turn lane plus a shoulder in the northbound direction. There are two travel lanes plus a shoulder in the southbound direction of U.S. 130. Southbound vehicles on U.S. 130 have a dedicated right-turning lane, in addition to the dedicated left-turn lane with a left-only signal. There are no turns allowed from the northbound direction of U.S. 130, and vehicles must take the far-side jug-handle to Hughes Drive to turn left. There is also a separate right-in and right-out access to Hughes Drive 550 feet south of the intersection on U.S. 130 northbound. John Galt Way carries two travel lanes without shoulders in each direction from the southbound approach, while Hughes Drive carries one southbound and two northbound travel lanes on the northbound approach. There is a channelized right-turn lane on John Galt Way to southbound U.S. 130. The southbound approach of John Galt Way also has a dedicated left-turn lane with a left-turn signal and a shared through-left lane. The northbound approach of Hughes Drive has dedicated right and left-turn lanes, in addition to a single through lane.

Crashes

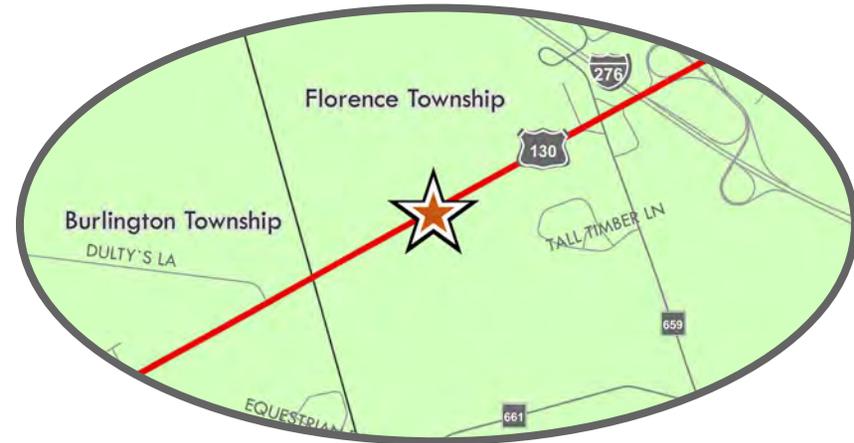
- 5 Crashes between 2014-2016; no serious injuries reported
- 21 Crashes between 2014 – 2016 at Hughes Drive access point south of the intersection, 2 involving severe injuries

AADT

- U.S. 130 – 23,488 in 2012, and 25,412 in 2011
- John Galt Way – Data not available

Considerations

John Galt way was constructed in the early 2000s to service the industrial parks to the north, while the south side was developed a decade later in response to additional warehousing demands. The primary purpose of this intersection is freight movement, and as a result, the turning movements are all intentionally designed to accommodate large trucks. The Florence Station of the River Line is located just north of the intersection. The station is within walking



distance of the industrial parks.

Issues

- The left-turn lanes on southbound U.S. 130, which are used overwhelmingly by large trucks, require the intersection to operate with a long signal phase to accommodate slow traffic and increasing congestion.
- There are no bicycle and pedestrian connections between the Florence River Line Station and the industrial land uses near the intersection.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Improve the internal circulation of the industrial park by providing frontage and access roads on either side of U.S. 130, connecting to Cedar Lane, Dultys Lane, and future industrial parcels.

Since the 1997 plan, John Galt Way was constructed, providing direct access to industrial land uses on both sides of U.S. 130.

The Florence Township engineering department has proposed the following additional change to the intersection of U.S. 130 and John Galt Way:

- Construct a far-side jug-handle on southbound U.S. 130 to replace the left-turn lanes for Hughes Drive.



Recommendations

- Remove left-turn lanes from southbound U.S. 130 to Hughes Drive.
- Construct a far-side jug-handle on southbound U.S. 130 to replace the left-turn lanes for Hughes Drive. The Jug handle terminal should be aligned with the River Line parking lot driveway. This extended alignment will accommodate future development on the northwest corner of the intersection. Alternatively, investigate constructing a near-side jug handle on southbound U.S. 130 to reduce the number of truck crossings at the intersection and to preserve developable land to the east of John Galt Way.
- Provide pedestrian facilities, including properly striped crosswalks, continuous sidewalks, and ADA curb ramps in the area surrounding the intersection to improve accessibility to the Florence River Line Station and bus stops from the industrial employment centers.



Unmet pedestrian demand just south of the intersection

US 130 at John Galt Way, Florence Twp

Transportation Improvements



Investigate constructing a far-side jug handle on southbound US 130 to replace the left-turn lanes for Hughes Drive. Alternatively, investigate constructing a near-side jug handle to reduce the number of truck crossings at the intersection and to preserve developable land to the east of John Galt Way



Connect the intersection with the sidewalk network between US 130 and the Florence River Line Station

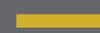


Remove left turn-lanes from southbound US 130 to Hughes Drive

Potential Improvements



Stripe Crosswalk



Install Sidewalk



0' 45' 90' 180' Feet

BURLINGTON TWP/ FLORENCE INDUSTRIAL AREA (DANIELS WAY, RAILROAD AVE, HUGHES DR)

Configuration

The Burlington Township/Florence Industrial area's rapid expansion necessitates additional circulation routes to distribute large truck traffic smoothly throughout the industrial area. River Road, Neck Road, Dultys Lane, and John Galt Way are currently the only vehicular access points to the industrial area. Minor interior roadways include Daniels Way and Richards Run. The industrial area is served by the New Jersey Turnpike Extension Interchange 6A, I-295 interchange 52, and U.S. 130.

Issues

- The Haines Center industrial park is rapidly developing, but construction of circulation roadways within the complex is not keeping pace.
- While John Galt Way is the easternmost roadway within the Haines Center industrial park, the roadway does not connect with Cedar Lane and the industrial park to the east of I-276, which contains the new Amazon facility, or to River Road to the west.
- Pedestrian activity has been documented along the railroad tracks between Cedar Lane and the Florence River Line Station.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Improve the internal circulation of the industrial area by providing frontage and access roads on either side of U.S. 130, connecting to Cedar Lane, Dultys Lane, and future industrial parcels.

Since the 1997 plan, Daniels Way, Richards Run, and other localized circulation roads and driveways have been constructed to provide access to new industrial land uses

The Burlington County Bridge Commission has proposed the following additional changes to circulation of the Haines Center Industrial Park

- Upgrade and extend Daniels Way from the Township line to River Road.
- Construct a roundabout at the western terminus of the proposed

Daniels Way Extension.

- Connect Cedar Lane to John Galt Lane by extending Railroad Avenue to Richards Run.

Recommendations

- Upgrade and extend Daniels Way from the Township line to River Road. The extension will require right-of-way acquisition.
- Construct a roundabout at the western terminus of the proposed Daniels Way Extension.
- Connect Cedar Lane to John Galt Lane by extending Railroad Avenue to Richards Run. This upgrade should provide a pedestrian connection between the Florence River Line Station and the industrial parcels along Cedar Avenue. Additional right-of-way may need to be acquired
- Extend Hughes Drive to the Burlington Coat Factory Campus and connect with the Dultys Lane intersection.



The rapid expansion of the Burlington Twp/Florence Industrial Area necessitates construction of additional circulation roadways



This NFI distribution center is a fraction of the over 12,000,000 square feet of warehousing space located within the Burlington Township/Florence Industrial Area

Burlington Twp / Florence Industrial Area

Transportation Improvements

 Signalize intersection of US 130 and LaGorce Avenue and extend LaGorce Avenue to New Pearl St (CR 656). Construct a roundabout at the new intersection

 Increase northbound jug handle capacity at intersection. Construct a traffic circle south of the intersection to accommodate left turning vehicles from US 130 to Cedar Lane.

 Channelize right turn to northbound US 130 from Neck Road to improve intersection circulation

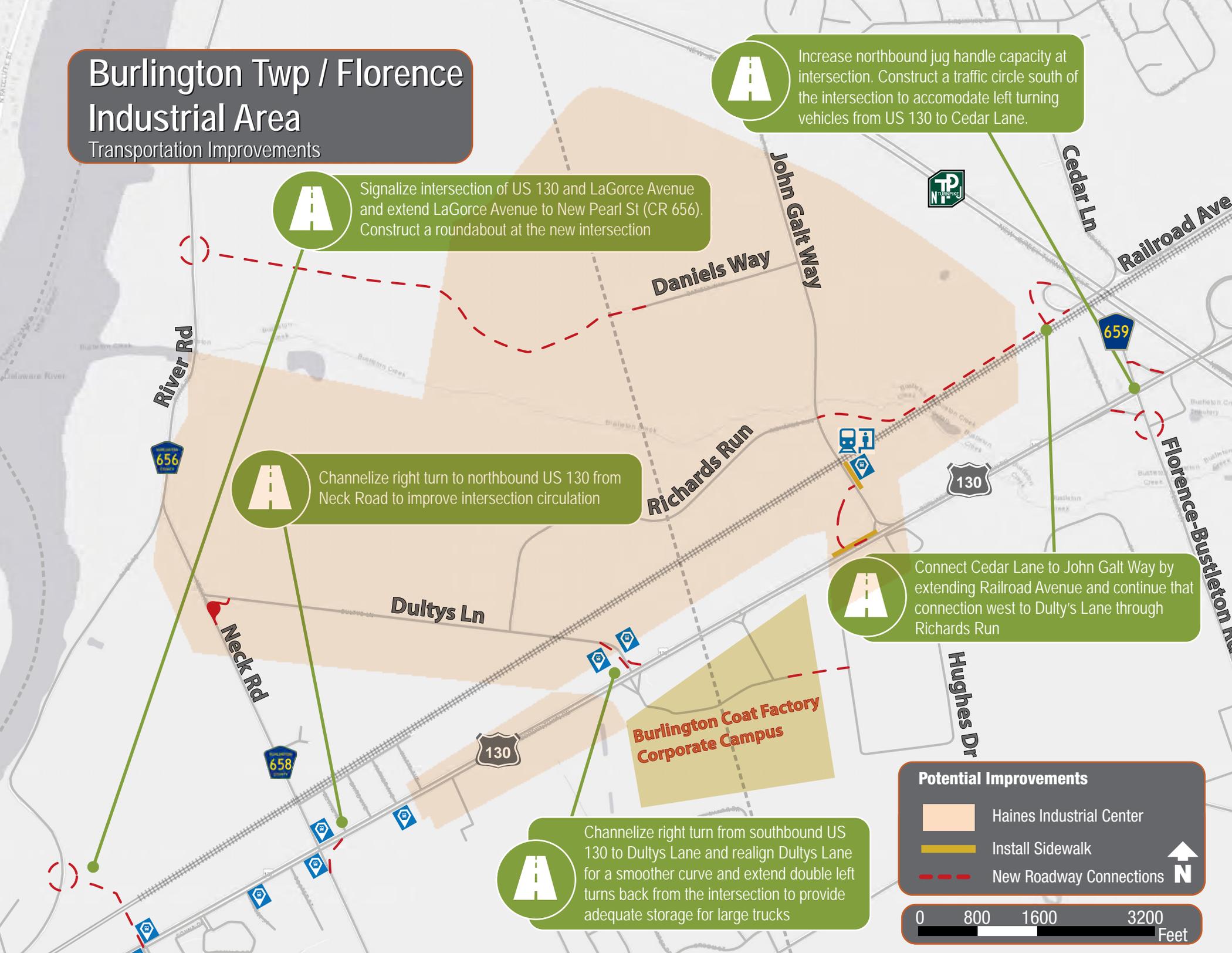
 Connect Cedar Lane to John Galt Way by extending Railroad Avenue and continue that connection west to Dulty's Lane through Richards Run

 Channelize right turn from southbound US 130 to Dultys Lane and realign Dultys Lane for a smoother curve and extend double left turns back from the intersection to provide adequate storage for large trucks

Potential Improvements

-  Haines Industrial Center
-  Install Sidewalk
-  New Roadway Connections

0 800 1600 3200 Feet



Burlington Twp / Florence Industrial Area

Transportation Improvements

 Connect the pedestrian network between the Florence River Line Station and the Florence Industrial Park

 Upgrade and extend Daniels Way from the Township line to River Road,

 Construct roundabout at the new intersection of River Road and Daniels Way

 Construct a far side jug handle on southbound US 130 to replace the left turn lanes for Hughes Drive. Alternatively, investigate constructing a near-side jug handle

 Cul-de-sac Neck Road and provide limited access entry for residents & emergency services only from Dultys Lane and explore alternatives for discouraging truck through-traffic

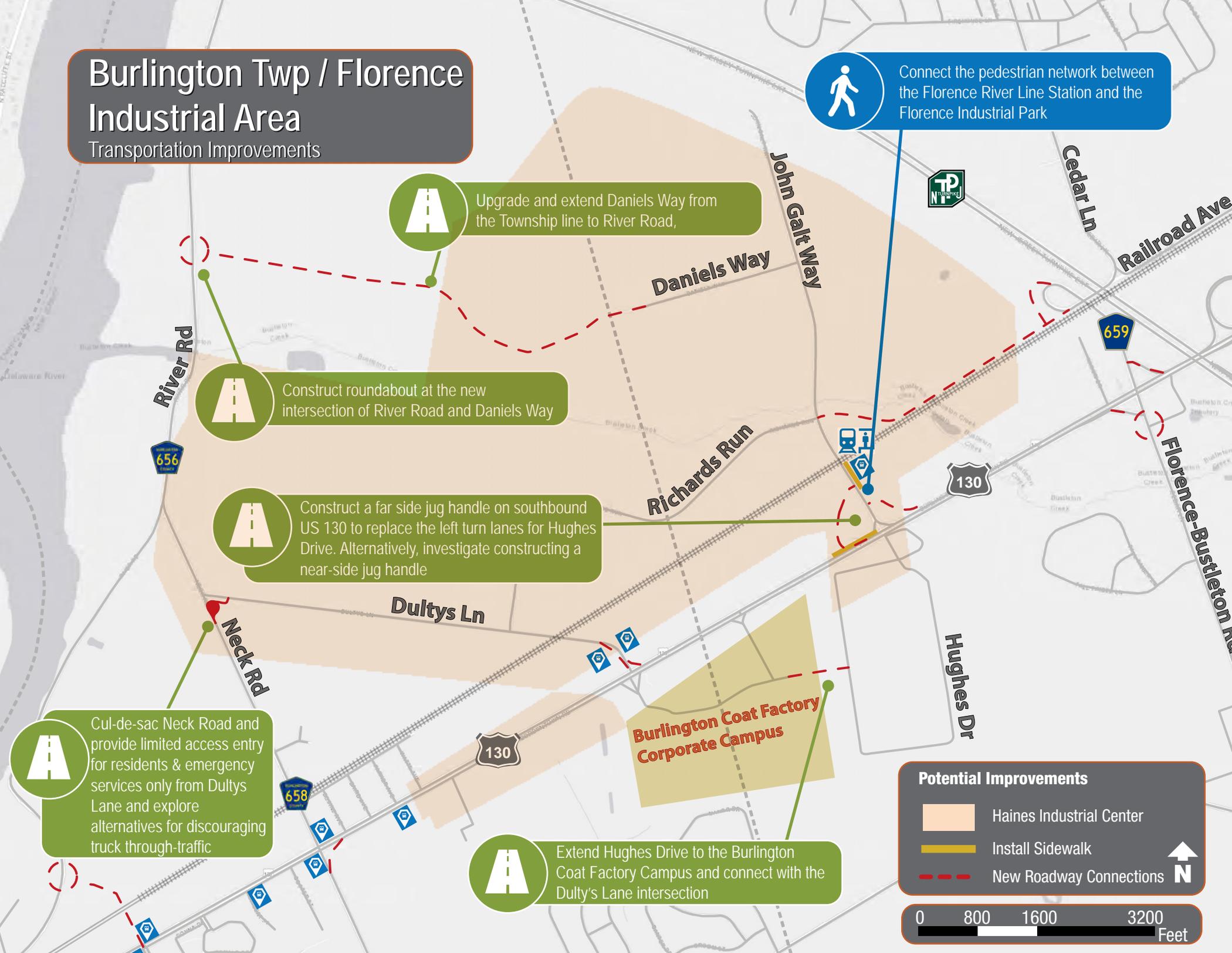
 Extend Hughes Drive to the Burlington Coat Factory Campus and connect with the Dulty's Lane intersection

Potential Improvements

-  Haines Industrial Center
-  Install Sidewalk
-  New Roadway Connections

 N

0 800 1600 3200 Feet



Daniels Way Extension, Florence & Burlington Twp

Transportation Improvements



Upgrade and extend Daniels Way from the Township line to River Road. The extension will require right-of-way acquisition



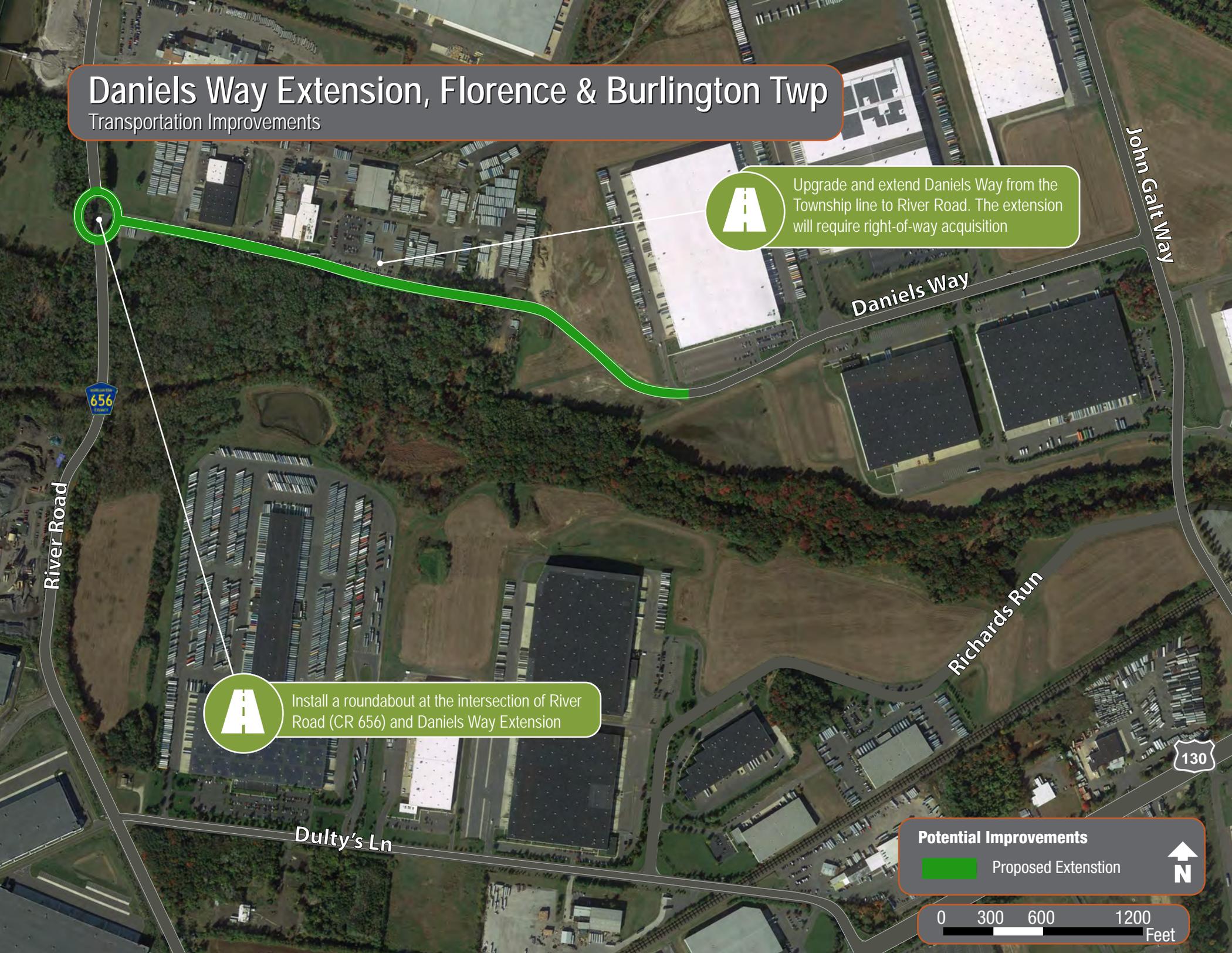
Install a roundabout at the intersection of River Road (CR 656) and Daniels Way Extension

Potential Improvements

 Proposed Extension

 N

0 300 600 1200 Feet



Amazon

Railroad Ave Extension, Florence Twp

Transportation Improvements

 Connect Cedar Lane to John Galt Way by extending Railroad Avenue and continue that connection west to Duly's Lane through Richards Run



Daniels Way

Cedar Ln

Railroad Ave

John Galt Way

Richards Run

Cedar Ln



Potential Improvements

 Proposed Extension



0 400 800 Feet



U.S. 130 AT DULTYS LANE, BURLINGTON TWP, MP 49.1

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries two travel lanes plus shoulders in each direction of travel. There are dedicated right and left-turn lanes with left-turn signals for southbound U.S. 130 while northbound U.S. 130 contains a dedicated left-turn lane only. Dultys Lane contains one travel lane in each direction of travel, plus shoulders. The eastbound approach has two dedicated left-turn lanes along with a shared through-right lane. The westbound approach carries has one dedicated left-turn, one left-through lane, and a channelized right-turn lane.

Crashes

- 6 Crashes between 2014-2016; no injuries reported

AADT

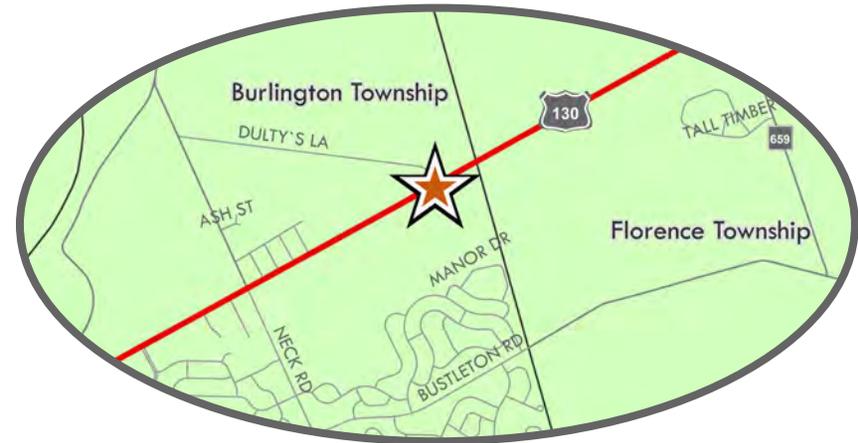
- U.S. 130 – 23,488 in 2012
- Dultys Lane – Data not available

Considerations

Dultys Lane is the primary truck route in the Burlington Township/ Florence industrial area. The intersection with U.S. 130 provides access to the corporate campus of Burlington Coat Factory to the south, while major warehousing for BJ's Wholesale Club and numerous other corporations are located to the north. Industrial uses in the area are rapidly expanding, increasing the demand for a truck friendly roadway network while retaining the existing level of service on U.S. 130. Pedestrians are also a major presence at the intersection due partially to two bus stops along Dultys Lane; one on the NJ Transit 409 bus and one on the BurLINK B shuttle.

Issues

- The intersection is missing crosswalks, ADA ramps, and continuous sidewalk facilities.
- There are no pedestrian facilities that connect employees from the bus stops to the industrial park.
- The curve radius of Dultys Lane just to the north of the intersection



- results in vehicular conflicts at the L’Oreal USA facility driveway.
- There is insufficient left-turn capacity from northbound U.S. 130 to Dultys Lane.
- The southbound U.S. 130 deceleration lane to Dultys Lane is too short to accommodate the large volume of right-turning heavy trucks.

Recommendations

- Realign Dultys Lane for a smoother curve and extend double left turns back from the intersection to provide adequate storage for large trucks. This may require additional right-of-way acquisition.
- Provide two left-turn lanes from northbound U.S. 130 onto Dultys Lane and widen U.S. 130 to maintain two northbound through lanes.
- Increase the length of the southbound U.S. 130 deceleration lane and provide a channelized right-turn lane onto Dultys Lane.
- Stripe lane extension markings for all left-turns at the intersection.
- Improve the pedestrian network along Dultys Lane between the intersection and the industrial uses to the north and west to accommodate employees arriving by bus by installing sidewalks with ADA curb ramps, and striping crosswalks.
- Investigate a possible far-side jug-handle for northbound U.S. 130 adjacent to the Burlington Coat Factory Campus parking lot.

US 130 at Dultys Ln, Burlington Twp

Transportation Improvements

 Install sidewalks, ADA curb ramps and stripe crosswalks to connect bus stops with employment centers

 Realign Dultys Lane for a smoother curve and extend double left turns back from the intersection to provide adequate storage for large trucks

 Stripe lane extension markings for all left turns

 Lengthen deceleration lane and channelize right turn movement

 Investigate feasibility of far-side jug handle to accommodate future truck demand

 Widen roadway to accommodate a second left turn lane onto Dultys Lane

Potential Improvements

-  Investigate Far Side Jug Handle
-  Stripe Crosswalk
-  Install Sidewalk
-  Install ADA Curb Ramp





Dultys Lane is heavily trafficked by heavy trucks, often resulting in extended queuing on the existing left-turn lane from U.S. 130

U.S. 130 AT NECK ROAD (CR 658), BURLINGTON TWP, MP 48.4

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries two travel lanes plus shoulders in each direction separated by a raised median. Neck Road contains two travel lanes, one in each direction, without shoulders. There are dedicated left-turn lanes on U.S. 130 along with a shared through-right lane in each direction. U-turn movement in each direction of U.S. 130 is allowed at this intersection. There are no dedicated turn lanes on Neck Road and westbound vehicles making a right-turn on to U.S. 130 must yield to the U-turning vehicles on U.S. 130. Right-turn on red is prohibited for eastbound vehicles on Neck Road.

Crashes

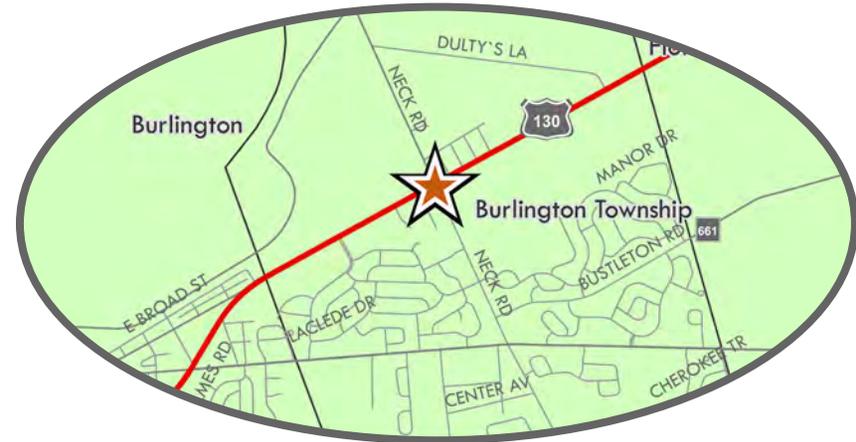
- 8 Crashes between 2014-2016; no injuries reported

AADT

- U.S. 130 – 27,603 in 2015, and 23,488 in 2012
- Neck Road– 2,466 in 2014, and 2,235 in 2011

Considerations

Neck Road provides access to U.S. 130 for large residential developments to the south beyond Columbus Road. To the north of U.S. 130, Neck Road serves as a residential street before it connects to Dultys Lane and then continues to meet River Road further north. A weight restriction of 10 tons is in place between U.S. 130 and Dultys Lane, though many large trucks use the roadway regardless. Multiple newly-built warehouses are situated on the northwest quadrant of the intersection, while south of U.S. 130 there are multiple auto-body and repair shops as well as a packaging unit. There are residential developments co-existing with commercial uses on northbound U.S. 130 a little south of the intersection, while southbound U.S. 130 just north of the intersection is comprised of stand-alone single-family homes. There is a bus stop for NJ Transit route 409 on U.S. 130 in each direction at the intersection.



Issues

- The intersection is missing crosswalks, ADA ramps, and continuous sidewalk facilities.
- There are no pedestrian or bicycle facilities at this intersection to connect the bus stops with nearby residential developments to the south.
- Turning movements are limited from the northbound direction of Neck Road due to a lack of dedicated turn lanes.
- Heavy trucks persistently travel on Neck Road, where a four-ton weight restriction is in place. The stretch of Neck Road between U.S. 130 and Dultys Lane is residential in nature.

Recommendations

- Install a channelized right-turn lane from eastbound Neck Road onto northbound U.S. 130 on the state-owned parcel.
- Stripe a crosswalk on the south side of the intersection across U.S. 130 and across the northern crossing of Neck Road to provide pedestrian access to the NJ Transit bus stops at the intersection.
- Build a sidewalk along the westbound side of Neck Road to connect pedestrians to the multiple residential developments around the intersection.
- Cul-de-sac Neck Road at Dultys Lane, retaining access for standard and emergency vehicles to access the homes between Dultys Lane

and the railroad at night when access to U.S. 130 is blocked by the railroad rail yard stacking movements. This will effectively prevent truck movements from the industrial park to Neck Road.

- Explore alternatives for discouraging truck through-traffic.



The intersection lacks pedestrian facilities, forcing pedestrians to cross under dangerous circumstances



Neck Road serves a residential area between U.S. 130 and Dultys Lane

US 130 at Neck Rd (CR 658), Burlington Twp

Transportation Improvements



Stripe a crosswalk across US 130 and Neck Road to provide pedestrian access to the NJ Transit bus stops



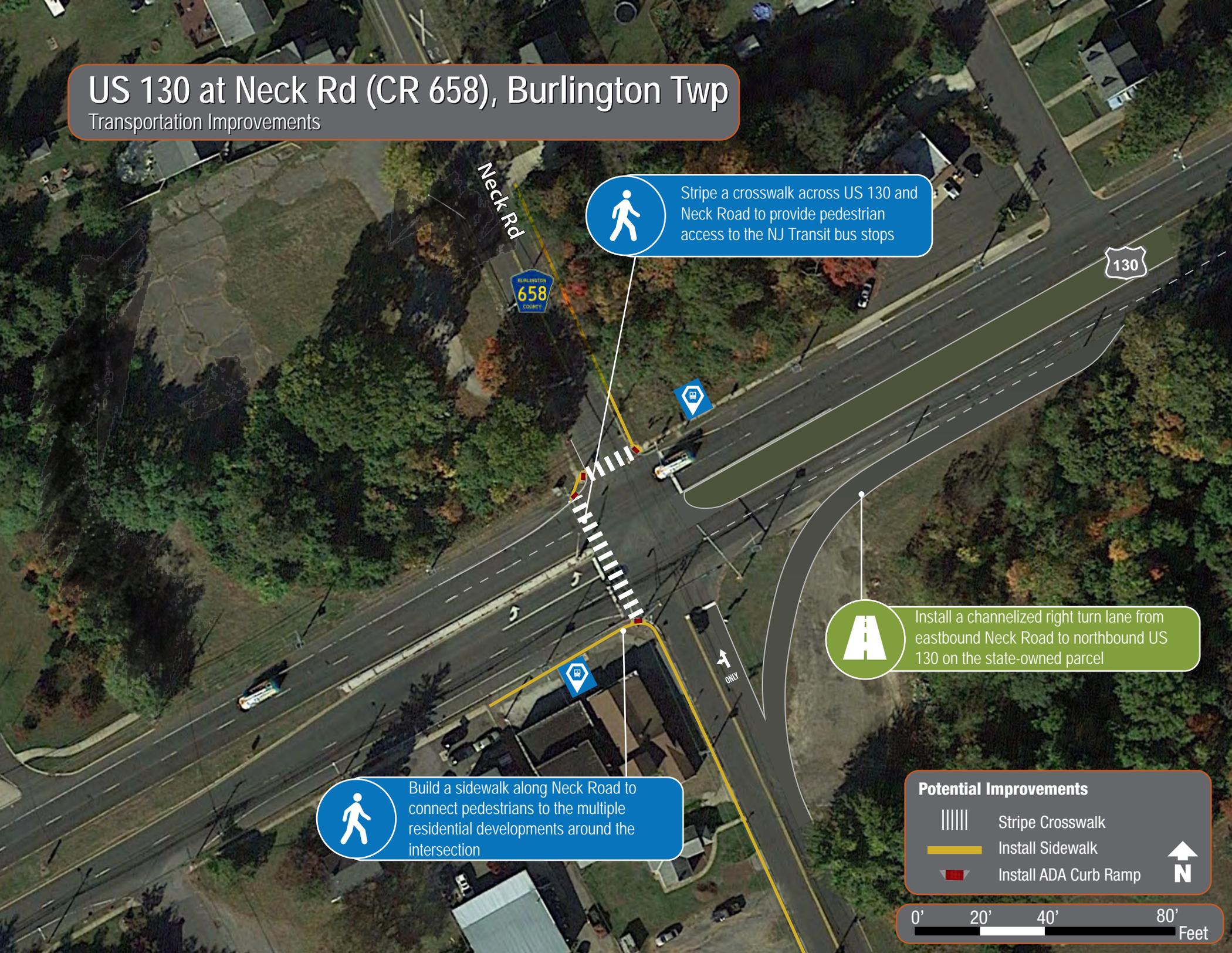
Build a sidewalk along Neck Road to connect pedestrians to the multiple residential developments around the intersection



Install a channelized right turn lane from eastbound Neck Road to northbound US 130 on the state-owned parcel

Potential Improvements

-  Stripe Crosswalk
-  Install Sidewalk
-  Install ADA Curb Ramp



Neck Rd Cul-de-sac, Burlington Twp

Transportation Improvements

Dultys Ln

 Cul-de-sac Neck Road and provide limited access entry for residents & emergency services only from Dultys Lane and explore alternatives for discouraging truck through-traffic

 Build a sidewalk along Neck Road to connect pedestrians to the multiple residential developments around the intersection

 Install a channelized right turn lane from eastbound Neck Road to northbound US 130 on the state-owned parcel

River Rd

Neck Rd

Railroad Ave



U.S. 130 AT LA GORCE BLVD, BURLINGTON TWP, MP 48.0

Configuration

This three-legged intersection is controlled by a traffic signal. U.S. 130 carries two travel lanes plus shoulders in each direction separated by a raised median. There is a dedicated left-turn lane on southbound U.S. 130 with a left-turn signal and no dedicated right-turn lane for U.S. 130 northbound. La Gorce Boulevard carries two travel lanes separated by a raised median, one in each direction of travel. The westbound approach of La Gorce Boulevard has a dedicated right-turn lane at the intersection which permits right-turns on red.

Crashes

- 2 Crashes between 2014-2016; 1 moderate injury

AADT

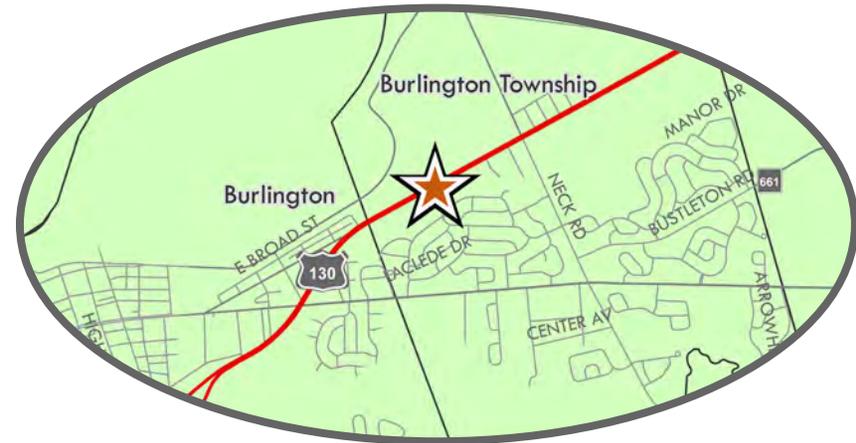
- U.S. 130 – 27,603 in 2015
- La Gorce Boulevard - Data not available

Considerations

La Gorce Boulevard provides access to a large residential community to the southeast of U.S. 130. The intersection is served by the NJ Transit 409 bus route and has stops in both directions. Industrial land uses exist between the intersection and the Delaware River, though the intersection is not connected to these uses.

Issues

- There are missing crosswalks, ADA ramps and continuous sidewalk facilities between the NJ Transit bus stops at the intersection and the adjacent residential developments.
- With the expanding industrial development taking place to the north of the intersection, a lack of truck access exists along this stretch of U.S. 130.
- The southbound left-turn lane on U.S. 130 to La Gorce Boulevard is inadequate.



Recommendations

- Construct a new road between U.S. 130 and nearby New Pearl Street (CR 656), and add a fourth leg to the existing intersection to connect it to the industrial area north of the intersection. The new road will require the construction of a new bridge over the existing railroad rail yard north of the intersection and significant right-of-way acquisition.
- Construct a new roundabout at La Gorce Boulevard extension and New Pearl Street (CR 656).
- Extend southbound U.S. 130 left-turn lane to La Gorce Boulevard to increase holding capacity.
- Install left-turn lane on northbound U.S. 130 to La Gorce Boulevard extension.
- Improve the pedestrian network along La Gorce Boulevard between the intersection and the industrial uses to the north and the residential developments to the south. Connect the NJ Transit bus stops to the pedestrian network.

US 130 at La Gorce Blvd, Burlington Twp

Transportation Improvements



Extend southbound US 130 left-turn lane to La Gorce Boulevard to increase holding capacity



Construct a new road between US 130 and New Pearl Street (CR 656). This will require significant right-of-way acquisition



Install left turn-lane on northbound US 130 to La Gorce Boulevard extension



Improve the pedestrian network along La Gorce Boulevard between the intersection and the industrial uses to the north and the residential developments to the south. Connect the NJ Transit bus stops to the pedestrian network

Potential Improvements



Stripe Crosswalk



Install Sidewalk



Install ADA Curb Ramp



US 130 at La Gorce Blvd, Burlington Twp

Transportation Improvements

 Construct a new roundabout at La Gorce Boulevard extension and New Pearl Street (CR 656).

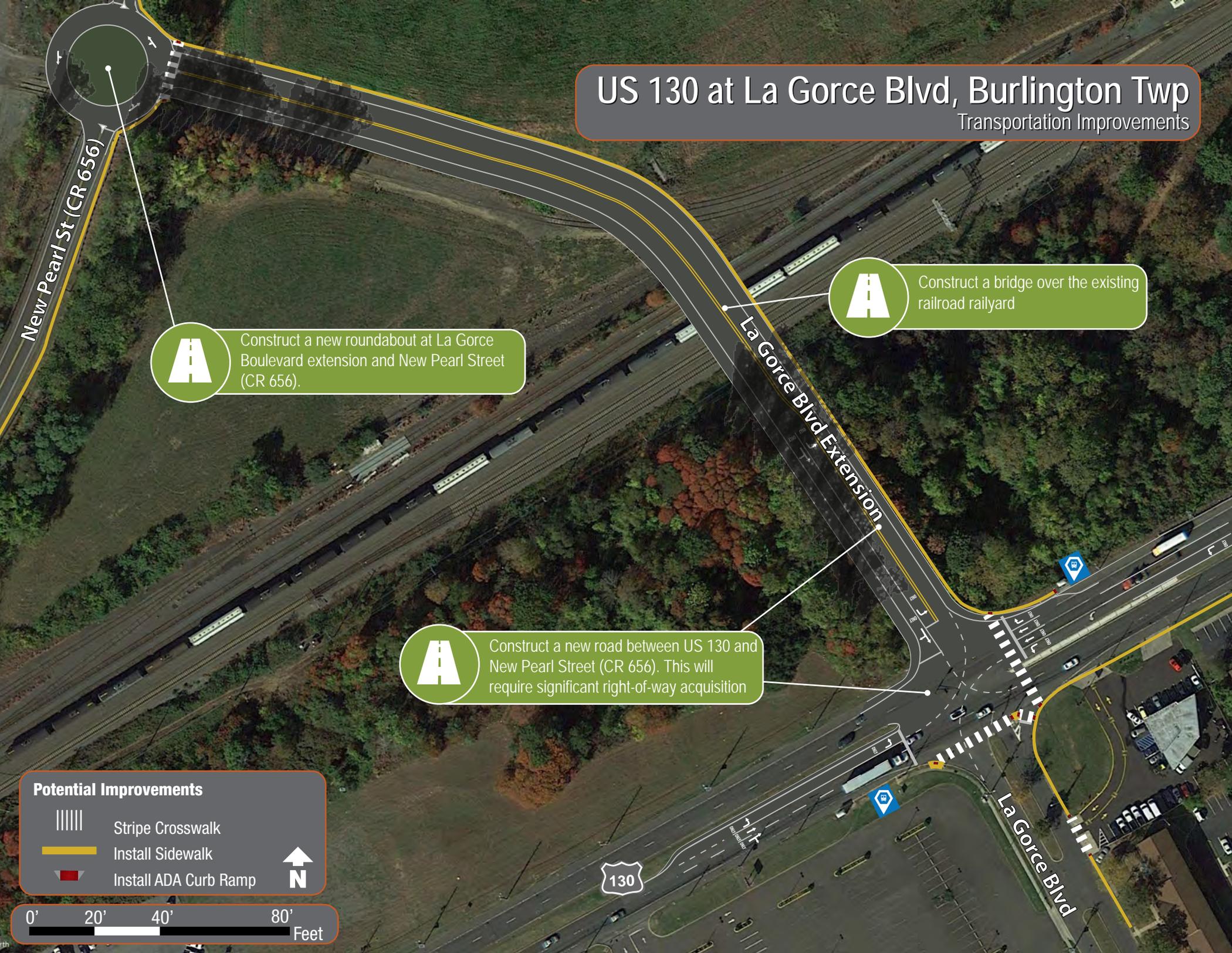
 Construct a bridge over the existing railroad railyard

 Construct a new road between US 130 and New Pearl Street (CR 656). This will require significant right-of-way acquisition

Potential Improvements

-  Stripe Crosswalk
-  Install Sidewalk
-  Install ADA Curb Ramp







The existing northern terminus of La Gorce Boulevard at U.S. 130

U.S. 130 AT COLUMBUS RD (CR 543/655)/JONES ST, BURLINGTON CITY, MP

47.2

Configuration

This modified five-legged intersection is controlled by a pair of traffic signals. U.S. 130 carries two travel lanes plus shoulders on each direction of travel. The skewed alignment of the intersection and 5-leg design create numerous geometric, mobility, and operational deficiencies, and results in several missing turning movements. There are no dedicated turn lanes on U.S. 130 and no left-turns permitted onto Columbus Road from either direction of U.S. 130. Left-turns are permitted from U.S. 130 onto Jones Street, though there are no dedicated turning lanes. Jones Street contains two travel lanes, one in each direction of travel. Left-turns from Jones Street onto U.S. 130 northbound are prohibited. Columbus Road carries two travel lanes plus shoulders, one in each direction. There are no dedicated turn lanes on Columbus Road, though all turning movements are permitted.

