NEWPORT TRAIN STATION FEASIBILITY STUDY

FINAL DRAFT REPORT JUNE 20, 2013

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BACKGROUND

Transportation has always helped to shape Newport. Its location along the Christina River, the historic Kings Highway, and Newport-Gap Pike enabled the town's early development as an agricultural exporter. By the middle of the 19th century, the railroad was extended through Newport. This, and Wilmington's growth as an agricultural exporter, forced a reorientation of the town's commercial focus to industry. With the advent of the automobile age in the latter half of the 20th century, Newport's close proximity to the Interstate system and location along SR 141 (the Newport Viaduct) resulted in its emergence as a bedroom, service-sector community of Wilmington and Philadelphia.

Today, the more than 1,000 residents of Newport are interested in creating a more sustainable, livable and complete town. Shifting away from the town's current automobile focus to a future where commuter rail service is restored, and residents and visitors can easily walk and bike throughout Newport and beyond, will help realize this goal.

Figure 1. As seen from the south, the 2,000-foot SR 141 Newport Viaduct (reconstruction of which began in 2011) divides downtown Newport in half. The old Newport train station, since demolished, was located at the blue dot. [Source: Bing Maps]

The Town of Newport has a very advantageous location along Amtrak's Northeast Corridor, the nation's busiest passenger rail route, which links Washington, Baltimore, Philadelphia, New York, and Boston. A 1990s study that extended Southeastern Pennsylvania Transportation Authority (SEPTA) commuter rail service along Amtrak's Northeast Corridor to Churchmans Crossing and Newark did not result in a new station in Newport. However, the Delaware Transit

Corporation (DTC) is proceeding with construction of a third mainline track on the Northeast Corridor between Wilmington and Newport. When complete, this link will eliminate a pinch point on the Northeast Corridor and will enable SEPTA to better serve points south of Wilmington. This project, coupled with gradual redevelopment efforts in Newport, provides a fresh opportunity to revisit commuter service to a new Newport train station.

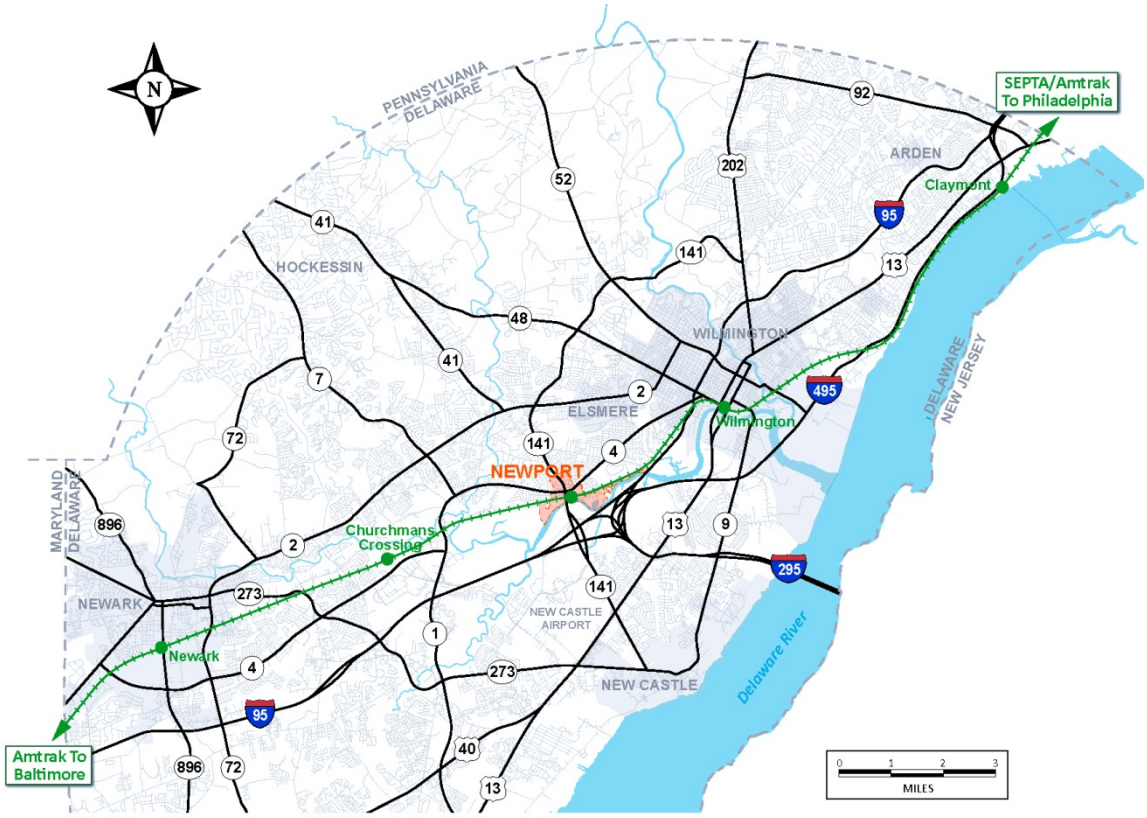


Figure 2. Newport's location in the region.

The objective of this Wilmington Area Planning Council (WILMAPCO) project was to assess the feasibility of reopening the Newport train station to promote economic growth in a walkable, transit-oriented environment. Newport's compact mix of good housing stock, local businesses, and institutions offer a unique opportunity to bring together all the characteristics that comprise a transit-oriented community. Improved, convenient access from downtown Newport to a commuter train station will encourage use of that facility and will augment existing bus service. Sidewalk and bikeway improvements and links will encourage and enable non-auto use to access the station.

Feasibility of the station itself was only one of two goals of the study. The second was to ascertain whether transit-oriented development (TOD) was appropriate in downtown Newport, regardless of whether a station was immediately feasible or not. TOD is higher-density mixed-use development within walking distance (about ½ mile) of a transit station, which would include almost all of the Town of Newport. TOD:

- Increases "location efficiency" so that people can walk, bike, and take transit
- Boosts transit ridership and reduces car traffic
- Provides a rich mix of housing, shopping and transportation choices
- Generates revenue for the public and private sectors and provides value for both new and existing residents
- Creates a sense of place

This report provides a description of the study process, outlines factors considered in train station feasibility (anticipated ridership, rail operations, parking, and access), and describes the types of TOD that may be appropriate for Newport.

STUDY PROCESS

In keeping with WILMAPCO's long-time philosophy of extensive, inclusive public involvement, stakeholders played a significant role in shaping the study. The project was guided from vision through completion by an Advisory Committee comprising agency staff and community representatives. Input was also received through three public workshops and presentations to the Newport Town Commissioners. A summary of each committee and public meeting is provided below.