Crashes

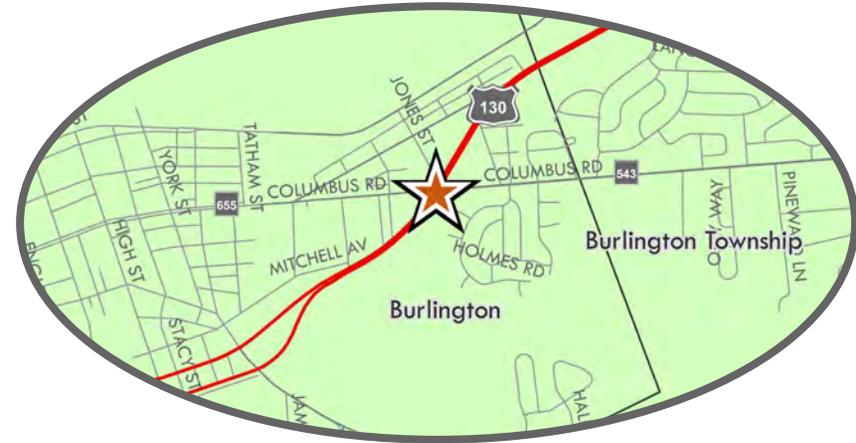
- 28 Crashes between 2014-2016; no injuries reported
- Primarily occurred along eastbound CR 543 leaving the intersection

AADT

- U.S. 130 – 27,063 in 2015, and 26,490 in 2011
- Columbus Road – 2,111 in 2015 and 2,113 in 2012
- Jones Street – Data not available

Considerations

Jones Street serves as the major connector between New Pearl Street (CR 656), U.S. 130, and Columbus Road (CR 543). There are two automotive dealerships to the north of Columbus Road and Jones Street on either side of U.S. 130 in addition to a gas station between westbound Columbus Road and southbound U.S. 130. Columbus Road contains mostly residential developments while Jones Street serves both commercial and few residential uses. The intersection experiences significant delays during peak periods.



Issues

- Maneuverability is a significant challenge at the intersection. First time users may find that navigating the intersection is not intuitive.
- The channelized right-turn lane from westbound Columbus Road to northbound U.S. 130 is inaccessible when more than three vehicles are in queue at the intersection, limiting its usefulness in clearing the intersection.
- There is insufficient space for simultaneous opposing left-turns on Columbus Road, which tends to result in vehicles waiting in the middle of the intersection, reducing the efficiency of all turning movements.
- There is no access from northbound U.S. 130 to westbound Columbus Road or from southbound U.S. 130 to eastbound Columbus Road.
- There are missing crosswalks, ADA ramps and continuous sidewalk facilities across Columbus Road and U.S. 130.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Cut back the center median on U.S. 130 to facilitate the northbound

left-turns onto Jones Street.

- Investigate the potential for split phase in the signal timing for Columbus Road as an approach to eliminate the left-turn conflict.
- The following alternative scenarios:
 - Change of operations of Jones Street to one-way approaching the intersection and, thus, eliminating left-turn movements from northbound U.S. 130, but maintaining connections to southbound U.S. 130.
 - Eliminate the fifth leg of the intersection by turning Jones Street into a cul-de-sac and provide a new access between U.S. 130 and River Road through Dugan Street, which intersects U.S. 130 approximately 1,900 feet north of Jones Street and extend Dugan Street to River Road, after its intersection with Broad Street.
 - Eliminate the fifth leg from the intersection by relocating Jones Street approximately 600 feet to the north with a new signalized intersection, which would utilize the median area for a center turn lane on U.S. 130.
 - Keep all five legs of the intersection but prohibit left-turns from northbound U.S. 130 onto Jones Street or Columbus Road. These movements would be accommodated through the construction of a far-side jug-handle around the car dealership on the northeast corner.

Recommendations

- Remove left-turn provisions from northbound U.S. 130 to Jones Street and from Jones Street to northbound U.S. 130 and retain right-in and right-out access to Jones Street from southbound U.S. 130.
- Close the existing median along U.S. 130 at Jones Street and remove the existing traffic signal.
- Construct a far-side jug-handle on northbound U.S. 130 behind the Lucas Ford car dealership to facilitate left-turn movements onto Columbus Road. Investigate the current drainage patterns along the proposed alignment and adjust the jug-handle alignment as necessary.
- Relocate center median along U.S. 130 further south to accommodate simultaneous left-turns along both directions of Columbus Road.

- Stripe lane extension markings to facilitate both left-turns onto U.S. 130.
- Install a single left-turn lane on southbound U.S. 130 using a portion of the existing median to facilitate left-turn movements onto Columbus Road.
- Install a channelized right-turn lane onto Columbus Road from both directions of U.S. 130.
- Investigate future right of way acquisition to construct a dedicated left-turn lane from westbound Columbus Road to southbound U.S. 130. The remaining through-lane should function as a through-left lane to increase left turning capacity at the intersection. An additional dedicated left-turn lane should also be considered for the eastbound approach of Columbus Road.
- Remove the easternmost driveway access to Lucas Ford from Columbus Road to improve operations at the intersection.
- Improve the pedestrian network at the intersection by installing sidewalks, ADA curb ramps, pedestrian signal heads and crosswalks.



Left turning trucks from northbound U.S. 130 to Jones Street regularly impede traffic traveling in the left lane of northbound U.S. 130, increasing congestion at the intersection

US 130 at Columbus Rd/ Jones St, Burlington City

Transportation Improvements



Remove left-turn provisions from northbound US 130 to Jones Street and from Jones Street to northbound US 130 and retain right-in and right-out access to Jones Street from southbound US 130. Close the US 130 median at Jones Street and remove the traffic signal



Channelize right turns from northbound US 130 to eastbound Columbus Rd



Investigate feasibility of adding a dedicated left-turn lane



Push back median on US 130 and install lane extension markings to accommodate opposing left turns from Columbus Road



Install left-turn lane on southbound US 130 to facilitate left-turn movements onto Columbus Road



Install channelized right turn lanes onto Columbus Road from both direction of US 130



Investigate future right of way acquisition to construct a dedicated left turn lane from westbound Columbus Road to southbound US 130

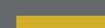


Improve the pedestrian network at the intersection by installing sidewalks, ADA curb ramps, pedestrian signal heads and crosswalks

Potential Improvements



Stripe Crosswalk



Install Sidewalk



Install ADA Curb Ramp



US 130 at Columbus Rd/ Jones St, Burlington City

Transportation Improvements

 Construct a far-side jughandle on northbound US 130 behind the Lucas Ford car dealership to facilitate left-turn movements onto Columbus Road

 Remove driveway access to improve proposed jug handle operations

 Investigate future right of way acquisition to construct a dedicated left turn lane from westbound Columbus Road to southbound US 130

Potential Improvements

-  Stripe Crosswalk
-  Install Sidewalk

 N

0' 50' 100' 200' Feet

Source: WSP additions to US 130 Corridor Study, 1997 by DVRPC

U.S. 130 AT COURT DR, BURLINGTON CITY, MP 47.2

Configuration

This three-legged intersection is controlled by a side street stop control. U.S. 130 carries two travel lanes plus shoulders in each direction of travel separated by a grass median. There are no dedicated turn lanes in either direction of U.S. 130, though all turn movements are permitted through the median gap. Left-turn movements are permitted from both southbound U.S. 130 onto Court Drive, as well as from Court Drive onto southbound U.S. 130. Court Drive carries two travel lanes without any marked shoulder space, one in each direction of travel.

Crashes

- 13 Crashes between 2014-2016; no injuries reported

AADT

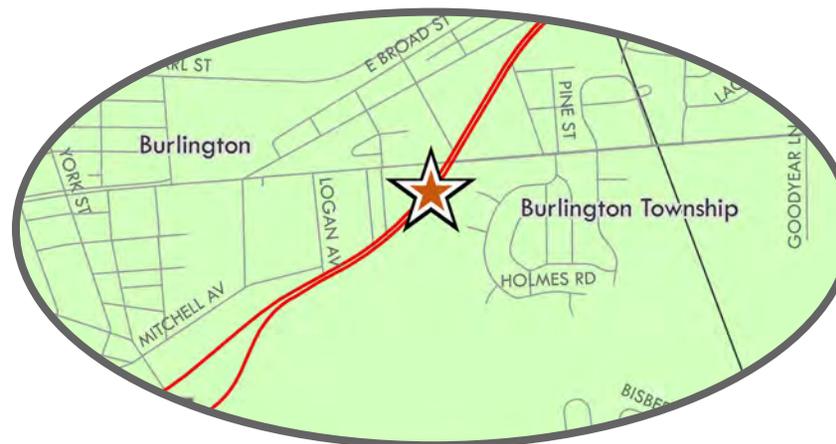
- U.S. 130 – 34,956 in 2015, and 26,490 in 2011
- Court Drive – Data not available

Considerations

Court Drive is the only access for Burlington Pointe, a large garden apartments community of 210 one and two-bedroom units in 19 buildings. There are considerable signs of bicycle and pedestrian activity in the area. The left-turn movement from Court Drive onto southbound U.S. 130 has signs of tire tracks on the grass median. The area surrounding the intersection is mostly residential with few industrial uses further south on U.S. 130.

Issues

- A lack of a dedicated left-turn lane from southbound U.S. 130 to Court Drive, coupled with the short proximity of this intersection to Columbus Road intersection, results in potential back-ups to the latter intersection.
- Left-turns from Court Drive onto to southbound U.S. 130 are problematic due to the minimal space provided in the median of U.S. 130, limited sight distances and conflicting movements with left-turning vehicles from southbound U.S. 130 to Court Drive. A high crash count was documented at the intersection.



- The crosswalk across Court Drive is missing, and Court Drive is missing sidewalks from U.S. 130 to the apartment buildings.

Recommendations

- Remove left-turn provisions from Court Drive onto southbound U.S. 130. Drivers originating from Court Drive wishing to travel south on U.S. 130 will be required to use the proposed far-side jug-handle north of the Columbus Road intersection.
- Realign the Court Drive approach to U.S. 130 to orient it for right-turns only.
- Channelize the right-turn lane from Court Drive to northbound U.S. 130 by installing a splitter island to discourage left-turning movements and to shorten pedestrian crossings.
- Install a left-turn lane on southbound U.S. 130 to facilitate left-turn movement onto Court Drive. Redesign the median break on U.S. 130 to discourage left-turns from Court Drive onto southbound U.S. 130.
- Stripe a crosswalk across Court Drive and install sidewalks to the apartment buildings.
- Work with Burlington City, Burlington Pointe Apartments, and the owner of the properties to the west of the apartment complex to build a secondary access point from U.S. 130 to the apartments when the adjacent properties are redeveloped.



Minimal space is provided for left turning vehicles from Court Drive to southbound U.S. 130, resulting in conflicts with vehicles making opposing turns

US 130 at Court Dr, Burlington City

Transportation Improvements

 Install a left turn lane on southbound US 130 to facilitate left turn movement onto Court Drive. Redesign the median break on US 130 to discourage left turns from Court Drive onto southbound US 130.

 Channelize the right turn lane from Court Drive to northbound US 130 by installing a splitter island to discourage left turning movements and to shorten pedestrian crossings

 Stripe a crosswalk across Court Drive and install sidewalks to the apartment buildings

 Realign the Court Drive approach to US 130 to orient it for right turns only.

 Remove left turn provisions from Court Drive onto southbound US 130. The proposed far-side jug handle north of the Columbus Road intersection will provide access to southbound US 130

Potential Improvements

-  Stripe Crosswalk
-  Install Sidewalk
-  Install ADA Curb Ramp

 N

0' 35' 70' 140'
Feet

U.S. 130 BETWEEN NJ 413 & ASSISCUNK CREEK, BURLINGTON CITY, MP 45.7 - 46.8

Configuration

Within Burlington City, U.S. 130 carries two travel lanes in each direction, as well as short dedicated turn lanes mixed with shoulder striping. This configuration, whereby one travel lane in each direction is removed, was recently implemented to reduce vehicular speeds along the corridor. Between Assiscunk Creek and Lincoln Avenue, U.S. 130 operates in a one-way pair configuration. A small section of the one-way pair alignment from Lincoln Avenue to Wood Street maintains three travel lanes in each direction without shoulders or dedicated turn lanes. Throughout the one-way pair alignment, commercial establishments line the median and several cross streets provide access across both directions of U.S. 130. A total of seven cross street operates bidirectionally within the one-way pair alignment, three of which interface with U.S. 130 at signalized intersections, while four utilize stop signs.

Crashes

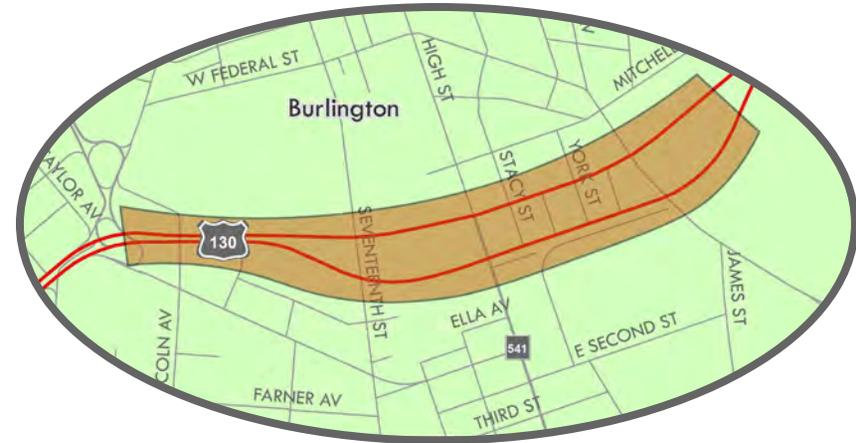
- 438 (25 on cross streets within the couplet) crashes from 2014-2016 with 2 fatalities and 6 moderate injuries reported
- A large cluster of crashes was documented on northbound U.S. 130 at the intersection of High Street

AADT

- U.S. 130 – 37,504 in 2011, 41,989 in 2012 and 41,746 in 2015

Considerations

U.S. 130 is the major north-south arterial roadway connecting Burlington City to major populations to the north and south. The roadway facilitates critical freight movements between interstate highways and local warehousing and distribution centers. In Burlington City, a significant pedestrian demand exists around U.S. 130, which forms a north-south barrier to the City's residents, students, and employees. U.S. 130 passes through the core of the city, through commercial, residential, and institutional land uses. Multiple schools, including Burlington City High School is located just off the highway.



Issues

- The corridor is missing crosswalks and ADA curb ramps at several intersections and the sidewalks are discontinuous along the corridor.
- There are no bicycle facilities along the corridor or along any of its crossings.
- Speeding is a major issue along the corridor.
- Nighttime visibility is lacking along the corridor.
- The frequency and geometrics of driveways along the corridor pose safety concerns.

Recommendations

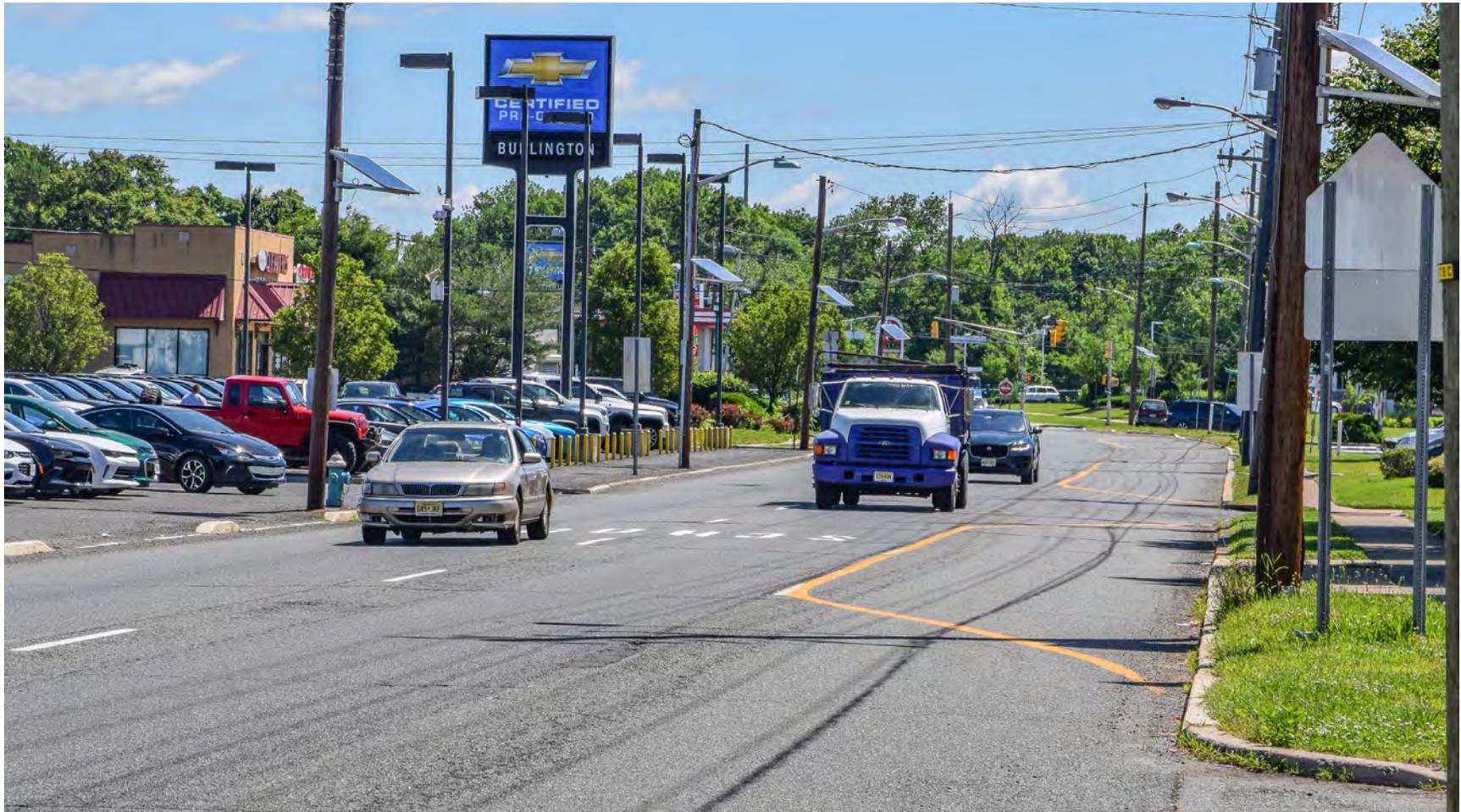
- Investigate a more permanent road diet solution on U.S. 130 with curb extensions, planted trees, and improved lighting to create a narrowing effect that naturally slows down drivers.
- Consider removing the third northbound travel lane between Jacksonville Road and the Columbus Road intersection to the north.
- Increase the length of the turn bays along the corridor to create safer and more maneuverable turning movements from both directions of U.S. 130.
- Improve access management along U.S. 130 by consolidating redundant driveways and removing access points too close to the

intersections.

- Improve lighting throughout the corridor in both directions to create a safer environment and improved visibility for pedestrians and drivers.
- Fill in sidewalk gaps, stripe crosswalks, install ADA curb ramps and pedestrian signal heads with leading pedestrian intervals to improve

pedestrian mobility and safety.

- Install electronic speed feedback and speeding deterrence signs to help mitigate speeding along the corridor.
- Investigate the feasibility of striping bicycle lanes and shared lane markings along High Street across U.S. 130 to provide a bicycle route to downtown Burlington City from neighborhoods to the south.



Recently implemented road diet along southbound U.S. 130 approaching High Street (CR 541)

US 130 in Burlington City

Transportation Improvements



Investigate the feasibility of striping bicycle lanes and shared lane markings along High Street across US 130 to provide a bicycle route to downtown Burlington City from neighborhoods to the south



Improve access management along US 130 by consolidating redundant driveways and removing access points too close to the intersections



Install electronic speed feedback and speeding deterrence signs



Investigate a more permanent road diet solution on US 130 with curb extensions, planted trees, and improved lighting to create a narrowing effect that naturally slows down drivers. Consider removing the third northbound travel lane between Jacksonville Road and the Columbus Road intersection to the north.



Fill in sidewalk gaps, stripe crosswalks, install ADA curb ramps and pedestrian signal heads with leading pedestrian intervals to improve pedestrian mobility and safety



Increase the length of the turn bays along the corridor to create safer and more maneuverable turning movements from both directions of US 130



Improve lighting throughout the corridor in both directions to create a safer environment and improved visibility for pedestrians and drivers.

Wilbur Watts Intermediate School

High St

Burlington City High School

Jacksonville Rd

413

130

541

Potential Improvements

Proposed Bicycle Connection



0' 200' 400' 800' Feet

MT. HOLLY RD (CR 541) BETWEEN I-295 & SUNSET RD (CR 634) BURLINGTON TOWNSHIP, MP 21.7 – 22.2

Configuration

This corridor begins at the ramps to and from I-295 at exit 47 and continues northwest to the intersection of Sunset Road. Mt. Holly Road (CR 541) carries three travel lanes plus varying shoulder space in each direction of travel. Mt. Holly Road intersects with Cadillac Road and the Burlington Bypass between Sunset Road and I-295. All turns along the corridor are made using respective jug-handles as turns are not permitted at the Cadillac Road and Sunset Road intersections.

Crashes

- 119 crashes from 2014-2016; 1 fatality and 3 moderate injuries reported
- Primarily occurred on westbound Mt. Holly Road (CR 541) with a large cluster between the westbound off-ramp to Wedgewood Drive and Cadillac Road, which accounts for over 50% of all crashes including the fatality and all injuries reported.

AADT

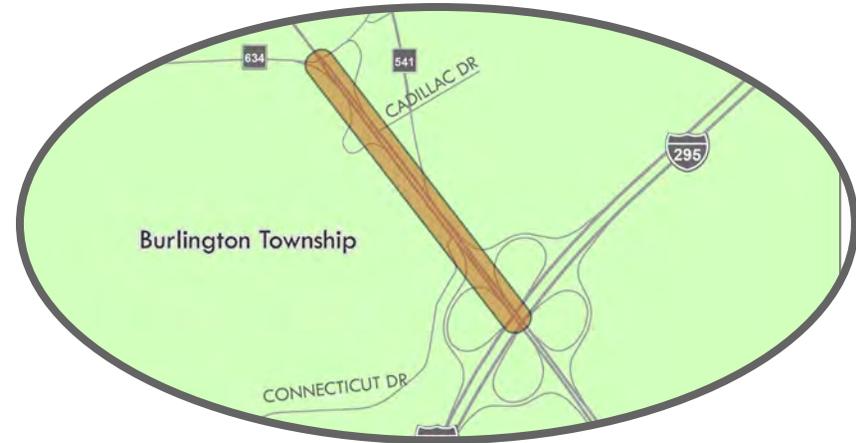
- Mt. Holly Road (CR 541) – 43,719 in 2013

Considerations

Mt. Holly Road (CR 541) serves as the major east-west connection through Burlington City and Burlington Township which provides the primary access to I-295 from these municipalities. Mt. Holly Road also connects U.S. 130 and NJ 413 to I-295. The stretch of Mt. Holly Road between Sunset Road and the I-295 ramps is surrounded by big box commercial uses, including a Walmart Supercenter. Light industrial uses also line the corridor, in addition to other commercial activity. There is currently a 4-ton weight restriction along the corridor north of the Burlington Bypass exit. All deliveries to local commercial establishments must be made using the Burlington Bypass. The CR 541 corridor will be studied in greater depth by Burlington County in the future.

Issues

- Dozens of crashes have been documented at the entrance to the near-side jug-handle from westbound Mt. Holly Road (CR 541) to



Wedgewood Drive.

- Although through heavy trucks are prohibited from using Mt. Holly Road north of the Burlington Bypass, many continue to do so.
- The pedestrian network is discontinuous along the corridor, especially near the commercial establishments.
- The frequency and geometrics of driveways along the corridor pose safety concerns.

Previous Studies and Recommendations

The 1997 River Route Corridor Study made the following recommendations for this intersection:

- Investigate improvement opportunities at clusters of crashes identified in the study, two of which are located within this corridor.
- Improve pedestrian access and crossings, especially at retail nodes and bus stops.

Recommendations

- Install a cantilever sign reading “All Through Trucks Must Exit to Burlington Bypass/Sunset Road” along northbound Mt. Holly Road (CR 541) in advance of the Burlington Bypass and Cadillac Road. Supplement sign with pavement markings reading “All Through Trucks Next Right”.
- Investigate the installation of roundabouts at the intersections of

the Burlington Bypass at Cadillac Drive and at the Burlington Bypass at Wedgewood Drive to improve traffic circulation in the shopping area. This would involve the elimination of the existing near-side jug handle at Wedgewood Drive and CR 541.

- Improve pedestrian facilities at the intersection of Mt. Holly Road (CR 541) and Sunset Road by striping high visibility crosswalks, installing

pedestrian signal heads with leading pedestrian intervals, and installing continuous sidewalks.

- Stripe “Right Turn Only” pavement markings for the right lane approaching the Wedgewood Drive jug handle. Supplement these markings with directional signage to the Liberty Square Shopping Center and the official truck delivery entrance.



This section of Mt. Holly Road (CR 541), just south of the Sunset Road jug-handle, experiences higher than average crash rates

Mt. Holly Road (CR 541), Burlington Twp

Transportation Improvements

 Remove jug handle from Mt. Holly Road to Wedgewood Drive

 Investigate the installation of roundabouts to improve traffic circulation in the shopping area

 Improve pedestrian facilities at the intersection of Mt. Holly Road (CR 541) and Sunset Road by striping high visibility crosswalks, installing pedestrian signal heads with leading pedestrian intervals, and installing continuous sidewalks

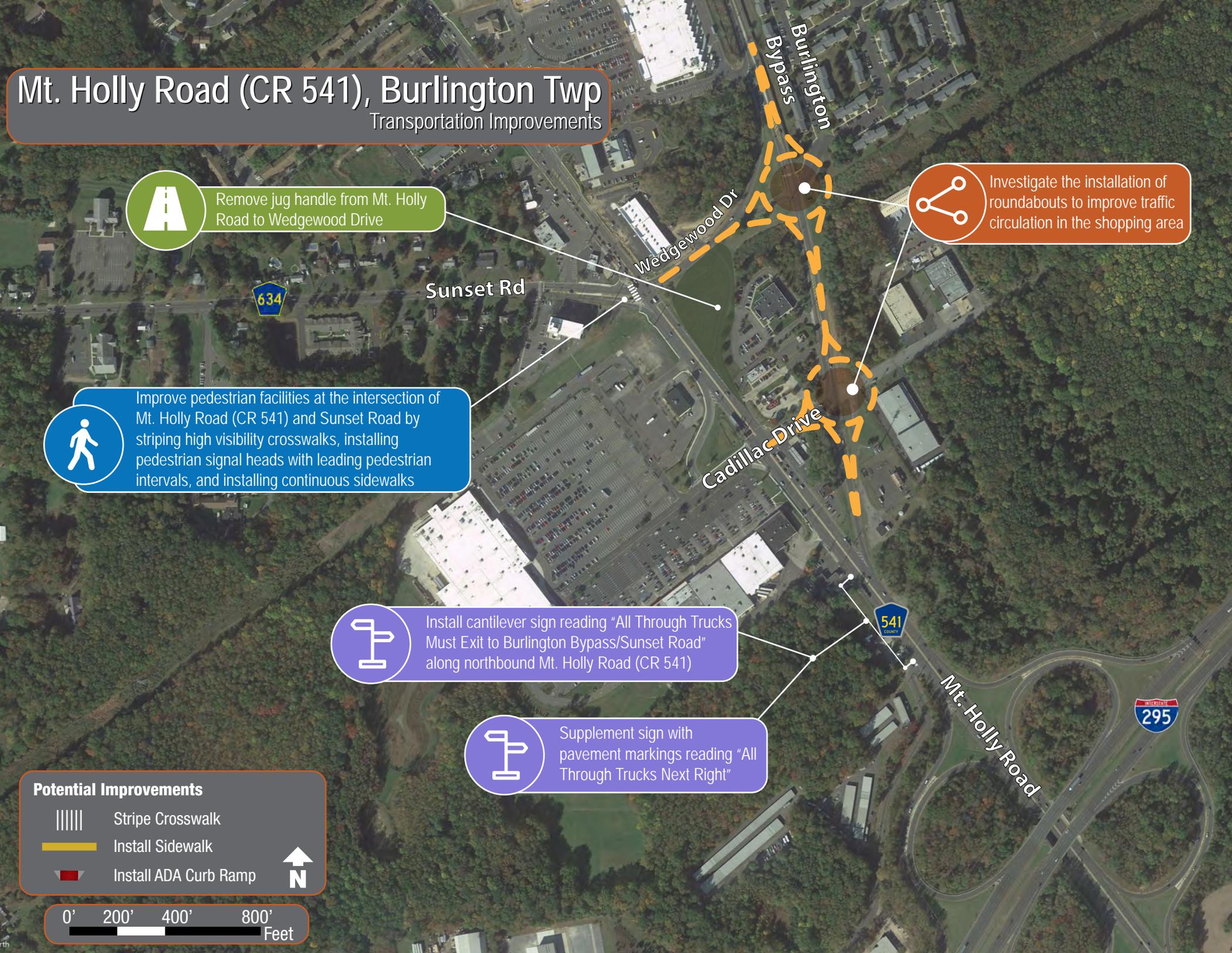
 Install cantilever sign reading "All Through Trucks Must Exit to Burlington Bypass/Sunset Road" along northbound Mt. Holly Road (CR 541)

 Supplement sign with pavement markings reading "All Through Trucks Next Right"

Potential Improvements

-  Stripe Crosswalk
-  Install Sidewalk
-  Install ADA Curb Ramp





U.S. 130 AT NJ 413, BURLINGTON CITY, MP 45.8

Configuration

This modified five-legged intersection is controlled by multiple traffic signals. U.S. 130 carries three travel lanes without shoulders in each direction. Left-turning vehicles on northbound U.S. 130 must use the jug-handle to Mott Avenue which also permits a U-turn movement. Left-turning vehicles on U.S. 130 must use the dedicated turn lane for Salem Road while U-turns from southbound U.S. 130 can be made using the Washington Avenue modified jug-handle. Eastbound NJ 413 carries one travel lane approaching the intersection before it splits into multiple lanes. Westbound vehicles must take Washington Avenue at the intersection to reach westbound NJ 413 (Keim Boulevard) via the traffic circle located just north of the intersection. Washington Avenue carries two lanes in the westbound direction which allows for one shared through-left lane serving as the modified jug-handle for southbound vehicles on U.S. 130. NJ 413 has two dedicated right and two dedicated left-turning lanes in addition to one right-turn lane to access the dedicated left-turning lane on southbound U.S. 130 for southbound Salem Road. Taylor Avenue contains two travel lanes, one in each direction and has right-in right-out access to and from eastbound NJ 413. Westbound vehicles on Mott Avenue must take Lincoln Avenue east of the intersection through a separate signalized intersection to reach westbound NJ 413 and Washington Avenue.

Crashes

- 76 Crashes between 2014-2016; no injury reported
- Primarily occurred along eastbound NJ 413 approaching the intersection

AADT

- U.S. 130 – 41,746 in 2015, and 41,989 in 2012
- NJ 413 – 27,876 in 2014, and 25,927 in 2011

Considerations

The intersection provides direct access for the Burlington Bristol Bridge via NJ 413 (Keim Boulevard). The intersection is designed for high throughput due to the high volumes that merge onto U.S. 130. Because the Burlington Bristol Bridge is a drawbridge, traffic often spills over



Keim Boulevard and onto U.S. 130 when the bridge is raised, resulting in congestion throughout Burlington City. The traffic circle north of the intersection provides a small amount of stacking capacity towards the Burlington Bristol Bridge but otherwise serves little purpose. Drivers on Washington Avenue have several alternatives to reach U.S. 130, making the connection with Keim Boulevard redundant. Greenlanders Park and John F. Kennedy Lake are located just north of the intersection, adjacent to Washington Avenue. Residential developments are located directly adjacent to the intersection, in addition to commercial establishments along U.S. 130.

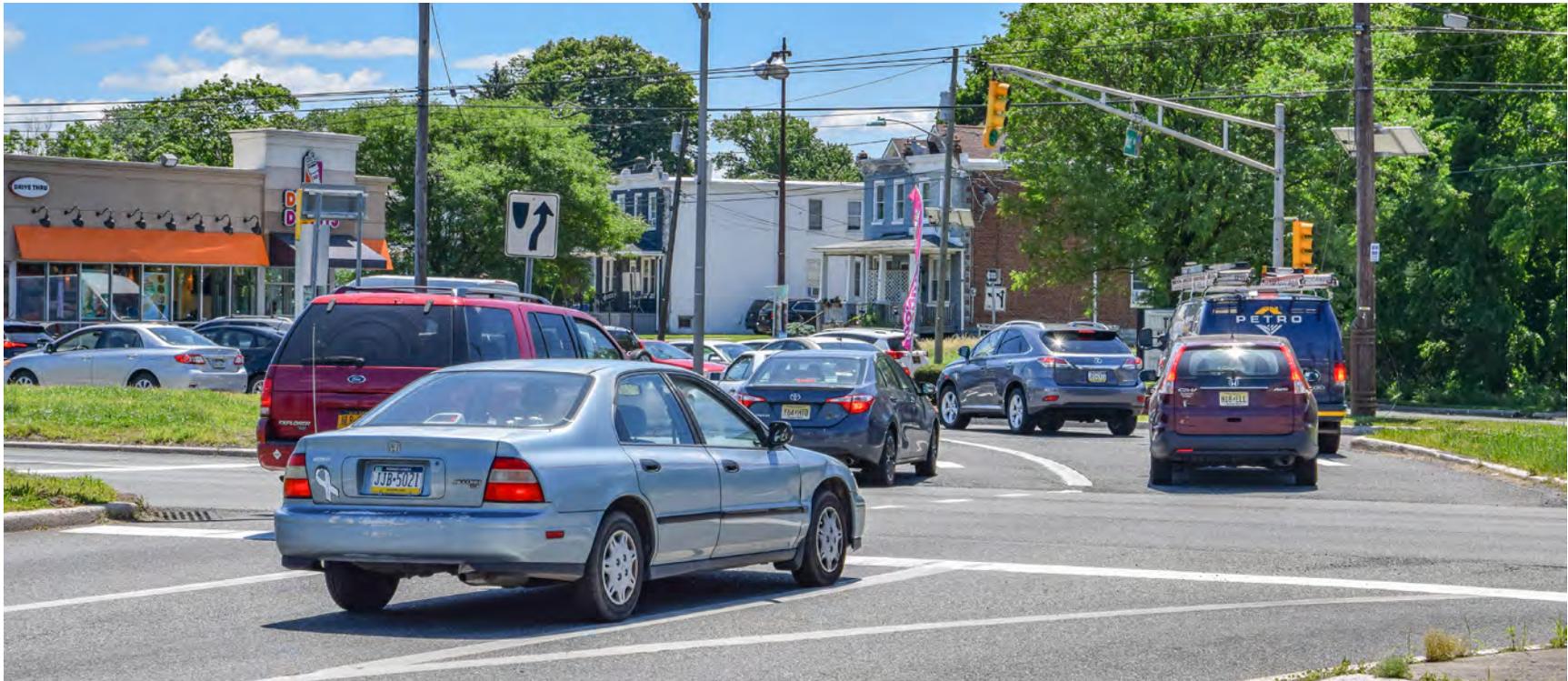
Issues

- The area around the intersection is missing sidewalks, crosswalks, ADA curb ramps, and pedestrian signal heads.
- The driveway for Taylor Road conflicts with the right-turn movements from eastbound NJ 413 to southbound U.S. 130.
- The right-turn lanes from eastbound NJ 413 to southbound U.S. 130 are blocked by the left-turn lanes to northbound U.S. 130. This results in longer queues and less efficient intersection clearance.
- The traffic circle immediately north of the intersection reduces pedestrian mobility and reduces the usable park space surrounding the circle.
- During the green phase, left-turning vehicles from NJ 413 to northbound U.S. 130 have little room for stacking due to the

simultaneous red light at the Lincoln Avenue signal just 500 feet to the north

Recommendations

- Re-configure and re-align the intersection of NJ 413 with U.S. 130 as a three legged intersection. Provide two left and one right-turn lane from NJ 413 to U.S. 130 and two dedicated left-turn lanes from northbound U.S. 130 to NJ 413.
- Re-align Salem Road approach at a new three-way intersection south of the original NJ 413 intersection. Provide a left-turn lane from southbound U.S. 130 to Salem Road. Extend the U.S. 130 road diet to the new Salem Road intersection. Investigate future alignment of Salem Road with Chelton Avenue.
- Reconstruct the existing roundabout to provide two lanes of travel and restore bi-directional movements on Oakland Avenue.
- Remove the signalized intersection at Lincoln Avenue and retain southbound U.S. 130 right-in access as an alternative exit. Restore bi-directional traffic on Lincoln Avenue south of the intersection and provide in-out turning movements.
- Cul-de-sac Mott Avenue and distribute local traffic to Lincoln Avenue and Salem Road.
- Cul-de-sac Taylor Avenue.
- Improve pedestrian network around the intersection by installing sidewalks, ADA curb ramps, and pedestrian signal heads and stripe crosswalks.



During the green phase, left-turning vehicles from NJ 413 to northbound U.S. 130 have little room for stacking due to the simultaneous red light at the Lincoln Avenue signal just 500 feet to the north

US 130 at NJ 413, Burlington City

Transportation Improvements



Cul-de-sac Taylor Avenue



Re-align Salem Road approach at a new three-way intersection south of the original NJ 413 intersection. Provide a left-turn lane from southbound US 130 to Salem Road. Extend the US 130 road diet to the new Salem Road intersection. Investigate future alignment of Salem Road with Chelton Avenue



Improve pedestrian network around the intersection by installing sidewalks, ADA curb ramps, and pedestrian signal heads and striping crosswalks



Reconstruct the existing roundabout to provide two lanes of travel and restore bi-directional movements on Oakland Avenue



Re-configure and re-align the intersection of NJ 413 with US 130 as a three legged intersection. Provide two left and one right-turn lane from NJ 413 to US 130 and two dedicated left-turn lanes from northbound US 130 to NJ 413



Remove signalized intersection and retain southbound US 130 right-in access as an alternative exit. Restore bi-directional traffic on Lincoln Avenue south of the intersection and provide in-out turning movements. Cul-de-sac Mott Avenue and distribute traffic to Lincoln Avenue and Salem Rd

Potential Improvements



Stripe Crosswalk



Install Sidewalk



Install ADA Curb Ramp



U.S. 130 AT CAMPUS DR (CR 631), BURLINGTON TWP, MP 44.6

Configuration

This three-legged, unsignalized intersection currently operates as a right-in right-out access to northbound U.S. 130. U.S. 130 carries three travel lanes in each direction in addition to paved shoulders. Campus Drive carries one travel lane plus paved shoulders in each direction. U.S. 130 does not have a deceleration lane for Campus Drive. The A and E Cage Company located to the north of the intersection contains channelized right-in right-out turn lanes.

Crashes

- 11 Crashes between 2014-2016; no injury reported
- Primarily occurred along northbound U.S. 130 approaching the intersection.

AADT

- U.S. 130 – 37,286 in 2017, and 39,480 in 2014
- Campus Drive – Data not available

Considerations

Campus drive provides a connection between U.S. 130 and Autumn Lane, Sunset Road, and Salem Road. Campus Drive provides direct access to multiple warehouses immediately south of the intersection in addition to a major apartment complex. Existing jug-handles, located just north of the intersection, provide the missing turning movements from Campus Drive to southbound U.S. 130 and facilitate other U-turns for access to residential and commercial developments along U.S. 130. Much of the pavement in front of the A and E Cage Company is underutilized.

Issues

- Heavy trucks traveling along southbound U.S. 130 must use the Van Sciver Parkway jug-handle or navigate local streets, such as Salem Road to access the warehousing along Campus Drive. This creates unnecessary wear and congestion on local streets and overburdens Van Sciver Parkway.
- Vehicles traveling from the Campus Drive warehouses to southbound



U.S. 130 must use northbound U.S. 130 to the nearby jug-handle, increasing congestion along this stretch of roadway.

Previous Studies and Recommendations

The 1997 River Route Corridor Study made the following recommendation for this intersection:

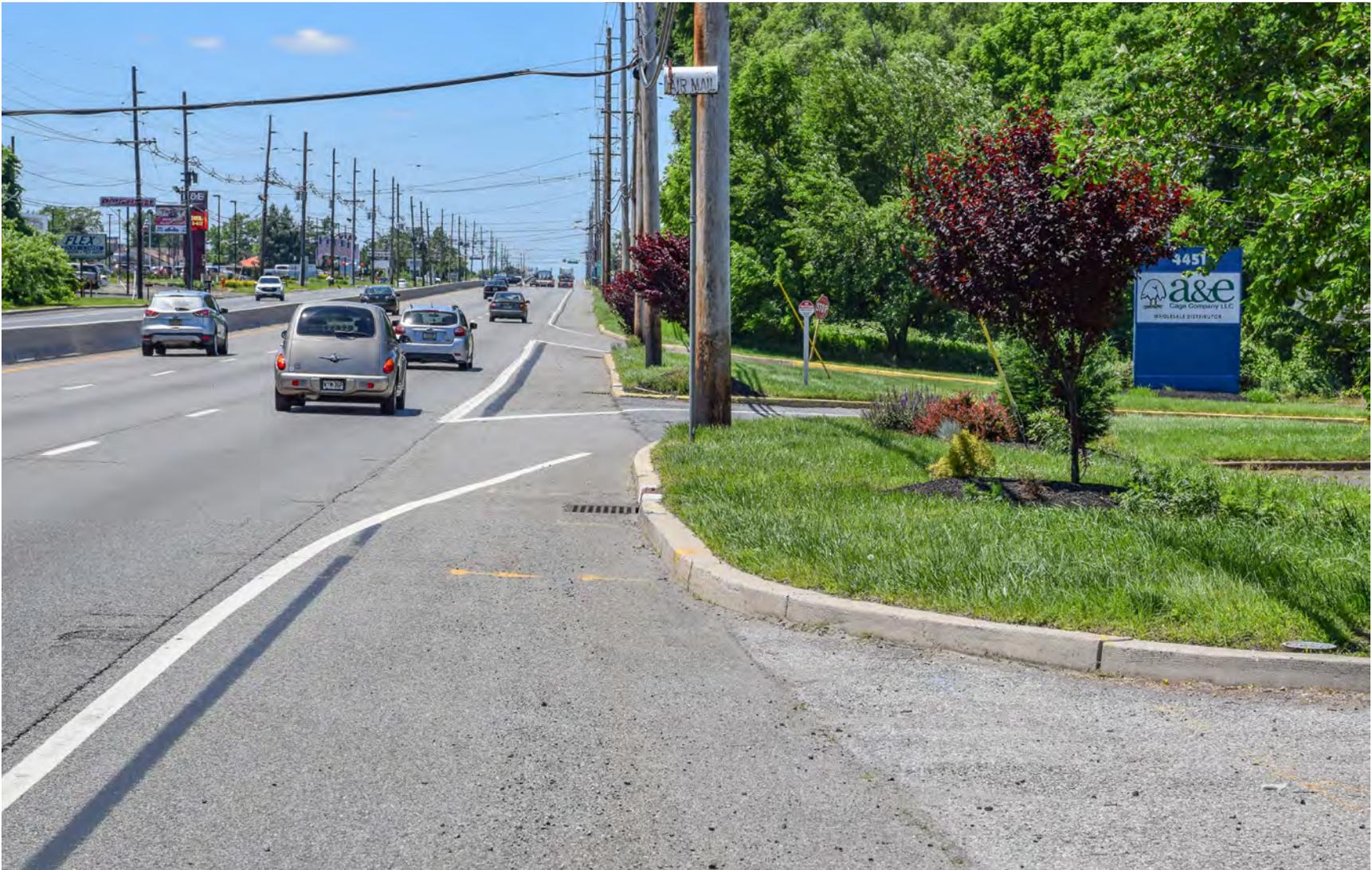
- Relocate the jug-handles on U.S. 130 north of Campus Drive to Campus Drive.

Recommendations

- Signalize the intersection.
- Construct a near-side jug-handle on southbound U.S. 130 and remove the jug-handle on southbound U.S. 130 north of the intersection with Campus Drive to provide better access to the warehouses on Campus Drive and to reduce congestion on Sunset Road. Alternate direct access to the A&E Cage Company may be provided from the proposed jug handle, subject to NJDOT approval.
- Coordinate the signal timings of the new jug-handle with the near-side jug-handle on northbound U.S. 130 north of the intersection with Campus Drive.
- Provide dedicated turn lanes on westbound Campus Drive to improve traffic flow at the intersection.
- Provide a deceleration lane on northbound U.S. 130 for the right-turn to Campus Drive to accommodate trucks and to reduce vehicular

conflicts.

- Construct a new driveway to provide trucks access to the A&G Cage Company via Yubas Avenue. Prohibit trucks north of the driveway.



The existing driveway to the A&E Cage Company is the location of the proposed jug-handle relocation

US 130 at Campus Dr (CR 631), Burlington Twp

Transportation Improvements



Construct a near side jug handle on southbound US 130 and remove the jug handle on southbound US 130 north of the intersection with Campus Drive. Alternate direct access to the A&E Cage Company may be provided from the proposed jug handle, subject to NJDOT approval



Provide a deceleration lane on northbound US 130 for the right turn to Campus Drive to accommodate trucks



Construct a new driveway to provide trucks access to the A&G Cage Company via Yubas Avenue. Prohibit trucks north of the driveway.



Coordinate the signal timings of the new jug handle with the near side jug handle on northbound US 130 north of the intersection with Campus Drive



Provide dedicated right and left turn lanes on westbound Campus Drive to improve traffic flow at the intersection



Signalize the intersection

Potential Improvements



Install Traffic Signal



0' 100' 200' 400' Feet

U.S. 130 AT WOODLANE RD/LEVITT PKWY (CR 629), EDGEWATER PARK TWP, MP 43.7

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries three travel lanes plus shoulders in each direction. There are no turns permitted from U.S. 130 at the intersection. There are separate jug-handles for both northbound and southbound vehicles on U.S. 130 that allows for all turning movements at the intersection. Woodlane Road carries two travel lanes, one in each direction. Levitt Parkway contains two travel lanes in each direction of travel separated by a raised median. Levitt Parkway and Woodlane Road each have one dedicated left-turn lane, one left-through lane, and one right-through lane at the intersection.

Crashes

- 23 Crashes between 2014-2016; 1 moderate injury reported
- Primarily occurred along northbound Levitt Parkway (CR 629) approaching the intersection

AADT

- U.S. 130 – 41,744 in 2016, and 34,260 in 2015
- Woodland Road – 7,050 in 2016, and 8,078 in 2010
- Levitt Parkway – Data not available

Considerations

There are many residential developments along both Woodlane Road and Levitt Parkway. In addition, large commercial developments surround the intersection, including a Big Lots, a shopping center with an Acme market, and the Willingboro Public Library. There are also NJ Transit bus stops along Route 409 in each direction of U.S. 130.

Issues

- The area around the intersection is missing sidewalks, crosswalks, ADA curb ramps, and pedestrian signal heads.
- The merging area on northbound Woodlane Road leaving the intersection is very short, leading to vehicular conflicts and queuing that often extends back to the intersection.



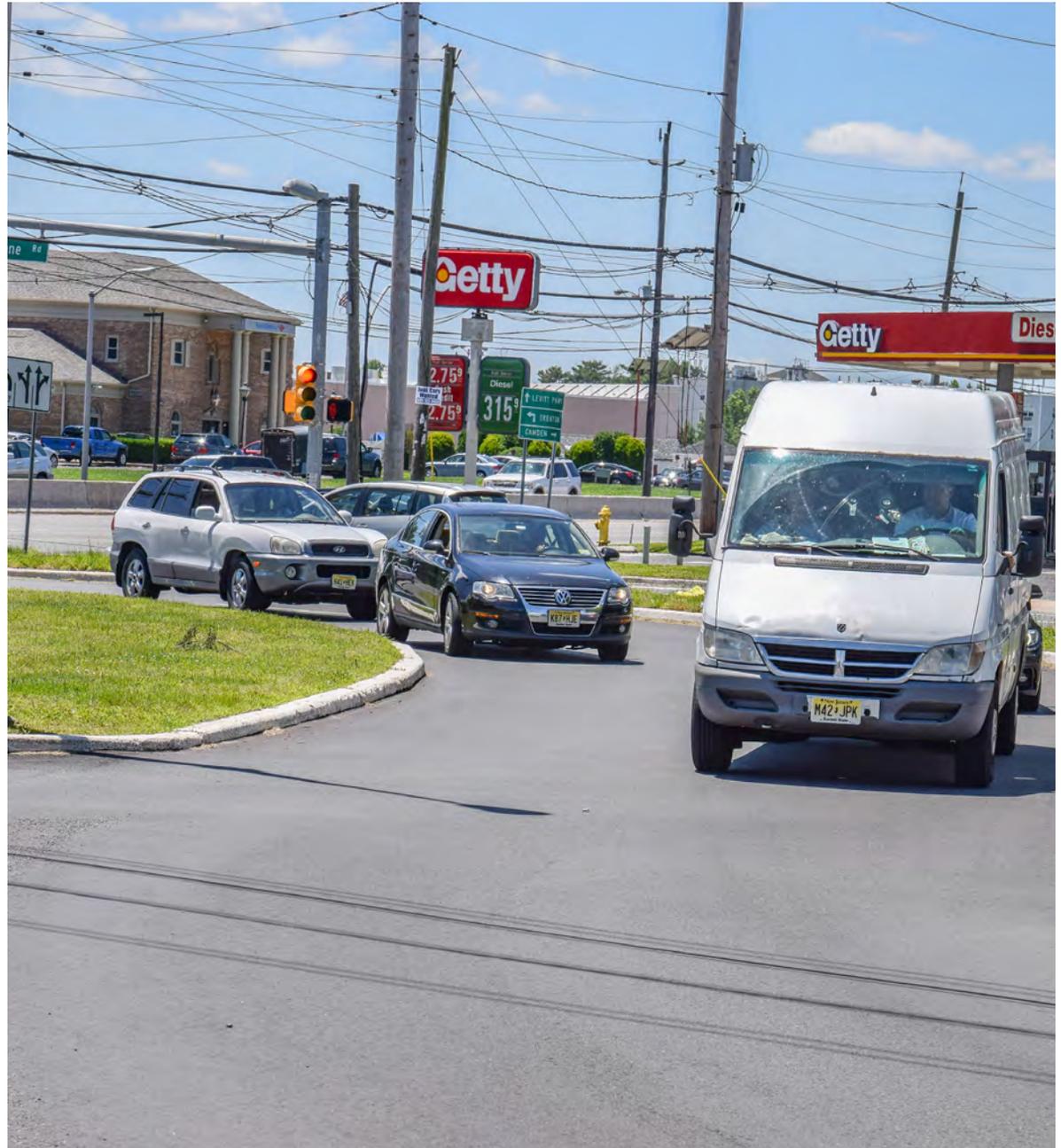
- There is an overabundance of driveways along southbound U.S. 130 approaching the intersection.

Recommendations

- Lengthen the merge area on northbound Woodlane Road leaving the intersection to improve safety.
- Improve access management from southbound U.S. 130 by consolidating duplicate driveways.
- Stripe lane extension markings for left-turns from Levitt Parkway to southbound U.S. 130 and Woodlane Road to northbound U.S. 130.
- Relocate the access point to the Getty gas station, located at the northwest corner of the intersection, further to the north to avoid vehicular conflicts at the intersection. Use the abundant pavement in front of the “Big Lots” property to facilitate movements to the gas station.
- Stripe high visibility crosswalks across U.S. 130, Levitt Parkway, and Woodlane Road with pedestrian signal heads, including leading pedestrian intervals. Install a continuous sidewalk between the NJ Transit bus stops and nearby residential and commercial developments.
- Investigate realigning Woodlane Road with Levitt Parkway with future redevelopment of the Big Lots parcel to straighten out the existing intersection.



Incomplete pedestrian network at intersection



Short merge area along northbound Woodlane Road creates excess congestion

US 130 at Woodlane Rd/ Levitt Pkwy, Edgewater Park Twp

Transportation Improvements



Use the excess pavement in front of the "Big Lots" property to facilitate movements to the gas station



Investigate realigning Woodlane Road with Levitt Parkway with future redevelopment of the Big Lots parcel to straighten out the existing intersection.



Relocate the access point to the Getty gas station, located at the northwest corner of the intersection, further to the north to avoid vehicular conflicts at the intersection



Lengthen the merge area on northbound Woodlane Road leaving the intersection to improve safety



Stripe high visibility crosswalks across US 130, Levitt Parkway, and Woodlane Road with pedestrian signal heads, including leading pedestrian intervals. Install a continuous sidewalk between the NJ Transit bus stops and nearby residential and commercial developments



Stripe lane extension markings for left turns from Levitt Parkway to southbound US 130 and Woodlane Road to northbound US 130

Potential Improvements



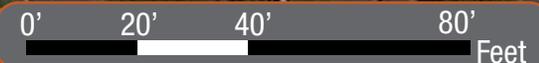
Stripe Crosswalk



Install Sidewalk



Install ADA Curb Ramp



Big Lots

Getty gas station

Woodlane Rd

Levitt Pkwy

130

U.S. 130 AT COOPER ST/CHARLESTON RD (CR 630), EDGEWATER PARK TWP, MP 43.2

Configuration

This four-legged intersection is controlled by a traffic signal. U.S. 130 carries three travel lanes plus shoulders in each direction of travel. There are no turns allowed at the intersection from U.S. 130. There are two near-side jug-handles, one each for each direction of U.S. 130 to make all turns to Cooper Street and Charleston Road. Both Cooper Street and Charleston Road carry two travel lanes, one in each direction, plus shoulders on either side. There are dedicated left-turn lanes for both Cooper Street and Charleston Road along with a shared through-right.

Crashes

- 30 Crashes between 2014-2016; 2 moderate injuries reported
- Primarily occurred along westbound Cooper Street (CR 630) leaving the intersection

AADT

- U.S. 130 – 41,744 in 2016, and 38,484 in 2013
- Cooper Street (CR 630) – 7,909 in 2015, and 9,040 in 2011
- Charleston Road (CR 630) – 7,677 in 2014, and 6,500 in 2011

Considerations

Cooper Street directly serves the city of Beverly to the north, while Charleston Road serves a similar function for Willingboro, connecting many residential communities to U.S. 130. A Burlington Coat Factory distribution center is located directly adjacent to the intersection. The truck access to this property was recently relocated to an access point off Delanco Road to the south. The shift changes at the warehouse facility generates a high pedestrian traffic volume at the intersection. The former gas station property on the northwest corner of the intersection is now an empty plot. Two bus stops along NJ Transit route 409 are situated at the intersection.

Issues

- The area around the intersection is missing sidewalks, crosswalks,



ADA curb ramps, and pedestrian signal heads.

- The driveway at the auto repair shop on the northern side of the intersection interferes with left-turning vehicles from the near-side jug-handle to Cooper Street.

Recommendations

- Stripe high visibility crosswalks across U.S. 130, Cooper Street, and Charleston Road with pedestrian signal heads, including leading pedestrian intervals.
- Install a continuous sidewalk between the NJ Transit bus stops and nearby warehousing, residential, and commercial developments. Push back the westbound stop bar along Charleston Road to accommodate the new crosswalk.
- Investigate the impacts of closing access to the auto repair shop driveway on the northern side of the intersection at the terminal of the southbound jug-handle to reduce conflicts with left-turning vehicles onto Cooper Street.
- Investigate ways to improve driveway access for future redevelopment of the former gas station property on the northwest corner of the intersection. Specifically, move the driveways further from the intersection.



The intersection lacks pedestrian facilities, forcing pedestrians to cross unsafely

US 130 at Cooper St & Charleston Rd, Edgewater Park Twp

Transportation Improvements

 Investigate the impacts of closing access to the auto repair shop driveway

 Reconfigure auto repair shop property to use mid-block driveway for all turning movements

 Relocate driveways when property is redeveloped

 Stripe high visibility crosswalks, ADA curb ramps, and pedestrian signal heads, including leading pedestrian intervals

 Install continuous sidewalks between NJ Transit bus stops and nearby developments

Potential Improvements

-  Close Driveway Access
-  Stripe Crosswalk
-  Install Sidewalk
-  Install ADA Curb Ramp



U.S. 130 AT PENNYPACKER DR/ DELANCO RD, EDGEWATER PARK TWP, MP 42.9

Configuration

U.S. 130 carries three travel lanes plus shoulders in each direction. Pennypacker Drive and Delanco Road intersect with U.S. 130 approximately 250 feet apart, each as a three-legged intersection. The intersection of Pennypacker Drive and U.S. 130 is controlled by a traffic signal while the intersection of Delanco Road and U.S. 130 is controlled by a stop sign on Delanco Road. There is no access from southbound U.S. 130 to Pennypacker Drive or from northbound U.S. 130 to Delanco Road. Access from northbound U.S. 130 to and from Pennypacker Drive is provided via right-in right-out turning movements. Pennypacker Drive is comprised of a single travel lane in each direction with no shoulders. Pennypacker Drive contains a dedicated left-turn lane for southbound U.S. 130. Delanco road is comprised of a single travel lane in each direction with striped shoulders. The intersection also operates in a right-in right-out configuration, but lacks the left-turn movements.

Crashes

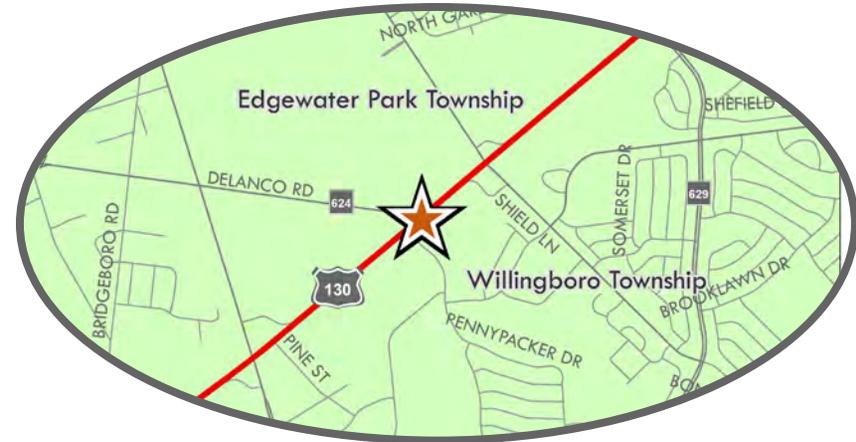
- 51 Crashes between 2014-2016; 2 fatalities and 4 moderate injuries reported
- 14 Crashes were recorded directly at the intersection of Delanco Road and U.S. 130, while 20 crashes were recorded directly at the intersection of Pennypacker Drive and U.S. 130

AADT

- U.S. 130 – 41,744 in 2016, and 38,484 in 2013
- Coopertown Road (Just west of Township Line) – 2,789 in 2016

Considerations

Delanco Road provides the primary connection between southbound U.S. 130 and Delanco Township. The roadway serves the added purpose of providing access to major warehouses, schools, residential developments, and recreational facilities. The recent expansion of the Burlington Coat Factory Distribution Center just north of the intersection has increased the number of trucks that must navigate the intersection. All truck traffic to the facility has been routed through a new driveway along Delanco Road just west of the intersection.



Pennypacker is a local roadway serving a limited number of commercial establishments near the intersection, though primarily serving residential developments to the south. The NJ Transit 409 bus route makes a stop along southbound U.S. 130 at the intersection.

Issues

- Truck traffic along northbound U.S. 130 does not have direct access to the Burlington Coat Factory Distribution Center, resulting in added strain on the Charleston Road jug-handle to the north.
- The intersection has experienced an abnormally high number of severe crashes.
- The intersection is missing pedestrian and bicycle facilities, including crosswalks, a continuous sidewalk network, pedestrian signal heads, and ADA curb ramps across U.S. 130, Pennypacker Road, and Delanco Road.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Create a new roadway connection between Van Sciver Parkway and Pennypacker Drive to the north of U.S. 130. The area has seen new development since this recommendation
- Extend Pennypacker Drive across U.S. 130 through the edge of the Cramps Liquor Store parking lot and vacant field and connect it with

Delanco Road.

- The existing section of Delanco Road between U.S. 130 and the proposed connector road should be retained and used as a southbound near-side jug-handle for U-turns or left-turns onto Pennypacker Drive.
- A northbound near-side jug-handle should be constructed in the open field in the southeast quadrant.

As of 2018, the new roadway connection is no longer feasible due to new residential, commercial, and industrial development along its proposed alignment. Pennypacker Drive and Delanco Road have not been reconfigured.

Recommendations

- Extend Pennypacker Drive across U.S. 130 through the edge of the Cramps Liquor Store parking lot and vacant field and connect it with

Delanco Road.

- The existing section of Delanco Road between U.S. 130 and the proposed connector road should be retained and used as a southbound near-side jug-handle for U-turns or left-turns onto Pennypacker Drive.
- Construct a northbound near-side jug-handle in the open field in the southeast quadrant.
- Improve the pedestrian network at the new intersection by installing sidewalks, ADA curb ramps, and pedestrian signal heads, overhead lighting over crosswalks, and stripe crosswalks across U.S. 130, Delanco Road, and Pennypacker Drive.
- Relocate the bus stops to the far-side of the intersection and install bus shelters.



Existing turn to Delanco Road (foreground) with the Pennypacker Drive intersection to the south. The proposed extension crosses the liquor store parking lot to the right and continues to Delanco Road further west

US 130 at Pennypacker Dr/ Delanco Rd, Edgewater Park Twp

Transportation Improvements



Extend Pennypacker Drive across US 130 through the edge of the Cramps Liquor Store parking lot and vacant field and connect it with Delanco Road



The existing section of Delanco Road between US 130 and the proposed connector road should be retained and used as a southbound near-side jughandle for U-turns or left turns onto Pennypacker Drive



Relocate bus stops to far side of the intersection and install bus shelters



Improve the pedestrian network at the new intersection by installing sidewalks, ADA curb ramps, pedestrian signal heads, overhead lighting over crosswalks, and stripe high visibility crosswalks across US 130, Delanco Road, and Pennypacker Drive

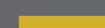


Construct a northbound nearside jughandle in the open field in the southeast quadrant

Potential Improvements



Stripe Crosswalk



Install Sidewalk



Install ADA Curb Ramp



0'

100'

200'

400'

Feet

DELANCO RD (CR 624) BETWEEN U.S. 130 AND DELANCO TWP LINE, EDGEWATER PARK TWP, MP 1.3 – 2.5

Configuration

Delanco Road carries one travel lane plus varying shoulders in each direction. There are no dedicated turn lanes at the intersections with other cross streets. Two out of the three intersections along the corridor are controlled by four-way stop signs, while the intersection with Perkins Lane is controlled by a flashing red signal for Perkins Lane and a flashing yellow signal for Delanco Road. There are multiple driveways from residential developments and other uses which are all controlled by side street stop signs.

Crashes

- 26 Crashes between 2014-2016; no major injuries reported
- Crashes are concentrated at the intersections with Perkins Lane and Mt. Holly Road

ADT

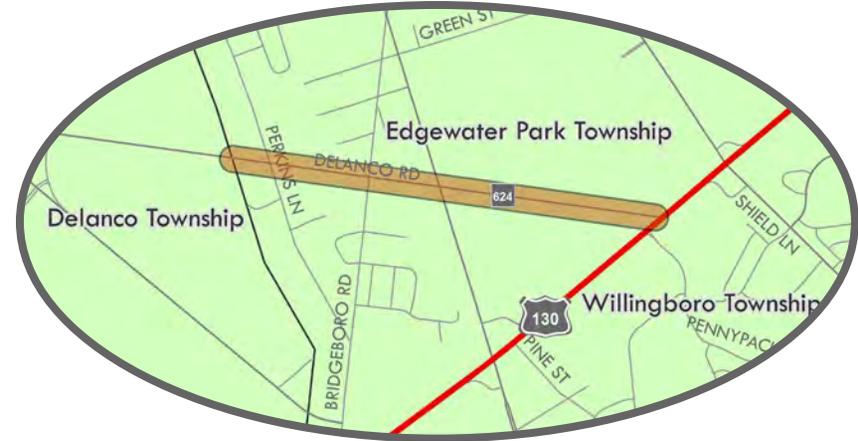
- Coopertown Road (Just west of Township Line) – 2,789 in 2016

Considerations

Delanco Road provides the primary connection between southbound U.S. 130 and Delanco Township. The recent expansion of the Burlington Coat Factory Distribution Center just north of the intersection with U.S. 130 has increased the number of trucks that utilize the easternmost section of Delanco Road. All truck traffic to the facility has been routed through a new driveway along Delanco Road just west of the intersection. A middle school is situated along Delanco Road, in addition to Township offices, residential developments, current and future warehousing, and light commercial activity. The land opposite the Courtyards Apartment Complex will likely be developed in the future.

Issues

- The corridor is lined with residential developments and a school, which is not compatible with the observed heavy truck volumes.
- The corridor lacks bicycle and pedestrian facilities.



- Lighting is insufficient at intersections and nonexistent at the pedestrian scale.

Recommendations

- Investigate the feasibility of imposing an 8-ton truck restriction along Delanco Road between the Burlington Coat Factory Distribution Center and Enterprise Drive. Guide trucks to Creek Road and U.S. 130 on either end of the truck restriction. Should truck volumes increase beyond projections, retain truck access on Delanco Road but implement traffic calming to slow motorists near sensitive land uses.
- Investigate the feasibility of constructing roundabouts at the intersections of Delanco Road at Mt. Holly Road and Delanco Road at Bridgeboro Road.
- Improve the pedestrian network along the corridor by installing sidewalks, ADA curb ramps, and pedestrian signal heads, and stripe crosswalks across all major roadways and driveways. Connect the NJ Transit Route 409 bus stop and the Samuel M. Ridgeway Middle School to the residential developments along the corridor.
- Improve lighting for all users along the corridor.
- Stripe shared bicycle lane markings on the road to accommodate bicyclists along this corridor.
- If future industrial development takes place on the land opposite the Courtyards Apartment Complex, driveway access should be

provided from Delanco Road opposite the existing Burlington Coat Factory Distribution Center driveway and an additional in-out access point should be established along southbound U.S. 130 south of the intersection.



Delanco Road lacks pedestrian facilities near the Township Middle School

Delanco Rd Corridor, Edgewater Park Twp

Transportation Improvements

 Improve the pedestrian network along the corridor by installing sidewalks, ADA curb ramps, and pedestrian signal heads, and stripe crosswalks across all major roadways and driveways

 Stripe shared bicycle lane markings on the road to accommodate bicyclists along this corridor

 Investigate the feasibility of imposing an 8-ton truck restriction along Delanco Road between the Burlington Coat Factory Distribution Center and Enterprise Drive. Guide trucks to Creek Road and US 130 on either end of the truck restriction

 Improve lighting for all users along the corridor

 Investigate the feasibility of constructing roundabouts at the intersections of Delanco Road at Mt. Holly Road and Delanco Road at Bridgeboro Road.

Burlington Coat Factory Distribution Center

Samuel M. Ridgeway Middle School

 Connect the NJ Transit Route 409 bus stop and the Samuel M. Ridgeway Middle School to the residential developments along the corridor

 If future industrial development takes place on the land opposite the Courtyards Apartment Complex, driveway access should be provided from Delanco Road opposite the existing Burlington Coat Factory Distribution Center driveway and an additional in-out access point should be established along southbound US 130 south of the intersection



Delanco Rd

Perkins Ln

Bridgeboro Rd

Mt Holly Rd



Delanco Twp

Edgewater Park Twp

Willingboro



U.S. 130 AT BRIDGEBORO RD, EDGEWATER PARK TWP, MP 41.7

Configuration

This three-legged intersection is controlled by a traffic signal. U.S. 130 carries three travel lanes plus shoulders in each direction. There are no turns allowed for vehicles on U.S. 130. Both directions of U.S. 130 must use the respective near-side jug-handles for left-turns and U-turns. Southbound U.S. 130 drivers must also use the near-side jug-handle for right-turns. Bridgeboro Road carries two travel lanes, one in each direction. The southbound approach to the intersection splits up into two dedicated turn lanes, one for a left-turn and the other for a right-turn movement. The northbound U.S. 130 near-side jug-handle does not have lane delineations, though drivers typically form two queues at the stop bar.

Crashes

- 67 Crashes between 2014-2016; 1 fatality reported
- Primarily occurred along northbound U.S. 130 at the near-side jug-handle split

AADT

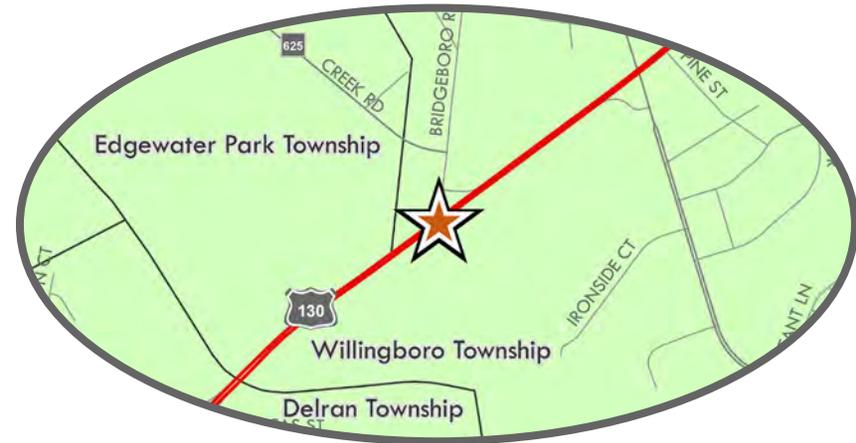
- U.S. 130 – 49,512 in 2017
- Bridgeboro Road – 6,628 in 2017, and 6,441 in 2014

Considerations

There are multiple commercial establishments surrounding the intersection, including a Wawa gas station. A church and the Living Springs Manor Senior facility are located to the west of the intersection, both of which have four separate access points from Creek Road and U.S. 130. Willingboro Lakes Park is located just south of the intersection and contains a network of walking trails. Pennington Park is located just north of the intersection along Creek Road. A NJ Transit Route 409 bus stop is located on southbound U.S. 130 just north of the intersection.

Issues

- Traffic volumes at the northbound U.S. 130 near-side jug-handle are near capacity, rendering the existing configuration inadequate.
- The nearby intersection of Creek Road and Bridgeboro Road



regularly backs up to U.S. 130.

- The Living Springs Senior Housing property is being used to bypass the intersection of U.S. 130 and Bridgeboro Road via Creek Road (CR 625).
- The intersection is missing bicycle and pedestrian facilities such as crosswalks, a continuous sidewalk network, pedestrian signal heads, and ADA curb ramps across Bridgeboro Road and U.S. 130.

Previous Studies and Recommendations

DVRPC's 2017 study, Transportation Improvements for the U.S. 130-Bridgeboro Road Corridor, made the following recommendations for the intersection:

- Signalize the intersection of Creek Road and U.S. 130.
- Relocate the near-side jug-handle on northbound U.S. 130 at Bridgeboro Road to a far-side jug-handle at the new intersection with Creek Road.
- Install a new roundabout at the intersection of Bridgeboro Road and Creek Road to improve vehicular movements for all four approaches.

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Relocate the intersection and jug-handle approximately 900 feet to the north and construct a far-side jug-handle along northbound U.S. 130.

- Conduct a study to identify options which would redirect traffic out of this intersection.

Recommendations

- Construct a deceleration lane along northbound U.S. 130 for the Bridgeboro Road near-side jug-handle.
- Stripe two lanes within the jug-handle, one for through movements and one for left-turns.
- Widen the near-side jug-handle along southbound U.S. 130 to two lanes to account for additional heavy trucks destined for Creek Road due to the proposed Delanco Road weight restriction.
- Stripe a crosswalk across the northern crossing of U.S. 130 at

Bridgeboro Road and across Bridgeboro Road to connect Willingboro Lakes Park with Pennington Park via the existing trail and sidewalk network located within the Livings Springs Senior facility property. Install sidewalks, ADA curb ramps, and pedestrian signal heads at the intersection connecting the bus stops.

- Construct shared-use paths along northbound U.S. 130 from Bridgeboro Road to Willingboro Lakes Park.
- Investigate an alternate connection from Creek Road via “Old Creek Road” to U.S. 130 to replace the Bridgeboro Road intersection with U.S. 130.
- Coordinate these proposed improvements with the ongoing study of the Bridgeboro Road and U.S. 130 intersection.



Southern terminus of Bridgeboro Road at U.S. 130

US 130 at Bridgeboro Rd, Edgewater Park Twp

Transportation Improvements



Construct shared-use paths along northbound US 130 from Bridgeboro Road to Willingboro Lakes Park



Widen the near-side jug handle along southbound US 130 to two lanes to account for additional heavy trucks destined for Creek Road due to the proposed Delanco Road weight restriction



Stripe two lanes within the jug handle, one for through movements and one for left turns



Construct a deceleration lane along northbound US 130 for the Bridgeboro Road near-side jug handle



Investigate alternate connection from Creek Road via "Old Creek Road" to US 130 to replace the Bridgeboro Road intersection with US 130



Stripe a crosswalk across the northern crossing of US 130 at Bridgeboro Road and across Bridgeboro Road to connect Willingboro Lakes Park with Pennington Park via the existing trail and sidewalk network located within the Living Springs Senior facility property. Install sidewalks, ADA curb ramps, and pedestrian signal heads at the intersection connecting the bus stops

Potential Improvements

-  Multi-use path
-  Stripe Crosswalk
-  Install Sidewalk
-  Install ADA Curb Ramp



BURLINGTON AVE (CR 543) BETWEEN RIVERSIDE-DELANCO BRIDGE AND WILLOW ST, DELANCO TWP, MP 10.9 – 11.1

Configuration

This corridor stretches from the Riverside-Delanco Bridge to Willow Street. Six intersections are located along the roadway, all utilizing side street stop signs. Burlington Avenue (CR 543) carries one travel lane in each direction plus shoulders on the southbound side and parking on the northbound side. With the exception of Washington Street and the eastern alignment of Rancocas Avenue, all cross streets are along the corridor are one-way. On-street parking is permitted on the cross-streets.

Crashes

- 9 Crashes between 2014-2016; one injury reported at the Rancocas Avenue intersection
- Two crashes occurred directly at the Vine Street intersection

AADT

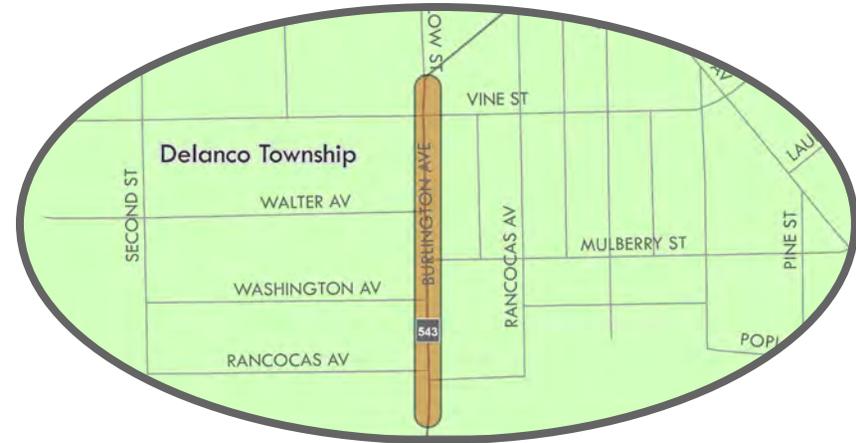
- Burlington Avenue (CR 543) – 8,878 in 2015

Considerations

This stretch of Burlington Avenue (CR 543) runs through the residential core of Delanco Township where bicycle and pedestrian activity is common. Light commercial uses line the corridor, relying primarily on on-street parking to accommodate customers. Vehicular volumes are relatively high along Burlington Avenue due to its dual function as a Main Street and a through-street. The Delaware River Heritage Trail, at various stages of planning and construction, will intersect with the Burlington Avenue corridor by way of Rancocas Avenue. The proposed trail alignment will then cross into Riverside Township via the Riverside-Delanco Bridge.

Issues

- ADA curb ramps are missing at the Franklin Street and Vine Street intersections.
- Burlington Avenue lacks a crosswalk across Franklin Street.
- Speeding is an issue along Burlington Avenue due to fast moving



through traffic with limited stop controls.

- The one-way signs at Vine Street and Franklin Street are difficult to see from Burlington Avenue.
- There is insufficient sight distance for right-turning traffic from southbound Willow Street to Burlington Avenue due to a large pine tree.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Evaluate the potential for installing a flashing hazard identification beacon at this intersection to heighten awareness of the change in horizontal alignment.
- Install larger chevrons on the curve and oversized DO NOT ENTER signs on Willow Street.
- Install additional and brighter street lighting.
- Trim local vegetation to permit better visibility of signing and lighting.

As of 2018, all the 1997 DVRPC recommendation have been implemented except for the vegetation improvements at the Willow Street intersection.

Recommendations

- Install ADA curb ramps and stripe missing crosswalks along the corridor.
- Install a Rectangular Rapid Flash beacon (RRFB) at the intersection of Burlington Avenue and Vine Street to improve pedestrian safety.
- Install Street name signs at Vine Street.
- Install dynamic driver feedback signs along Burlington Avenue at Vine Street and at Washington Avenue to reduce speeding.
- Construct Delaware River Heritage Trail as per the proposed alignment.
- Supplement the proposed trail with directional signage at the intersection of Rancocas Avenue and Burlington Avenue.
- Install curb extensions at the Vine Street intersection to shorten the pedestrian crossing distance and install pedestrian yield signs along the road centerline to calm traffic.
- Trim the vegetation adjacent to the Willow Street intersection to mitigate sight distance issues for turning vehicles.
- Investigate a gateway treatment along for Burlington Avenue to slow down motorists approaching from the south, where travel speeds are much higher.
- Investigate warrants for a possible three-way stop at the intersection of Burlington Avenue and Willow Street to address speeding and local impact of heavy truck through movements.



Poor visibility from Willow Street to Burlington Avenue (CR 543)

Burlington Ave (CR 543) in Delanco Township

Transportation Improvements

 Install street name signs.
Install dynamic driver feedback signs

 Install curb extensions at the Vine Street intersection to shorten the pedestrian crossing distance and install Rectangular Rapid Flash Beacon to improve pedestrian safety

 Construct Delaware River Heritage Trail as per the proposed alignment

 Install trail signage for the proposed Delaware River Heritage Trail

 Trim the vegetation adjacent to the Willow Street intersection to mitigate sight distance issues for turning vehicles

 Investigate warrants for a possible three-way stop at the intersection of Burlington Avenue and Willow Street to address speeding and local impact of heavy truck through movements.

 Install ADA curb ramps at all crosswalks along Burlington Avenue and place pedestrian yield signs along the road centerline to calm traffic

 Stripe missing crosswalks at all intersections along the corridor

 Install dynamic Driver feedback signs

 Investigate a gateway treatment along for Burlington Avenue to slow down motorists approaching from the south, where travel speeds are much higher.

Potential Improvements

-  Stripe Crosswalk
-  Clear Vegetation
-  Proposed Delaware River Heritage Trail





COOPERTOWN RD/COOPER ST (CR 624) BETWEEN BURLINGTON AVE (CR 543) & EDGEWATER PARK TWP LINE, DELANCO TWP, MP 0-1.3

Configuration

Coopertown Road (CR 624) carries two travel lanes plus varying shoulders in each direction. Dedicated turn lanes are only located at the intersection of Coopertown Road and the Creek Road extension. The intersection with Burlington Avenue (CR 543) is controlled by a traffic signal. Along this corridor there are six unsignalized intersections controlled by side street stop signs while the intersection with Hickory Street contains “Stop for Pedestrians” signs for Coopertown Road but no traditional stop signs. In addition to the side street intersections, there are multiple driveways which are all controlled by a side street stop signs. Coopertown Road crosses over the River Line Light Rail tracks between Pennsylvania Avenue and Rhawn Street.