Advisory Committee Meeting 1, May 16, 2011

A kickoff meeting was held to introduce the Advisory Committee to the project. Project team members provided a description of the study and of TOD. The meeting also provided the opportunity for committee members to establish a vision for the study and for Newport as a whole. Working in a small-group format, attendees offered answers to questions posed by the facilitators:

- What makes Newport special?
- What do you want Newport to be in the future?
- How do you think a Newport train station could benefit the Town?
- What transportation issues currently exist in Newport?

Responses to these questions formed the basis for the project vision, which is discussed in the Visioning section of this report.

Organizations Represented on the Advisory Committee (in alphabetical order)

BASF
Delaware Department of Transportation
Delaware Transit Corporation
Harvey Hanna & Associates, Inc.
New Castle County Chamber of Commerce
New Castle County Government
Newport Businesses
Newport Residents
State Representative Bob Gilligan (now retired)
State Senator Karen Peterson
Town of Newport
U.S. Representative John Carney
U.S. Senator Chris Coons
U.S. Senator Tom Carper
Wilmington Area Planning Council

Advisory Committee Meeting 2, October 11, 2011

A meeting and walking tour were held to give the Advisory Committee an opportunity to review the vicinity of the potential Newport train station and provide input on opportunities and constraints. The project team discussed findings from initial meetings with Amtrak and SEPTA and also provided information on upcoming public engagement activities.

Public Workshop, November 17, 2011

Fourteen members of the public attended an open-house format workshop to get more information about the project. Project team members gave brief presentations periodically throughout the evening providing an overview of the study. Participants were asked to comment on the draft vision for the project established by the Advisory Committee. They also noted their transportation concerns on maps of the study area.

Advisory Committee Meeting 3, February 9, 2012

This status meeting was held to update the Advisory Committee on the progress of several technical activities and to outline next steps. Results of the first public workshop were shared with the group, as were results of a market scan to identify the potential for TOD in Newport. Team members discussed rail operations and constraints on station development as described in the Rail Operations section of this report. Finally, the team presented the results of the ridership forecasting analysis, indicating that up to 500 rail trips are anticipated daily at a new Newport station. These encouraging results guided subsequent development of station alternatives. Initial discussions were held regarding parking and multimodal access.

Public workshop, March 15, 2012

WILMAPCO and the Town conducted an aggressive outreach campaign, including contacts with dozens of civic organization representatives throughout the SR 141 corridor, as well as newspaper and radio spots, to increase attendance at the study's second public workshop. Seventeen people attended and learned about the information shared with the Advisory Committee at its previous meeting: results of the visioning process, the TOD market scan, railroad coordination, and ridership forecasts. The project team also provided an initial look at station design elements including platform, parking, and amenities. Attendees were asked to add to the previous visioning process as well to ensure good participation.

Advisory Committee Meeting 4, June 7, 2012

At this meeting, the project team presented design alternatives for the Advisory Committee's consideration. Final results from the visioning process were shared, indicating that the Advisory Committee and other stakeholders had a similar vision for the town and the station. All comments received during the previous two public workshops were positive. An initial planning-level cost estimate was also provided.

Figure 3. Workshop participants.

Public Workshop, June 14, 2012

Once again, WILMAPCO made great efforts to publicize the workshop in the hope of attracting a significant number of participants. Seventeen attendees viewed the design alternatives presented to the Advisory Committee the week before and offered comments on station design, parking, and access. All participants expressed a desire to see the project move forward, although several had questions about funding.

EXISTING CONDITIONS

Opportunities and constraints for a new commuter rail station in Newport and associated TOD were identified by the Advisory Committee and through technical analysis by the project team. The primary opportunity for this input was provided through a walking audit in conjunction with the second Advisory Committee meeting. The information provided by the Advisory Committee allowed the project team to develop a comprehensive understanding of existing conditions as described below.

Opportunities:

- The station site is very close to downtown Newport. The Northeast Corridor and Market Street are only about 600 feet apart, and essentially the entire town (except for some industrial areas to the east) is within a ½-mile walk of the station.
- The Northeast Corridor through Newport is currently served by SEPTA commuter rail.
- The Town of Newport is at a strategically significant location, halfway between Wilmington and Churchmans Crossing.
- From a rail operations standpoint the previous Newport station site is at a good location along the Northeast Corridor, between rail interlockings.
- A project is in progress to further facilitate commuter rail frequency and expand hours of operation along the SEPTA Newark line south of Wilmington.
- One of the greatest challenges to service along an existing heavily-traveled rail line is the need to grade-separate pedestrian crossings. There is an existing underpass at James Street with serviceable pedestrian connections to connect both sides of the rail line.

Figure 4. High-quality streetscape improvements implemented by the Town of Newport.

- The State of Delaware owns all of the land under the SR 141 Newport Viaduct. If this land is large enough to provide for anticipated parking needs, there may be no need to acquire land for a new station.
- Newport retains its historic grid layout, providing transportation route choices for various modes of travel. Sidewalks are in place throughout much of the town.
- Previous streetscape improvements on Market and Justis Streets have changed the face of the town and provide a design vocabulary to be used for subsequent work.
- The Town and private partners have demonstrated their commitment to foster beautification and redevelopment in Newport.
- There is a supply of vacant or underutilized land in the station area to support TOD. In fact, nearly all vacant commercial land in Newport is owned by a local developer, Harvey Hanna and Associates. Harvey Hanna was a member of the Advisory Committee and supports the idea of station development and TOD.
- DART bus line 5 serves Market and Justis Streets, only a few hundred feet from the station. DART is also considering a new route along SR 141 that will provide additional transit connections.
- Although the Newport Viaduct divides the Town, it does provide some degree of weather protection for potential station and parking uses.

Constraints:

- None of the old station infrastructure remains; the station building and platforms have been removed, and the stairs accessing the station have been walled off.

- Discussions with Amtrak, SEPTA, and Norfolk Southern indicated that a new commuter rail platform must be located on the south side of the tracks, opposite downtown Newport.

- Some of the current parking immediately adjacent to the station site is currently used by BASF. That parking would need to be relocated to allow use of that site by station patrons.

- The old station site is currently inaccessible from public rights-of-way and is visually separated from downtown Newport by an adjacent commercial property.

- The existing James Street underpass, while good for access across the tracks, is not in the best condition. Concerns include lighting/security, bicycle access, discomfort for pedestrians due to roosting birds, occasional flooding (of the roadway, but not the elevated sidewalks), and low clearance (13'-2").

Figure 5. Inaccessibility of the former station site.

- The property immediately adjacent to the site to the east has been actively used by the Town for maintenance purposes and by the State of Delaware for construction staging. Those uses would need to be relocated so that property could be used for station purposes.