Crashes

- 4 Crashes between 2014-2016; no injury reported

AADT

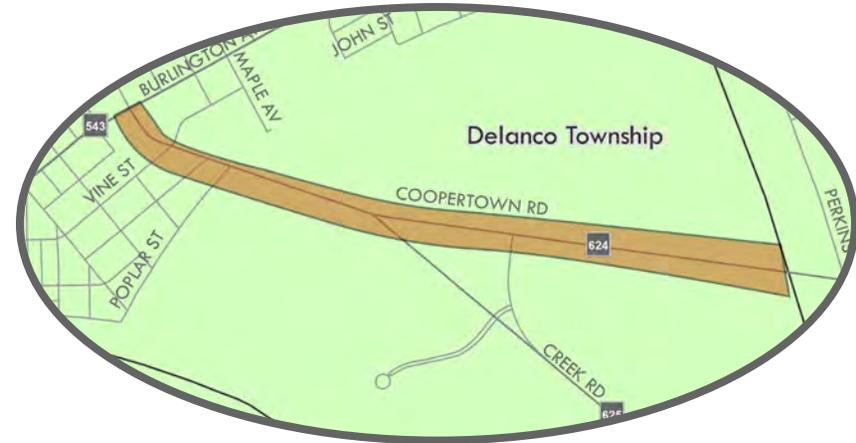
- Coopertown Road – 2,789 in 2016

Considerations

In combination with Delanco Road, Coopertown Road provides the primary connection between southbound U.S. 130 and Delanco Township. Multiple industrial parcels line the corridor, including a major lumber yard. A new RLS Logistics warehouse is currently under construction at the intersection of Coopertown Road and Enterprise Drive. The corridor serves residential neighborhoods within Delanco Township between Pennsylvania Avenue and Burlington Avenue. The Delanco River Line station is located just south of the corridor along Rhawn Street. Unmet pedestrian demand is visible along the corridor. A future

Issues

- Truck traffic will increase as the new RLS Logistics warehouse is completed. Truck volumes will overburden the left-turning movements from Coopertown Road to Creek Road, which is the only truck route to U.S. 130 from the industrial area, given the proposed



weight restriction along Delanco Road between Enterprise Drive and the Burlington Coat Factory Distribution Center to the east.

- The corridor is missing pedestrian and bicycle facilities, creating a gap between employment centers, residential developments, and the River Line station at Delanco.

Recommendations

- Extend Creek Road from Coopertown Road to Enterprise Drive to create internal circulation within the industrial park and to relieve Coopertown Road of excess truck traffic. This connection will also discourage truck traffic from using Coopertown Road and Delanco Rd to the east, where the proposed weight restriction would be enacted.
- Investigate installing a roundabout at the intersection of Coopertown Road and Creek Road to facilitate traffic to the proposed Creek Road Extension.
- Install signage along Coopertown Road to restrict trucks weighing over 8 tons south of Enterprise Drive to create a safer corridor for the residential developments and the middle school on Delanco Road.
- Improve the pedestrian network along Coopertown Road from Pennsylvania Avenue to the industrial park by providing pedestrian access to the Delanco Light Rail Train Station. Install sidewalks and ADA curb ramps, and stripe crosswalks along the corridor. Coordinate the pedestrian facilities with Delanco Road in Edgewater Park Township to extend the pedestrian facilities to U.S. 130.

- Extend the existing multi-use off road facilities in both directions to connect the residential developments north of Newtons Landing Road to Pennington Park and across U.S. 130 to Willingboro Lakes Park.
- Consider installing and daylighting a pedestrian crossing with a hybrid beacon at the intersection of Cooper Street and Hickory Street to facilitate safer pedestrian crossings.



Coopertown Road experiences heavy truck volumes due to the adjacent warehousing and distribution centers

Coopertown Rd Corridor, Delanco Twp

Transportation Improvements

 Install signage along Coopertown Road to restrict trucks weighing over 8 tons south of Enterprise Drive to create a safer corridor for the residential developments and the middle school on Delanco Road

 Install sidewalks and ADA curb ramps, stripe high visibility crosswalks, and overhead lighting on crosswalks along the corridor. Coordinate the pedestrian facilities with Delanco Road in Edgewater Park Township to extend the pedestrian facilities to US 130

Burlington Ave



Hickory St



 Consider installing and daylighting a pedestrian crossing with a hybrid beacon to facilitate safer pedestrian crossing

 Future Mixed-use Development

Coopertown Rd



Perkins Ln

Edgewater Park Twp

 Extend Creek Road from the intersection of Coopertown Road to Enterprise Drive to create internal circulation within the industrial park and to relieve Coopertown Road of excess truck traffic. Investigate installing a round-about at the intersection with CR 624

Delanco Twp

Newtons Landing Rd

 Extend the existing multi-use off road facilities in both directions to connect the residential developments north of Newtons Landing Road to Pennington Park and across US 130 to Willingboro Lakes Park

 Improve the pedestrian network along Coopertown Road from Pennsylvania Avenue to the industrial park by providing pedestrian access to the Delanco Light Rail Train Station.

Potential Improvements

-  Install Sidewalk
-  Proposed Trail Connection




CREEK RD (CR 625) BETWEEN NEWTONS LANDING BLVD & BRIDGEBORO RD, EDGEWATER PARK/DELANCO TWP, MP 0.1–1.2

Configuration

Creek Road carries two travel lanes plus shoulders in each direction. Dedicated turn lanes along the corridor are located at the intersections of Bridgeboro Road and Newtons Landing Boulevard, in addition to the Powerhouse Boiler Equipment driveway. The intersection of Creek Road and Bridgeboro Road is controlled by a traffic signal. The remaining intersections and driveways along the corridor are controlled by side street stop signs.

Crashes

- A single crash was recorded between 2014-2016, just south of the intersection with Newtons Landing Boulevard. No injuries were reported.

AADT

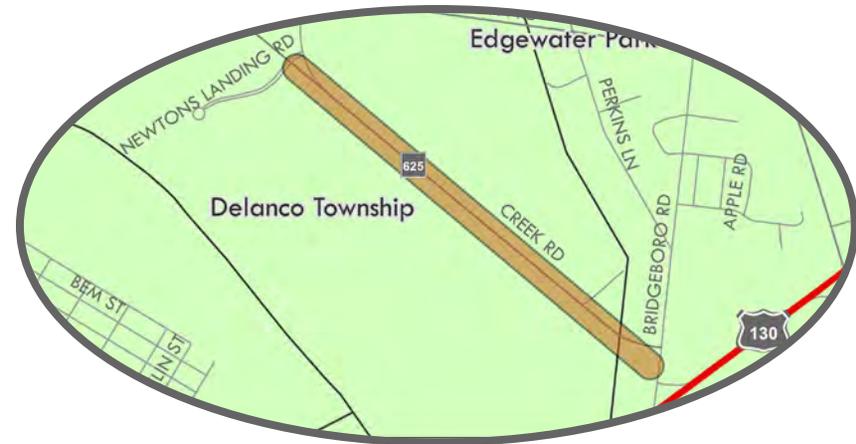
- Creek Road – Data not available

Considerations

Creek Road provides access to Coopertown Road (CR 624) and Delanco Township from U.S. 130, though its primary purpose is to provide direct access to several warehouses and other industrial parcels along the corridor. Creek Road provides access to a single residential development, via Newtons Landing Boulevard and to Pennington Park, a sprawling 140-acre park complete with an internal trail network. The Living Springs Senior facility and the Abundant Life Fellowship Church are both accessed from Creek Road near the southern terminus of the corridor. A New Jersey Motor Vehicle Commission complex is currently under construction at the 300 block of Creek Road, just south of the intersection with Coopertown Road. This facility will likely generate a significant number of trips along the corridor.

Issues

- Truck and vehicular volumes are expected to rise as the new warehousing along Coopertown Road and the new MVC facility begin operations.
- The corridor is missing bicycle and pedestrian facilities.



- The corridor lacks adequate lighting.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this corridor:

- Install signage along Creek and Coopertown Roads to encourage trucks to use Creek Road to reach U.S. 130.
- Delanco Township should incorporate the concept of a connector road from Creek Road to Burlington Street into the circulation element of their Master Plan.

As of 2018, Creek Road has been extended from its previous terminus to Coopertown Road. Further extension was deemed infeasible.

The 2017 DVRPC Transportation Improvements for the U.S. 130-Bridgeboro Road Corridor study made the following recommendations for this corridor:

- Extend Creek Road from Bridgeboro Road to U.S. 130 by widening and upgrading the existing Wawa driveway.
- Signalize the intersection of Creek Road and U.S. 130 and relocate the existing near-side jug-handle from Bridgeboro Road to the new intersection.
- Install a new roundabout at the intersection of Creek Road and Bridgeboro Road.

Burlington County has chosen not to construct a far-side jug-handle at

Creek Road due to environmental constraints and for environmental justice purposes.

Recommendations

- Install continuous sidewalks and ADA curb ramps, stripe crosswalks, and install pedestrian scale lighting on Creek Road to connect residential developments, warehousing, and other land uses along the corridor.
- Provide a pedestrian connection from the intersection of Bridgeboro Road and U.S. 130 to Creek Road by installing a sidewalk along the old alignment of Creek Road adjacent to the Abundant Life Fellowship Church.
- Extend the existing multi-use off road facilities in both directions to connect the residential developments north of Newtons Landing Road to Pennington Park and across U.S. 130 to Willingboro Lakes Park.
- Stripe a mid-block crosswalk across Creek Road at the Pennington Park Community Garden driveway to provide safe park access to the adjacent employment centers.



Pennington Park, a major pedestrian destination, lacks a safe crossing at the main entrance

Creek Rd (CR 625) Corridor, Edgewater Park/Delanco Twp

Transportation Improvements



Install continuous sidewalks and ADA curb ramps, stripe crosswalks, and install pedestrian scale lighting on Creek Road to connect residential developments, warehousing, and other land uses along the corridor



Stripe a mid-block crosswalk across Creek Road at the Pennington Park driveway to provide safe park access to the adjacent employment centers



Provide a pedestrian connection from the intersection of Bridgeboro Road and US 130 to Creek Road by installing a sidewalk along the old alignment of Creek Road adjacent to the Abundant Life Fellowship Church



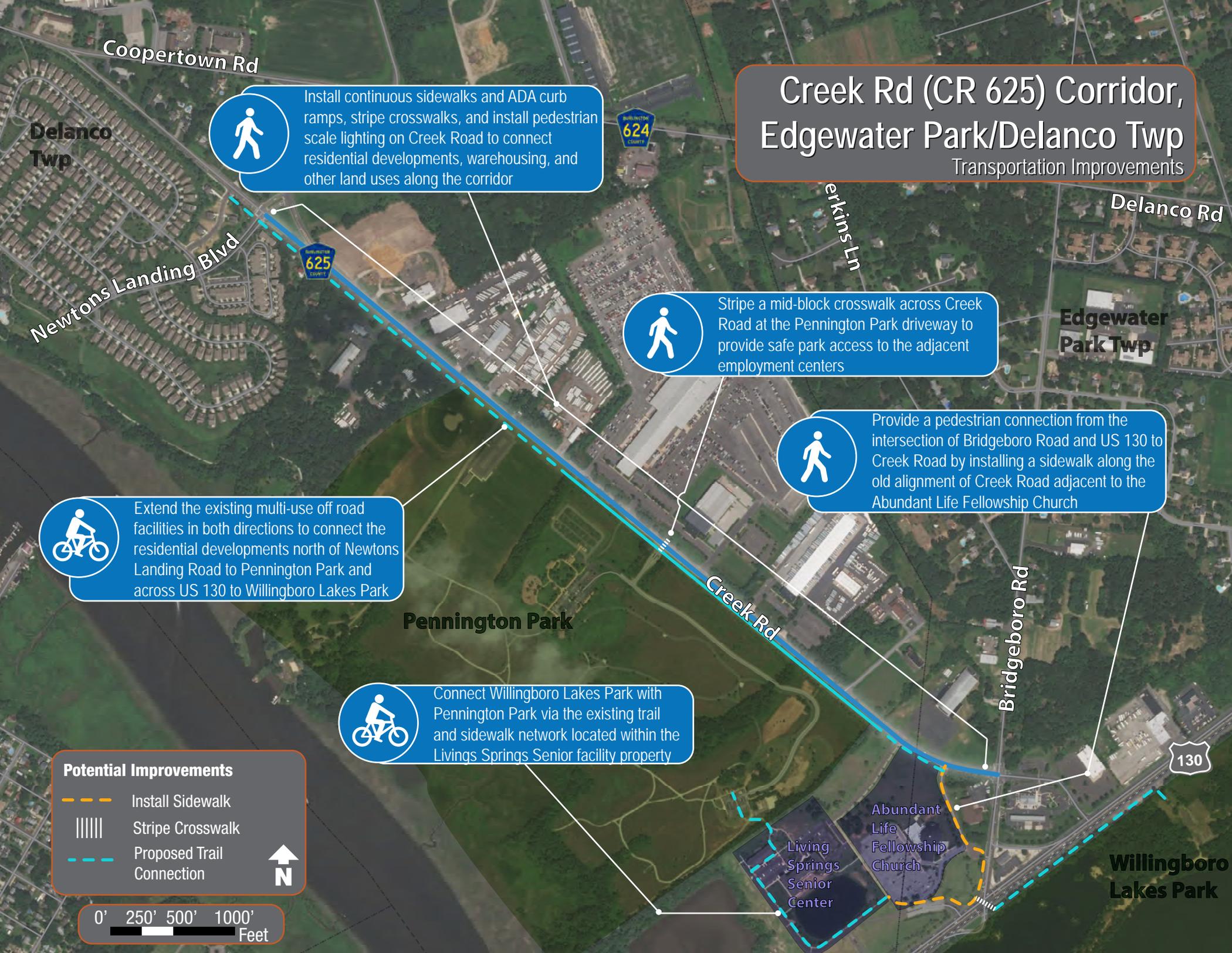
Extend the existing multi-use off road facilities in both directions to connect the residential developments north of Newtons Landing Road to Pennington Park and across US 130 to Willingboro Lakes Park



Connect Willingboro Lakes Park with Pennington Park via the existing trail and sidewalk network located within the Livings Springs Senior facility property

Potential Improvements

- Install Sidewalk
- Stripe Crosswalk
- Proposed Trail Connection



S PAVILION AVE AT S FAIRVIEW ST (CR 605), RIVERSIDE TWP, MP 1.3

Configuration

This is a modified five-legged intersection located just south of downtown Riverside Township. South Fairview Street has a flashing yellow signal at the intersection and does not stop. The remaining approaches, including 3rd Street, Rush Street, and South Pavilion Avenue are controlled by stop signs and a flashing red signal. South Fairview Street carries one travel lane in each direction plus shoulders on the northbound side and parking on the southbound side. Rush Street, 3rd Street, and South Pavilion Ave all carry one lane in each direction of travel with parking in each direction. There are no dedicated turn lanes on any of the streets at the intersection.

Crashes

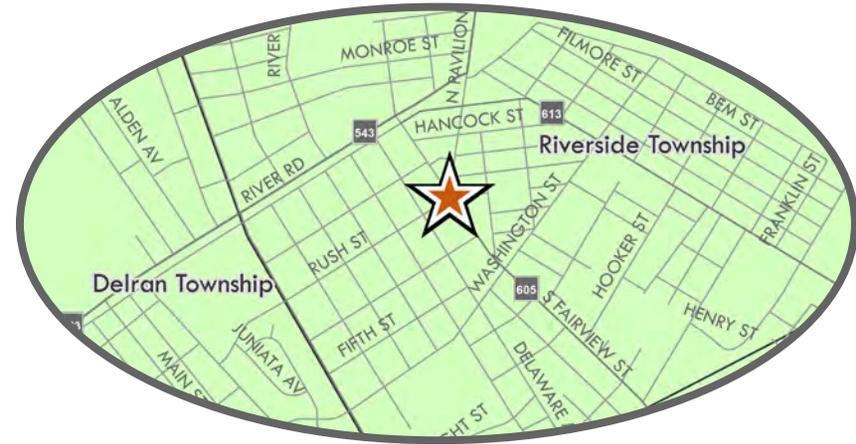
- No crashes reported at the intersection between 2014-2016

AADT

- S Fairview St (CR 605) – 7,064 in 2012
- S Pavilion Avenue – Data not available

Considerations

South Pavilion Avenue is a primary connection between Downtown Riverside, Delanco Township, and U.S. 130 to the south. Drivers originating in these locations have the choice of traveling south along Lafayette Street to South Fairview Street to reach the intersection, but that route is less direct and places strain on the intersection of Lafayette Street and South Fairview Street, which is situated next to railroad tracks. The Riverside Township municipal offices are located adjacent to the intersection along South Pavilion Avenue. Spring Garden Park is located one block to the east along Rush Street. Riverside Township Middle School and High School are located two blocks to the east. A Lutheran Church is situated just north of the intersection and lacks a dedicated parking lot. Significant residential and commercial development is planned for the area adjacent to the NJ Transit River Line Riverside station to the north of the intersection.



Issues

- South Pavilion Avenue regularly experiences southbound backups as vehicles form queues while waiting to turn onto South Fairview Street. Future residential and commercial development will likely exacerbate the congestion at the intersection.
- Visibility is a major concern at the intersection for all turning movements, especially the Rush Street approach.
- The intersection is missing pedestrian facilities, including ADA curb ramps, and a lack of convenient crosswalks between South Fairview Street and South Pavilion Avenue next to the Lutheran Church.

Recommendations

- Signalize the intersection and revisit signal timings as volumes change over time. Provide dedicated phases for South Fairview Street, South Pavilion Avenue, 3rd Street, and Rush Street. Prohibit right-turns on red from all five legs of the intersection due to the poor visibility.
- Improve pedestrian conditions by striping missing crosswalks, installing missing ADA curb ramps, and installing pedestrian signal heads at the newly signalized intersection. Install a pedestrian refuge island on S. Pavilion Avenue to improve pedestrian crossings.



Visibility is a major concern at the intersection for all turning movements, especially at the Rush Street approach

S Pavilion Ave at S Fairview St, Riverside Twp

Transportation Improvements



Signalize the intersection and revisit signal timings as volumes change over time. Prohibit right turns on red at all legs of the intersection



Improve pedestrian conditions by striping missing crosswalks, installing missing ADA curb ramps, and installing pedestrian signal heads at the newly signalized intersection. Install a pedestrian refuge island on S. Pavilion Avenue to improve pedestrian crossings

Potential Improvements

-  Install Traffic Signal
-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp



0' 50' 100' 200' Feet

Webster St

Spring Garden St

S Pavilion Ave

Rush St

3rd St

S Fairview St

Carrol St

Spring Garden Park



CREEK RD (CR 636) BETWEEN BRIDGEBORO RD (CR 613) & BOUNDARY CREEK NRA, DELRAN/MOORESTOWN TWP, MP 0.3-2.0

Configuration

Creek Road carries one travel lane plus variable shoulders in each direction between Bridgeboro Road and the Boundary Creek Natural Resource Area. There are several locations along the corridor with dedicated turning lanes, including the intersection with Bridgeboro Road, the Laurel Run Park driveway, and Creekdale Drive. Numerous additional driveways are controlled by side street stop signs. Highly visible crosswalks are located across Creek Road at the driveway to Laurel Run Park and the Boundary Creek Natural Resource Area opposite Tudor Lane.

Crashes

- 29 Crashes between 2014-2016; 2 injuries reported
- 13 crashes took place at the intersection of Creek Road and Bridgeboro Road.

AADT

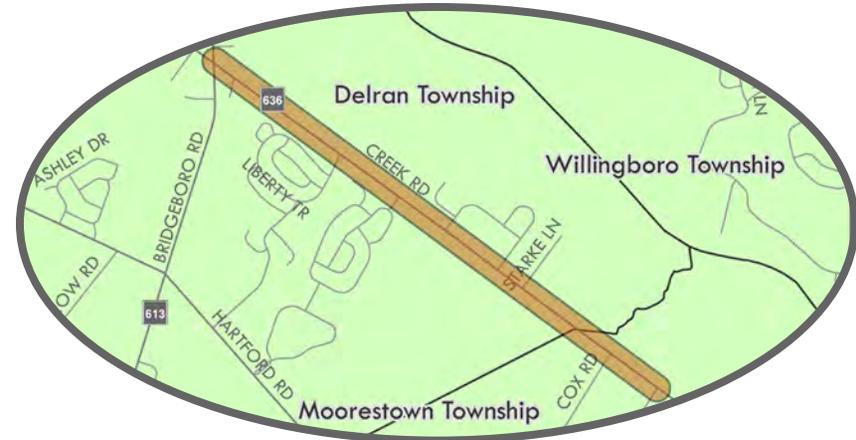
- Creek Road (CR 636) – 10,766 in 2012, 11,090 in 2013, and 11,491 in 2016

Considerations

Creek Road provide a primary connection between Riverside Township and I-295 exit 43. Residential developments and parkland line most the corridor. Additional residential developments are currently under construction along nearby Hartford Road and opposite Waters Edge Drive. Laurel Run Park, a relatively new recreational area, generates significant pedestrian volumes from nearby residential developments. A 12-ton weight restriction is in place along the corridor due to a small wooden bridge that spans Laurel Run at mile marker 0.5.

Issues

- Pedestrian facilities are missing along the corridor, including a continuous sidewalk, ADA curb ramps and crosswalks.
- Dedicated turn lanes for the new residential development opposite Waters Edge Drive are missing.



- Vehicular speeds are excessive along the corridor approaching the crosswalks for Laurel Run Park and the Boundary Creek Natural Resource Area.

Recommendations

- Improve the pedestrian network along the corridor by installing sidewalks, ADA curb ramps, and stripe crosswalks to connect the residential developments with Laurel Run Park and Boundary Creek Natural Resource Area.
- Investigate a future trail connection between Laurel Run Park and Boundary Creek Natural Resource Area to the north of Creek Road.
- Stripe a dedicated left-turn along Creek Road to provide access to the future residential development opposite Waters Edge Drive.
- Investigate connection to regional trail network across municipal boundaries via the existing pedestrian walkway on northbound U.S. 130 over Rancocas Creek.
- Investigate implementing traffic calming measures near the entrances to Laurel Run Park and Boundary Creek Natural Resource Area. Improvements may include constructing pedestrian refuge islands, installing Rectangular Rapid Flashing Beacons, and placing rumble strips before the pedestrian crossings to reduce vehicular speeds.



Traffic calming may be necessary near the Laurel Run Park driveway to reduce vehicular speeds and provide for adequate pedestrian crossings

Creek Rd (CR 636) Corridor, Delran/Moorestown Twp

Transportation Improvements



Investigate a future trail connection between Laurel Run Park and Boundary Creek Natural Resource Area to the north of Creek Road.



Improve the pedestrian network along the corridor by installing sidewalks, ADA curb ramps, and stripe crosswalks to connect the residential developments with Laurel Run Park and Boundary Creek Natural Resource Area



Investigate connection to regional trail network across municipal boundaries via the existing pedestrian walkway on US 130 northbound over Rancocas Creek



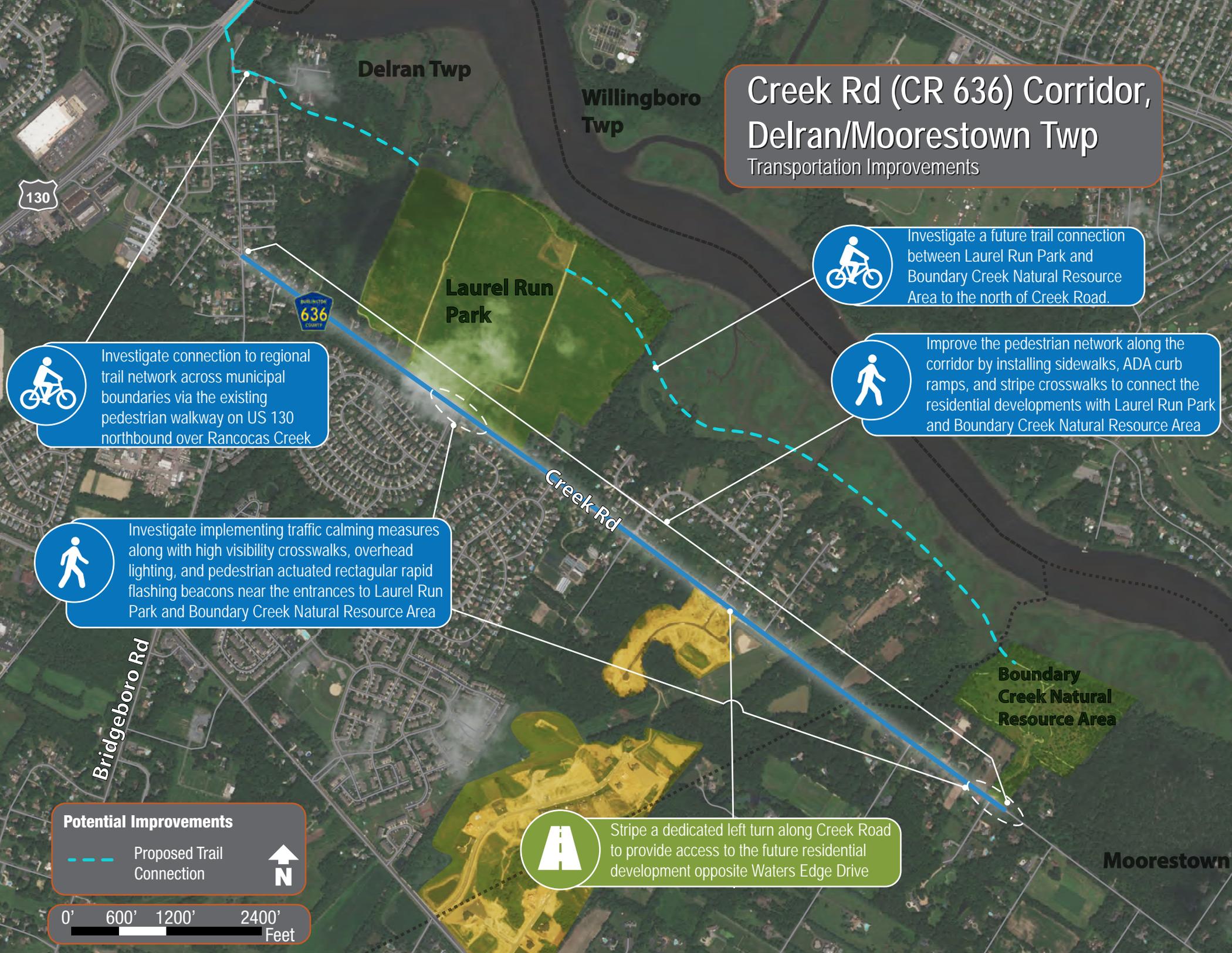
Investigate implementing traffic calming measures along with high visibility crosswalks, overhead lighting, and pedestrian actuated rectangular rapid flashing beacons near the entrances to Laurel Run Park and Boundary Creek Natural Resource Area



Stripe a dedicated left turn along Creek Road to provide access to the future residential development opposite Waters Edge Drive

Potential Improvements

- Proposed Trail Connection



U.S. 130 AT S CHESTER AVE/HAINES MILL RD, DELRAN TWP, MP 39.6

Configuration

South Chester Avenue and Haines Mill Road approach U.S. 130 from the north and south respectively approximately 650 feet apart, resulting in a dual-signal configuration. U.S. 130 carries three travel lanes plus shoulders in each direction. South Chester Avenue carries one travel lane plus shoulders in each direction and an additional right-turn lane at the intersection. Haines Mill Road carries one lane plus shoulders in each direction and an additional left-turn lane at the intersection. Right-turns from U.S. 130 to both roadways are made directly from U.S. 130 while both left-turns and U-turns must be made using the near-side jug-handles. Through traffic along South Chester Avenue and Haines Mill Road is required to use U.S. 130 between the jug-handles to continue north or south.



Crashes

- 173 Crashes between 2014-2016; 11 serious injuries and one fatality reported

AADT

- U.S. 130 – 47,929 in 2014, and 50,565 in 2011
- Haines Mill Road – 8,234 in 2014, and 7,586 in 2011
- South Chester Avenue – 4,820 in 2015, and 5,276 in 2011

Considerations

South Chester Avenue serves a light industrial park north of the intersection, as well as the Delran Middle School, the Delran Township municipal buildings, and numerous residential developments. A shopping center adjacent to the intersection has been vacant for several years, though recent proposals for redevelopment will likely result in additional traffic along Chester Avenue for northbound U.S. 130 traffic. Haines Mill Road serves a major shopping center just south of the intersection and dense residential developments to the south. NJ Transit route 409 bus stops are located just before each intersection in each direction. Swede Run flows through the intersection and creates a spatial obstacle to major configuration changes.

Issues

- There is a very high crash prevalence at this set of intersections, likely due partially to the signal spacing.
- The short portion of U.S. 130 between the intersections is congested due to the reliance of U.S. 130 for concurrent through movements along the cross streets.
- The existing jug-handles are operating over capacity, resulting in queue spillover to U.S. 130.
- The intersection is missing pedestrian facilities such as sidewalks, ADA Ramps, crosswalks, and pedestrian signal heads to connect the commercial uses and the bus stops to the nearby residential developments.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Evaluate and adjust signal timings to provide a lead green phase for both jug-handles to help keep the queue from spilling back onto U.S. 130.
- Evaluate the following three scenarios for long term realignment concepts at the intersection
 - Continue Chester Avenue across U.S. 130, curve to the north, and create a road parallel to U.S. 130 which intersects with Hartford

Road to the east.

- Extend Haines Mill Road across U.S. 130 and tie into South Chester Avenue in the vicinity of the Delran municipal building.
- Connect South Chester Avenue to U.S. 130 south of Haines Mill Road by using Underwood Boulevard, the existing stream crossing on Underwood Court, and constructing a new connector through some vacant property to U.S. 130.

As of 2018, the intersection has not been reconfigured.

Recommendations

- Investigate the feasibility of widening U.S. 130 over Swede Run to provide the necessary space for dedicated deceleration lanes for both near-side jug-handles. Coordinate the lanes with existing commercial driveways along southbound U.S. 130. Although this recommendation may require substantial capital investment, it may be useful to perform the upgrades at the end of the useful life of the bridge.
- Investigate the feasibility of connecting Haines Mill Road and South Chester Avenue at a single signalized intersection at the present day Haines Mill Road intersection. This configuration requires the

construction of a roundabout at the merge point between Chester Avenue and the proposed alignment, two additional bridges over Swede Run, and a far-side jug handle along U.S. 130. Right-in, right-out access will remain at the current Chester Avenue intersection. Right turning vehicles from Haines Mill Road to U.S. 130 will utilize the channelized right turn over Swede Run. Through-traffic along northbound Haines Mill Road will continue north along the proposed alignment to the roundabout. Southbound through and left-turning traffic will proceed south from the roundabout, along the new alignment, to the current Haines Mill intersection. Southbound right-turning traffic will continue south from the roundabout along Chester Avenue and turn right at the right-out unsignalized stop with U.S. 130. The existing bus stops will require relocation to the near side of the proposed intersection.

- Conduct an in-depth environmental review to investigate the impacts of building two bridges over Swede Run.
- Improve pedestrian facilities at the intersection by connecting the NJ Transit route 409 bus stops with nearby commercial, industrial, and residential developments. Install sidewalks, ADA curb ramps, and pedestrian signal heads and stripe missing crosswalks.



Future improvements at the intersection are constrained by the bridge over Swede Run

US 130 at S Chester Ave/ Haines Mill Rd, Delran Twp

Transportation Improvements



Investigate the feasibility of connecting Haines Mill Road and South Chester Avenue at a single signalized intersection at the present day Haines Mill Road intersection. This configuration requires the construction of a roundabout, two additional bridges over Swede Run, and a far-side jug handle



Investigate the feasibility of widening US 130 over Swede Run to provide the necessary space for dedicated deceleration lanes for both near-side jug handles. Coordinate the lanes with existing commercial driveways along southbound US 130

Potential Improvements

— Proposed Roadway Connections



0' 100' 200' 400' Feet



Haines Mill Rd

S Chester Ave

Swede Run

U.S. 130 AT TAYLORS LN, CINNAMINSON TOWNSHIP, MP 38.6

Configuration

This four-legged intersection comprises of a signal and two near-side jug-handles. U.S. 130 carries three travel lanes plus shoulders in each direction. Taylors Lane contains two travel lanes, one in each direction. Taylors Lane and New Albany Road are accessed from southbound U.S. 130 by a near-side jug-handle, which splits for right and left-turns. Drivers on northbound U.S. 130 must make a right-turn before the intersection for all turning movements. Two commercial establishments are located completely within the northbound jug-handle and have their own driveways which interface with the jug-handle movement. Taylors Lane splits into three lanes on the northbound approach, including a left-turn lane, a through lane, and a right-turn lane. The southbound approach splits into a right-through lane and a dedicated left-turn lane. There are no dedicated left-turn phases at the intersection.

Crashes

- 19 Crashes between 2014-2016; no injuries reported

AADT

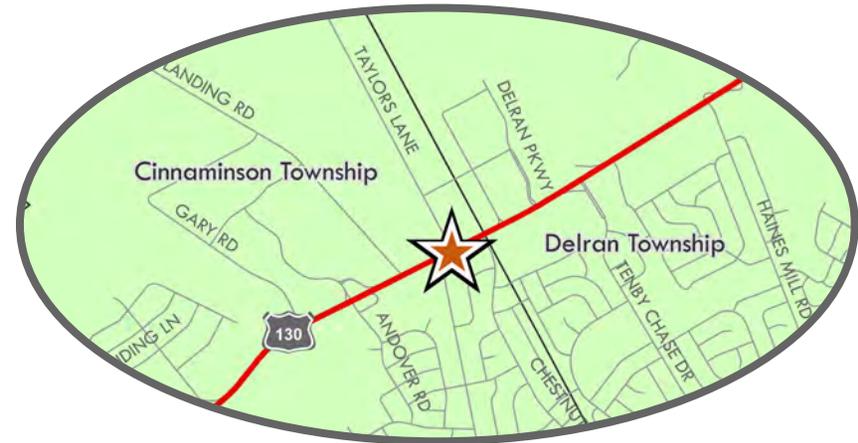
- U.S. 130 – 47,929 in 2014, and 50,565 in 2011
- Taylors Lane – 5,380 in 2014, and 5,435 in 2011

Considerations

Taylors Lane provides direct access to a major industrial center to the north of the intersection. Taylors Lane lacks connectivity to adjacent roadways, such as Union Landing and Mainline Drive, resulting in a significant reliance on this intersection by heavy trucks. A Wawa convenience store, as well as a new Marriott Hotel, are currently being constructed at the intersection. Two NJ Transit bus stops are located at the intersection.

Issues

- Pedestrian accommodation is lacking at the intersection. The new developments will generate localized foot traffic. There are two bus stops that are virtually unserved by pedestrian facilities.



- An over-abundance of commercial driveways pose a vehicular conflict at the intersection.
- The curb radius for the left-turn onto Taylors Lane from New Albany Road may pose a challenge to large trucks to navigate.

Previous Studies and Recommendations

An earlier 1997 DVRPC study on the U.S. 130 Corridor recommended providing a connection between Taylor's Lane at Surrey Lane to the north and through the commercial complex onto the intersection of U.S. 130 with Andover Road. The study cited the lack of capacity at this intersection, seeking ways to divert large trucks to the more appropriate Mainline Drive and Industrial Highway.

Recommendations

- Alter the curb geometry of the left-turn from New Albany Road to Taylors Lane to provide adequate space for commercial vehicles to make the turns.
- Manage access to commercial properties and reduce vehicular conflicts by closing the driveway from the Cinnaminson Primary & Walk-in Care Clinic located next to the intersection, in addition to one of the driveways serving the Proactive Rehabilitation Center.
- Consolidate the driveways of the two merchants located along northbound U.S. 130 just before the intersection and seek access easements where necessary.



- Fill in the pedestrian network at the signalized intersection, including sidewalks, crosswalks and ADA curb ramps and signage to connect the new developments with the existing bus stops.
- Create a connection between Taylors Lane and Union Landing Road by extending either Surrey Lane or Wallace Boulevard to provide an alternate route for truck movements.



Enhanced connections between Taylors Lane and Union Landing Road may reduce queuing and truck impacts at the intersection

US 130 at Taylors Ln, Cinnaminson Twp

Transportation Improvements

FUTURE WAWA

FUTURE HOTEL

Taylors Ln

Taylors Ln

New Albany Rd

130

 Install advance pedestrian crossing signs to warn drivers of upcoming crosswalk

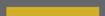
 Install ADA curb ramps, extend sidewalk network, and stripe crosswalks across US 130 and Taylors Ln to connect new developments across the intersection with existing bus stops

 Obtain access easement to consolidate parking lot driveways

 Manage access to commercial properties and reduce vehicular conflicts by consolidating driveways

 Alter curb geometry to provide adequate space for commercial vehicles to make left turn

Potential Improvements

-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp

 N

0' 45' 90' 180'
Feet

U.S. 130 AT UNION LANDING RD, CINNAMINSON TOWNSHIP, MP 38.4

Configuration

This three-legged intersection is controlled by a side street stop signs with only right-in and right-out access to Union Landing Road from southbound U.S. 130. U.S. 130 carries three travel lanes plus shoulders in each direction. There is a dedicated right-turn lane for southbound U.S. 130. Union Landing Road carries one undivided travel lane in each direction without marked shoulders. There is a dedicated right-turn lane controlled by a stop sign.

Crashes

- 43 Crashes between 2014-2016; 8 moderate injuries reported

AADT

- U.S. 130 – 51,380 in 2016
- Union Landing Rd - Data not available

Considerations

Union Landing Road serves as the major connector for residential developments on and between River Road to the west and U.S. 130. There are several large commercial uses on either side of Union Landing Road continuing all the way to River Road, including the major industrial and commercial complex with Walmart, Sam’s Club, and a Dollar Tree. This area has its main access on U.S. 130 south of the intersection, in addition to secondary access points on Union Landing Road. On the northbound side of U.S. 130, which has no direct access to Union Landing Road at the intersection, there are several commercial uses as well, including a truck equipment store, pharmacies, and a diner. A new Wawa gas station and convenience store and a new hotel are currently under construction, just to the north of the intersection. The hotel will have five floors, totaling over 100 units.

Issues

- Pedestrian accommodation is lacking at the intersection. The new developments, including a new truck stop, will generate localized foot traffic.
- Recommended connections between Union Landing Road and Taylors Lane have not been established, as per the 1997 DVRPC plan. This results in excess strain on the Taylors Lane intersection with U.S. 130.



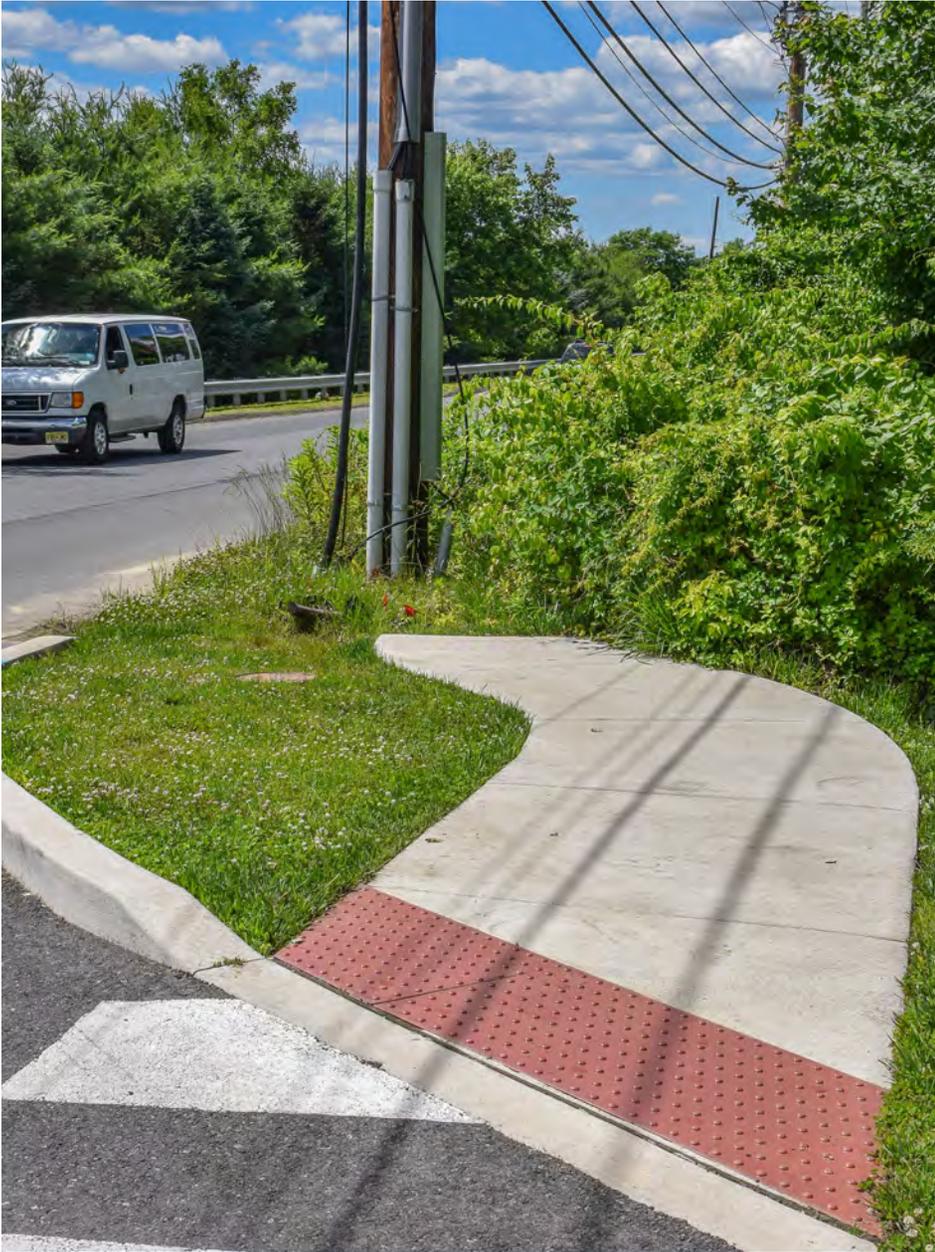
- There is no advance signage to warn drivers of the upcoming intersection.
- The curb radius for the right-turn onto Union Landing Road may pose a challenge to large trucks.