- Because SR 4 and the SR 141 ramps form one-way pairs in downtown Newport, the town is dominated by four heavily-traveled intersections. These intersections are highly auto-oriented and present barriers for pedestrians. This is especially true along the south side of Market Street, where the route 5 bus stop is only accessible by one crosswalk. Alternative access to this stop, adjacent to the Newport Skate Park, is very narrow and isolated from a security perspective.

- Sidewalks are frequently broken by driveways. Better access management could be provided to retain good vehicular access to businesses while enhancing the experience for pedestrians and bicyclists. Improved access management generally makes driver safer as well.

- There are no marked or signed bicycle facilities in the project area, though James, Market, Marshall, and Justis Streets are designated connector routes in the Delaware Bicycle Facility Master Plan.

- Some sidewalk is in very poor condition and curb ramps are either missing or not compliant with the Americans with Disabilities Act (ADA).

- The town's population of about 1,100, even when combined with business employment in the adjacent Newport Industrial Park, will not generate significant ridership. For the station to be feasible, it will need to serve drivers as well as potential new TOD.

- Sufficient parking should be provided to minimize spillover into nearby residential neighborhoods.

- A small portion of potential parking underneath the Newport Viaduct is next to the Christina River, which may post concerns for occasional flooding. Sea level rise may exacerbate this problem.

VISIONING

One of the most vital steps in the development of this type of planning document is the visioning process. This process not only helps solidify the purpose of a plan, but also defines the issues that a plan will address and the goals implementation of the plan seeks to achieve.

The vision for the Newport Train Station was initially developed by the Advisory Committee through its first two meetings. The public had the opportunity, through two subsequent workshops, to enhance and prioritize the Advisory Committee's points. The votes listed below in parentheses represent the public's priorities expressed during the workshops.

What makes Newport special?

- Nice, stable town – attractive to families
- Good police protection
- Rowing club
- Good schools
- Reasonably priced homes
- Good transit service
- Centrally located
- Charm, friendly and kind people
- Good access
- Safe and convenient
- Business development potential – business friendly community
- Quality workforce
- Remaking of Conrad and Delaware Military Academy
- Fisker plant is reopening [as of the date of this report, this may no longer be the case]
- Focus on eco-tourism: lagoon, parks, etc.
- Make Newport a place to live, work, and play
- Restaurants and shopping

What do you want Newport to be in the future?

- Make Newport an even better place to live, work, and play
- Environmental destination
- Serve the area beyond Newport – capitalize on new bus service
- Beautification/streetscape – build on what's been done – "baby Manayunk"
- Quality development: shops and condos, not big box (especially local)
- "Second downtown station" to supplement Wilmington train station
- Shopping destination
- Maintain the heritage of Newport while bringing it into the 21st century
- Grow without significantly changing the town's character

If the Newport station project is successful, it will…

- Make Newport an even better place to live, work, and play (7 votes at the public workshops)
- Build on recent beautification/streetscape efforts (7 votes)
- Support growth without significantly changing the town's character (7 votes)
- Act as a "second downtown station" – an alternative to Wilmington (6 votes)
- Support quality development: shops and condos, not big box (3 votes)
- Maintain the heritage of Newport while bringing it 21st century transportation (3 votes)
- Increase residential property values in Newport (2 votes)
- Make Newport a shopping destination (1 vote)
- Make Newport an environmental destination (1 vote)
- Serve the area beyond Newport – capitalize on new bus service (1 vote)

A Newport station could benefit the Town by…

- Allowing people to take the train to work, maybe eventually living in Newport (9 votes at the public workshops)
- Drawing people in from outside Newport, creating a small business growth opportunity (9 votes)
- Supporting SEPTA ridership, possibly providing an opportunity to increase train service in Delaware (8 votes)
- Enhancing potential for mixed-use development of underutilized properties (5 votes)
- Connecting to bus service, building on current success (2 votes)
- Providing transportation for seniors (2 votes)
- Providing better access for Newport business clients, including eating and shopping (1 vote)
- Providing more access for lower income residents, especially to jobs (1 vote)
- Making Newport a bedroom community, with people working in Philadelphia (no votes)
- Making industrial business investment more attractive by serving as a marketing tool (no votes)

What transportation issues currently exist in Newport?

- Too much traffic
- Recognized as a speed trap
- Need greenway connections to areas outside the town
- Need to consider plenty of free parking with station development – use everything under the viaduct except Wilmington Trust
- James Street bridge needs "more than a face lift" – maybe raise it for better rowing/recreational access
- [DART] Route 5 doesn't connect directly to the Wilmington station – a better connection is needed before a Newport station is built
- Maybe even consider phased structured parking
- [Route] 141 is a barrier to walking and bicycling – it's also impossible to safely cross I-95

These key points, particularly those that were supported by the most stakeholder votes, were used to develop the improvement alternatives below. They will be useful in evaluating the success of the project through its eventual design, construction, and operation.

ANTICIPATED RIDERSHIP

The Delaware Department of Transportation's (DelDOT's) "Peninsula Model" was used to estimate future ridership in Delaware using methods required by the Federal Transit Administration (FTA) to apply for Federal funds.

A travel demand model like the Peninsula Model is the standard for estimating future travel in a region. The model determines how many people start and end trips in every neighborhood in that region, where each trip ends, whether they choose to travel by walking, biking, taking transit, or driving, and which route they use to get there. The model makes its decisions based upon how many people live and work in each neighborhood, how far neighborhoods are from one another, what methods of travel are available, how much each method of travel costs, how long each method of travel takes, and how congested the roadways are that they would take to get there.

To estimate station ridership, the model was edited to provide more detail in the Newport area and to more accurately capture ridership to and from Pennsylvania. [Details on the methods used to make these projections can be found in Appendix A.] Taking these elements into account, forecast future ridership for the year 2020 is shown in Figure 6.

Figure 6. Ridership forecasts.

SEPTA station	Existing ridership (without Newport)	Existing ridership (if there was a Newport station)	Future ridership (with Newport)
Newark	500	500	710
Churchmans Crossing	463	330	450
Newport	**--**	**480**	**500**
Wilmington	2,020	2,020	2,220
Claymont	1,024	1,020	1,380
TOTAL	**4,007**	**4,350**	**5,250**

These are encouraging figures. Not only do the forecasts indicate significant ridership at Newport, most of those riders are new riders rather than patrons shifted from other stations. For example, the current year forecasts show 480 rail trips at the Newport station. Only 133 of those trips are shifted from the Churchman's Crossing station; the rest are people who are not currently riding the train. The Federal Transit Administration, who often provides funding for station projects, is typically encouraged by the number of new riders that proposed stations are expected to generate.

The project team also evaluated where those trips would originate. As illustrated below, they are generally along the SR 141/41 corridor from New Castle in the south to Hockessin in the north. This makes sense, as without a Newport station those riders would have to drive southwest ("backwards") to the Churchman's Crossing station, then go northeast on the train to Wilmington or Philadelphia.

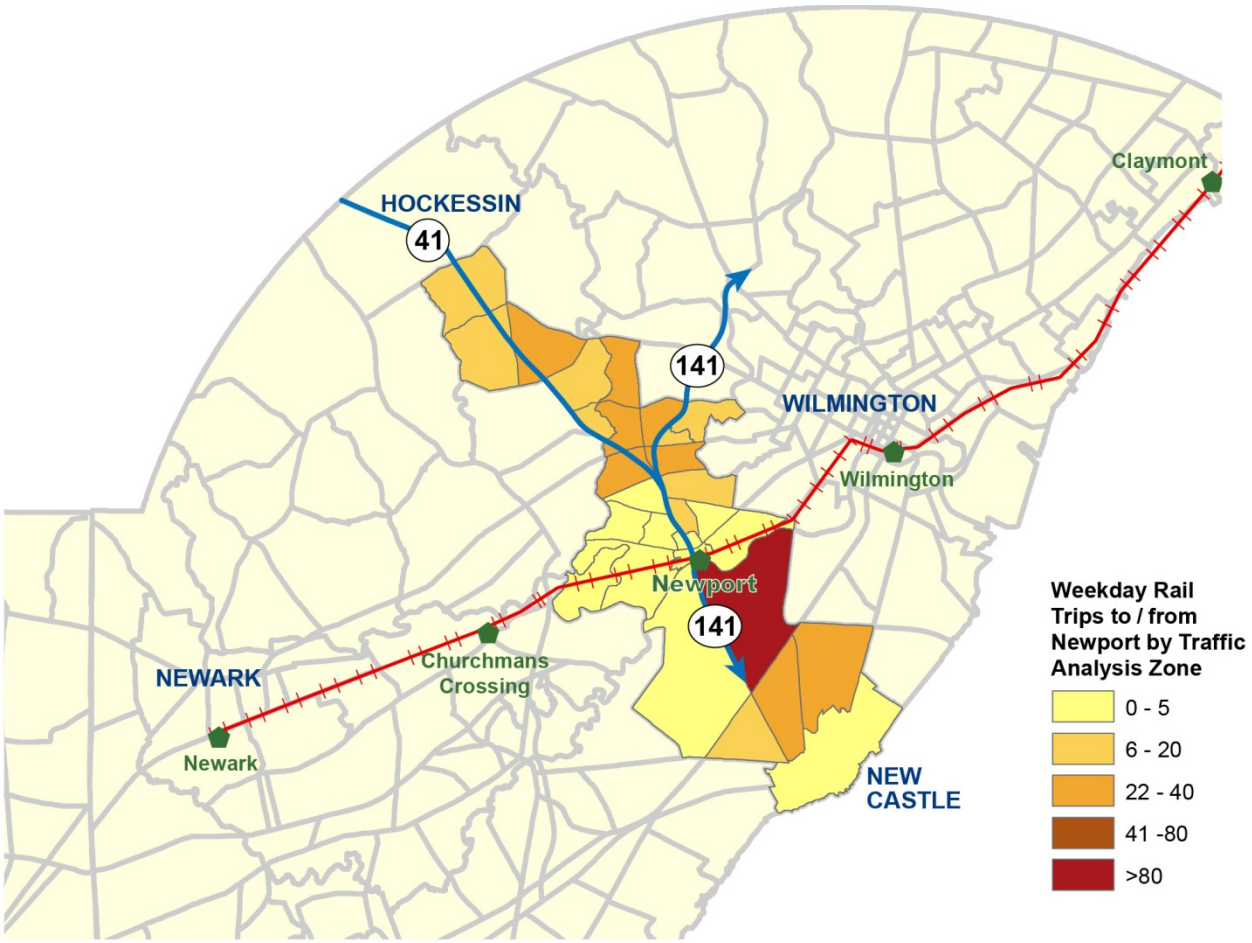


Figure 7. Distribution of anticipated station patrons.

These forecasts assume the same level of train service as today (17 trains each weekday). This is a conservative approach because more SEPTA service is expected south of Wilmington with the completion of anticipated track improvements between Newport and Wilmington. More frequent train service is likely to translate into even higher ridership.

RAIL OPERATIONS AND STATION LOCATION

To evaluate rail operations, the project team initially met with the three railroads that pass through Newport on the Northeast Corridor (NEC): Amtrak, SEPTA, and Norfolk Southern (NS). The NEC is owned by Amtrak but used regularly by NS and SEPTA.

Describing the corridor is complicated by the fact that the NEC, although it runs primarily north-south, is nearly due east-west in Newport. Along this part of the NEC the railroads call east "railroad north," west "railroad south," etc. For the purposes of this report, actual compass directions will be used for simplicity.

Current Operations

The NEC presently has three mainline tracks through Newport (see Figure 8). A former industrial lead track, the Newport Industrial Track, was located on the south side of the three mainline tracks but has been removed. The three main tracks are numbered 1 through 3, south to north. Tracks 2 and 3 are high-speed tracks, while Track 1 is primarily used by SEPTA and Norfolk Southern (NS) trains between Wilmington and Newark. While most Amtrak trains operate on Tracks 2 and 3, Amtrak will frequently use Track 1 to route slower trains so they can be overtaken by faster Acela Express trains between Ragan Interlocking (north of Newport) and Iron Interlocking (at the Delaware/Maryland state line).

Amtrak has recently completed making track and signal improvements at Ragan in preparation for the addition of a third main track, which is currently under construction between that point and Wilmington. This is popularly called the "third track" project. Currently there are only two main tracks (Tracks 2 and 3) between Ragan and the Wilmington Amtrak station, a situation which will limit train movements between those points until the new third track is operational.

SEPTA currently operates nine weekday trains to Philadelphia from Newark and eight trains to Newark from Philadelphia as the contract provider of commuter service in Delaware for DTC. There is no SEPTA service south of Wilmington on Saturdays or Sundays. Service is provided using self-propelled electric passenger cars and two seven-car locomotive powered trains (twice daily) on this route. These trains operate in nine time slots allocated to SEPTA for this service. The number of time slots allocated by Amtrak cannot be increased until the "third track" project is complete. This study assumes the "third track" project will be finished before the Newport station is operational.

SEPTA operates its trains only on Track 1 south of Ragan, and the stations at Churchman's Crossing and Newark are located only on the south side of the NEC accordingly.