Previous Studies and Recommendations

An earlier 1997 DVRPC study on the U.S. 130 Corridor recommended providing a connection between Taylor’s Lane at Surrey Lane to the north and through the commercial complex onto the intersection of U.S. 130 with Andover Road. Due to the then-proposed residential, retail, and industrial developments along Union Landing Road, the plan recommended an upgrade to AASTHO standards of 12-foot travel lanes and an 8-foot shoulder in each direction.

Recommendations

- Adjust curb geometry to provide adequate space for commercial vehicles to make the right-turn from southbound U.S. 130 to Union Landing Road.
- Install advance right-turn signage indicating the distance to Union Landing Road to make drivers more aware of the intersection.
- Adjust sidewalk geometry at the northeast corner to match the adjustments made to the curbs and replace utility poles as needed.
- Stripe a crosswalk across Union Landing Road to connect the new truck stop to the adjacent shopping center. Install advance pedestrian crossing signs to warn drivers of the new crosswalk.



Sidewalk terminates abruptly just north of the intersection



Lack of pedestrian facilities to the south of the intersection

US 130 at Union Landing Rd, Cinnaminson Twp

Transportation Improvements



Install advance right turn signage indicating distance to Union Landing Rd



Alter curb geometry to provide adequate space for commercial vehicles to make right turn



Install advance pedestrian crossing signs to warn drivers of upcoming crosswalk



Adjust sidewalk geometry to match new curb radius and extend sidewalks into adjacent shopping center. Stripe a crosswalk across Union Landing Rd to connect new development with shopping center

Potential Improvements

-  Install Sidewalk
-  Stripe Crosswalk
-  Install ADA Curb Ramp



0' 35' 70' 140' Feet

Union Landing Rd & Taylors Ln Connection, Cinnaminson Twp

Transportation Improvements

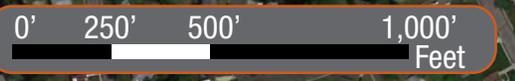


Explore connections between Taylors Ln and Union Landing Rd to alleviate excess truck volumes at the intersection of Taylors Ln & US 130



Potential Improvements

- Proposed Roadway Connections
- Future Hotel
- Future Wawa

A white arrow pointing upwards with the letter 'N' below it, indicating North is towards the top of the map.

U.S. 130 AT RIVERTON RD (CR 603), CINNAMINSON TWP, MP 37.1

Configuration

The intersection of U.S. 130 and Riverton Road is split into two signalized intersections approximately 225 feet apart. U.S. 130 carries three lanes plus shoulders in each direction. Riverton Road carries one lane plus shoulders in each direction of travel on both sides of U.S. 130. Eastbound Riverton Road approaching U.S. 130 additionally contains dedicated left-turn lanes to the signalized entrance of Cinnaminson Shopping Center and a center turn lane between Clover Square and Manor Road. Access to westbound Riverton Road from northbound U.S. 130 is provided by a modified jug-handle that leads to a separate signal. The jug-handle alignment is shared with right-turns from westbound Riverton Road to northbound U.S. 130 and with westbound Riverton Road through traffic. Eastbound Riverton Road is accessed from northbound U.S. 130 directly at the southern signal, while southbound U.S. 130 drivers must use the near-side jug-handle at the northern intersection to make a right onto westbound Riverton Road, to make a U-turn, or to make a left onto eastbound Riverton Road. Access to U.S. 130 from eastbound Riverton Road is made with dedicated left and right-turn lanes at the southern intersection.

Crashes

- 67 Crashes from 2014-2016; 7 injuries reported

AADT

- U.S. 130 – 51,380 in 2016
- Riverton Road (CR 603)– 6,323 in 2016, and 6,961 in 2013

Considerations

Riverton Road connects U.S. 130 with the Borough of Riverton, Cinnaminson High School, and the Cinnaminson municipal complex to the north and west with residential developments in Cinnaminson Township to the south and east. Commercial development is built up to the intersection and is even contained within the jug-handles. Numerous driveways provide access to commercial establishments from the both jug-handles. The former gas station located on the southwest corner of the intersection is now a vacant property. Two bus stops along the NJ Transit 409 bus route are located at the southern intersection. A



pedestrian bridge spans U.S. 130 at the southern intersection.

Issues

- There is a high crash prevalence at this set of intersections, likely due partially to the signal spacing.
- The proximity between the two intersections traps vehicles between them, resulting in major back-ups when the adjacent left-turns are given green lights.
- Access to commercial driveways from the jug-handles slows down operations at the intersection.
- Two-way traffic along westbound Riverton Road at the southern intersection is redundant and interferes with southbound U.S. 130 jug-handle operations.
- Except for the pedestrian bridge, there are no pedestrian facilities at the intersection. Because the bridge does not accommodate disabled individuals, the intersection is not ADA compliant.

Previous Studies and Recommendations

The 1997 DVRPC River Route Corridor Study made the following recommendations for this intersection:

- Change eastbound Riverton road to one-way approaching U.S. 130 between the southbound jug-handle and U.S. 130. Re-stripe the eastbound approach to contain a dedicated left-turn lane, a through lane, and a right-turn lane. Close the westbound access from the gas

station located inside the jug-handle and reroute motorists through the jug-handle driveway.

- Install a traffic signal at the Cinnaminson Shopping Center driveway to the north of the intersection.
- Reconstruct the intersection to allow a continuous through movement across U.S. 130 on Riverton Road. Reconfigure the northbound jug-handle to operate as a reverse jug-handle. Consolidate commercial driveways affected by the reconfiguration.

As of 2018, a traffic signal has been constructed at the Cinnaminson Shopping Center driveway. The intersection of U.S. 130 and Riverton Road has not been reconfigured.

Short Term Recommendations

- Change eastbound Riverton road to one-way approaching U.S. 130 between the southbound jug-handle and U.S. 130. Re-stripe the eastbound approach to contain a dedicated left-turn lane, a through lane, and a right-turn lane. Close the westbound access from the gas station located inside the jug-handle and reroute motorists through the jug-handle driveway.
- Provide ADA accessible pedestrian crossings and link them with

sidewalks, ADA curb ramps, and pedestrian signal heads. Connect the bus stops with the commercial, governmental, and residential developments nearby.

Long Term Recommendations

- Reconstruct the intersection to allow a continuous through movement across U.S. 130 on Riverton Road in both directions.
- Reconfigure the northbound jug-handle to operate as a far-side jug-handle.
- Remove the signal from the northern intersection and retain the southbound U.S. 130 near-side jug-handle function.
- Construct a dedicated deceleration lane for the southbound near-side jug handle.
- To provide a dedicated left-turn and through lane at the new far-side jug-handle, a portion of the automotive center parking lot will need to be utilized to acquire the necessary space. A portion of the land located immediately south of the repair shop may be used to replace the acquired land for the jug-handle.
- Consolidate commercial driveways affected by the reconfiguration.



The existing pedestrian bridge over U.S. 130 is obsolete by current ADA requirements

US 130 at Riverton Rd, Cinnaminson Twp

Transportation Improvements
Short-Term



Change eastbound Riverton road to one-way approaching US 130 between the southbound jug handle and US 130. Restripe the eastbound approach to contain a dedicated left turn lane, a through lane, and a right turn lane



Provide ADA accessible pedestrian crossings and link them with sidewalks, ADA curb ramps, and pedestrian signal heads. Connect the bus stops with the commercial, governmental, and residential developments nearby



Close the westbound access from the gas station located inside the jug handle and reroute motorists through the jug handle driveway

Potential Improvements



Stripe Crosswalk



Install Sidewalk



Install ADA Curb Ramp



0' 50' 100' 200'
Feet

US 130 at Riverton Rd, Cinnaminson Twp

Transportation Improvements

Long Term



Construct a dedicated deceleration lane for jug handle



To provide a dedicated left turn and through lane at the new far-side jug handle, a portion of the automotive center parking lot will need to be utilized to acquire the necessary space. A portion of the land located immediately south of the repair shop may be used to replace the acquired land for the jug handle



Remove the signal from the northern intersection and retain the southbound US 130 near-side jug handle function



Reconstruct the intersection to allow a continuous through movement across US 130 on Riverton Road in both directions



Reconfigure the northbound jug handle to operate as a far-side jug handle



Provide ADA accessible pedestrian crossings and link them with sidewalks, ADA curb ramps, and pedestrian signal heads. Connect the bus stops with the commercial, governmental, and residential developments nearby

Potential Improvements



Stripe Crosswalk



Install Sidewalk



Install ADA Curb Ramp

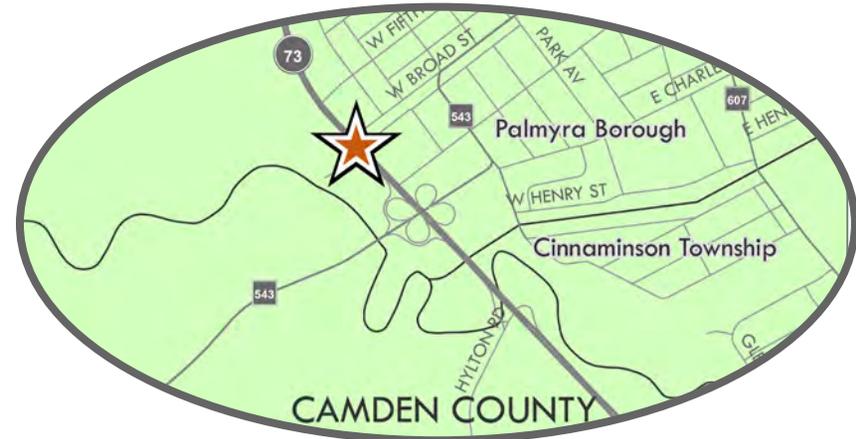


0' 50' 100' 200'
Feet

NJ 73 AT W BROAD ST (CR 543), PALMYRA BOROUGH, MP 33.4

Configuration

This modified three-legged intersection is controlled by a side street stop sign. NJ 73 carries two travel lanes separated by a median plus shoulders in each direction. Two Streets with the same name are located on either side of the railroad bridge. West Broad Street, located north of the railroad bridge, serves as the main thoroughfare through the Borough, while South Broad Street, located south of the railroad tracks, acts as the service road for the businesses to the east of the railroad tracks. Both roadways provide right-in right-out access to northbound NJ 73. West Broad Street carries one travel lane plus shoulders in each direction of travel while South Broad Street lacks a marked centerline and is approximately 15 feet wide from curb to curb.



Crashes

- 15 Crashes from 2014-2016; 1 moderate injury reported
- Primarily occurred along northbound NJ 73 approaching the intersection (before the railroad bridge)

AADT

- U.S. 130 – 51,380 in 2016
- Riverton Road (CR 603)– 6,323 in 2016, and 6,961 in 2013

Considerations

West Broad Street runs parallel to U.S. 130 as a continuation of River Road and serves as the major thoroughfare connecting multiple municipalities along the Delaware River. NJ 73 provides direct access to I-95 and Philadelphia across the Delaware River. The area surrounding the intersection is mostly industrial in nature with a few commercial establishments mixed in. One block north of the intersection, West Broad Street transforms into a Main Street and serves the central business district of Palmyra Borough. The southeast corner of the intersection contains a vacant property. The railroad tracks on which the NJ Transit River Line runs are located directly at the intersection.

Issues

- The view of the turning movement from northbound NJ 73 to West

- Broad Street is severely obscured by the railroad bridge immediately south of the intersection.
- There is no destination or advance signage for the West Broad Street intersection from northbound NJ 73.
- South Broad Street is inconspicuous and redundant. Access to this road from NJ 73 poses a conflict with vehicles turning onto nearby West Broad Street.
- The Spring Garden Street directional sign, located just south of the intersection of West Broad Street, should include “Palmyra” as the destination, not Riverton.

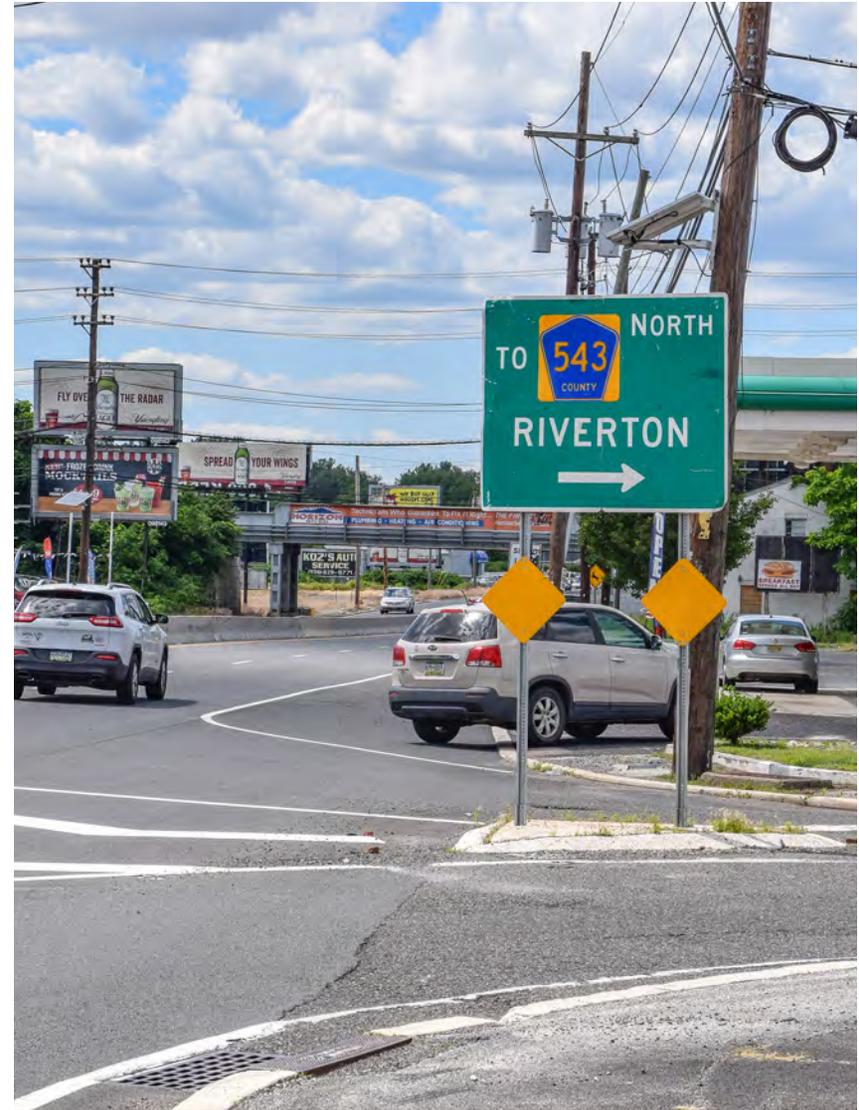
Recommendations

- Remove access to and from South Broad Street from NJ 73.
- Install destination signs along northbound NJ 73 that warn drivers of the upcoming blind intersection with West Broad Street. Include advance warning signs indicating the distance to the intersection.
- Re-sign the Spring Garden Street directional sign along northbound NJ 73 to include Palmyra as the destination.
- Increase the turning radius of the right-turn onto Spring Garden Street from NJ 73 to mitigate truck turning issues.
- Investigate feasibility of realigning West Broad Street by curving the street northward into the Roger Wilco property to improve sight distances for all turning movements at the intersection.

- Investigate warrants to signalize the intersection of West Broad Street and NJ 73 in the future, contingent on adjacent development to the west of the intersection.



Poor visibility of W Broad Street intersection



Lack of destination signage for Palmyra

NJ 73 at W Broad St, Palmyra Boro

Transportation Improvements



Investigate warrants to signalize the intersection of West Broad Street and NJ 73 in the future, contingent on adjacent development to the west of the intersection.



Install destination signs along northbound NJ 73 that warn drivers of the upcoming blind intersection with West Broad Street. Include advance warning signs indicating the distance to the intersection



Re-sign the Spring Garden Street directional sign along northbound NJ 73 to include Palmyra as the destination



Investigate feasibility of realigning West Broad Street by curving the street northward into the Roger Wilco property to improve sight distances for all turning movements at the intersection



Remove access to and from the eastern alignment of South Broad Street from NJ 73



Increase turn radius of Spring Garden Street to mitigate truck turning issues

Potential Improvements

- Realign Roadway
- Remove Access



0' 50' 100' 200'
Feet

GENERAL RECOMMENDATIONS FOR RIVERTON, BEVERLY & FIELDSBORO

Riverton

Issues

Stakeholders from Riverton Borough identified issues with the following four intersections within the Borough, citing pedestrian safety concerns:

- Broad Street at Elm Avenue
- Broad Street at Cedar Street
- Broad Street at Thomas Avenue
- 7th Street at Main Street

Speeding was also documented along Main Street.

Beverly

Issues

Stakeholders from the city of Beverly identified the following transportation related issues within the City:

- The intersections of Broad Street and Warren Street, in addition to the Five Points intersection (Warren Street, Cooper Street, and Bridge Street) have poor visibility for both drivers and pedestrians
- Speeding was documented along Broad Street, Cooper Street, and Manor Road
- Truck traffic is a concern along Manor Road

Fieldsboro

Issues

Stakeholders from the Borough of Fieldsboro identified the following transportation related issues within the Borough:

- The intersection of Washington Street and 4th Street has poor visibility and excessive speeding
- Union Street lacks sidewalks

Recommendations

Throughout the study area, pedestrian daylighting is recommended for intersections where pedestrian crossings are frequent or are difficult to execute. Intersection daylighting refers to physical elements that can be used to increase driver awareness of pedestrians at an intersection. Intersection daylighting techniques include the installation of curb bulb-outs, speed tables, additional signage, and pedestrian signal lead time, among others.

Each intersection listed above should be investigated individually to identify pedestrian and driver behaviors. The intersection daylighting techniques best suited to address the observed issues should then be designed and implemented.

Speeding can be mitigated by implementing traffic calming measures, such as narrowing the street, reducing the speed limit, installing a median, installing speed tables, and increasing the use of stop signs. Each street is context specific and must be investigated individually to fully document the root cause of the speeding.

To eliminate truck traffic on roadways that are not designed for such use, weight restrictions should be imposed and enforced. In addition, flexible bollards can be installed on top of roadway centerlines in highly visible locations to deter trucks from turning onto the weight restricted roadways.

Sidewalk installation should be prioritized by pedestrian demand. Schools, parks, municipal buildings, and commercial establishments all generate pedestrian activity. Each town should conduct a pedestrian safety audit to identify key gaps in the pedestrian network and to document pedestrian demand.

Enacting a Complete Streets Policy or Resolution is a significant first step to building a transportation network for all users, including pedestrians. All municipalities in the study area should adopt the Complete Street approach, and work to implement the policy into their transportation projects.



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Edward Fox, Manager, Regional Planning

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APPENDIX: REVIEW OF PREVIOUS STUDIES & EXISTING CONDITIONS

Review of Previous Studies & Overall Existing Conditions

For The

Transportation and Circulation Planning Study
For the River Route Corridor
(Formerly Route 130/Delaware River Corridor)
Burlington County, New Jersey

Prepared For:



Burlington County Bridge Commission

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November 2017

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1. RIVER CORRIDOR STRATEGIC REVITALIZATION PLAN, PART 1: CONSTRAINTS AND OPPORTUNITIES (1998)

A. Document Overview

In 1995, the Burlington County Board of Freeholders initiated the process to revitalize the Route 130/Delaware River Corridor, which consists of twelve communities in the northwestern region of the county that cover 59 square miles, representing (at the time) 7.2% of Burlington County's land mass.

The document is organized into two parts: analysis of constraints and opportunities for the corridor and recommendations setting forth policies, actions and strategies based on the vision for the corridor and the methods needed to implement the strategic plan.

Constraints:

There are two main constraints to the corridor. The corridor doesn't have direct access to I-295, and vehicles travelling along US 130 have to travel between two and four miles to reach I-295. The land development patterns are set for most of the corridor, which limits infill development/redevelopment.

Opportunities:

Burlington County is located in the center of the Boston-New York-Philadelphia-Washington corridor. Within New Jersey, Burlington County is located in a region that is projected to continue growing at a moderate rate, with Burlington and Florence Townships expected to grow at a rapid rate due to proximity to the I-295 growth corridor. The corridor is served by a regional highway network, with US 130 providing direct north-south travel through the corridor. NJ 73 and County Routes 541 and 656 provide cross corridor linkages to I-295. The county's three Delaware River bridge crossings provide direct connections to Pennsylvania, and the proposed NJ Turnpike interchange at Route 130 will enhance east-west interstate travel via the Pennsylvania Turnpike and north-south travel via the New Jersey Turnpike. The active freight rail line is a major asset for attracting and serving industrial uses, and combined with the roadway network, the corridor can support deep water port facilities that broaden the types of industrial uses.

The Delaware River and its tributaries are major assets to the corridor offering unique opportunities for a balance of housing, recreational and commercial development and environmental preservation. The corridor offers a variety of community settings which makes each municipality distinctive and contributes toward the small town character of the municipalities.

B. Document Recommendations

Several of the sections in this document were reiterated in the US 130 Corridor Study (Document 3).

Identified Problems:

US 130 and Highbridge Road: Milepost 57.3

- » Primary access from US 130 to correctional facility
- » Increase in turning movements during shift changes and visitation causes congestion and potential safety problems
- » Vehicles have difficulty making right turn from northbound US 130 onto Highbridge Road

- » Crest of hill on US 130 south of Highbridge Road reduces sight distance for vehicles exiting from Highbridge Road

US 130 and Farnsworth Avenue: Milepost 55.4

- » Northbound US 130 truck traffic has trouble making right turns at the intersection due to geometry
- » Heavy truck traffic on northbound US 130

US 130 from Burlington Street (CR 662) to Hedding Kinkora Road (CR 678): Milepost 53.5-52.6

- » Southbound sight distance on US 130 is limited due to horizontal and vertical US 130 curvature
- » Tight turning radius for southbound vehicles on US 130 turning right onto Burlington Street
- » Restricted sight distance for vehicles making left from Hedding Kinkora Road onto southbound US 130
- » Development of property adjacent to northbound side of US 130 has potential for several hundred homes
- » Commercial development possibility in parcel between US 130 southbound and Burlington Street
- » Proposed Crystal Lake Development located east of US 130 between Hedding Kinkora Road and Burlington Street is projected to add traffic from approximately 700 homes on roadway network

US 130 and Hornberger Avenue: Milepost 51.6

- » Sight distance issues due to grade
- » Northbound left turn lane will be insufficient if Roebling Steel Mill is redeveloped
- » Southbound right turn lane is 8 feet wide and creates tight turning radius for trucks
- » Intersection is adjacent to Crafts Creek which restricts improvement possibilities
- » Access to potential light rail would increase traffic on Hornberger Avenue

US 130 and Florence Columbus Road (CR 656): Milepost 50.3

- » High truck traffic because Florence Columbus Road serves as connection between US 130 and I-295
- » Westbound congestion due to right turning vehicles unable to bypass trucks at intersection
- » Northbound US 130 trucks turning right jump curb on southeast corner due to tight radius
- » Truck traffic expected to increase with Food Distribution Center opening

US 130 and Florence Bustleton Road/Cedar Lane (CR 659): Milepost 50.1

- » Heavy turning movements to/from Cedar Lane – Cedar Lane provides access to NJ Turnpike extension, light industrial/warehousing facilities
- » Northbound US 130 vehicles sometimes have trouble making left turns due to queueing on eastbound Cedar Lane
- » Tire tracks indicate vehicles made a near side jughandle on southeast corner of intersection
- » Southbound US 130 vehicles have trouble making right turns due to geometry

US 130 and Columbus Road (CR 543) and Jones Road: Milepost 47.1

- » Complex intersection
- » Absence of left turn lanes on US 130 reduces intersection capacity
- » Left turn conflict exists on Columbus Road as vehicles maneuver for position while waiting for gaps
- » Northbound US 130 traffic encroaches median while turning left onto Jones Road

US 130 and Jacksonville Road (CR 670)/Federal Street: Milepost 46.4

- » Congestion caused by the following problems:
 - » Signals for northbound US 130 and southbound US 130 are 335 feet apart
 - » US 130 requires significant portion of signal time
 - » Heavy truck traffic at intersections

- » Jacksonville Road is designated truck route designed to bypass CR 541 to travel to Burlington City and Burlington Township
- » Primary flow of traffic on westbound Jacksonville Road turns left onto US 130 southbound – through lane is underutilized
- » Signal timing provides equal time to eastbound and westbound traffic despite uneven traffic flow

US 130 from Creek Road to Van Sciver Parkway: Milepost 41.6-44.1

- » Too many curb cuts interfere with overall traffic flow/patterns
- » Traffic flow impeded due to stop-and-go traffic conditions caused by signalized intersections

US 130 and Levitt Parkway/Woodlane Road

- » S-curve alignment of Woodlane Road causes vehicles travelling westbound crossing US 130 have to shift right and merge from two lanes to one
- » If four or more vehicles exit the northbound jughandle via the westbound turn lane, the median opening is blocked and prevents jughandle traffic from accessing westbound Levitt Parkway lanes

US 130 and Cooper Street/Charleston Road (CR 630): Milepost 43.0

- » Access to/from local businesses conflicts with other traffic
- » Poor internal circulation within the jughandle restricts all movements
- » Queues on Charleston Road create safety issues for left turning traffic from Sidney Lane and adjacent gas station

US 130 and Pennypacker Drive/Delanco Road (CR 624): Milepost 42.7

- » Lack of connection between Delanco Road and Pennypacker Drive
- » Inability to serve all turning movements at two intersections

US 130 and Creek Road (CR 625)/Bridgeboro Road: Milepost 41.6

- » Queueing on northbound jughandle spills onto US 130 after 12 vehicles are stacked
- » Widening/extending existing northbound jughandle is constrained by proximity of adjacent lake
- » Northbound jughandle provided the least amount of green time from signal timing

US 130: From Tenby Chase Drive to Creek Road (CR 636): Milepost 38.9-40.6

- » Excessive use of curb cuts impedes through traffic and presents safety concern
- » Stop-and-go traffic patterns caused by the signalized intersection

US 130 and Fairview Street (CR 605)/Hartford Road Connector: Milepost 40.1

- » Hartford Road intersects US 130 approximately 1600 feet south of Fairview Street,
- » Vehicles traveling westbound on Hartford Road turn right onto US 130 and go north to Fairview Street to cross the highway or make a U-turn

US 130 and Chester Avenue (CR 604)/Haines Mil Road: Milepost 39.5

- » Off-set intersections cause congestion between intersections
- » Hinders emergency vehicle response for calls on east side of township
- » Bad signal timing leads to queueing and safety concerns

US 130: From Andover Road to Taylor's Lane: Milepost 38.1-38.4

- » US 130 and Taylor's Lane intersection experiences heavy congestion
- » Lack of connection between Taylor's Lane and Union Landing Road limits access to industrial area west of US 130

US 130 and Moorestown Riverton Road (CR 603): Milepost 37.1

- » Congestion/safety issues due to disjointed nature of the intersection
- » The proximity of the two signals causes queueing
- » Driveway access to the jughandles causes conflicts for vehicles proceeding through the intersections
- » Conflicting traffic patterns

US 130 and Cinnaminson Avenue (CR 607): Milepost 36.0

- » Significant congestion throughout the day, especially during peak hours
- » Number of roads, high traffic volumes at intersection eliminate benefits of signal retiming, lane designations
- » Proximity of retail options generates significant traffic through the intersection

Potential Improvements:

US 130 and Highbridge Road: Milepost 57.3

- » Encourage alternative routes between US 130 and correctional facility
- » Cutback southeast corner of intersection to increase turning radius for northbound US 130 right turning vehicles
- » Investigate installing stop signs/traffic calming along Willow Street and Charles Bossert Drive to discourage high speed shortcuts through area
- » Construct internal roadways in area to promote new development
- » Signalize entrance to new development near intersection and close median
- » Provide connection from US 130 to Amboy Road/US 206

US 130 and Farnsworth Avenue: Milepost 55.4

- » Conduct circulation study to identify movements between I-295 and Rising Sun Road/US 206/NJ Turnpike
- » Determine if dedicated turn signal phasing is necessary
- » Construct northbound right turn lane if necessary

US 130 from Burlington Street (CR 662) to Hedding Kinkora Road (CR 678): Milepost 53.5-52.6

- » Realign Burlington Street into US 130 at 90 degree angle and shift intersection north towards crest of hill
- » Install traffic signal at realigned Burlington Street and provide treatment for left turn movements from US 130
- » Install traffic signal at Crystal Lake development entrance
- » Close off median break at Burlington Street and Hedding Kinkora Road intersection
- » Monitor operating conditions to determine impacts of developments

US 130 and Hornberger Avenue: Milepost 51.6

- » Reconfigure US 130 and Hornberger Avenue to include longer existing left turn lane or elimination of left turn lane and install jughandle
- » Relocate intersection 200 feet south and providing reverse jughandle for northbound left turns
- » Widen and straighten Hornberger Avenue

US 130 and Florence Columbus Road (CR 656): Milepost 50.3

- » Construct reverse jughandle around cemetery for northbound US 130 left turns
- » Eliminate northbound center turn lane

- » Upgrade shoulder on US 130 to provide northbound right turn lane and additional northbound lane on far side of intersection to access reverse jughandle
- » Widen Florence Columbus Road approaches to provide left turn lane and shared through/right turn lane

US 130 and Florence Bustleton Road/Cedar Lane (CR 659): Milepost 50.1

- » Construct near side jughandles for both northbound and southbound US 130 left and right turns
- » Eliminate center left turn lanes
- » Widen Florence Bustleton Road to provide left turn lane and shared through/right turn lane on westbound approach
- » Widen US 130 to provide acceleration/deceleration lanes for new interchange ramps

US 130 and Columbus Road (CR 543) and Jones Road: Milepost 47.1

- » Cut back center median on US 130 to facilitate northbound left turns onto Jones Road
- » Investigate potential for split phase signal timing
- » Resurface Jones Road from US 130 to River Road
- » Eliminate fifth leg of intersection and convert Jones Road into cul-de-sac
 - » Requires new connection between US 130 and River Road
- » Change operation of Jones Road to one way towards intersection
- » Relocate Jones Road 600 feet north
 - » Requires new roadway through open field behind auto dealer
 - » New intersection would be signalized with center northbound left turn lane
- » Prohibit northbound left turns onto Jones Road or Columbus Road

US 130 and Jacksonville Road (CR 670)/Federal Street: Milepost 46.4

- » Convert Federal Street into one-way carrying traffic away from intersection
- » Convert westbound Jacksonville Road through lane into shared left/through lane
- » Optimize signal timings

Campus Drive from US 130 to Sunset Road

- » Relocate existing signal and jughandles on US 130 just north of Campus Drive to Campus Drive

US 130 from Creek Road to Van Sciver Parkway: Milepost 41.6-44.1

- » Improve geometry, including better jughandles and additional lanes
- » Rear access road parallel to US 130 behind commercial properties through Edgewater Park

US 130 and Levitt Parkway/Woodlane Road

- » Smooth the curve on Woodlane Road by cutting into adjacent shopping center parking lot
- » Relocate northbound jughandle so that it intersects Levitt Parkway further to the east
- » Close existing median on the eastbound Levitt Parkway approach and creating a new one across from the relocated jughandle

US 130 and Cooper Street/Charleston Road (CR 630): Milepost 43.0

- » Reconfigure jughandles with the possibility of creating reverse jughandles for both directions

US 130 and Pennypacker Drive/Delanco Road (CR 624): Milepost 42.7

- » Extend Pennypacker Drive across US 130 to connect with Delanco Road

US 130 and Creek Road (CR 625)/Bridgeboro Road: Milepost 41.6

- » Relocate intersection 900 feet north
 - » Conduct study to identify options to redirect traffic out of new intersection

US 130: From Tenby Chase Drive to Creek Road (CR 636): Milepost 38.9-40.6

- » Extend Fairview Street or Chester Avenue/Haines Mill Road across US 130

US 130 and Chester Avenue (CR 604)/Haines Mill Road: Milepost 39.5

- » Optimize signal timings
- » Extend Chester Avenue or Haines Mill Road across US 130
- » Potential long term improvements include better signal timing and extending either Chester Avenue or Haines Mill Road across US 130 to allow for better overall access in crossing US 130

US 130 and Moorestown Riverton Road (CR 603): Milepost 37.1

- » Reconstruct intersection to allow for continuous movement across US 130 on Moorestown Riverton Road

C. Document Review Relevant to River Route Corridor Project

The following list summarizes the *Potential Improvements* included in Section B relevant to the River Route Corridor that have been implemented in the field based on review of available aerial photography.

US 130 and Highbridge Road: Milepost 57.3

- » Northbound US 130 was restriped as of September 2013 to increase the turning radii for right turns in and out of Highbridge Road
- » The new development driveway is right-in/right-out along northbound US 130

US 130 and Farnsworth Avenue: Milepost 55.4

- » Southbound US 130 has a dedicated left turn phase

US 130 from Burlington Street (CR 662) to Hedding Kinkora Road (CR 678): Milepost 53.5-52.6

- » Burlington Street was realigned between 2013 and 2016 into US 130 at 90 degree angle and the intersection was shifted north to where the channelized turn was
- » A traffic signal was installed at realigned Burlington Street with treatment for left turn movements from US 130
- » The Crystal Lake development entrance is a right-in/right-out driveway

US 130 and Hornberger Avenue: Milepost 51.6

- » The existing northbound left turn lane was lengthened as of June 2004
- » The southbound right turn lane was widened and channelized as of April 2016

US 130 and Florence Columbus Road (CR 656): Milepost 50.3

- » A reverse jughandle was constructed around the cemetery for northbound US 130 left turns as of December 2002
- » The northbound US 130 center turn lane was eliminated as of December 2002
- » The shoulder on US 130 was upgraded as of December 2002 to provide northbound right turn lane and additional northbound lane on far side of intersection to access reverse jughandle

- » As of December 2002, Florence Columbus Road approaches were widened to provide left turn lane and shared through/right turn lane

US 130 and Florence Bustleton Road/Cedar Lane (CR 659): Milepost 50.1

- » Nearside jughandles for both northbound and southbound US 130 left and right turns were completed as of December 2002
- » Center turn lanes were eliminated as of December 2002
- » The westbound Florence Bustleton Road approach was widened to provide left turn lane and shared through/right turn lane as of December 2002
- » US 130 was widened to provide acceleration/deceleration lanes for new interchange ramps as of December 2002

US 130: From Tenby Chase Drive to Creek Road (CR 636): Milepost 38.9-40.6

- » Fairview Street was extended from US 130 to Hartford Road as of June 2004

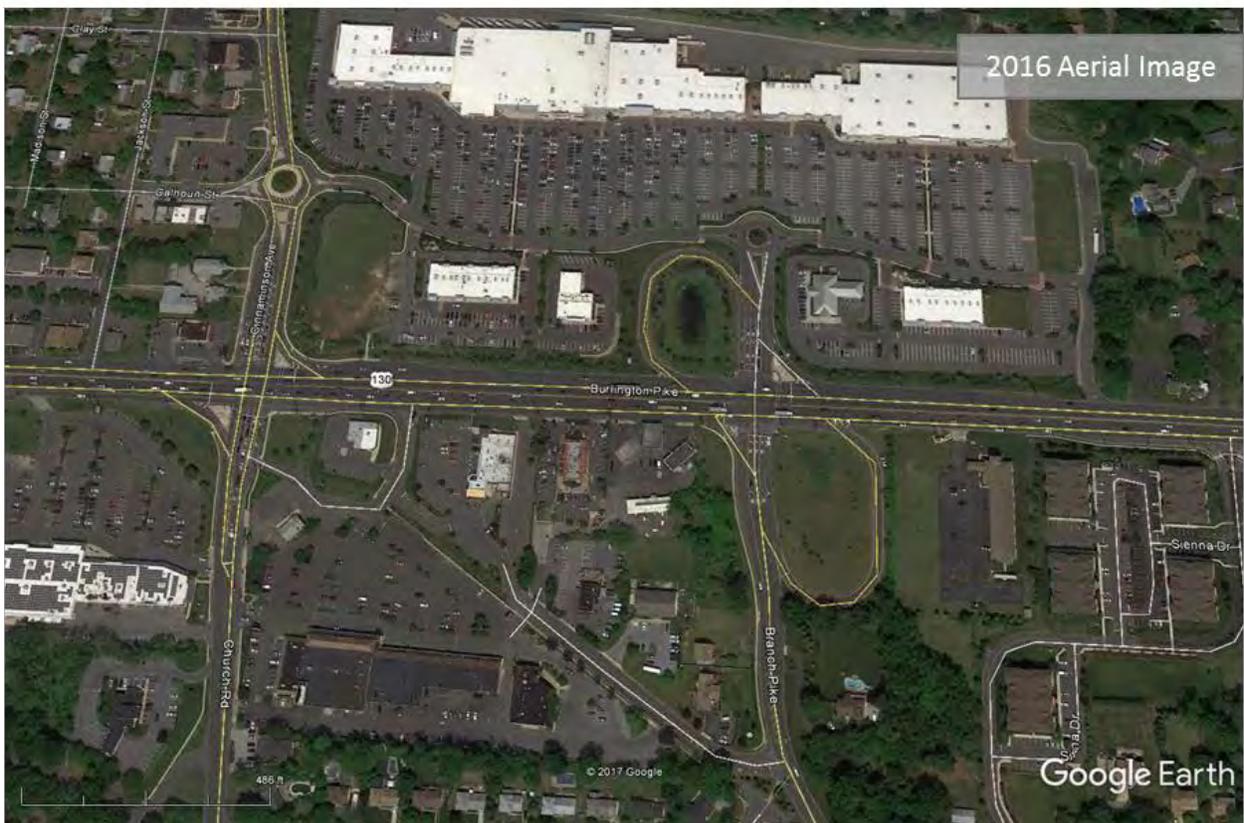
US 130 and Moorestown Riverton Road (CR 603): Milepost 37.1

- » As of December 2002, vehicles were able to cross US 130

US 130 and Cinnaminson Avenue (CR 607): Milepost 36.0

- » The intersection of US 130 and Cinnaminson Avenue (CR 607) was included as an *Identified Problem*; however, there were no specific improvements identified as *Potential Improvements*. Based on review of available aerial photography, as of August 2008, the eastbound Cinnaminson Avenue approach had been widened to include one left-turn lane, two through lanes, and one right turn lane, and the eastbound Cinnaminson Avenue approach was widened to include two left turn lanes, one through lane, and one shared through/right lane. The changes can be seen below in before-and-after aerial images (Figure 1).

Figure 1: US 130 at Cinnaminson Avenue Before/After Aerial Photography



2. RIVER CORRIDOR STRATEGIC REVITALIZATION PLAN, PART 2: RECOMMENDATIONS (1998)

A. Document Overview

This document is intended to serve as a follow-up to the *Route 130/Delaware River Corridor Strategic Revitalization Plan, Part 1: Constraints and Opportunities (1998)*. The document provides various recommendations for the target areas covered in the *Constraints and Opportunities* analysis, stating that the recommendations must be implemented as a complete plan to significantly improve the entire Corridor.

B. Document Recommendations

The document provides specific recommendations for economic development, transportation and circulation, housing, utilities and infrastructure, open space/recreation/environment and community services. Based on an analysis of this document, the recommendations tend to focus on economic development and redevelopment of existing infrastructure and the development of new houses and businesses along the Corridor (as opposed to overhauling the existing roadway network).