As much as possible, NS avoids operating its trains on the NEC, but typically operates on Track 1 or Track A (which, where present, is adjacent to Track 1) when it does. NS currently uses those two tracks to operate its freight trains, chiefly at night, between its Chrysler Yard in Newark and Ragan. Currently, NS has one regularly scheduled freight train each week that operates through Newport from Newark to the Evraz Steel Company plant in Claymont via the Shellpot Secondary. This train operates at night and has no impact on current or anticipated SEPTA schedules.

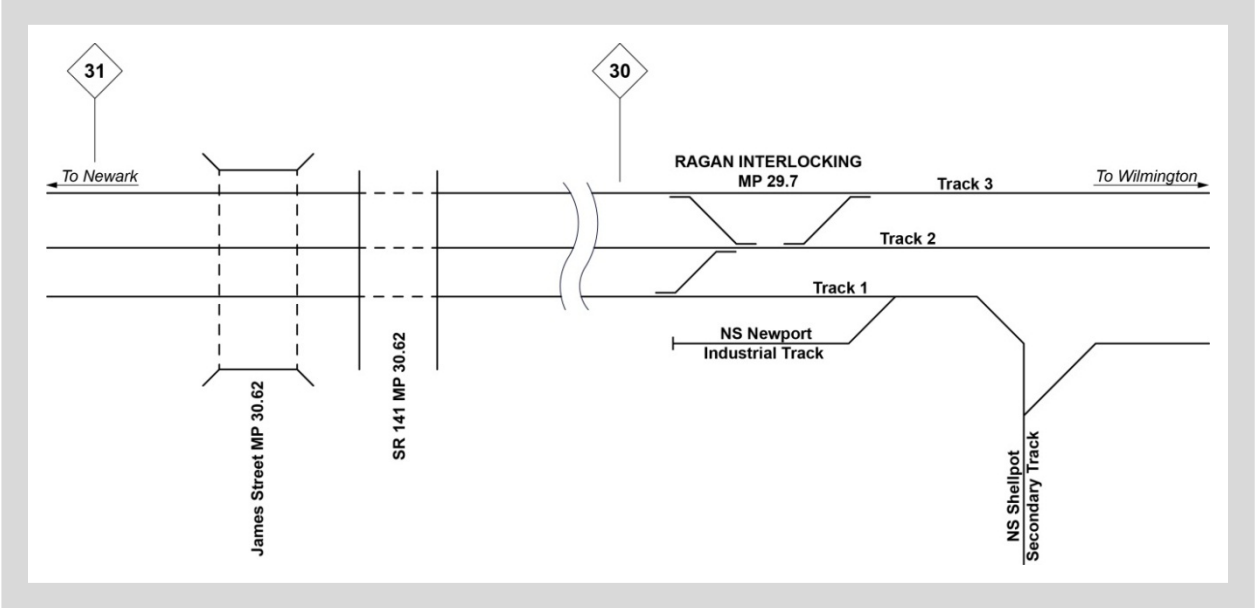


Figure 8. Existing track layout.

Planned Operations

Amtrak has identified Delaware as an area in which it wants to increase its maximum authorized track speed. Part of this work includes the addition of the "third track" project, while future projects will add tracks to further separate high speed trains from commuter and freight trains. The extension of Track 1 into Wilmington will require that the NS Shellpot Secondary be extended south to connect to NEC Track 1 at a point north of the proposed Newport Station (see Figure 9). This track extension would occupy part of the alignment of the Newport Industrial Track (Track A). This work will provide Amtrak with additional track capacity between Ragan and Wilmington, allowing Amtrak to hold freight trains clear of Track 1 so that Amtrak could continue to make overtaking train movements. It would also keep SEPTA trains separated from high speed trains from Wilmington to Newark.

Factors Affecting the Location of a New Station at Newport

The location of the station will be affected by a number of factors, including railroad criteria, the Americans with Disabilities Act (ADA), and clearances between tracks and structures. SEPTA recommends a minimum distance of two miles between stations, and the proposed station meets that criterion at 3.4 miles to Churchman's Crossing and 4.1 miles to Wilmington. To meet current Amtrak and ADA criteria, a new station at Newport is required to have a high level (car floor height) platform at least 600 feet long located on tangent track. The width of the platform will be determined during design based on required passenger capacity, but preliminary measurements taken during this study indicate that at the most restricted area under the Route 141 viaduct, a 14-foot platform width may be achieved. Horizontal clearances to tracks from obstructions such as passenger platforms, walls, and bridges and clearances between tracks will likely pose the biggest challenges to the location of the proposed station.

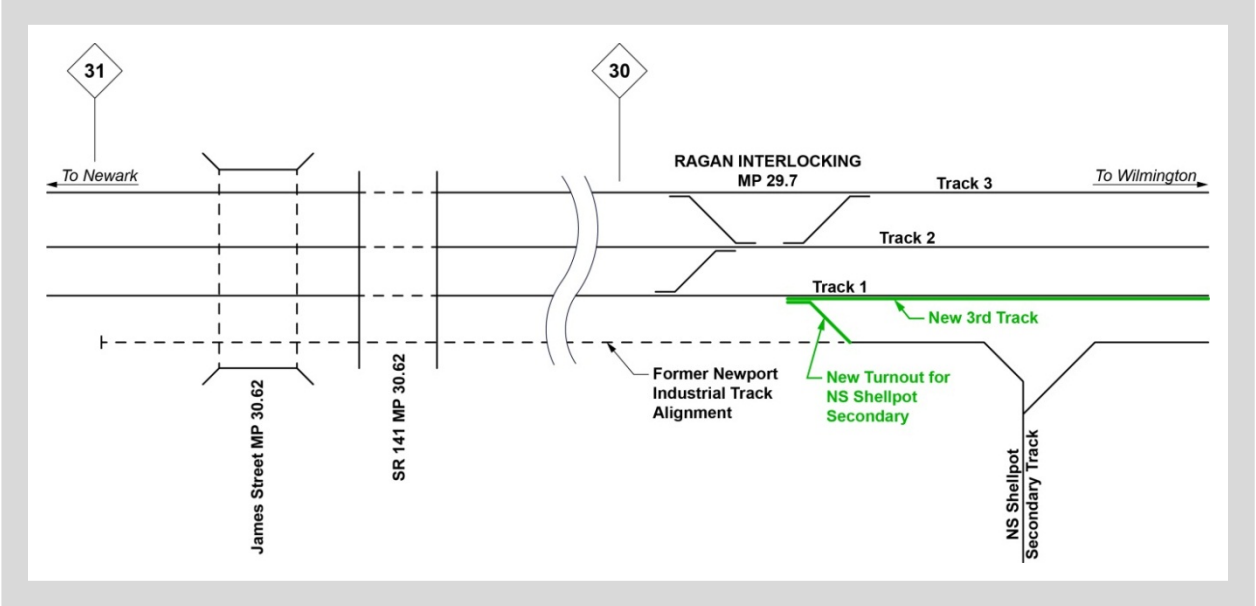


Figure 9. Proposed track layout for third track between Ragan and Wilmington.

For NS, horizontal clearance is a significant concern. While high level platforms pose no clearance issues for passenger trains, they are an obstruction for freight trains. Because NS freight trains will continue to use Track 1 for the foreseeable future, NS has expressed its concern about having the proposed platform adjacent to Track 1. Use of Tracks 1 and A by freight trains is the reason the platforms at Churchman's Crossing and Newark were constructed as low level platforms with high blocks with movable edges. New requirements dictate that platforms be high level on the NEC; high blocks are no longer allowed.

This leaves two options to eliminate freight conflicts with high-level platforms. The first is that the platform must be along a track that is not used by freight trains. The second option is to use a gauntlet track. As shown in Figure 10, a gauntlet track is a track that diverges from, but lies within, another track and provides a horizontal offset from the other track. Because the two tracks lie within the same space, only one train at a time may occupy a section of track containing a gauntlet track. While gauntlet tracks have been proposed for other locations on SEPTA tracks, none have actually been constructed. Amtrak's position regarding gauntlet tracks is generally unfavorable.

Figure 10. Gauntlet track on Westside Express Service (WES) commuter rail near Portland, Oregon. The main track carries freight traffic, so the gauntlet track allows the commuter trains to move left to access the platform. *Source: maxfaqs.wordpress.com.*

Clearances are also an issue for Amtrak. Track centers between Tracks 2 and 3 are currently an acceptable 14 feet, more or less, but track centers between Tracks 1 and 2 are only approximately 12.5 feet. Amtrak has recently expressed concern that the Federal Railroad Administration (FRA) may require them to widen those centers to 14 feet or 15 feet. Figure 11 shows a schematic of the existing and proposed clearance conditions at Newport.

A new track on the alignment of the former Newport Industrial Track has been proposed by Amtrak in its NEC Master Plan. Whether this track is constructed by Amtrak or DelDOT, the clearance to the east parapet of the bridge over James Street will likely control how far the proposed track must be separated from existing Track 1.

Amtrak's standards allow a minimum clearance of six feet at the elevation of the top of rail to any bridge member. From that point all bridge members must remain outside of a clearance line that projects up and out away from the track at 3 feet horizontally to 4 feet vertically. Two options may exist for aligning Track A.

- Set the center-to-center distance of the proposed track to existing Track 1 at 15.5 feet. This may allow Amtrak to shift Track 1 a sufficient distance southward to achieve a 14-foot center-to-center distance from Track 2. However, it may also encroach into the clearance envelope of the James Street bridge.

- If sufficient clearance cannot be achieved between the proposed track and the bridge parapet, shift all tracks northward.

In either case, there appears to be sufficient clearance between Track 1 and the adjacent Route 141 bridge piers to permit the construction of the proposed track and a 14-foot-wide high level platform.

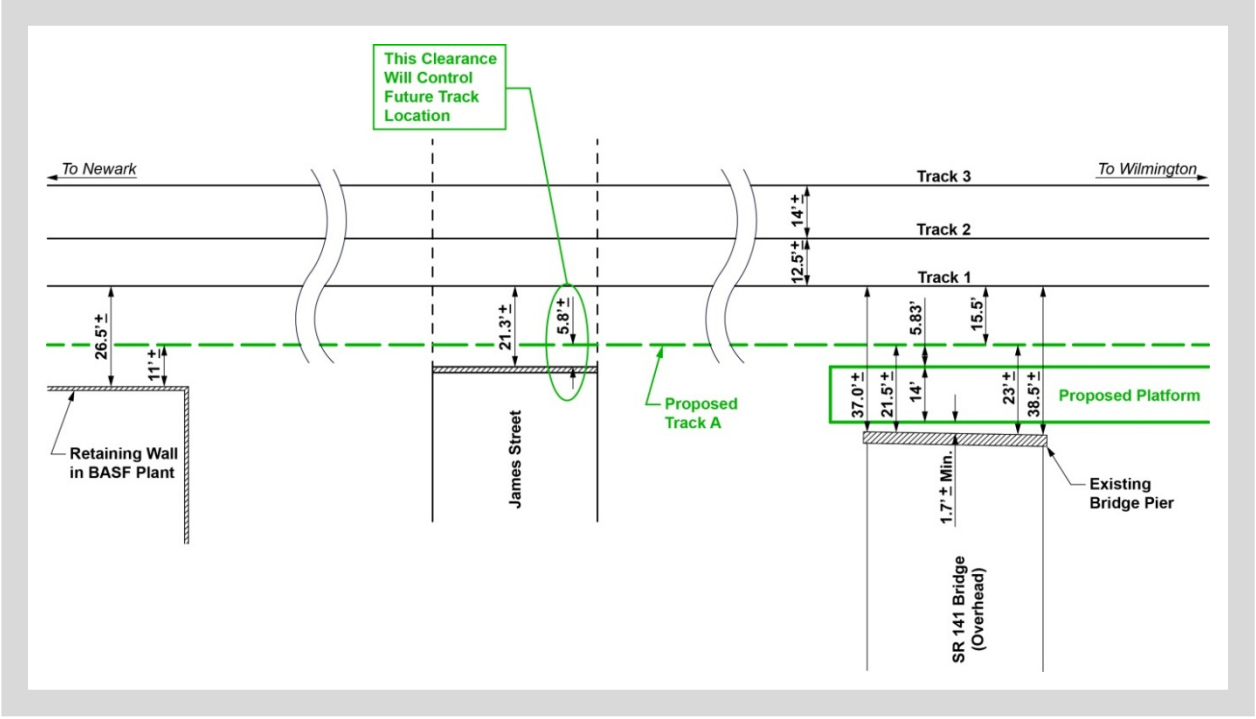


Figure 11. Existing and proposed clearance conditions at Newport.

Station Options

Option 1 – Extend the Newport Industrial Track, which connects to Track 1 at Ragan, south through Newport to a connection with Track 1 south of Newport in the vicinity of Milepost 31. Locate the proposed station on the east side of this track (see Figure 12). This option would allow NS to continue to operate on Track 1 without clearance restrictions. The track, which would be designated Track A, may even be constructed by Amtrak as part of its NEC Master Plan if their simulations show that it is warranted.