Potential Improvements:

Roebing Village and Steel Mill – Florence Township

- » Construct jughandles at US 130 and Hornberger Avenue
- » Straighten and widen Hornberger Avenue from US 130 into the Village to create a landscaped boulevard

Food Distribution Center Site and Route 130 Area – Florence and Burlington Townships

- » Ensure future development along US 130 complements the industrial development on the Food Center Site (C. William Haines Industrial Center) through adoption of zoning ordinances and design standards
- » Consolidate smaller sites to encourage the development of larger scale commercial and industrial developments to avoid the clutter and inefficiencies of numerous driveways, signs and small individual facilities along the highways
- » Provide an ample supply of land zoned for commercial and industrial uses along US 130
- » Remove and/or redevelop dilapidated and obsolescent industrial and commercial building structures along US 130. Remove incompatible uses (i.e. residential, in the area planned for construction/industrial development)
- » Provide an adequate transportation network to accommodate the increase of commuters/commercial traffic (i.e. trucking) into the area
- » Create a new commercial center and facilities on US 130 to provide support goods and services for the employment center and residential population growing in surrounding areas
- » Avoid the degradation of the highway's aesthetics due to anticipated business growth
- » Prepare/implement design standards for landscaping, buffering, signage and lighting
- » Avoid excessive curb cuts serving new businesses anticipated to locate along US 130
- » Consider developing traffic management program for Burlington and Florence Townships

US 130 Highway Commercial Area and Route 413 Link to Burlington-Bristol Bridge – Burlington City and Burlington Township

- » Reverse the decline of businesses located along US 130 and Route 413

- » Eliminate incompatible land uses along US 130 and revise the zoning ordinances to prohibit incompatible uses
- » Remove and/or redevelop dilapidated and obsolescent commercial buildings located along the highways
- » Reduce the number of curb cuts on US 130
- » Enhance the visual quality of US 130 and Route 413, including buffering, signage and lighting
- » Improve the circulation patterns and functionality of the road system along the highways
- » Restore/revitalize the area as a highway commercial, retail and services destination

US 130 Highway Frontage – Edgewater Park, Delanco and Willingboro

- » Reduce the number of curb cuts along US 130; encourage consolidation of smaller lots for larger planned developments and for common driveways
- » Enhance the visual quality of US 130, including buffering, signage and lighting
- » Improve circulation patterns and functionality of US 130 and its crossroads
- » Remove the stigmatism that the area is economically depressed
- » Reinvent this section’s economic purpose by exploring ways to diversify the mix of uses in the section
- » Rehabilitate deteriorated multifamily housing complexes located along or near US 130 by exploring innovative planning and financial techniques and incentives
- » Revitalize the concentration of commercial uses within the vicinity of US 130, Cooper Street and Charleston Road to lengthen the Linear Commercial/Services/Industrial/Residential Redevelopment Node
- » Create a Town Center on the former Willingboro Plaza site to diversify and strengthen the Node

US 130 Frontage – Delran and Cinnaminson

- » Reduce the number of curb cuts on US 130
- » Improve circulation patterns and functionality of US 130 intersections and crossroads
- » Restore and revitalize the highway frontage as a commercial, retail and services destination
- » Remove and/or redevelop dilapidated and obsolescent commercial buildings along US 130
- » Eliminate incompatible businesses and uses along US 130 (i.e. vehicle and equipment storage yards, single family dwelling on the highway, etc.)
- » Enhance the visual quality of US 130, including buffering, signage and lighting
- » Improve circulation patterns and functionality of Route 130, including intersections and crossroads by engaging in advanced planning with the county and state for this segment of the highway and adjoining roads for an improved circulation system
- » Strengthen this segment of US 130 through the introduction of alternate uses compatible with commercial uses by revisiting and revising local zoning ordinances accordingly to implement this recommendation

C. Document Review Relevant to River Route Corridor Project

The implementation of recommendations included in this report relevant to the River Route Corridor are difficult to determine from review of available aerial photography. Specific intersection improvements within the areas of improvement targeted in this document are discussed in the *River Corridor Strategic Revitalization Plan, Part 1*.

3. US 130 CORRIDOR STUDY (1997)

A. Document Overview

The study provides a transportation improvement plan for the US 130 Corridor in Burlington County, and identifies 44 total project locations and potential improvement scenarios at high priority locations within the specific US 130 Corridor. The study was compiled by the Delaware Valley Regional Planning Commission (DVRPC).

Traffic Volumes:

AADT was determined at several sites along US 130 in 1995:

- » Cinnaminson Road: 59,900
- » South of Creek Road: 48,200
- » Burlington City: 36,900
- » North of Food Distribution Center: 21,200
- » North of US 205: 29,400

After the completion of I-295 in Mercer County, the AADT was recorded as 23,700.

Transit:

At the time of the study, NJ Transit was evaluating the potential for a light rail transit system along the Bordentown Secondary Line, a 53 mile system running through Trenton, Burlington County, Camden County, Gloucester County, and Glassboro. The first phase of the rail system was planned between Camden and Trenton.

The light rail system would connect passengers with other transit systems (Patco, NJ Transit, etc.), linking residential areas to existing employment centers with the potential to spur capital investment that would bring job opportunities into the Corridor. The light rail system was proposed to have about 19 stops, with 12 potential stops located within the Corridor. Six of these stops were to be developed as park-and-ride sites, while the remaining six locations would be more local in nature with limited parking to encourage walk-up patrons. Headways of 15 minutes were proposed during AM, mid-day and PM peak periods and 30 minutes during off-peak periods, and was expected to run from about 6 AM to 11 PM. The travel time between Camden and Trenton was expected to be about an hour.

There are three bus routes that run along the corridor: Route #409 (Trenton-Willingboro-Philadelphia), #413 (Burlington-Mt. Holly-Philadelphia) and #419 (Burlington-Philadelphia). Route 409 runs along US 130 with variations into Willingboro, Burlington City and Roebing, and offers 30 minute headways from the Willingboro Plaza park and ride lot to Trenton and 15 minute headways from this location to Philadelphia. During the AM Peak, travel times from Willingboro Plaza to Center City Philadelphia is approximately 45 minutes, and travel time from Willingboro Plaza to Trenton is approximately 70 minutes. Route 413 services mainly CR 541 between Burlington City and Mount Holly, with connections to Cherry Hill and Camden. Route 419 services the section of the corridor between Burlington City and Palmyra via Warren Street, Burlington Street and Broad Street

B. Document Recommendations

Identified Problems:

US 130 and Highbridge Road: Milepost 57.3

- » Queueing/congestion due to its location as the primary access to the correctional facility
- » Reduced sight distance south of Highbridge Road on US 130 for vehicle exiting from Highbridge Road
- » Safety issue caused by conflicting traffic from Highbridge Road and Hogback Road because of insufficient traffic control measures

US 130 and Farnsworth Avenue (CR 545): Milepost 55.4

- » Difficult turning radius for trucks making right turns, and the encroaching on curbs and sidewalks while making turns by trucks
- » The I-295 opening caused additional truck traffic on northbound US 130 turning right
- » Possible queueing for left turns on northbound US 130 that could lead to congestion

US 130 from Burlington Street (CR 662) to Hedding Kinkora Road (CR 678): Milepost 53.5-52.6

- » Limited sight distance on southbound US 130 approach to Burlington Street and Hedding Kinkora Road
- » Tight turning radius for southbound vehicles on US 130 turning right onto Burlington Street

US 130 and Hornberger Avenue: Milepost 51.6

- » Limited sight distance for vehicles on US 130 due to grade
- » Small southbound right turn only lane and tight turning radius for trucks
- » Access to light rail service adds more traffic onto Hornberger Avenue

US 130 and Florence Columbus Road (CR 656): Milepost 50.3

- » Heavy truck usage and congestion on westbound approach
- » The opening of a Food Distribution Center will increase truck traffic between NJ Turnpike and US 130

US 130 and Florence Bustleton Road/Cedar Lane (CR659): Milepost 50.1

- » Heavy turning movements to/from Cedar Lane
- » Trucks have difficulty turning left from northbound US 130 due to vehicle queues on the eastbound Cedar Lane approach

US 130 and Columbus Road (CR 543)/Jones Road: Milepost 47.1

- » Five leg intersection causes complexity and congestion at the intersection
- » Absence of left turn lanes on US 130 reduces capacity of intersection due to queueing
- » Left turns on Columbus Road cause congestion due to drivers maneuvering for position

US 130 and Jacksonville Road (CR 670)/Federal Street: Milepost 46.4

- » US 130 northbound and US 130 southbound signals are separated by 335 feet
- » Heavy truck traffic at these intersections
- » Traffic signal at US 130 southbound and Jacksonville Road operates on two-phase cycle that is not conducive to westbound traffic flow

US 130 from Creek Road to Van Sciver Parkway: Milepost 41.6-44.1

- » Too many curb cuts interfere with overall traffic flow/patterns
- » Traffic flow impediment due to stop-and-go traffic conditions caused by signalized intersections

US 130 and Levitt Parkway/Woodlane Road

- » S-curve alignment of Woodlane Road causes vehicles travelling westbound crossing US 130 have to shift right and merge from two lanes to one
- » If four or more vehicle exit the northbound jughandle via the westbound turn lane, the median opening is blocked and prevents jughandle traffic from accessing westbound Levitt Parkway lanes

US 130 and Cooper Street/Charleston Road (CR 630): Milepost 43.0

- » Access to/from local businesses conflicts with other traffic
- » Poor internal circulation within the jughandle restricts movements
- » Queues on Charleston Road create safety issues for left turning traffic from Sidney Lane and adjacent gas station

US 130 and Pennypacker Drive/Delanco Road (CR 624): Milepost 42.7

- » Lack of connection between Delanco Road and Pennypacker Drive – Inability to serve all turning movements at two intersections

US 130 and Creek Road (CR 625)/Bridgeboro Road: Milepost 41.6

- » Queueing on northbound jughandle spills onto US 130 after 12 vehicles are stacked
- » Widening/extending existing northbound jughandle is constrained by proximity of adjacent lake
- » Northbound jughandle provided the least amount of green time from signal timing

US 130: From Tenby Chase Drive to Creek Road (CR 636): Milepost 38.9-40.6

- » Excessive use of curb cuts impedes through traffic and presents safety concern
- » Stop-and-go traffic patterns caused by the signalized intersection

US 130 and Fairview Street (CR 605)/Hartford Road Connector: Milepost 40.1

- » Hartford Road intersects US 130 approximately 1600 feet south of Fairview Street,
- » Vehicles traveling westbound on Hartford Road turn right onto US 130 and go north to Fairview Street to cross the highway or make a U-turn

US 130 and Chester Avenue (CR 604)/Haines Mill Road: Milepost 39.5

- » Off-set intersections causes congestion between intersections
- » Hinder emergency vehicle response for calls on east side of township
- » Bad signal timing leads to queueing and safety concerns

US 130: From Andover Road to Taylor's Lane: Milepost 38.1-38.4

- » US 130 and Taylor's Lane intersection experiences heavy congestion
- » Lack of connection between Taylor's Lane and Union Landing Road limits access to industrial area west of US 130

US 130 and Moorestown Riverton Road (CR 603): Milepost 37.1

- » Congestion/safety issues due to disjointed nature of the intersection
- » The proximity of the two signals causes queueing
- » Driveway access to the jughandles causes conflicts for vehicles proceeding through the intersections
- » Conflicting traffic patterns

US 130 and Cinnaminson Avenue (CR 607): Milepost 36.0

- » Significant congestion throughout the day, especially during peak hours

- » Number of roads, high traffic volumes at intersection eliminate benefits of signal retiming, lane designations
- » Proximity of retail options generates significant traffic through the intersection

Potential Improvements:

US 130 and Highbridge Road: Milepost 57.3

- » Signalize entrance to new development & close existing median break on US 130 at Highbridge Road
- » Provide connection from US 130 to Amboy Road/US 206 using signal at new development
- » Extend internal circulation road through development to Hogback Road

US 130 and Farnsworth Avenue (CR 545): Milepost 55.4

- » Reroute truck traffic to NJ Turnpike/US 206
- » Construct northbound right turn lane utilizing vacant lot on southeast corner

US 130 from Burlington Street (CR 662) to Hedding Kinkora Road (CR 678): Milepost 53.5-52.6

- » Potential long term improvements to realign Burlington Street into US 130 at a 90 degree angle and move the intersection north toward the crest of the hill
- » Install traffic signal at realigned Burlington Street intersection and provide appropriate treatment for left turn movements from US 130
- » Install traffic signal at Crystal Lake development entrance
- » Close median break at existing Burlington Street and Hedding Kinkora Road intersection

US 130 and Hornberger Avenue: Milepost 51.6

- » Widen and straighten Hornberger Avenue between US 130 and rail line
- » Improve connection of Hornberger Avenue to US 130

US 130 and Florence Industrial Area: Milepost 49.6

- » Include access road to industrially zoned properties on east side of US 130 that intersects US 130 adjacent to Food Distribution Center and create a signalized four-leg intersection

US 130 and Columbus Road (CR 543)/Jones Road: Milepost 47.1

- » Convert Jones Road into cul-de-sac, eliminating fifth leg of intersection – Requires new location for access between US 130 & River Road
- » Convert operation of Jones Road to one way approaching the intersection
- » Relocate Jones Road 600 feet north – Requires construction of new roadway through open field behind auto dealer
- » Prohibit left turns from northbound US 130 onto Jones Road or Columbus Road

US 130 from Creek Road to Van Sciver Parkway: Milepost 41.6-44.1

- » Improve geometry, including better jughandles and additional lanes
- » Rear access road parallel to US 130 behind commercial properties through Edgewater Park

US 130 and Levitt Parkway/Woodlane Road

- » Smooth the curve on Woodlane Road by cutting into adjacent shopping center parking lot
- » Relocate northbound jughandle so that it intersects Levitt Parkway further to the east
- » Close existing median on the eastbound Levitt Parkway approach and creating a new one across from the relocated jughandle

US 130 and Cooper Street/Charleston Road (CR 630): Milepost 43.0

- » Reconfigure jughandles with the possibility of creating reverse jughandles for both directions

US 130 and Pennypacker Drive/Delanco Road (CR 624): Milepost 42.7

- » Extend Pennypacker Drive across US 130 to connect with Delanco Road

US 130 and Creek Road (CR 625)/Bridgeboro Road: Milepost 41.6

- » Relocate intersection 900 feet north – Conduct study to identify options to redirect traffic out of new intersection

US 130: From Tenby Chase Drive to Creek Road (CR 636): Milepost 38.9-40.6

- » Extend Fairview Street or Chester Avenue/Haines Mill Road

US 130 and Chester Avenue (CR 604)/Haines Mill Road: Milepost 39.5

- » Optimize signal timings
- » Extend Chester Avenue or Haines Mill Road across US 130
- » Potential long term improvements include better signal timing and extending either Chester Avenue or Haines Mill Road across US 130 to allow for better overall access in crossing US 130

US 130 and Moorestown Riverton Road (CR 603): Milepost 37.1

- » Reconstruct intersection to allow for continuous movement across US 130 on Moorestown Riverton Road

C. Document Review Relevant to River Route Corridor Project

The following list summarizes the *Potential Improvements* included in Section B relevant to the River Route Corridor that have been implemented in the field based on review of available aerial photography.

US 130 and Highbridge Road: Milepost 57.3

- » The new development driveway is right-in/right-out along northbound US 130

US 130 from Burlington Street (CR 662) to Hedding Kinkora Road (CR 678): Milepost 53.5-52.6

- » Burlington Street was realigned between 2013 and 2016 into US 130 at 90 degree angle and the intersection was shifted north to where the channelized turn was
- » A traffic signal was installed at realigned Burlington Street and provide treatment for left turn movements from US 130
- » The Crystal Lake development entrance is a right-in/right-out driveway

US 130 and Hornberger Avenue: Milepost 51.6

- » The southbound right turn lane was widened and channelized as of April 2016

US 130 and Cooper Street/Charleston Road (CR 630): Milepost 43.0

- » Access to sites within jughandles from jughandles were closed as of December 2002

US 130: From Tenby Chase Drive to Creek Road (CR 636): Milepost 38.9-40.6

- » Fairview Street was extended from US 130 to Hartford Road as of June 2004

US 130 and Moorestown Riverton Road (CR 603): Milepost 37.1

- » As of December 2002 vehicles were able to cross US 130

4. TRANSIT VILLAGE DESIGN IN BURLINGTON COUNTY (2002)

A. Document Overview

This study was conducted by the DVRPC as a measure to gauge the feasibility of implementing and new light rail system from Camden to Trenton via an existing freight railway extending through the River Corridor. The DVRPC characterized the light rail system as a high priority after completing its US Route 130 Corridor Study in August, 1997 due to its corridor-wide significance and multiple benefits.

The rail system was divided into two phases: Phase 1 planning included Burlington City, Riverside, Roebling (Florence Township) and Delanco, while Phase 2 included Beverly/Edgewater Park, Riverton and Palmyra. Once completed, the rail line would consist of twenty stations with 3,500 parking spaces. As part of the project, 17 new/rehabilitated bridges would be completed over corridor waterways, and there would be 50 at grade crossings. Transit villages near the stations would promote continuous activity near the stations, thereby reducing the likelihood of crimes and improving the economic outlook of the surrounding areas.

B. Document Recommendations

Riverside Station:

Possible Improvements

- » Install trailblazer signs from US 130 to the station: The most direct route to the Riverside station is to take US 130, then CR 613/CR 605, which would help traffic at intersections surrounding the station.

Roebling Station Area:

Possible Improvements at US 130 and Hornberger Avenue (see Figure 2)

- » Enhance the visual landscape of US 130 through signage, landscaping, buffering and lighting
- » Construct a reverse jughandle on the southwest corner to allow southbound traffic on US 130 to turn onto Hornberger Avenue
- » Improve/lengthen the left turn lane and create a near-side jughandle
- » Install "Approaching Intersection" signs on US 130

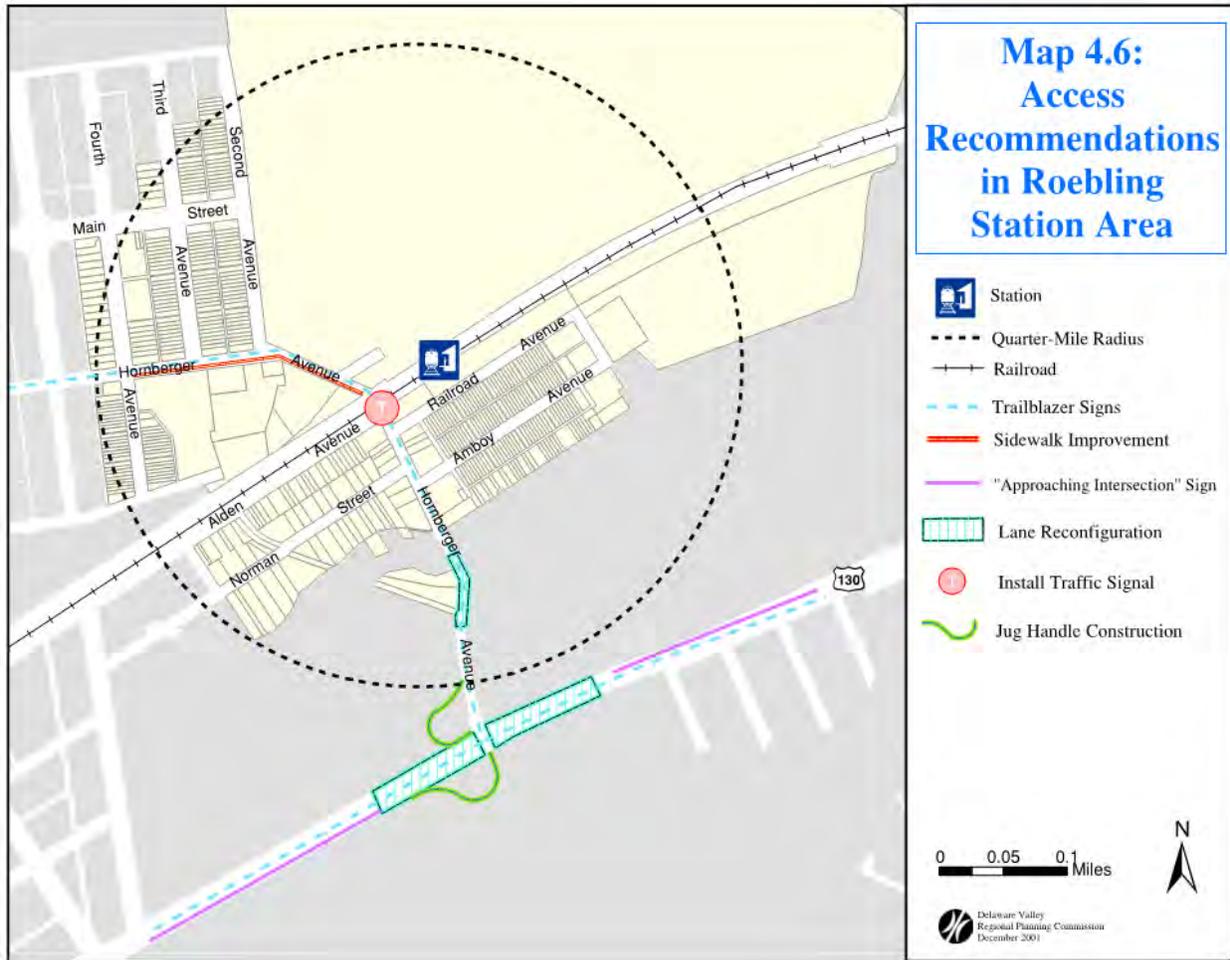
C. Document Review Relevant to River Route Corridor Project

The following list summarizes the *Potential Improvements* included in Section B relevant to the River Route Corridor that have been implemented in the field based on review of available aerial photography.

US 130 and Hornberger Avenue: Milepost 51.6

- » The existing northbound left turn lane was lengthened as of June 2004
- » The southbound right turn lane was widened and channelized as of April 2016

Figure 2: Proposed Improvements in Roebling Station Area



5. ROUTE 130/ROUTE 206 TRANSPORTATION AND CIRCULATION STUDY (2003)

A. Document Overview

The document conveys the transportation and circulation element of the plan that includes the northern section of US 130 where it merges with US 206 in Bordentown, as well as US 206 from Bordentown Township in the north to Southampton Township in the south.

The study process included multi-agency field reviews to review the transportation location problems for including in the study. Problems identified included the absence or inadequate turning lanes, need for an additional through lane to reduce congestion, the need for wider shoulders and traffic calming measures.

Traffic Volume:

The Delaware Valley Regional Planning Commission (DVRPC) regional travel simulation model was used to assess future traffic conditions on selected arterials in the study area, identifying areas which may experience congestion. Two scenarios were used: the first used historical trends for future projections, and the second used assumptions that development will take the form of cluster development. Both scenarios were based on the DVRPC 2025 population and employment forecasts

Most sections of US 206 where congestion is forecasted to be heavy to severe are adjacent to significant east-west arterials such as NJ 70, CR 530 and CR 630. Congestion on Rising Sun Road is also forecasted to be heavy to severe due to the expected increase in truck traffic.

Northern Area of Study

- » Highest traffic volumes recorded where US 206, US 130, the New Jersey Turnpike (NJTP) and I-295 converge in the Bordentown area
- » Highest traffic volume on US 206 was recorded between CR 660 Old York Road and NJTP entrance (29,214 Average Annual Daily Traffic (AADT) in 2002)
- » A full-scale truck stop located along Rising Sun Road makes the route attractive for truckers

Central Area of Study

- » In 2001, an AADT of 20,160 was recorded near the intersection of East and West Mansfield Roads
- » AADT fluctuated between 15,570 at a location south of CR 669 to 18,456 near the NJ 38 intersection

Southern Area of Study

- » Traffic volume along US 206 gradually increases moving southward. An AADT of 17,669 was recorded on US 206 in Southampton Township in 2000. US 206 intersects with NJ 70 at the Red Lion Circle. On the west side of the circle, an AADT of 17,124 was recorded in 2001, and an AADT of 18,930 was taken on the east side of the circle in 2001.

Accident Analysis:

US 206 has two travel lanes in both directions in some areas while in others it has only one lane in each direction, leading to weaving traffic, increasing likelihood in accidents. Heavy truck volumes interfere with the mobility of farming equipment, and is most severe in the vicinity of US 206 and Old York Road in Bordentown.

Accident Summary for US 206

- » Accident data was compiled for US 206 from milepost 16.29 to 38.46 (~22 miles from Southampton Township to Bordentown Township) between 1999 and 2001
- » From 1999 to 2001, 934 accidents were recorded at 286 locations along this stretch of road
- » Severity: 68.2% were property damage only and 0.7% fatalities
- » Type: 36.8% were rear-end collisions, 11.2% were sideswipe accidents, 18.2% were angle crashes, 5.2% were left-turn accidents and "other" accidents accounted for 24.8% of the total

Accident Cluster Locations (three year frequency of 30 or greater crashes)

- » Mile Post 23.48-23.50: US 206 & Rte. 38/CR 550
 - » 48 accidents in a 3 year period: 36 property damage only, 11 injury accidents and 1 fatal
 - » Rear-end collisions: 27.1% (13), angle collisions: 27.1% (13)
- » Mile Post 26.67: US 206 & CR 669 Juliustown Road
 - » 57 accidents in a 3 year period: 43 property damage only, 13 injury and 1 fatal
 - » Angle collisions: 31.6% (18), rear end collisions: 26.3% (15)
- » Mile Post 26.8: US 206 & CR 537 Monmouth Road
 - » 57 accidents in a 3 year period: 43 were property damage only, 13 injury, 1 fatal
 - » Rear-end collisions: 31.6% (18) at Monmouth Road, 26.3% (15) at Juliustown Road
 - » US 206 narrows from two lanes to one lane per direction on the south side of the CR 537 intersection. Consequently, vehicles tend to accelerate in order to gain first position in the two-lane section of US 206.
 - » Area is vulnerable to accidents due to compromised sight distance and lack of left turn lanes
- » Mile Post 28.28: US 206/CR 670 Jacksonville-Jobstown Road:
 - » 41 accidents in a 3 year period: majority were property damage only with no fatalities
 - » Rear-end collisions: 31.7% (13), left-turn collisions: 22% (9)
 - » Intersection improvements (widening, dedicated left turn lanes) in 2002 caused decline in collisions

Safety Recommendations:

- » Connect I-295 to the NJ Turnpike, alleviating heavy truck traffic from arterials
- » Widen shoulders to minimum 8 feet
- » Ensure mailbox, utility poles and drainage ditches have 8 foot setback where possible
- » Trim vegetation within right-of-way
- » Upgrade bridges within farm belt to accommodate heavier vehicles

Transit:

The area is serviced by NJ Transit Riverline, NJ Transit Bus Routes 317 (Philadelphia to Asbury Park) and 409 (Philadelphia to Trenton).

Aviation Facilities:

There are four civilian airports and one military area within close proximity to the study area. The civilian airports (South Jersey Regional Airport in Lumberton Township, Flying W in Lumberton and Medford Townships, Red Lion Airport in Southampton Township, Pemberton Airport in Pemberton Township) are used by small aircrafts. McGuire Air Force Base in New Hanover Township handles traffic approaching and departing civilian airports in the area and serves as a major military staging and material center.

Pedestrian and Bicycle Facilities/Amenities:

Delaware River Heritage Trail (proposed at the time of the study)

- » The trail (at the time) was expected to enter the US 206 study corridor at the Mansfield Township boundary, mostly following US 130 and continuing on Burlington-Bordentown Road, veering north on Farnsworth Avenue in the City of Bordentown. In Bordentown, the trail could conceivably connect to the then proposed Riverline Station, and then enter the Delaware and Raritan Canal State Park.

B. Document Recommendations

Identified Problems:

Intersection of US 130 and Farnsworth Avenue (CR 545): Bordentown Township

- » Northbound US 130 truck traffic experiences difficulty in making right turns at this intersection. Although the northbound approach has a shoulder and the eastbound departure is 27 ft. wide, trucks were observed encroaching on the curb/sidewalk while making a northbound right turn
- » Prior to completion of I-295 north of US 130, the US 130 northbound left turn lane at Farnsworth Avenue was congested in the PM peak and the queues spilled into the through lane. However, traffic congestion at the intersection—especially in the northbound left turns, has greatly decreased since the opening of the new section of I-295 and the need for a northbound jughandle seems to have been eliminated
- » The opening of I-295 north of US 130 allows southbound I-295 truck traffic to exit onto northbound US 130 and turn right at Farnsworth Avenue to reach trucking facilities in the vicinity of Rising Sun Road and US 206 as well as the NJ Turnpike. An existing alternative to this movement is to exit I-295 southbound onto US 130 southbound and turn left onto Dunn's Mill Road to reach US 206. The disadvantage of this route is the potential to conflict with the high school and residences located along Dunn's Mill Road

Intersection of US 206 and Georgetown Road (CR 545)/Farnsworth Avenue: Bordentown Township

- » The weigh station is in close proximity to the intersection and is occupying land which could be used to extend the left turn lane on US 206 southbound
- » Eastbound Farnsworth Avenue is currently striped for one 19 ft. lane with a 13 ft. striped shoulder. Field observation revealed that traffic is utilizing this 32 ft. areas as if it were two lanes
- » No pedestrian amenities are provided on any leg of the intersection

Potential Improvements:

Intersection of US 130 and Farnsworth Avenue (CR 545): Bordentown Township

- » Reroute truck traffic destined to the NJ Turnpike or US 206
- » Construct northbound right turn lane utilizing the vacant lot on the southeast corner

C. Document Review Relevant to River Route Corridor Project

Based on review of available aerial photography, none of the identified improvements appear to have been implemented.

6. NORTHERN BURLINGTON COUNTY GROWTH AND PRESERVATION PLAN (2010)

A. Document Overview

The Northern Burlington County Growth and Preservation Plan (GAPP) is a regional strategic plan for Burlington County's farmbelt and provides a regional vision, goals, and objectives to balance growth, development, and preservation. The GAPP study area covered 13 municipalities and was a collaborative effort among representatives from local government, Burlington County, and the State, as well as residents, businesses, farmers, community groups, and other stakeholders. It includes the River Corridor communities of Bordentown City, Bordentown Township, Fieldsboro, and Mansfield Township.

B. Document Recommendations

The GAPP outlines an implementation agenda to identify activities needed to achieve the region's goals. The comprehensive agenda includes strategies related to land use, natural resources, redevelopment, economic development, housing, agriculture, transportation, historic preservation, infrastructure, recreation, and coordination. Most pertinent to the River Route Corridor study are the transportation recommendations. The GAPP includes many broad transportation strategies for the regional that support the vision for growth, preservation, and enhancing existing Centers and Nodes and multimodal safety and mobility. These include:

- » Review/update the Circulation Element of municipal master plans and the County Highway Master Plan
- » Continue to support NJDOT planned capital investments and DVRPC TIP
- » Work with NJDOT and the Burlington County Engineer's Office to apply the principles of their "Mobility and Community Form" to link municipal master plan Land Use and Circulation Elements
- » Utilize shared parking opportunities in non-residential and mixed-use development in Centers and Nodes and
- » Explore traffic calming measures on roadways approaching Centers and Nodes
- » Continue to support NJDOT planned capital investments
- » Reduce local and regional vehicular use to decrease auto dependency and reduce congestion by:
 - o Supporting municipal planning of mixed-use zoning, higher-density development, transit oriented development (TOD) in Centers and Nodes
 - o Encouraging expansion of private commuter transportation systems
 - o Encourage increased public transit use and higher quality service
- » Explore expansion of NJ Transit and BurLink services
- » Develop a regional Bicycle and Multi-use Trail Network and promote greenways and trail for transportation and recreation
- » Develop new and improved bicycle lane routes along selected county and municipal roads to connect schools, parks, neighborhoods and employment centers. Provide bicycle racks and explore opportunities for bike share to encourage bicycle riding

The GAPP also identified targeted areas in need of transportation improvements. Locations along US 130 include:

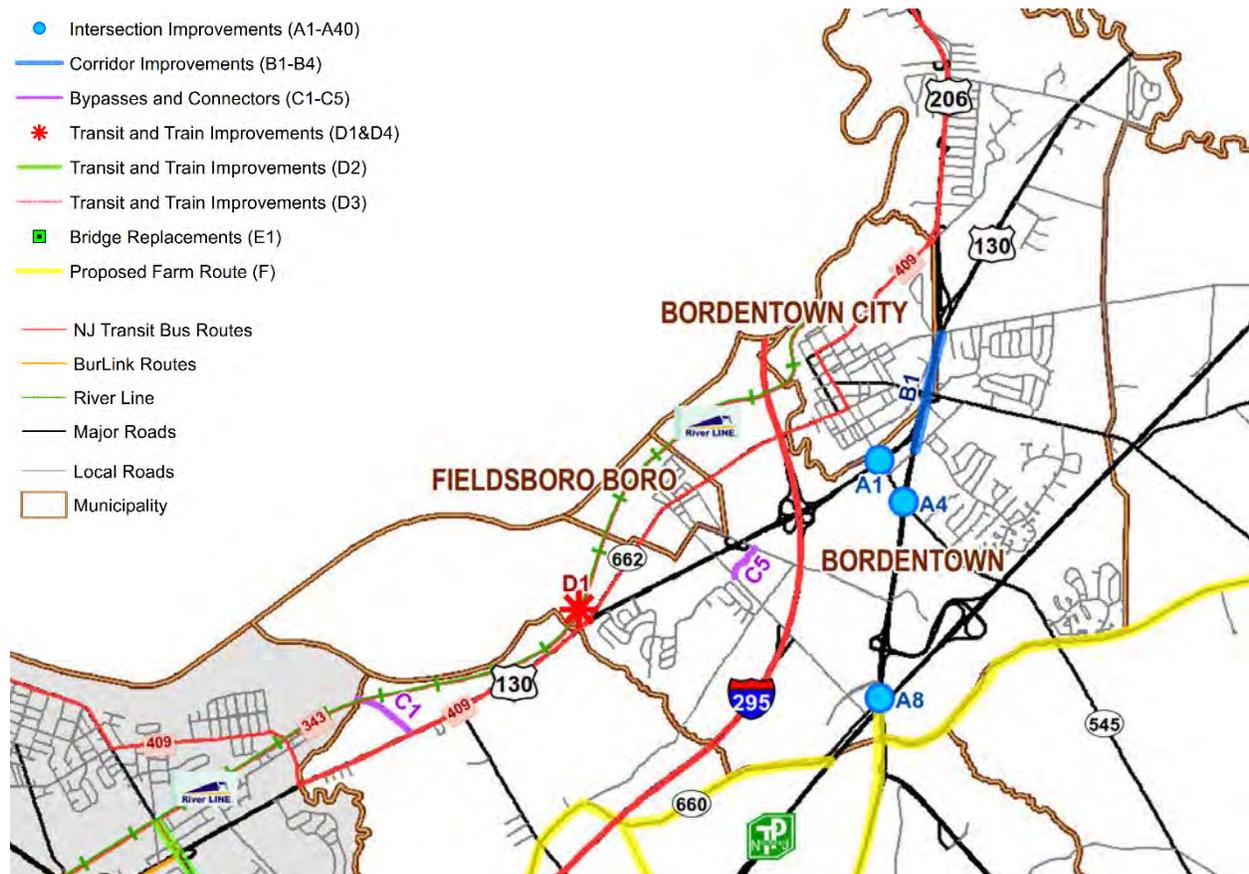
- » US 130 at Farnsworth Ave (CR 545) – address congestion, mobility, safety, and redevelopment issues (location A1 in Figure 3)

- » US 130 between Ward Avenue and Cemetery Road – address congestion, mobility, safety, and redevelopment issues (location B1 in Figure 3)
- » Roebling connector (US 130 to Roebling via New Road and Bridge) – address mobility, safety, and redevelopment issues (location C1 in Figure 3)
- » I-295 – Turnpike connector (Rising Sun Road to Dunns Mill Road via New Road) – address congestion, mobility, and safety issues (location C5 in Figure 3)
- » Bordentown (Twp) Shipyard NJ Transit station – new RiverLine station to support mobility and redevelopment (location D1 in Figure 3)

C. Document Review Relevant to River Route Corridor Project

Based on review of available aerial photography, none of the identified improvements appear to have been implemented.

Figure 3: GAPP Transportation Improvements (zoom-in of Rt 130 corridor area)



7. FREIGHT IN BURLINGTON COUNTY (2011)

A. Document Overview

According to this document, freight should be thought about in the “same terms as trips made by people.” The document states that freight, like person trips, is influenced by factors such as total distance, pricing of various travel modes, shipping size and the delivery timeline of goods.

Large chains such as IKEA and CVS are significant freight generators for Burlington County. Notable industrial center sites within Burlington County include the Haines Industrial Center near Burlington Township, Cinnaminson and Mount Laurel. I-295 and the New Jersey Turnpike provide “superior” conditions for trucks, a direct connection to the Pennsylvania Turnpike and access and egress via 11 local interchanges.

B. Document Recommendations

There are no specific recommendations made within this document.

C. Document Review Relevant to River Route Corridor Project

There are no specific recommendations made within this document.

8. CR 541 CORRIDOR SAFETY REVIEW, BURLINGTON COUNTY (2012)

A. Document Overview

The safety evaluation for the CR 541 corridor was conducted as part of the DVRPC's Office of Transportation Safety and Congestion Management. County-specific top ten lists of five-mile county route segments that met a minimum crash threshold for 2005-07 were distributed to county partners for consideration for DVRPC's Road Safety Audit program. The five-mile segment of CR 541 analyzed in the study had the highest crash total of any in the county, and was also within the ten highest of DVRPC's four New Jersey counties.

Traffic Volumes:

Traffic volumes spike significantly near major interchanges, especially near the I-295 interchanges (Exit 47), with over 19,000 northbound and 16,900 southbound trips recorded in 2009. About 15,000 trips in both the northbound and southbound directions were recorded south of the I-295 interchange near the NJ Turnpike interchange. At the southern end of the corridor, where CR 541 meets CR 691 (High Street), 12,350 northbound trips and 15,900 southbound trips were recorded. The last count occurred in the Burlington City neighborhood near 7th Street, where about 10,000 northbound and 10,000 southbound trips were recorded.

Transit Service:

The NJ Transit #413 bus route is the only transit serving the entire length of the CR 541 corridor, but does not serve the section between High Street and Woodlane Road. The bus route starts at Walter Rand Transportation Center in Camden City and travels through several municipalities to Burlington City. Weekday headways are 30 minutes until 10:00 AM, hour headways until 8:00 PM and limited service after 8:00 PM. Weekend headways are one hour. Along the CR 541 corridor, there are 14 marked stops and connections to the #409 and #419 NJ Transit buses, the Riverline and the BurLink Shuttle.

Accident Analysis:

759 crashes occurred on this corridor from 2005 to 2007. 792 crashes (4.3% increase) occurred from 2008 to 2010. Crashes on CR 541 increased between 2005 and 2008, peaking at 284 in 2008. Since 2008, crash totals have declined, and a low of 246 was recorded in 2010 (a 13% reduction). No fatal crashes occurred during either of the two analysis periods, and the overall percentage of injury crashes declined by over 1% between the analysis periods.

B. Document Recommendations

- » Improve/install pedestrian accommodations throughout the study area. Burlington County requires all intersections accommodate pedestrians with marked crossings and pedestrian count down signal heads.
- » Improve visibility and delineate travel way with new/improved striping and roadway markings
- » Install GPS based Emergency Vehicle preemption systems for all signals along corridor
- » Install medians and pedestrian crossing islands at areas with high pedestrian volumes
- » Optimize the signal timing along CR 541, including the intersection with US 130.

C. Document Review Relevant to River Route Corridor Project

Based on review of available aerial photography, pedestrian accommodations, including ADA ramps, crosswalks and pedestrian countdown signal heads are present at the intersection of CR 541 and US 130 as of April 2010.

9. BORDENTOWN TOWNSHIP REDEVELOPMENT, PROPOSED CONNECTOR ROAD (2014)

A. Document Overview

The DVRPC, at the request of Burlington County and Bordentown Township, conducted a traffic study associated with the construction a new road between Dunns Mill Road and Rising Sun Road to improve the overall traffic circulation in a developing section of Bordentown. The proposed road would accommodate tractor-trailer traffic that would otherwise use Farnsworth Avenue to access Rising Sun Road due to the fact that there is no southbound off-ramp at Exit 56 of I-295. The study area encompasses the section of the Township bounded by US 130 to the west, Farnsworth Avenue to the north, US 206 to the east and Rising Sun Road to the south. The new connector road was found to be feasible; however, identified problems at US 130 and Dunns Mill Road would need to be resolved: congestion on southbound US 130 approach must be mitigated for a connector road to work, and high traffic volumes entering the jughandle create the potential for gridlock.

B. Document Recommendations

Potential Improvements:

US 206 and Connector Road/NJ Turnpike Entrance

- » Add a second entrance ramp lane feeding the NJ Turnpike from the Connector Road and US 206 to improve traffic operations
- » Adjust associated approaches to have one dedicated through lane and one lane allowing for entrance access

US 206 and Farnsworth Avenue

- » Extend existing 170 foot southbound left turn lane to 500 feet. The land necessary to extend the lane is occupied by an unused NJDOT weight station

I-295 and Rising Sun Road:

- » Complete the I-295 interchange with Rising Sun Road (Exit 56), alleviating truck traffic issues and congestion at the US 130 and Dunns Mill Road intersection. This concept can be viewed as an alternative to the connector road or a long-term complement to it. Some adjustments to the current truck parking would be necessary to accommodate the new ramp.

US 130 and Dunns Mill Road (see Figure 4 for proposed alignment)

- » Extend cycle length to provide additional green time to the eastbound approach
- » Add queue sensors in the jughandle to trigger a signal phase change to empty the jughandle
- » Install a traffic signal for eastbound Lockwood Avenue prior to the entry of the jughandle traffic to allow the jughandle to empty

C. Document Review Relevant to River Route Corridor Project

Based on review of available aerial photography, none of the identified improvements appear to have been implemented.

Figure 4: Bird's Eye View of Proposed Alignment of US 130 and Dunns Mill Road



10. US 130/US 206 ROAD SAFETY AUDIT, BORDENTOWN CITY AND BORDERTOWN TOWNSHIP (2012)

A. Document Overview

The Road Safety Audit (RSA) was conducted during the Fiscal Year 2011 as part of the DVRPC's Office of Transportation Safety and Congestion Management's annual work program. This study area consisted of 1.83 miles of US 130, from the intersection of Farnsworth Avenue to the intersection of Highbridge Road, as well as 1.16 miles of US 206 from the intersection of Farnsworth Avenues northwest to East Park Street. The study section for the RSA was previously identified as an NJDOT priority location for bicycle and pedestrian improvements. Consequently, a bicycle and pedestrian access and safety study was conducted.

Pedestrian and bicycle issues were considered high priorities by the audit team, as such amenities have suffered as a result of priority being given to vehicular movements. Even with few amenities provided, pedestrians and bicyclists frequently travel the study area.

Traffic Volume:

The central area of this audit, where US 130 and US 206 become a single roadway, has an eight-lane cross-section with a barrier median and no shoulder. This cross section pre-dates the I-295 completion and now is considered to have excess capacity. Data found that traffic volumes on the north and south sections of the corridor to be in the range of 11,000-12,000 vehicles per day on average. Where the two roadways converge, an average of 25,000 vehicles per direction per day on average was recorded.

Transit Service:

The NJ Transit #409 bus provides service in close proximity to the study area and enters the corridor at East Park Street, but provides no service along US 130/US206 within the study limits. The bus route provides service to Trenton, Willingboro and Philadelphia, and has seven bus stops in Bordentown City along CR 545 and CR 662—also outside of the study limits to the west. Peak-hour headways are one hour in the AM and every 30 minutes in the PM. Off-peak headways are every hour. The NJ Transit Riverline is located outside of the study area to the west and has one stop in Bordentown City. Despite the fact that neither of these transit services are located immediately in the study corridor, there is still pedestrian activity to and from the nearest stops

Accident Analysis:

US 130 (General):

- » 227 total crashes from 2007-2009
- » About 33% of crashes reported on US 130 in 2007 occurred at an intersection (statewide average 29%)
- » Most crashes occurred in June, October
- » Most crashes occurred Friday, Sunday
- » 57% of crashes occurred from 11:00 AM – 7:00 PM, spiked at 7:00 AM – 8:00 AM during rush hour
- » During the study, one pedestrian and three bicyclist crashes were reported

US 130 South Section: Milepost 55.44-55.77:

- » 54 crashes reported from 2007-2009
- » Predominantly northbound crashes
- » Over half of crashes in area in the immediate vicinity of the Farnsworth Avenue (CR 545) signalized intersection—a 0.04 mile-stretch of road.

US 130 Central Section (Merge with US 206): Milepost 55.77-56.44:

- » 128 crashes from 2007-2009 (highest number of crashes in the study)
- » Bicyclist crashes higher than the statewide average

US 130 North Section: Milepost 56.44-57.29:

- » 45 crashes reported from 2007-2009
- » Predominantly southbound crashes

B. Document Recommendations

Identified Problems:

US 130 and Farnsworth Avenue

- » Curb ramps and pedestrian crossings missing on some approaches. Lack of pedestrian accommodations throughout the area
- » Right turn on red allowance onto US 130 from Farnsworth Avenue compromises pedestrian safety
- » Median opening north of intersection with Farnsworth Road presents safety hazard
- » Lack of left turn green time for Farnsworth Avenue
- » Inadequate storage capacity in left turn lane from US 130 to westbound Farnsworth Road causes spilling into northbound through lanes
- » Inadequate intersection geometry hinders vehicles (especially trucks) making rights from US 130 northbound
- » Equipment was documented at the Haines Trucking Facility that encroached on ROW and impacted roadway sight distance
- » Poor access for bicyclists between Farnsworth Avenue and Crosswicks Avenue along US 130
- » Confusing merge area where I-295 NB off ramp merges with US 130 NB

Crosswicks Street/Butts Avenue Intersections with US 130/206

- » Lack of sidewalk throughout area
- » Stop bars located in center of crosswalks to cross US 130 at Butts Avenue and eastbound approach of Crosswicks Street
- » Pedestrian refuge island at Butts Avenue isn't properly aligned with ADA ramps and crosswalk endpoints
- » Curb ramp at northwest corner of Crosswicks Street intersection isn't ADA Complaint
- » Receiving lane on east side of intersection for Crosswicks Street EB traffic is mismatched with west side sending lane
- » No space for bicyclists to go through Crosswicks Street intersection
- » The median pedestrian fence near Denny's is hit repeatedly
- » Left turns from Butts Avenue to US 130/US 206 SB conflict with Butts Avenue EB ramp to US 130 and US 206 SB, both movements have short distance to choose between roadways before the split
- » Signal heads at Butts Avenue are different than those at Crosswicks Street
- » Crosswicks Street WB ramp to US 130/206 has compromised sight distance
- » Duplicative access points for US 130 NB and SB between Crosswicks Street and Elizabeth/Ward Streets to the north
- » US 130/206 southbound has excess capacity from pre-I-295 era
- » The dedicated right turn lane to Crosswicks Street hampers safe bike and pedestrian movements at intersection
- » Signs to indicate turns from jughandle are ineffective and drivers make illegal left turns at intersection in

lieu of jughandle

- » Drivers entering merge onto US 130 northbound from Crosswicks Street are often speeding

Median Crossover at US 130 at Mastoris Diner

- » Lack of warning for motorists that crossover exists

Intersection of US 130 and Highbridge Road

- » Illegal u-turns are made at the median breaks on US 130 southbound
- » Highbridge Road is difficult to see from northbound and southbound US 130 due to surrounding wooded area and poor lighting

Potential Improvements:

US 130 and Farnsworth Avenue

- » Install/upgrade intersections and crossings to be ADA compliant
- » Add “no turn on red when pedestrians are present signs” to intersections with pedestrian activity
- » Close median opening north of intersection
- » Optimize signal timings
- » Conduct left turn capacity analysis and extend queue if appropriate
- » Evaluate ROW options to improve turn radius
- » Work with Haines Trucking to move objects encroaching on ROW to bring ROW into compliance
- » Consider changing intersection geometry to accommodate bicyclists
- » Create a better designed, safer merge on northbound US 130

Crosswicks Street/Butts Avenue Intersections with US 130/206

- » Install sidewalks, and redo curb ramps to meet ADA requirements
- » Move stop bars so they don't conflict with pedestrian crosswalks
- » Redo pedestrian refuge island to align with ramps and add signal and pedestrian heads
- » Evaluate need for two through lanes on Crosswicks Street eastbound and restripe to match west side lane
- » Restripe intersection approaches to provide bicyclist friendly shoulder width/dedicated bike lane
- » Reinstall pedestrian fence on jersey barriers
- » Add dotted line “elephant tracks” for left turns from Butts Avenue to US 130/206, eastbound Crosswicks to US 130 NB
- » Consider pavement markings to provide advanced warning of US 130/206 split
- » Evaluate effectiveness of existing signal heads and ensure signal heads at the two intersections match if necessary
- » Redo Crosswicks Street westbound ramp and median island to meet FHWA standards for pedestrian access
- » Implement access management by narrowing openings and eliminating duplicates
- » Consider a road diet for US 130/206 from four lanes to three lanes with a shoulder
- » Consider squaring off southeast and northwest corners of US 130 and Crosswicks intersection to slow right turning drivers accommodating pedestrians
- » Evaluate sign placement, adequacy of advance warning, and messaging to improve information flow to motorists
- » Reinstall overhead US 130/206 signs and add lane marking in left lane at jughandle location to indicate through movements only
- » Consider gateway treatment to emphasize posted speed limit

Median Crossover at US 130 at Mastoris Diner

- » Provide advance warning signs to drivers and slow speeds through area
- » Consider flashing beacon
- » Relocate access to better/safer location

Intersection of US 130 and Highbridge Road

- » Add supplementary signs to reinforce no u-turns
- » Install new median break at Villa Mannino driveway to accommodate southbound left turns
- » Install intersection ahead warning sign/flashing beacon for Highbridge Road
- » Consider additional street lighting

C. Document Review Relevant to River Route Corridor Project

The following list summarizes the *Potential Improvements* included in Section B relevant to the River Route Corridor that have been implemented in the field based on review of available aerial photography.

Crosswicks Street/Butts Avenue Intersections with US 130/206

- » The intersection was upgraded as of September 2013. Sidewalks were installed and curb ramps were redone to meet ADA requirements
- » The eastbound Crosswicks Street approach was redone to carry two left turn lanes and two through lanes. The stop bar was moved back and a crosswalk was installed.
- » The pedestrian refuge islands on US 130 and westbound Crosswicks Street were redone to include ADA ramps.

11. TRAFFIC-CALMING ALTERNATIVES FOR ROUTE 130 AND 206 IN BORDENTOWN, NJ (2012)

A. Document Overview

This study was prompted by local concern for pedestrian and motorist safety on US 130 and US 206. The purpose of the study was to improve safety for vehicular access along the studied route and the safety of pedestrians and bicyclists travelling along both US 130 and US 206. At the time of the report, there were too few locations for pedestrians to cross US 130 and US 206, with very few controlled pedestrian crossing locations along the corridor. Overall, the study notes that the high density of driveways—which are poorly defined—and the lack of shoulders along the shared section (0.8 mile) of US 130 and US 206 contribute to safety concerns for pedestrians, bicyclists and motorists.

Environmental Justice:

The report concludes that elderly people 75 years and older often rely on alternative modes of transportation for mobility, and accessible streets and sidewalks are paramount. As the driving rate decreases with age, mobility is greatly impacted by quality and connectivity of the pedestrian network, breadth and frequency of transit service and availability and accessibility of local services and employment.

The inability to speak English can be a potential barrier to accessing goods and services such as transportation. Limited English Proficient populations can impact how an agency or municipality reaches out to an audience, including providing translated materials.

The report notes that a physical design encouraging walking, cycling and transit use are particularly effective for the elderly population 75 years and older.

Guide Signage:

A large deficiency exists in the signage system for movements between I-295 South to the NJ Turnpike. There is no direct connection for both passenger vehicles and heavy trucks. Existing signage at the time of the study directs drivers to use Exit 7 for the NJ Turnpike, putting them on a narrow and congested roadway with limited turning radii (Farnsworth Avenue) or a weight restricted route (Dunns Mill Road)

Transit:

- » The NJ Transit Riverline stops at the Park Street station within the study area at the western end of Bordentown City's downtown business area, with 183 available parking spaces—the parking lot has a 90% utilization rate, as noted by the study--and also accessible by walk-up passengers
 - » Peak-hour headways are 15 minutes and off-peak headways are 30 minutes, with service beginning at 6 AM and continuing until around 10 PM
- » The NJ Transit #409 connects Philadelphia to Trenton via Burlington County's "river towns"
- » Within the study area, the #409 route travels along US 206 north, enters and exits Bordentown City via Park Street, crosses the city's downtown business area along Farnsworth venue and enters/exits the city along Burlington Street
 - » Of the Route's overall passengers, 78% walked to/from the bus stop according to a fall 2010 passenger survey conducted by DVRPC for NJ Transit

Crash Analysis:

In 2010, the DVRPC lead a Road Safety Audit of the study area, utilizing crash data from 2007-2009. 73% of the 309 crashes occurred along US 130, including the shared section with US 206. With a crash rate of

4.43 crashes per million vehicle miles traveled, the segment of US 130 between Farnsworth Avenue and the southern merge of the shared section with US 206 had the highest crash rate of the segments studied, over twice the statewide average. The second highest crash concentration area was the intersection of US 130 and Farnsworth Avenue.

B. Document Recommendations

Identified Problems:

US 130/US 206 Merge near the Mastoris Diner

- » Excessive speeding (85th percentile speeds are at or greater than posted speed limits)
- » Sight distance is compromised by vertical and horizontal curvature due to grade separation of roadways and the natural topography of the area
- » Four median breaks in the area allow vehicles to enter, exit and cross the roadways at often unexpected locations

US 130/US 206 Merge (General Area)

- » Few pedestrian amenities
- » Excessive rate of speeding and a lack of transition to reinforce a reduced speed limit
- » Lack of a direct east/west connection between Ward Avenue and Elizabeth Street
- » Frequent weaving (38% of reported crashes are sideswipe)
- » Too many access points to driveways on this section of the road without a deceleration lane creates safety issues and an increased risk for accidents
- » Lack of appropriate truck connections between I-295 and the NJ Turnpike
- » Corridor commercial parcels are vacant and/or underutilized

Potential Improvements:

US 130/US 206 Merge near the Mastoris Diner (see Figure 5)

- » Install converging chevrons within the existing corridor along the northbound US 206 overpass to limit excessive speeding
- » New acceleration and deceleration lanes would reduce the speed differential for entering/exiting vehicles
- » Reorient northbound and southbound entry points to increase storage length, sight distance

US 130/US 206 Merge (General Area, see Figure 6)

- » Create a road diet for the US 130/US206 Merge by replacing travel lanes with stormwater management facilities such as rain gardens, vegetated filter strips, bio-retention facilities and infiltration trenches
- » Build pedestrian median refuges and extend curb bumpouts along this road segment, new sidewalks and bike lanes and new shoulders
- » Encourage the use of shared driveways to reduce the number of access points along this road segment
- » Recognize the need for adequate shoulders and turning lanes
- » Add connection between I-295 and the NJ Turnpike

The figures on the following pages illustrate the identified potential improvements.

C. Document Review Relevant to River Route Corridor Project

Based on review of available aerial photography, none of the identified improvements appear to have been implemented.

Figure 5: Proposed Improvements for US 130/US 206 Merge near the Mastoris Diner



Figure 6: Proposed Improvements for US 130/US 206 Merge Area



12. TRANSPORTATION IMPROVEMENTS FOR THE US 130-BRIDGEBORO ROAD CORRIDOR (2017)

A. Document Overview

This study was conducted by the DVRPC to assess improvement alternatives for the corridor section of US 130 between Bridgeboro Road and Mount Holly Road/Beverly Road (CR 626). This segment experiences recurring traffic congestion and safety challenges due to inadequate capacity of the US 130 and Bridgeboro Road jughandle.

B. Document Recommendations

As shown in Figure 7, The study proposes a solution involving relocating the jughandle intersection and reconfiguring geometry and revising traffic control, including a roundabout at Bridgeboro Road and Creek Road. Pedestrian and bicycle solutions include providing a trail connection between Pennington Park and Willingboro Lakes Park.

Phasing Implementation of Potential Improvements:

Short-Term (1 to 4 years)

- » Pedestrian crossing at US 130 and Creek Road
- » Sidewalks – construct missing links to connect Pennington Park and nearby residential housing with Willingboro Lakes Park
- » Wayfinding signage
- » Parking lot and driveway relocations

Medium-Term (5 to 10 years)

- » Jughandle relocation – move the existing northbound jughandle from the near side to the far side
- » One-lane roundabout at Bridgeboro Road and Creek Road

C. Document Review Relevant to River Route Corridor Project

The document outlines next steps for potential implementation, including a detailed assessment of environmental impact of the proposed jughandle and further collaboration with stakeholders to finalize the conceptual design.

Figure 7: Proposed Improvement Concept for the US 130-Bridgeboro Road Corridor



13. OPERATIONS

A. Traffic Volumes

Traffic count reports collected as part of the New Jersey Traffic Monitoring Program were compiled along the project corridor. A background growth factor for the corridor was utilized to develop current traffic volumes based on information supplied by the New Jersey Department of Transportation (NJDOT) in their Annual Background Growth Rate Table. As shown in Figure 1 and Figure 2, daily traffic volumes fluctuated along the project corridor. The highest annual average daily traffic (AADT) volumes were recorded at the southern project limit near the Tacony-Palmyra Bridge. Commuter peak periods had a K-factor, the proportion of the AADT occurring during the peak hours, of 8.5 and 8.6 in the morning and afternoon, respectively.

Data Source(s): New Jersey Department of Transportation Bureau of Transportation Data and Safety

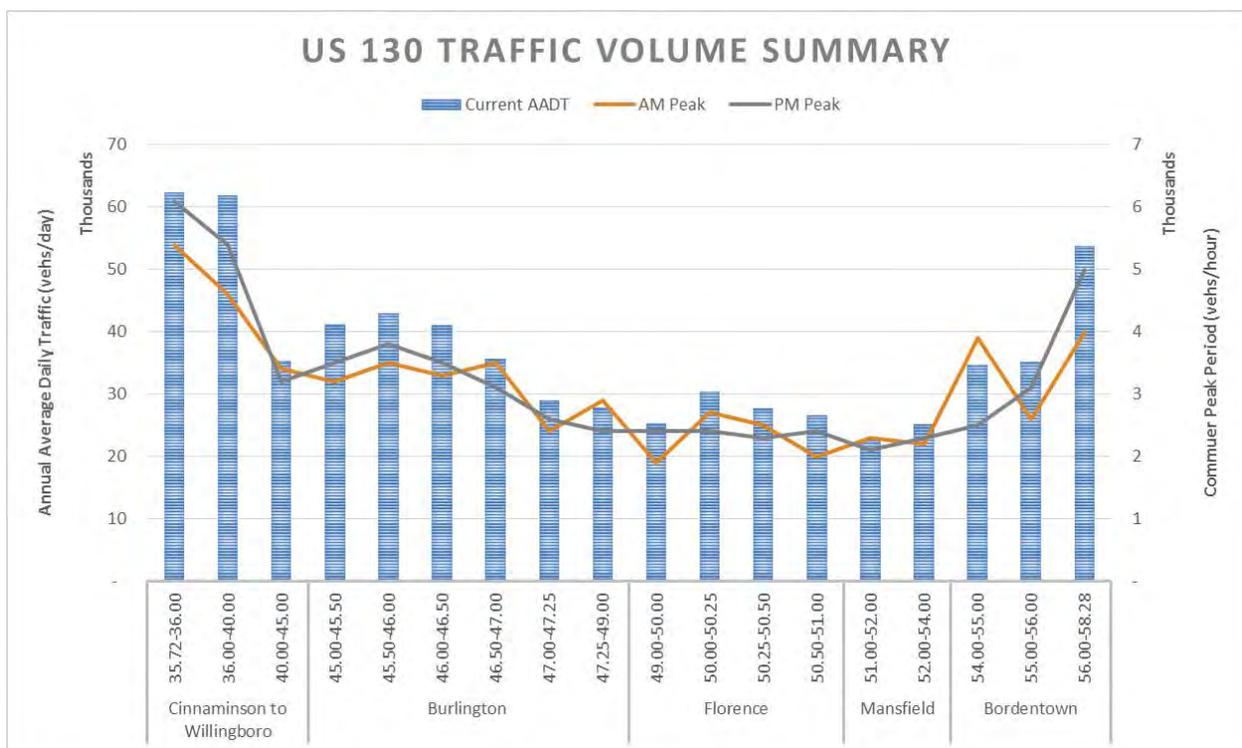


Figure 8: Traffic Volume Summary

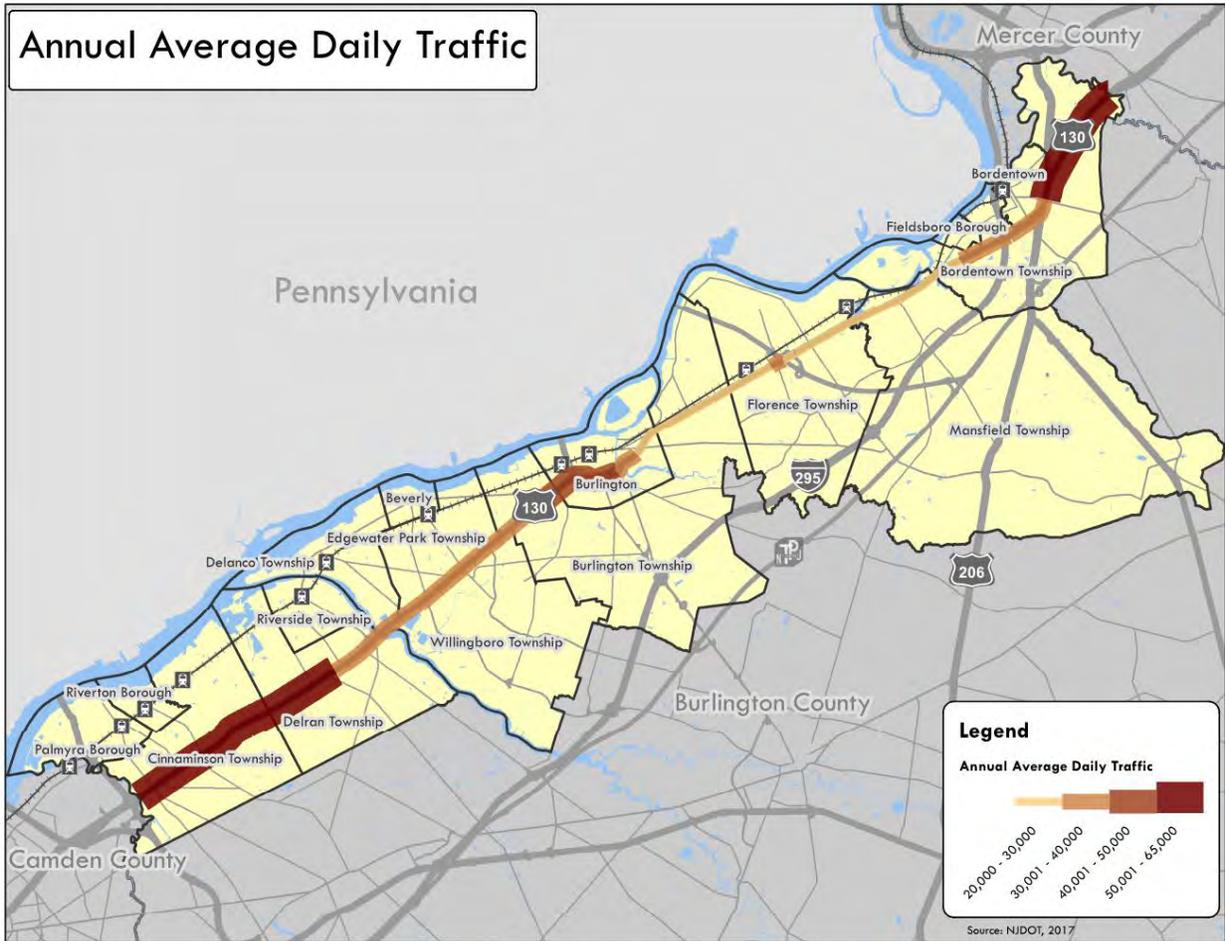


Figure 9: Annual Average Daily Traffic

B. Congestion

Probe Data Analytics (PDA) Suite¹ data from 2016 was reviewed within the project corridor. Based on INRIX data, the PDA Suite provides Travel Time Indices (TTIs) for the corridor throughout the day. The TTI is a ratio of the travel time for a given time period compared to travel time under free flow conditions.

The TTI screen for the project corridor is shown in Figure 3. The highest congestion in the southbound direction was recorded in the segment approaching the Burlington Road (CR 662) intersection in Bordertown during the PM peak period, with a TTI of 1.71. The highest congestion in the northbound direction was recorded in the segment near US 206 (Bordertown) during the PM peak period, with a TTI of 1.79. Both TTIs indicate considerable congestion during the peak hour.

Data Source(s): Probe Data Analytics (PDA) Suite data developed by the University of Maryland for the I-95 Corridor Coalition

¹ The University of Maryland's Center for Advanced Transportation Technology Laboratory has created a number of Probe Data Analytics (PDA) to aid users in evaluating system performance in support of planning, operations, research and other activities. More detail can be found here: <http://i95coalition.org/projects/probe-data-analytics/>

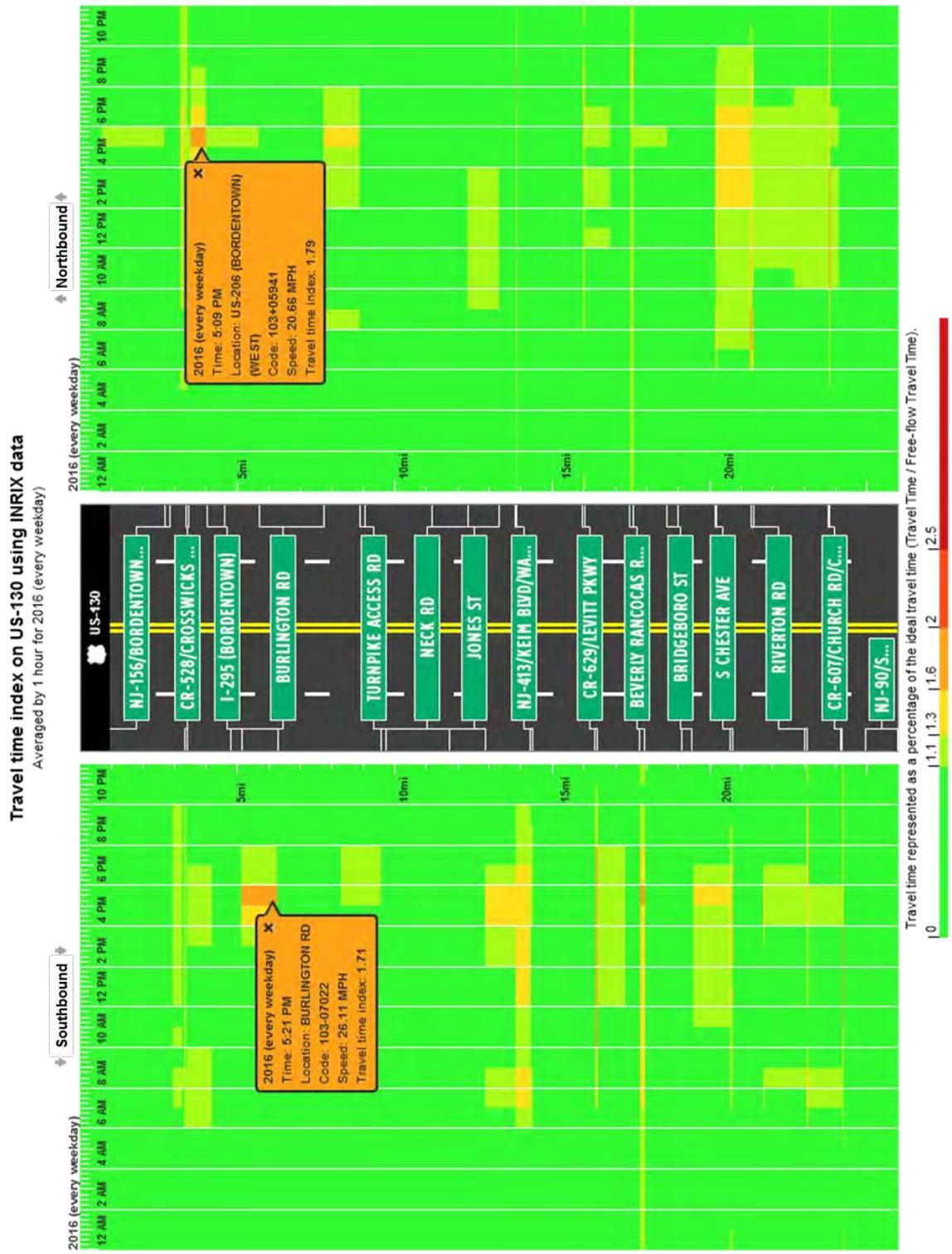


Figure 10: PDA Suite Congestion Scan Analysis

14. PUBLIC TRANSPORTATION

There are multiple transit facilities along the Route 130 Corridor in Burlington County, including the NJ Transit light rail River Line, three NJ Transit bus routes, multiple park and ride locations, and the BurLINK shuttle service. Several connections and transfers are available between the transit options. These transit options, shown in Figure 4, provide a critical alternative to personal vehicular transportation on this highly-traveled Route 130 Corridor.

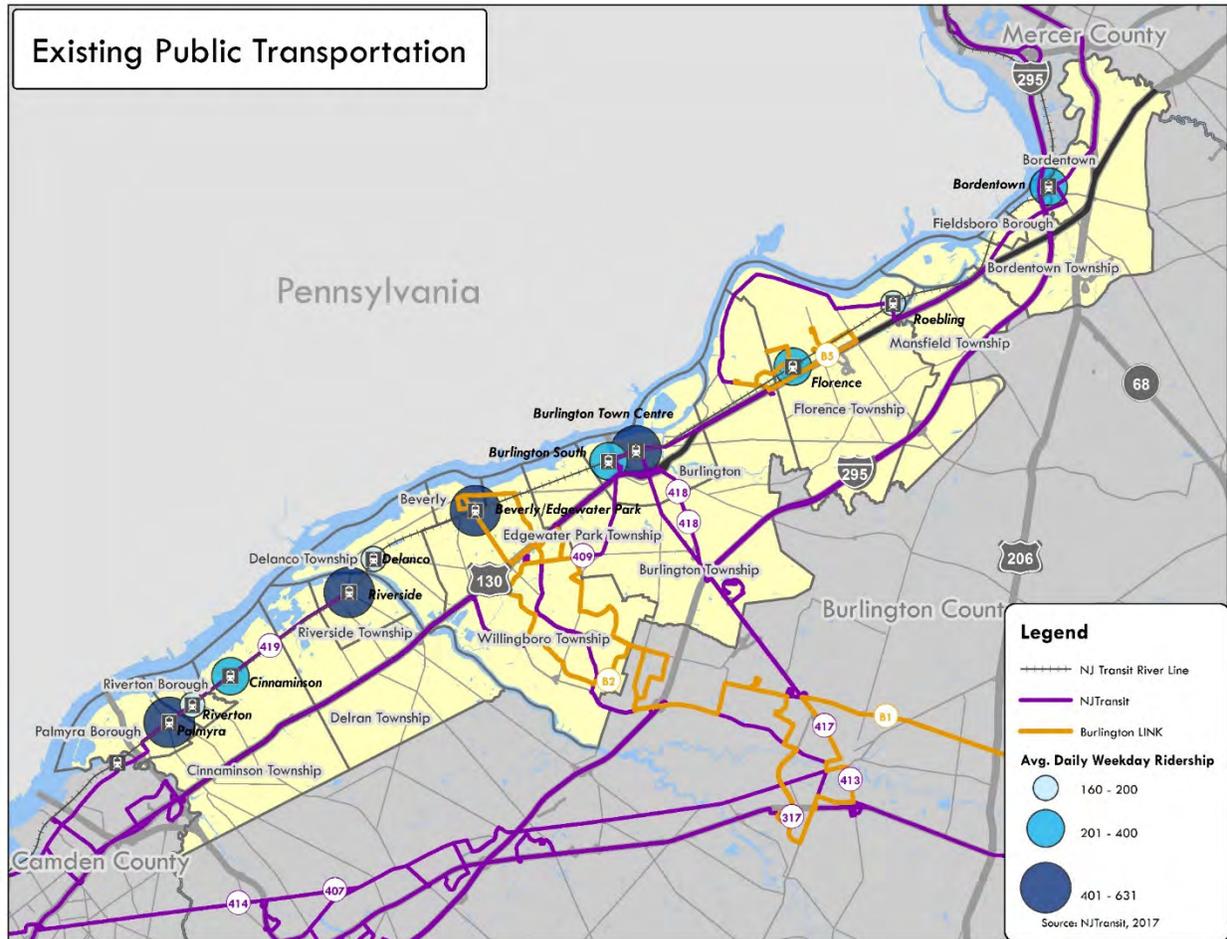


Figure 11: Existing Public Transportation

A. NJT Light Rail – River Line

The NJ Transit River Line is a diesel powered, light rail line that generally runs parallel to both the Delaware River and Route 130, providing weekday and weekend service through Camden, Burlington, and Mercer counties. The River Line provides crucial connections to regional transportation hubs in Camden at the Walter Rand Transportation Center, which provides access to the PATCO Speedline and Philadelphia, and in Trenton at the Trenton Transit Center, which provides access to the Northeast Corridor Line and New York.

The line is 34 miles long with 21 stations and over 50 at-grade rail crossings. The NJ Transit River Line has 10 stations in Burlington County. Based on fiscal year 2017 NJ Transit ridership data, there are 8,600 average weekday boardings on the River Line. Within Burlington County, stations range from 160 average weekday boardings at the Riverton station to 631 average weekday boardings at the Burlington Town Centre station.

The Burlington Town Centre station ranks as the third largest by boardings behind the Walter Rand Transportation Center (1) and the Trenton Transit Center (2).

Data Source(s): NJ Transit Average Weekday Light Rail Passenger Boardings, Fiscal Year 2017

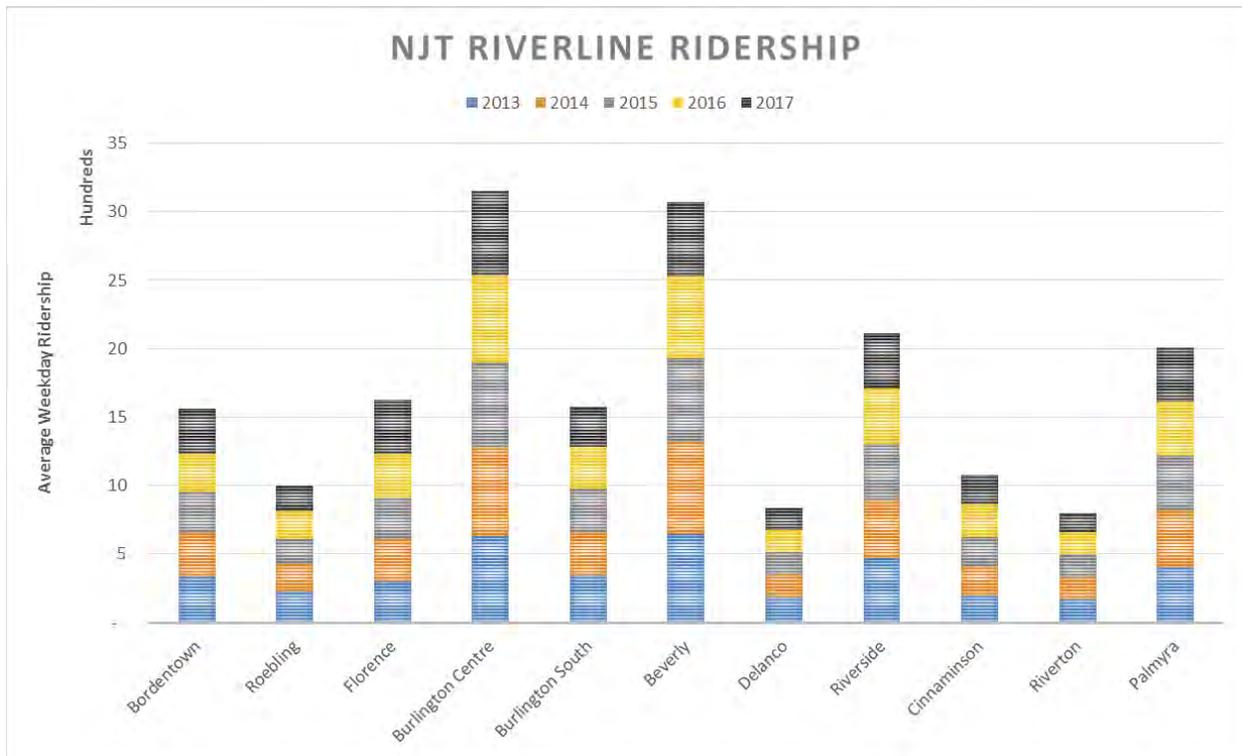


Figure 12: NJ Transit Riverline Ridership

B. NJT Bus Routes

There are currently four NJ Transit bus routes that service the Route 130 corridor:

- Route 409: Trenton-Willingboro-Philadelphia
- Route 417: Mount Holly-Willingboro-Philadelphia
- Route 418: Express weekdays Camden-Willingboro-Trenton
- Route 419: Camden-Riverside

The Route 409 bus provides service along a majority of the Route 130 corridor from Cinnaminson to Bordentown. The bus route provides overall service between Trenton and Philadelphia, with 11 scheduled stops in Burlington County. Peak-hour headways are approximately 10-20 minutes in the AM and every 30 minutes in the PM. Off-peak headways are approximately 30-60 minutes and the weekend service has approximately one hour headways. This route has an average daily weekday ridership of 2,300 passengers, with 940 to 1,200 average daily weekend passengers (2016 NJ Transit data). Figure 6 shows the ridership on Route 409 for the previous four years.

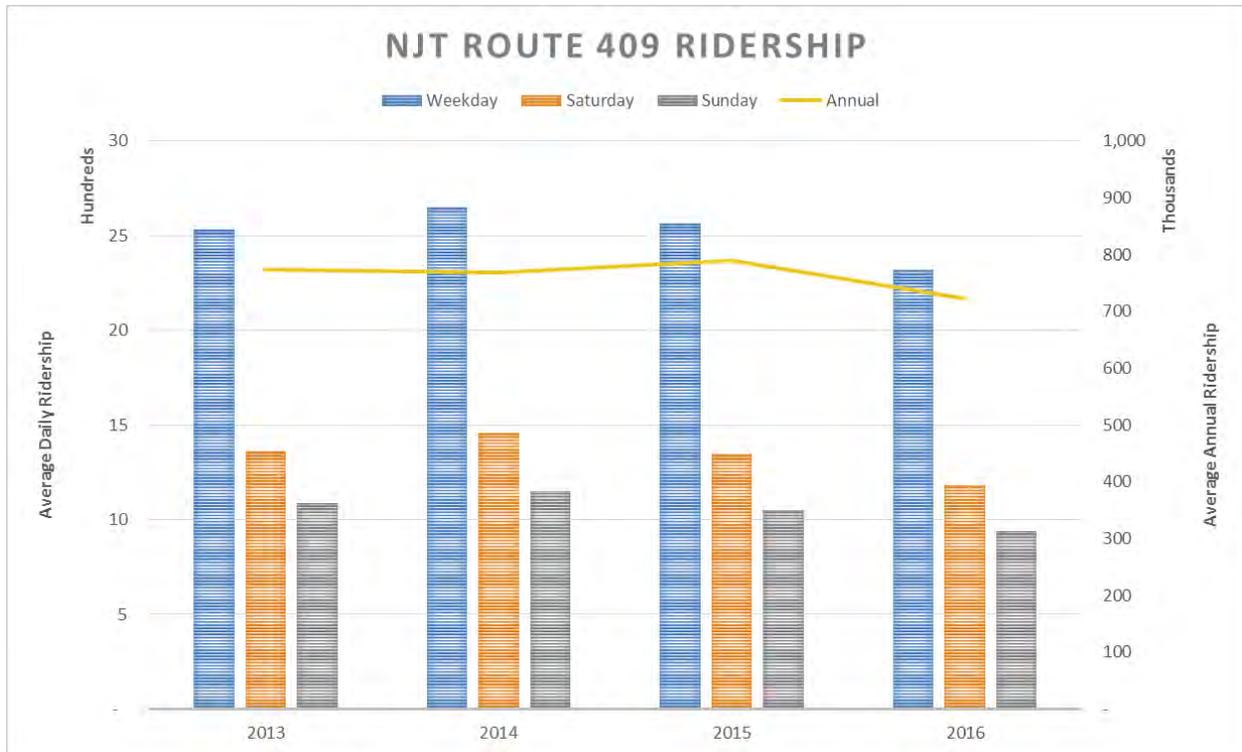


Figure 13: NJ Transit Route 409 Ridership

The Route 417 bus serves the southern portion of the corridor from Cinnaminson north to the Willingboro Town Center, beginning in Mount Holly and ending in Philadelphia. There are five stops in Burlington County, including in Cinnaminson, Delran, two in Willingboro, and at the Fairgrounds Plaza in Mount Holly. This is a weekday service with approximately 30-minute headways with four AM trips to Philadelphia and four PM trips back to South Jersey. It also operates an express service between the two Willingboro stops. This Route has an average daily ridership of 96 passengers (2016 NJ Transit data).

The Route 418 bus provides a limited express service along a portion of the corridor with one AM trip from Camden to Trenton and one return PM trip with stops in Willingboro and Burlington. This route has an average daily weekday ridership of 43 passengers with no weekend service available (2016 NJ Transit data).

The Route 419 bus serves a short segment of the southern corridor from Palmyra to Riverside, beginning in Camden. This route parallels the NJ Transit River Line but provides more local stops. This service has approximately one-hour headways on weekdays and the weekend.

Data Source(s): NJ Transit Bus Timetables (accessed 08/2017)

C. Park and Ride

There are 11 park and ride facilities in Burlington County that primarily serve the Route 130 Corridor. Ten of these sites are associated with their respective NJ Transit River Line stations as follows:

- Bordentown – 200 spaces
- Roebling – 220 spaces
- Florence – 625 spaces
- Burlington South – 415 spaces
- Beverly / Edgewater – 205 spaces
- Delanco – 50 spaces
- Riverside – 300 spaces

- Cinnaminson – 250 spaces
- Riverton – 40 spaces
- Palmyra – 25 spaces

Additionally, there is a park and ride facility at the Willingboro Town Center at the intersection of Route 130 and Levitt Parkway, providing connection to the NJT Route 409 and BurLink Route B2 bus services. This site houses approximately 233 parking spaces.