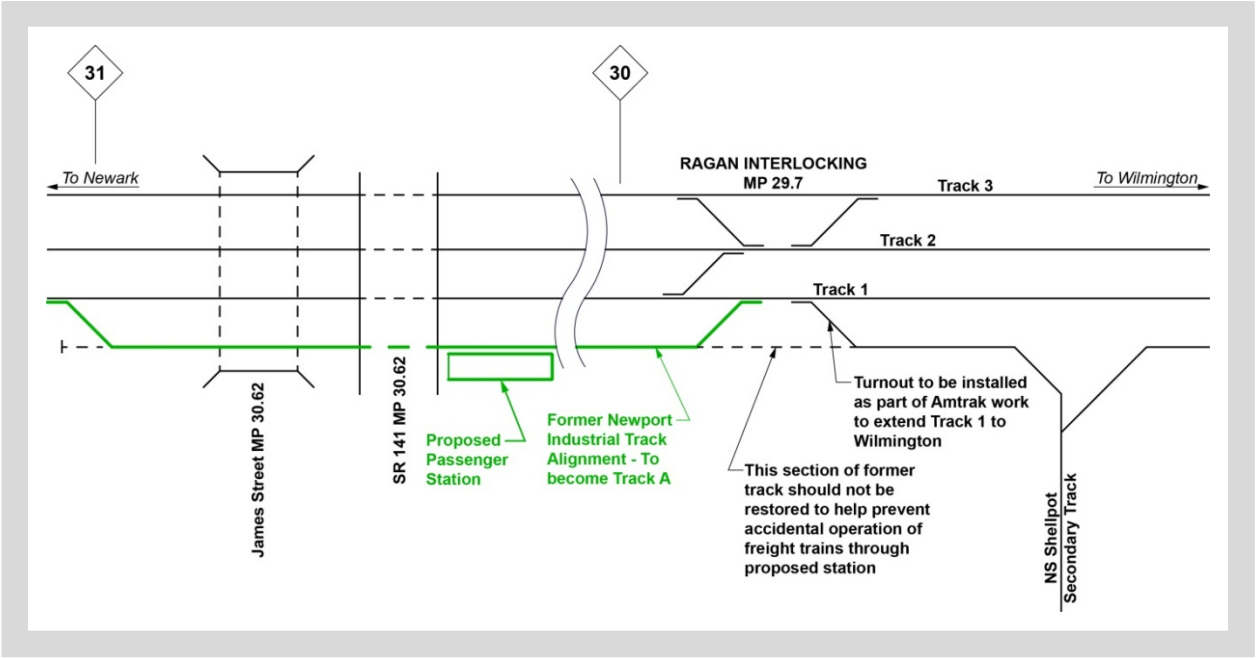


Figure 12. Proposed track schematic for track option 1.

Advantages:

- Track A could be placed to allow Amtrak to widen track centers between Tracks 1 and 2 in the future and still have space for a 14-foot wide platform under Route 141.

- Eliminates need for a gauntlet track by placing the platform on a track separate from freight trains.

Issues:

- The physical location of the platform along the track will depend on whether Track A can be reconstructed across the James Street Bridge under current Amtrak design criteria. If clearances permit its construction across the bridge, the south end of Track A would connect to Track 1 in the tangent at approximately Milepost 31, and the platform can extend as far south as James Street. If clearances do not permit its construction across the James Street Bridge, the connection to Track 1 will be on or near the bridge, and the resulting track geometry will push the west end of the platform east approximately 350 feet.

- An existing 20-inch water main is located on the east side of the Amtrak right-of-way, approximately under the location of the proposed platform. It could impact the design of the piers supporting the platform. The water main is visible in Figures 13 and 14 where it crosses above James Street attached to the south side of the Amtrak bridge.

Figure 13. 20-inch water main at James Street on east side of Amtrak bridge at penetration of north backwall.

Figure 14. 20-inch water main at James Street on east side of Amtrak bridge looking south.

Option 2 – Construct the station platform adjacent to Track 1 as shown in Figure 15. SEPTA trains would continue to use Track 1 as they do now. Freight trains would have to be diverted to Track 2 for some distance to bypass the station in lieu of installing a gauntlet track in Track 1.

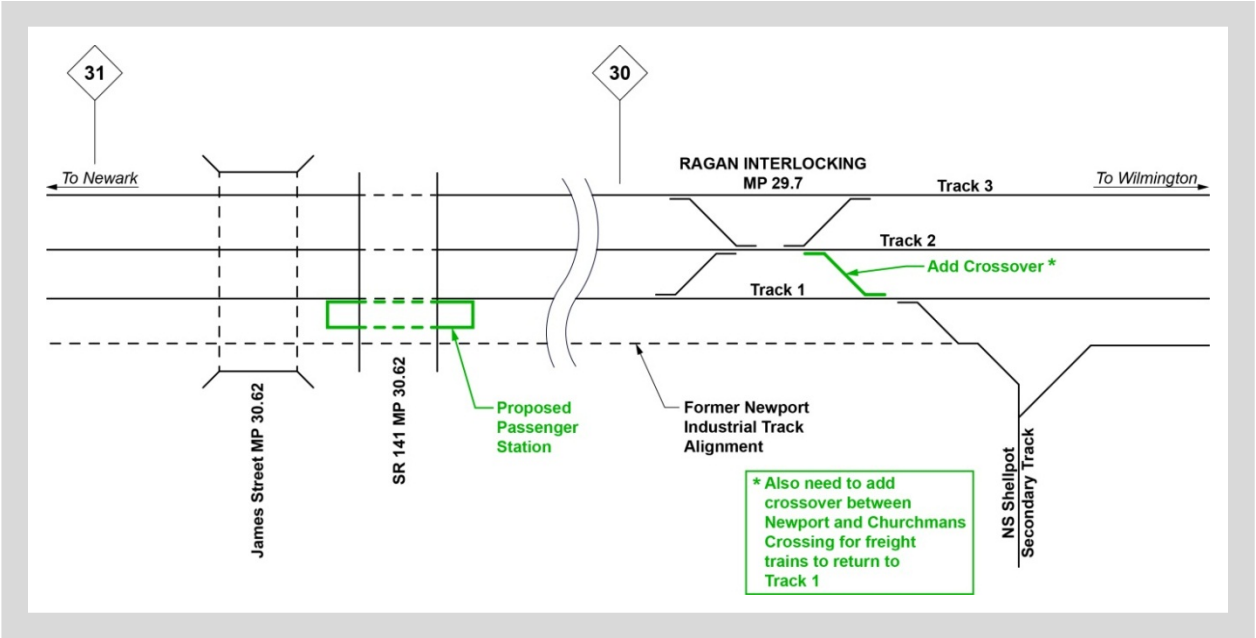


Figure 15. Proposed track schematic for track option 2.

Advantages:

- Would permit construction of the platform with its west end at James Street.
- Would require less track construction.
- Could avoid platform design impacts to the water main.