The distribution of the capacity of park and ride facilities serving the corridor is shown in Figure 7.

Data Source(s): Cross County Connection TMA website (accessed 09/2017)

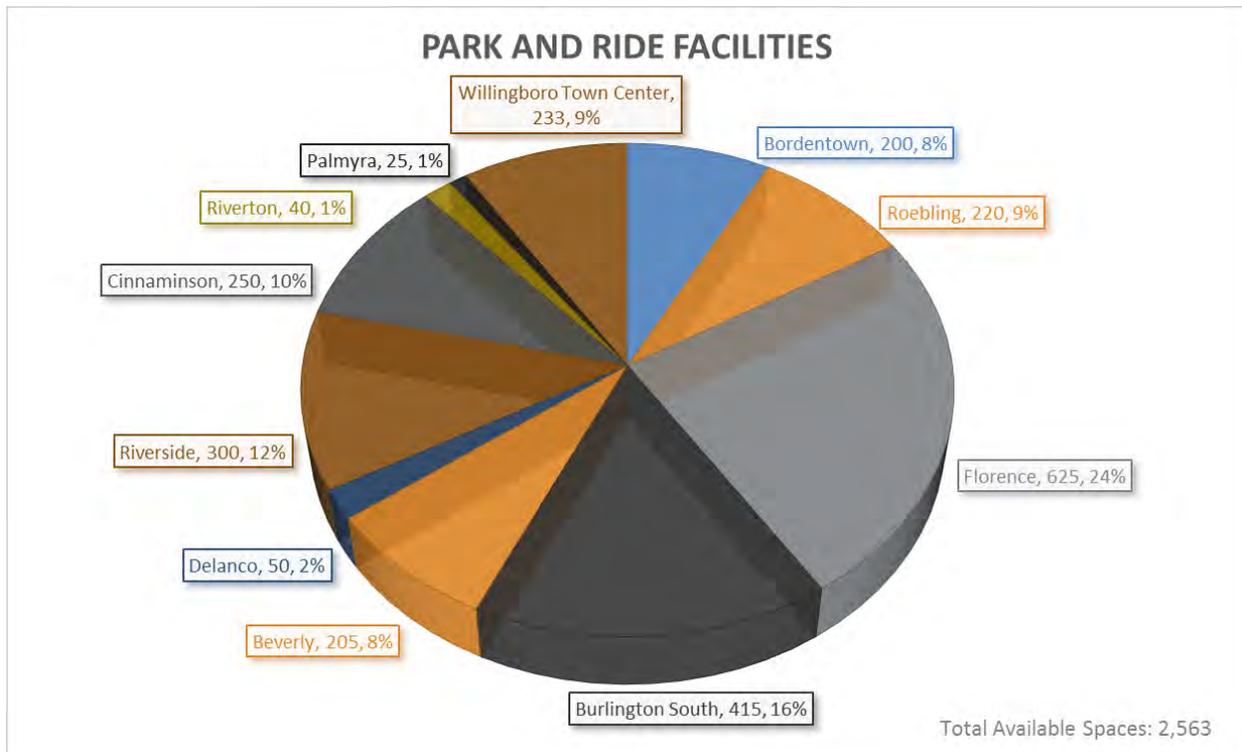


Figure 14: Park and Ride Facilities

D. BurLINK

The Burlington County Board of Chosen Freeholders provides a shuttle service to its residents via the BurLINK. The BurLINK buses connect with several NJ Transit bus routes and River Line stations. This service is operated by Stout's Transportation Services and is funded by the Federal Transit Administration, NJ Transit, and Burlington County. The BurLink currently has three active routes (B1, B2, B5), with several routes recently ceasing operation in 2015 and 2016. BurLINK ridership for the past four years is illustrated in Figure 8.

The B1 Route provides service between the Beverly River Line station and Browns Mills / Country Lakes with 11 total stops including Willingboro, Westampton, Lumberton, Mount Holly, and Pemberton. This service operates with one-hour headways and has a daily ridership of 250 passengers (2016 Burlington County ridership data).

The B2 Route provides service between the Beverly River Line station and several points in Willingboro, with connections to the B1 route. This Route operates three daily AM trips and two daily PM trips and has a daily ridership of 17 passengers (2016 Burlington County ridership data).

The B5 Route provides service between the Florence River Line station, the Haines Center industrial park, and various industrial uses near Railroad Avenue and Cedar Lane in Florence / Burlington Townships. This route operates five daily AM trips and six daily PM trips and has a daily ridership of 41 passengers (2016 Burlington County ridership data).

Data Source(s): Ridership statistics provided by Burlington County for BurLINK Bus Services

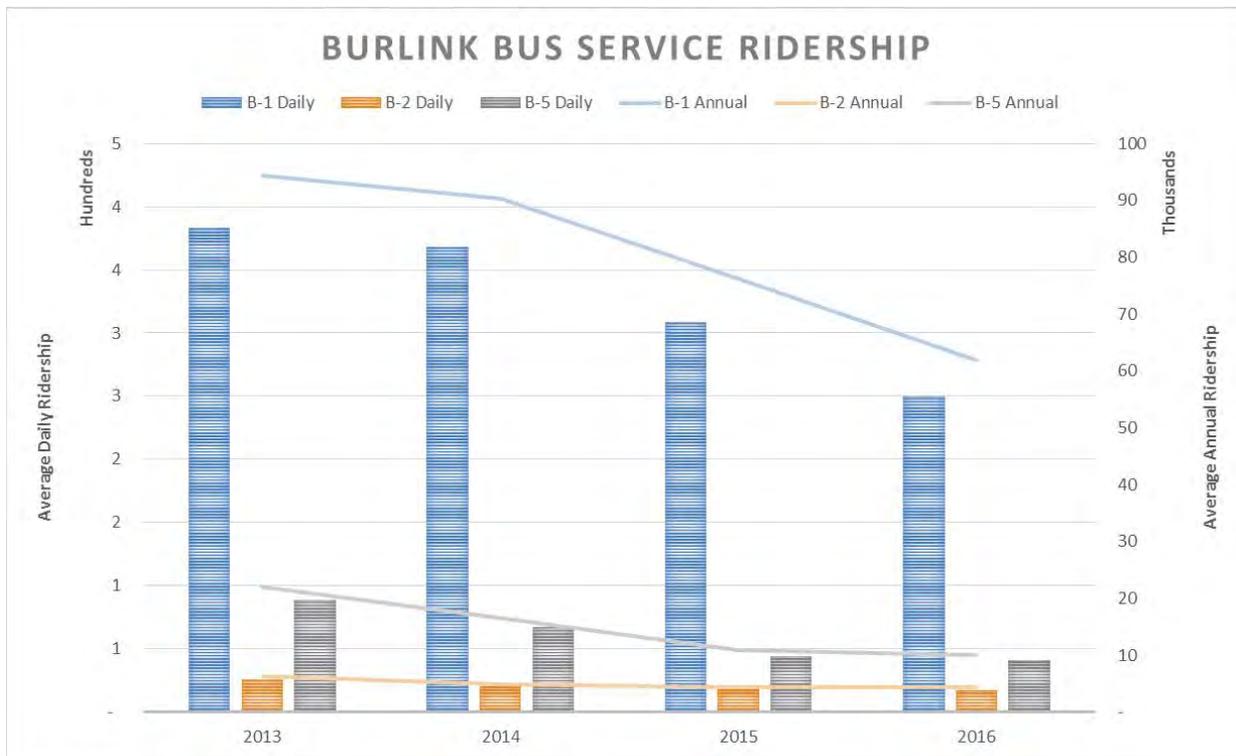


Figure 15: BurLINK Bus Service Ridership

15. SAFETY

A. Crash Data

The raw crash records were retrieved from the NJDOT Bureau of Transportation Data and Safety for the period from 2014 to 2016. The data was summarized by collision type, severity, environmental conditions, and location. The data indicates 2,372 total reportable crashes along the corridor for the three-year period. There were 18 fatal crashes and an additional 30% (703) were identified as involving injuries. While most crashes during the three-year period typically occurred at non-intersection locations (63%), the percentage is slightly less than the statewide average for state highways (74%). Crash types consisted largely of same direction impact crashes (49% rear-end and 22% sideswipe), comparable with statewide averages. The environmental conditions for the crashes within the project corridor were consistent with the factors for all state system roadways.

Data Source(s): New Jersey Department of Transportation Bureau of Transportation Data and Safety

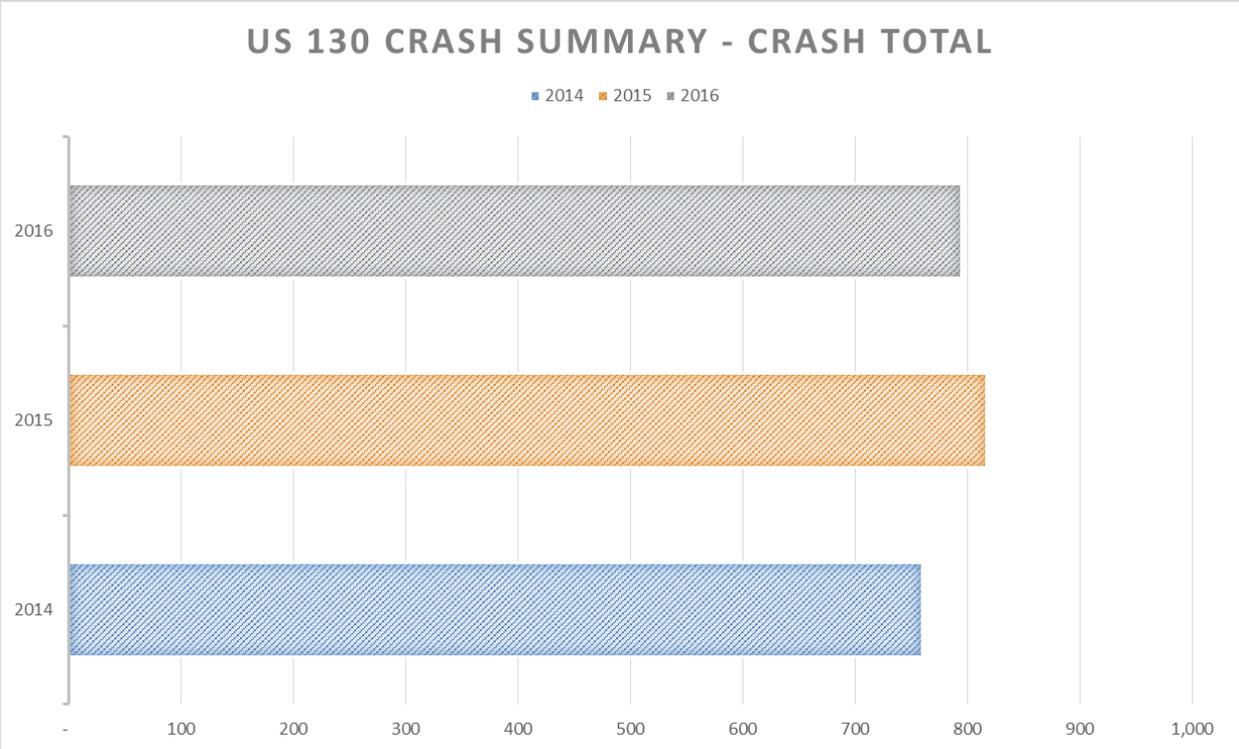


Figure 16: Corridor-wide Crash Summary by Year

Table 1: Corridor-wide Crash Summary by Type and Environmental Conditions

River Route Corridor US 130 Crash Data						
Parameters	Individual Year			3-Year Period		
	2014	2015	2016	Total	Average	%
Total Crashes	760	817	795	2,372	791	-
Collision Type						
Same Direction - Rear End	369	381	404	1,154	385	48.7%
Same Direction - Sideswipe	157	190	163	510	170	21.5%
Angle	85	83	79	247	82	10.4%
Head On	9	8	10	27	9	1.1%
Parked Vehicle	6	3	2	11	4	0.5%
Left Turn / U Turn	8	8	12	28	9	1.2%
Backing	7	6	3	16	5	0.7%
Encroachment	5	13	4	22	7	0.9%
Overtaken	4	5	2	11	4	0.5%
Fixed Object	70	84	68	222	74	9.4%
Animal	10	17	27	54	18	2.3%
Pedestrian	13	9	8	30	10	1.3%
Pedalcycle	2	0	3	5	2	0.2%
Non-Fixed Object	10	4	8	22	7	0.9%
Other	5	6	2	13	4	0.5%
Unknown	0	0	0	0	0	0.0%
Intersection Type						
At Intersection	286	299	287	872	291	36.8%
Non at Intersection	474	518	508	1,500	500	63.2%
Crash Severity						
Fatality	4	9	5	18	6	0.8%
Injury	238	233	232	703	234	29.6%
Property Damage Only	518	575	558	1,651	550	69.6%
Lighting Conditions						
Day	554	600	571	1,725	575	72.7%
Dawn	15	21	20	56	19	2.4%
Dusk	9	12	17	38	13	1.6%
Night	178	181	185	544	181	22.9%
Unknown	4	3	2	9	3	0.4%
Road Surface Conditions						
Dry Surface	583	638	627	1,848	616	77.9%
Wet Surface	139	139	155	433	144	18.3%
Snow	25	24	6	55	18	2.3%
Ice	11	12	3	26	9	1.1%
Other	1	4	4	9	3	0.4%
Unknown	1	0	0	1	0	0.0%

B. Crash Clusters and Crash Rate Compared to Statewide

The project corridor was divided into 14 segments based on roadway cross section, and the annual crash rate per million vehicle miles traveled was calculated for each segment using the 2014-2016 crash data.² The crash rates for each segment are summarized in the table below and compared to the statewide average for roadways with similar cross sections. The crash rates for each segment are also illustrated on the map in Figure 9.

Table 2: Calculated Crash Rate Compared to Statewide Average (crashes per million vehicle miles traveled per year)

MP	Municipality	Cross Section	Crash Rate	Statewide Rate	Deviation from State Average*
35.72 - 41.22	Cinnaminson, Delran, Delanco, Willingboro	4 Lanes / Barrier / No Shoulder	2.48	3.17	-22%
41.22 - 45	Delanco, Willingboro, Edgewater Park, Burlington Twp	4 Lanes / Barrier / Yes Shoulder	1.71	1.89	-10%
45 - 45.92	Burlington Twp, Burlington City,	4 Lanes / Grass Median / No Shoulder	4.33	4.5	-4%
45.92 - 46.45	Burlington City	4 Lanes / Barrier / No Shoulder	9.76	3.17	208%
46.45 - 46.76	Burlington City	4 Lanes / Barrier / Yes Shoulder	4.77	1.89	152%
46.76 - 54.22	Burlington City, Burlington Twp, Florence, Mansfield, Bordentown Twp	4 Lanes / Grass Median / Yes Shoulder	1.62	2.5	-35%
54.22 - 55.3	Bordentown Twp	4 Lanes / Barrier / Yes Shoulder	1.56	1.89	-17%
55.3 - 55.7	Bordentown Twp	4 Lanes / Grass Median / Yes Shoulder	3.5	2.5	40%
55.7 - 55.77	Bordentown Twp	4 Lanes / Barrier / Yes Shoulder	3.33	1.89	76%
55.77 - 55.95	Bordentown Twp	4 Lanes / Barrier / No Shoulder	4.46	3.17	41%
55.95 - 56.1	Bordentown City	4 Lanes / Grass Median / No Shoulder	3.96	4.5	-12%
56.1 - 56.32	Bordentown City, Bordentown Twp	4 Lanes / Barrier / No Shoulder	1.16	3.17	-63%

²

$$\text{Crashes / Million Vehicle Mi / 3 Years} = \frac{(\# \text{ Crashes in past 3 years}) (10^6)}{(\text{ADT})(365 \text{ Days})(3 \text{ years})(\text{Segment length in miles})}$$

56.32 - 56.44	Bordentown Twp	4 Lanes / Grass Median / No Shoulder	1.7	4.5	-62%
56.44 - 58.28	Bordentown Twp	4 Lanes / Grass Median / Yes Shoulder	0.6	2.5	-76%

*RED indicates segment crash rate exceeds statewide average

As shown in the table and Figure 9, several segments of the corridor had crash rates more than 25 percent higher than the statewide average for similar cross sections, including:

- Segments with barrier median and shoulders: MP 46.45-46.76 (Burlington City), MP 55.70-55.77 (Bordentown Township)
- Segments with barrier median and no shoulders: MP 55.77-55.95 (Bordentown Township, Bordentown)
- Segments with grass median and shoulders: MP 55.30-55.70 (Bordentown Township)
- Segments with grass median and no shoulders: MP 45.92-46.45 (Burlington City)

Crash clusters were identified by calculating the number of crashes that occurred within 500 feet of each crash location during the three-year study period. A total of 21 crash clusters were identified from the raw data, as shown in Figure 9. Combined, the identified crash clusters included 1,949 total crashes representing 82 percent of the total crashes along the corridor for the three-year period. Overall, the crashes within the identified crash clusters follow the same collision type, location, and environmental conditions as previously summarized.

The crash cluster with the largest number of crashes was located in Burlington City between MP 45.91-46.82. Crashes within this largest cluster deviated from the other crash clusters along the corridor in terms of collision type and location. During the three-year period, crashes within this largest cluster occurred at intersection locations (56%) and consisted largely of same direction impact (27% rear-end and 38% sideswipe) and angle (22%) crashes.

Data Source(s): New Jersey Department of Transportation Bureau of Transportation Data and Safety

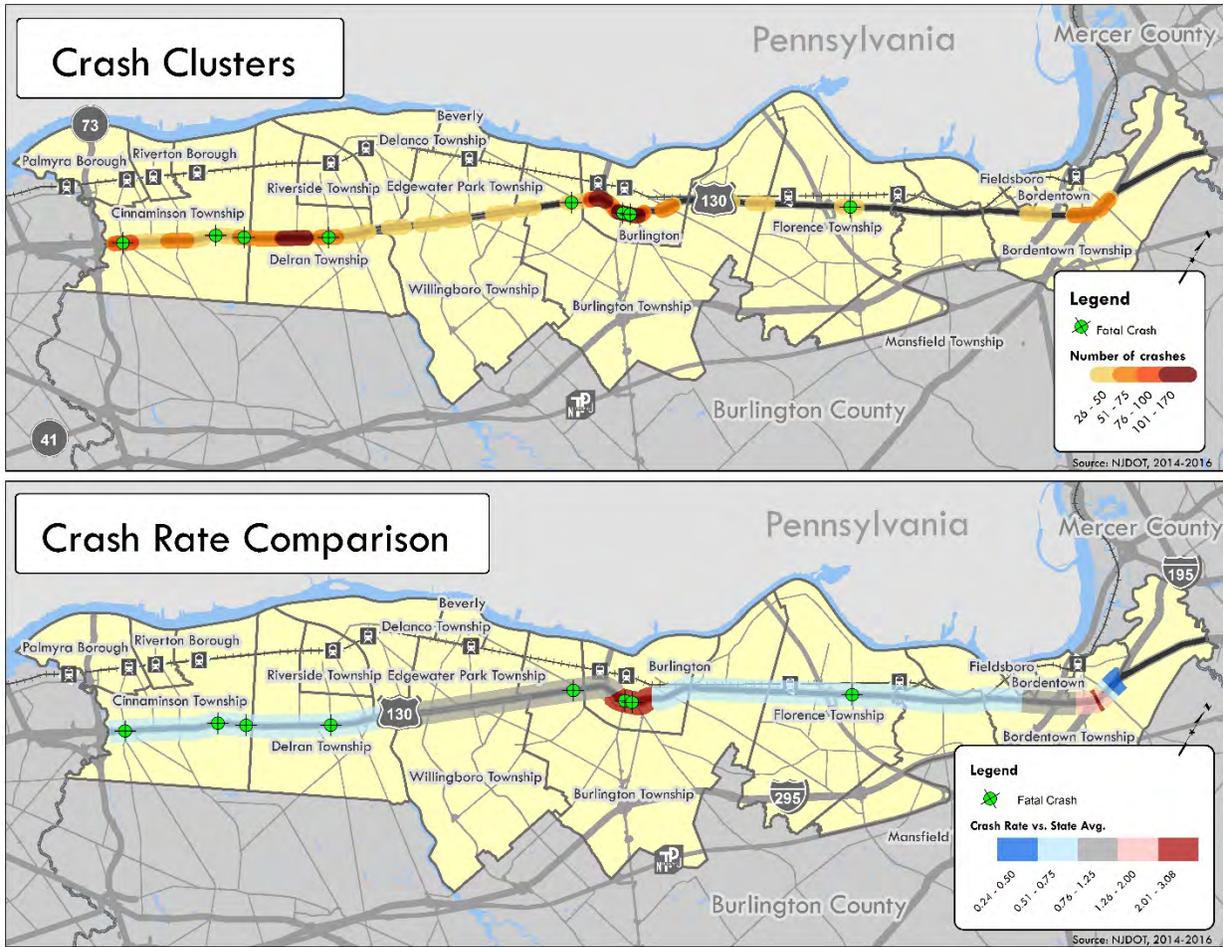


Figure 17: Crash Clusters and Crash Rate Compared to Statewide

C. Bicycle and Pedestrian-Related Crashes

The number of pedestrian-related crashes along the project corridor decreased from 13 in 2014 to 9 in 2015 and 8 in 2016. Fatal pedestrian crashes ranged from 3 in 2014 (23% of all pedestrian-related crashes) to 4 in 2015 (44% of pedestrian-related), and 2 in 2016 (25% of pedestrian-related). Pedestrian-related crashes during the three-year period typically occurred at intersection locations (80%) and during night-time conditions (67%). There were five locations that had multiple pedestrian-related crashes:

- Church Road in Cinnaminson Township – *near Shoppes at Cinnaminson retail development*
- Wynwood Drive in Cinnaminson Township – *NJT Route 409 bus stops located at intersection*
- Taylors Lane in Cinnaminson Township – *NJT Route 409 bus stops located at intersection*
- Chester Avenue in Delran Township – *NJT Route 409 bus stops located at intersection*
- Fairview Boulevard in Delran Township – *near Hartford Corners retail development*

There were five bicycle-related crashes along the project corridor during the analysis period: two in 2014 and three in 2016. There were no fatalities associated with the reported bicycle-related crashes. Overall, bicycle and pedestrian-related crashes represented 1.5 percent of total project corridor crashes and 50 percent of fatal corridor crashes.

The location of bicycle and pedestrian crashes are illustrated in Figure 10.

Data Source(s): New Jersey Department of Transportation Bureau of Transportation Data and Safety

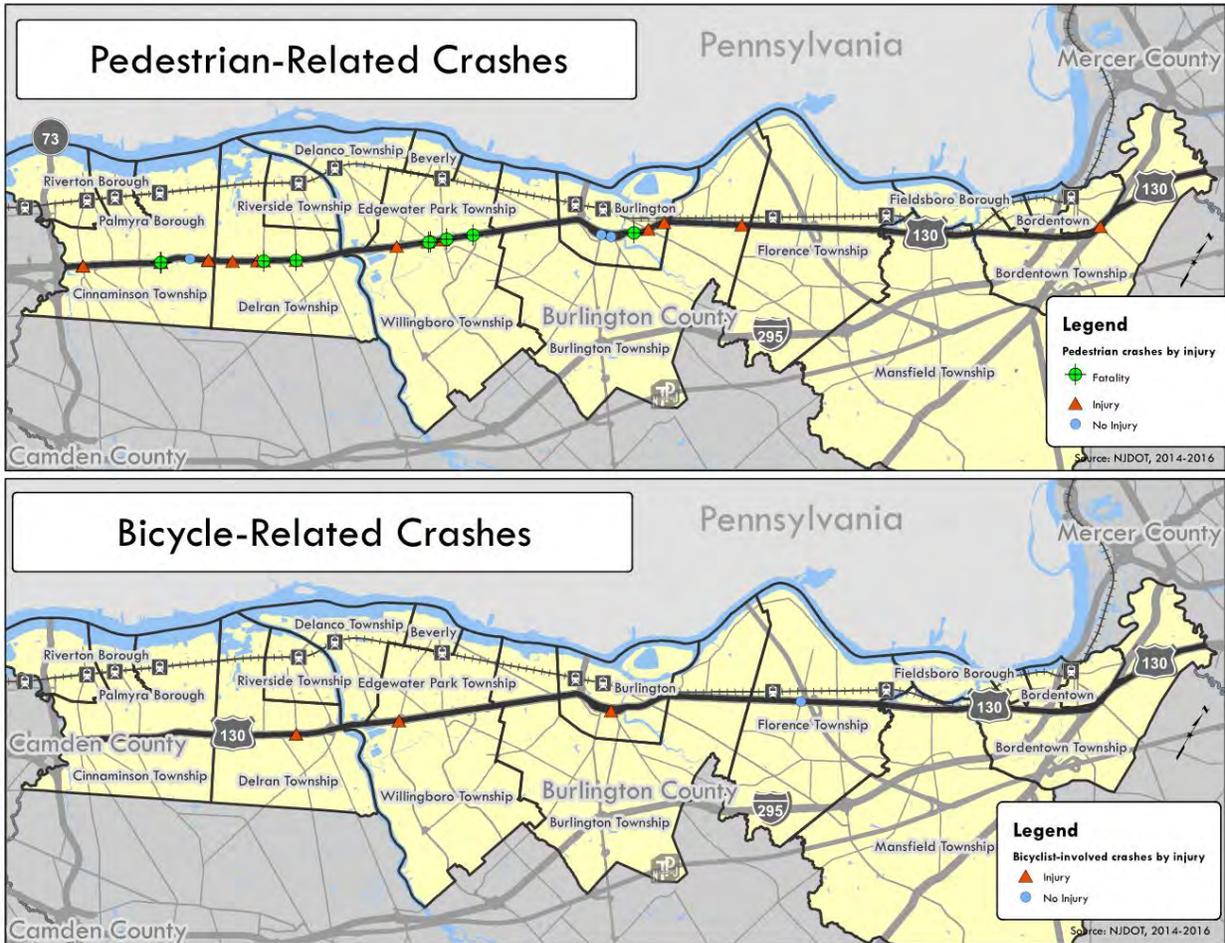


Figure 18: Bicycle and Pedestrian-Related Crashes

16. MANAGEMENT SYSTEMS DATA

A. Congestion Management System (CMS)

NJDOT's CMS database identifies congestion issues within the state highway system. The project corridor is on the list of Congested Commuter Corridors on State Highways. Within the CMS, the project corridor is divided into 16 separate segments. The CMS scores and rankings are based upon AM and PM v/c ratios, 24-hour two-way volumes, and functional class. As shown in Figure 11, the CMS identified four segments with Medium-High priority rankings:

- MP 35.52-40.86: Southern portion of the corridor (Cinnaminson and Delran)
- MP 45.32-45.75: Burlington City
- MP 50.25-54.22: NJ Turnpike Extension to Bordentown (highest overall ranking)
- MP 56.95-58.36: North of U.S. Route 206.

Data Source(s): New Jersey Department of Transportation Congestion Management System (accessed 07/2017)

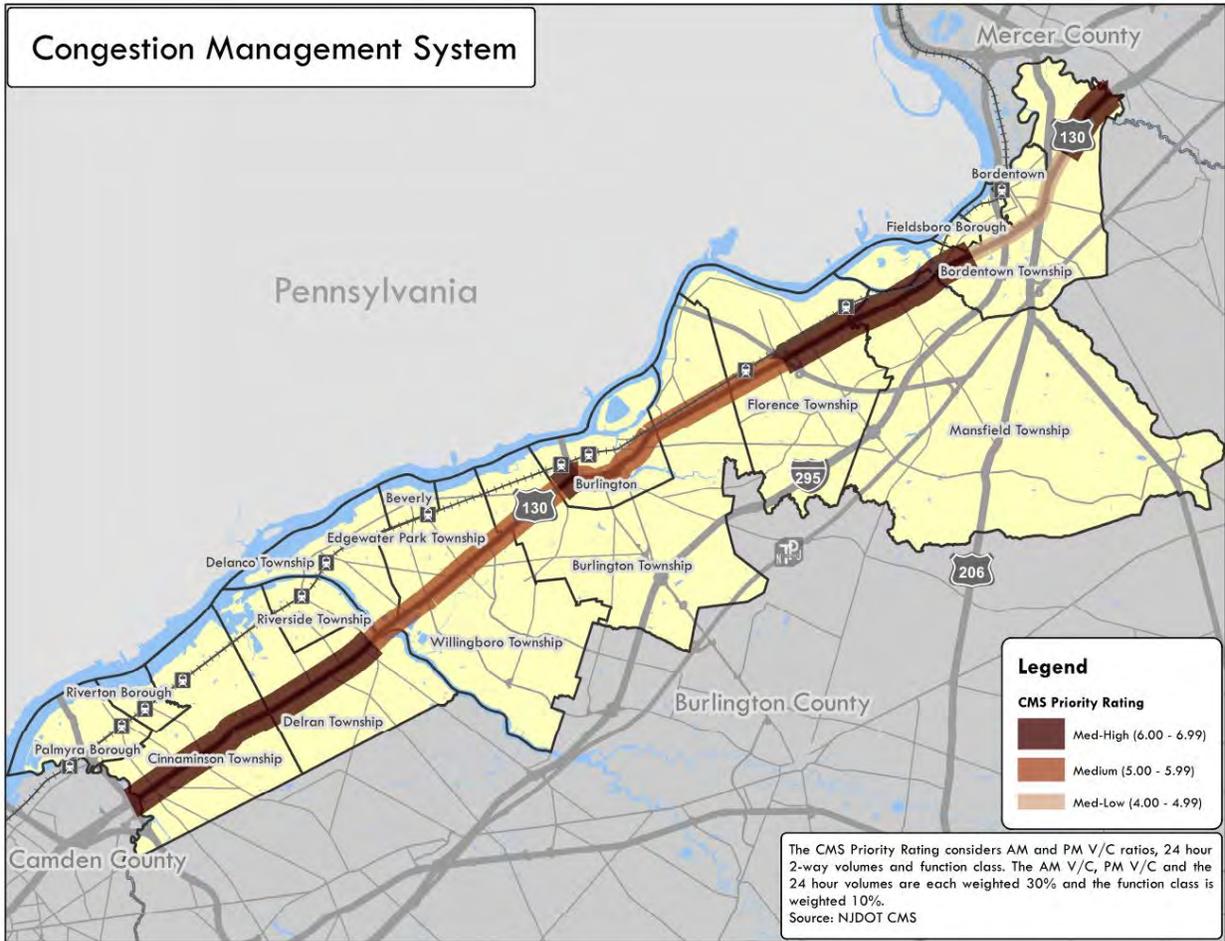


Figure 19: Congestion Management System Ratings

B. Pavement Management System (PMS)

The NJDOT Pavement Management Unit supplied Skid/Roughness/Surface Distress/Rut Data from test dates in 2015 and 2016 for the project corridor, divided into 0.1-mile segments. Overall, the average international roughness index (IRI) values along the entire corridor are 134 southbound and 157 northbound, representing 'Fair' ratings. The average surface distress index (SDI) values along the corridor are 1.85 northbound and 1.86 southbound, representing 'Poor' ratings.

Data for many segments of the corridor indicated substandard skid value, deficient IRI values, and/or deficient SDI values. Segments with deficient conditions are identified in Figure 12. The following segments included substandard or deficient values in all three categories:

- Northbound direction: MP 36.2-36.3, MP 36.6-36.7, MP 41.5-41.6, MP 43.6-43.7, MP 44.8-45.1, MP 49.0-49.2, MP 49.3-49.5, MP 49.9-50.1, MP 52.5-52.6, MP 55.3-55.5
- Southbound direction: MP 42.2-42.3, MP 45.6-45.7, MP 46.8-46.9, MP 48.6-48.8, MP 49.1-49.4, MP 49.5-49.7, MP 49.8-50.0, MP 50.1-50.7, MP 51.6-51.7, MP 51.8-52.0

Data Source(s): New Jersey Department of Transportation Pavement Management System (accessed 09/2017)

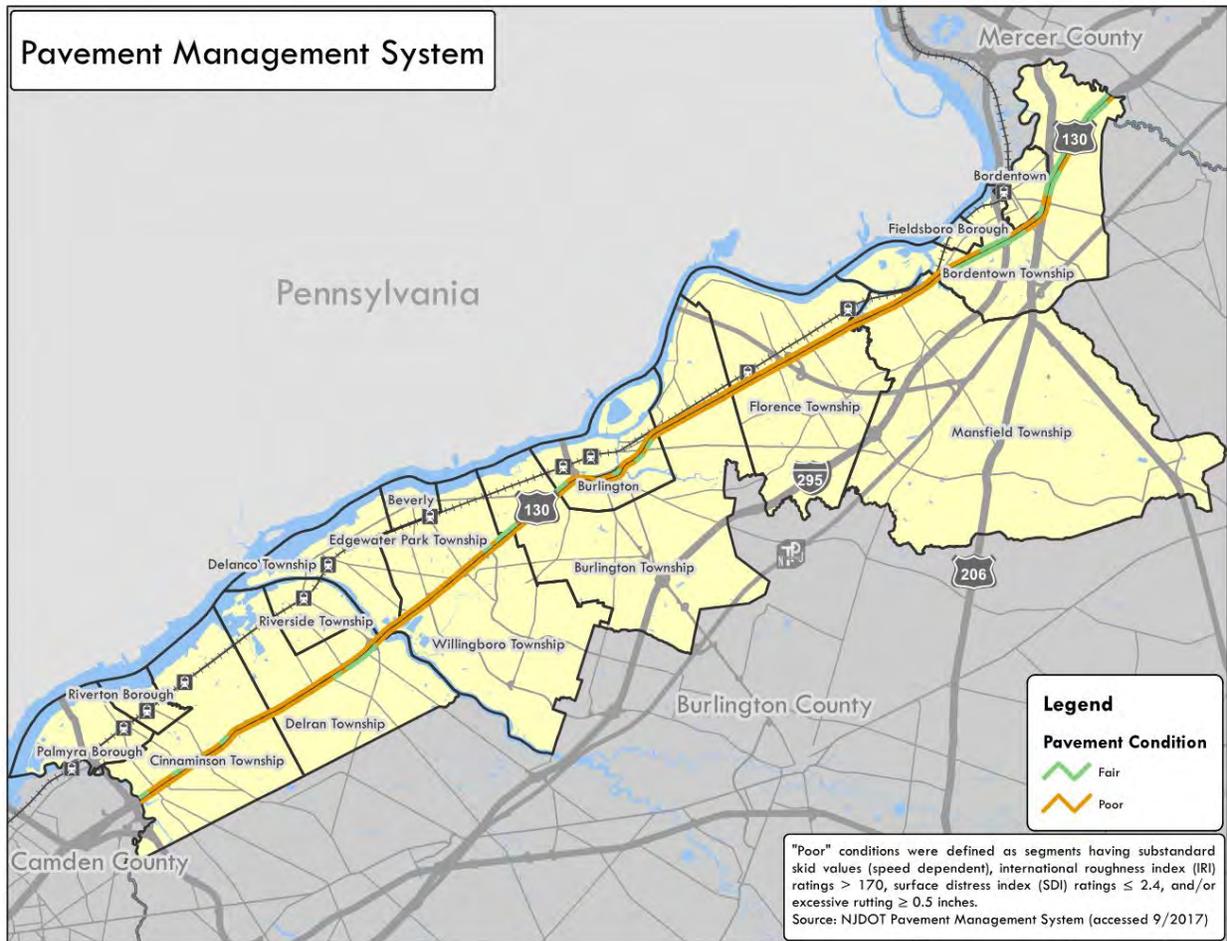


Figure 20: Pavement Management System Ratings

C. Pedestrian Safety Management System (PSMS)

NJDOT provided information on priority bicycle and pedestrian locations from the Pedestrian Safety Management System (PSMS) (last updated 2014). Based on information received from NJDOT, there were four segment locations along the project corridor identified as priority pedestrian locations:

- MP 38.46-40.46 – ranked #9 out of 230 (9 reported pedestrian-related crashes)
- MP 42.72-44.72 – ranked #29 out of 230 (6 reported pedestrian-related crashes)
- MP 52.45-54.45 – ranked #188 out of 230
- MP 55.96-57.96 – ranked #178 out of 230 (1 reported pedestrian-related crash)

There were six segment locations identified in the Pedestrian Safety Management System as priority bicycle locations:

- MP 36.10-38.10 – ranked #329 out of 375
- MP 38.46-40.46 – ranked #108 out of 375 (1 reported bicycle-related crash)
- MP 42.72-44.72 – ranked #113 out of 375
- MP 44.93-46.93 – ranked #47 out of 375 (1 reported bicycle-related crash)
- MP 54.00-56.00 – ranked #92 out of 375
- MP 56.06-58.06 – ranked #330 out of 375

This information was also mapped and overlaid with recent crash data (2014-2016), as shown in Figure 13. Several of the more recent severe bicycle and pedestrian crashes occurred in areas not previously identified in the PSMS, including fatalities in Cinnaminson and Burlington City.

Data Source(s): New Jersey Department of Transportation Pedestrian Safety Management System (accessed 06/2017)

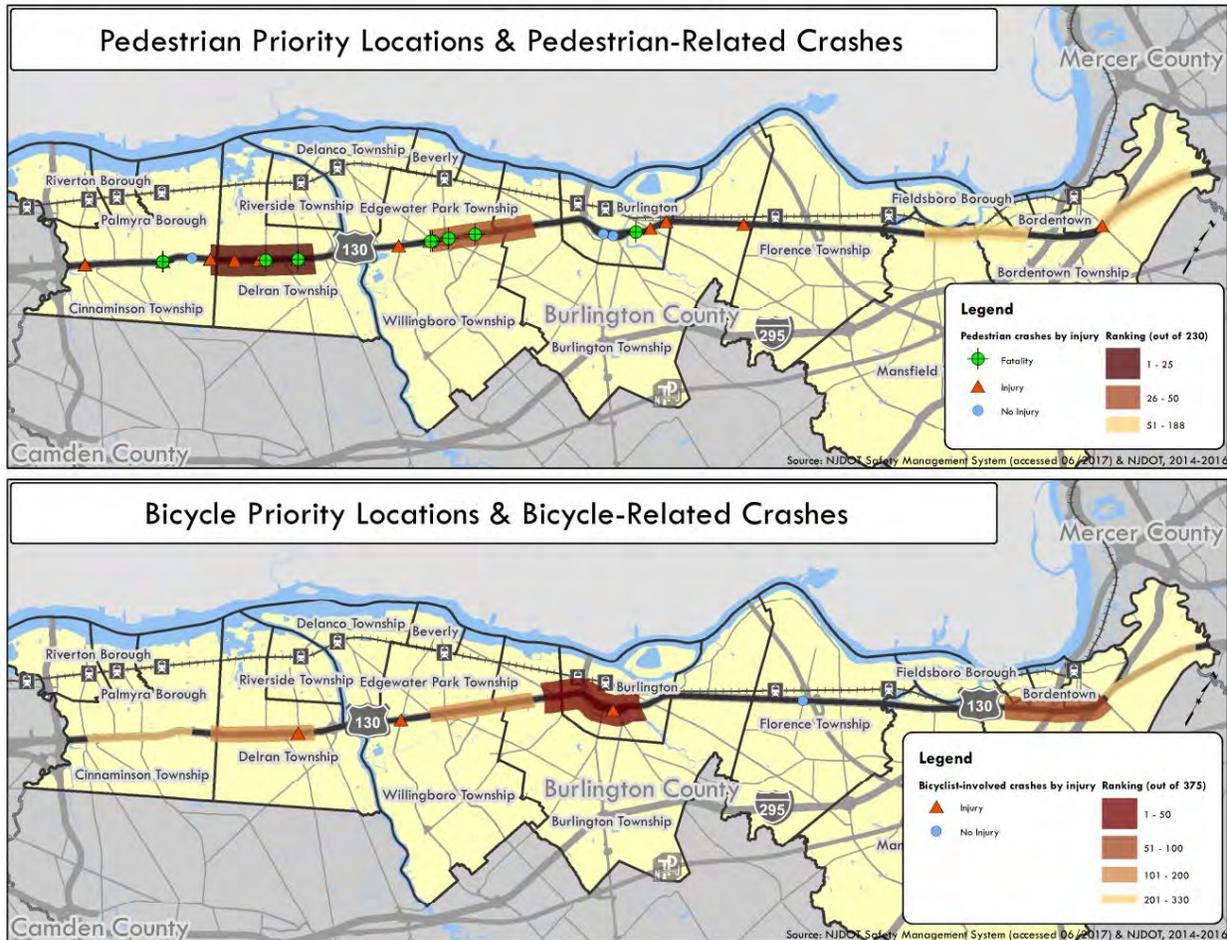


Figure 21: PSMS Priority Locations

2000 Lenox Drive, 3rd Floor
Lawrenceville, NJ 08648
609-512-3500