Issues:

- Would require a new crossover from Track 1 to Track 2, westbound, at Ragan to allow NS freight trains to bypass the station.
- A new crossover would be required to reach Track 1 from Track 2, westbound, west of Newport to allow freight trains to move off Track 2 as quickly as possible. The use of Track 2 by freight trains would probably be rejected by Amtrak.
- Could be impacted by Amtrak if Amtrak is forced to widen track centers between Tracks 1 and 2 in the future.

Option 3 – Construct an island platform adjacent to Track 1, located between Track 1 and an extended Track A as shown in Figure 16. This option was suggested by Amtrak as a way to keep freight trains off Track 2 and still allow a high level platform to be constructed on Track 1. This option is not considered to be feasible for the following reasons:

- Space constraints west of James Street on the BASF property would force Track A to use the space on the James Street Bridge formerly occupied by the Newport Industrial Track. The track geometry required to align Track A eastward from James Street to provide sufficient horizontal clearance to an island platform located between Track A and Track 1 would push the location of the station too far north to effectively serve the proposed parking lots and downtown Newport.

- In addition to the grade-separated pedestrian access required to cross the NEC to the platform, grade-separated access would also be required across Track A to reach the main station parking lots on the south side of the Amtrak right-of-way.

- The location of the station would place it in an active industrial park, where property impacts would likely be greater than in the vicinity of the Route 141 right of way.

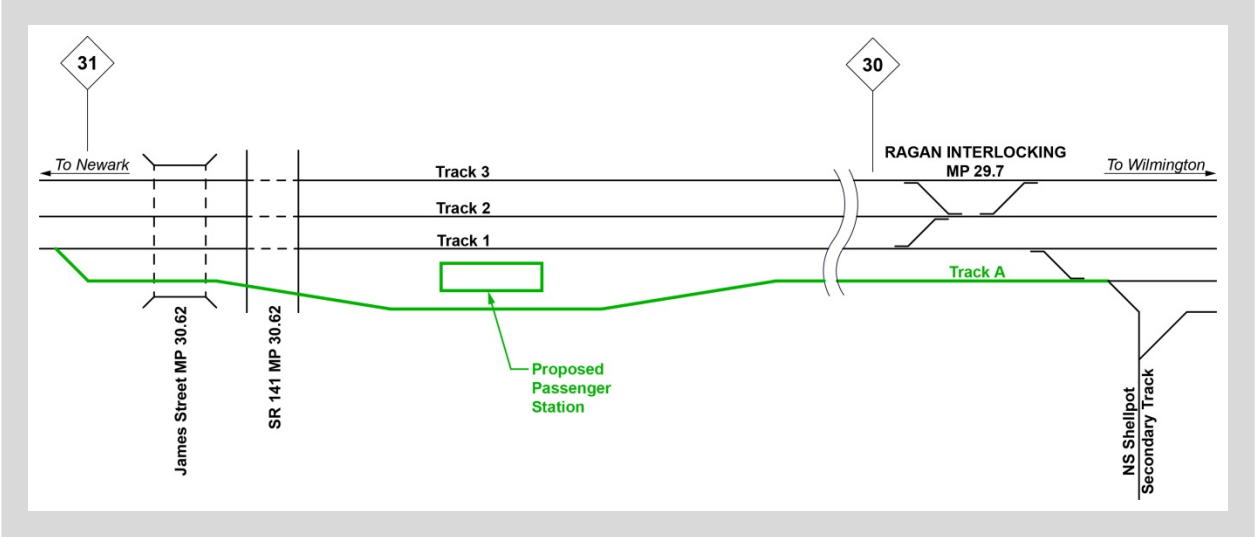


Figure 16. Proposed track schematic for track option 3.

Summary

Supplemental survey was obtained to evaluate railroad clearances at the James Street and Route 141 bridges. Based on those measurements, as well as operating requirements and cost, Option 1 is recommended for implementation. Tracks would operate as follows, from north to south:

- Existing Track 3: Southbound/westbound Amtrak trains (as they operate today)
- Existing Track 2: Northbound/eastbound Amtrak trains (as they operate today)
- Existing Track 1: Norfolk Southern freight trains and occasional Amtrak passing movements (currently shared with SEPTA)
- Proposed Track A: SEPTA commuter trains
- The new station platform would be adjacent to Track A

These improvements will require trackwork over slightly more than a mile of the Northeast Corridor, including new turnouts and catenary (overhead power) modifications. All railroad construction will need to be done by Amtrak directly.

PARKING

As noted above, 500 trips per day are forecast in the future. Those trips are two-way, which translates to 250 patrons per day. The ridership model indicates that about 75 percent of those patrons, or 188 patrons per day, are expected to drive. The remaining 25 percent are expected to arrive by bus, foot, or bike. To accommodate the anticipated drivers, it is recommended that at least 200 auto parking spaces be accommodated, plus some provision for overflow/expansion.

The four parking areas listed below are all owned by the State of Delaware and, combined, would result in between 192 and 202 spaces:

- Primary parking lot: 86 to 96 spaces (depending on configuration), next to platform
- Secondary lot south of Water Street: 26 spaces
- Secondary lot south of Ayre Street: 72 spaces (this lot was a Town maintenance yard until Route 141 construction began using it as a construction staging area)
- Secondary lot north of Ayre Street: 8 spaces

BASF currently uses about one-third of the primary parking lot for employee parking. Further discussions are needed to determine whether BASF parking can be replaced on-site or whether a lot south of the river is needed to accommodate these spaces.

Details of the parking configuration for the primary lot are dependent on how pedestrian access is provided, so they are illustrated in the section below. Each option shows two access points to Water Street. Because all traffic from the primary lot will pass through the intersection of James and Water Streets anyway, it may be feasible to provide a single point of access, which would provide a slightly higher parking yield for each option. Whether the parking lot should have one or two entrances should be evaluated further as the project proceeds into preliminary design.

The secondary parking lots are in relatively close proximity to the primary lot. Pedestrian improvements discussed in the following two sections would ensure a comfortable walking environment for patrons walking from bus stops, secondary lots, and Newport in general. In addition, covered, secure bicycle parking should be provided in a portion of the primary lot next to the platform.

One recommendation made at the first public workshop was to consider the capped landfill on the south side of the Christina River east of South James Street for overflow parking. Preliminary discussions with DelDOT staff familiar with the area indicate that concept may have merit. It is not specifically addressed by this report but could be considered as the station parking areas noted above approach capacity. Due to its proximity to the BASF entrance, this area could also be considered for BASF employee or visitor parking.

DelDOT is currently designing a replacement bridge over the Christina River at this location. Through coordination with the Newport study team, this bridge will incorporate a shared pedestrian and bicycle path along its east side to ensure the use of the area south of the river for parking remains viable.

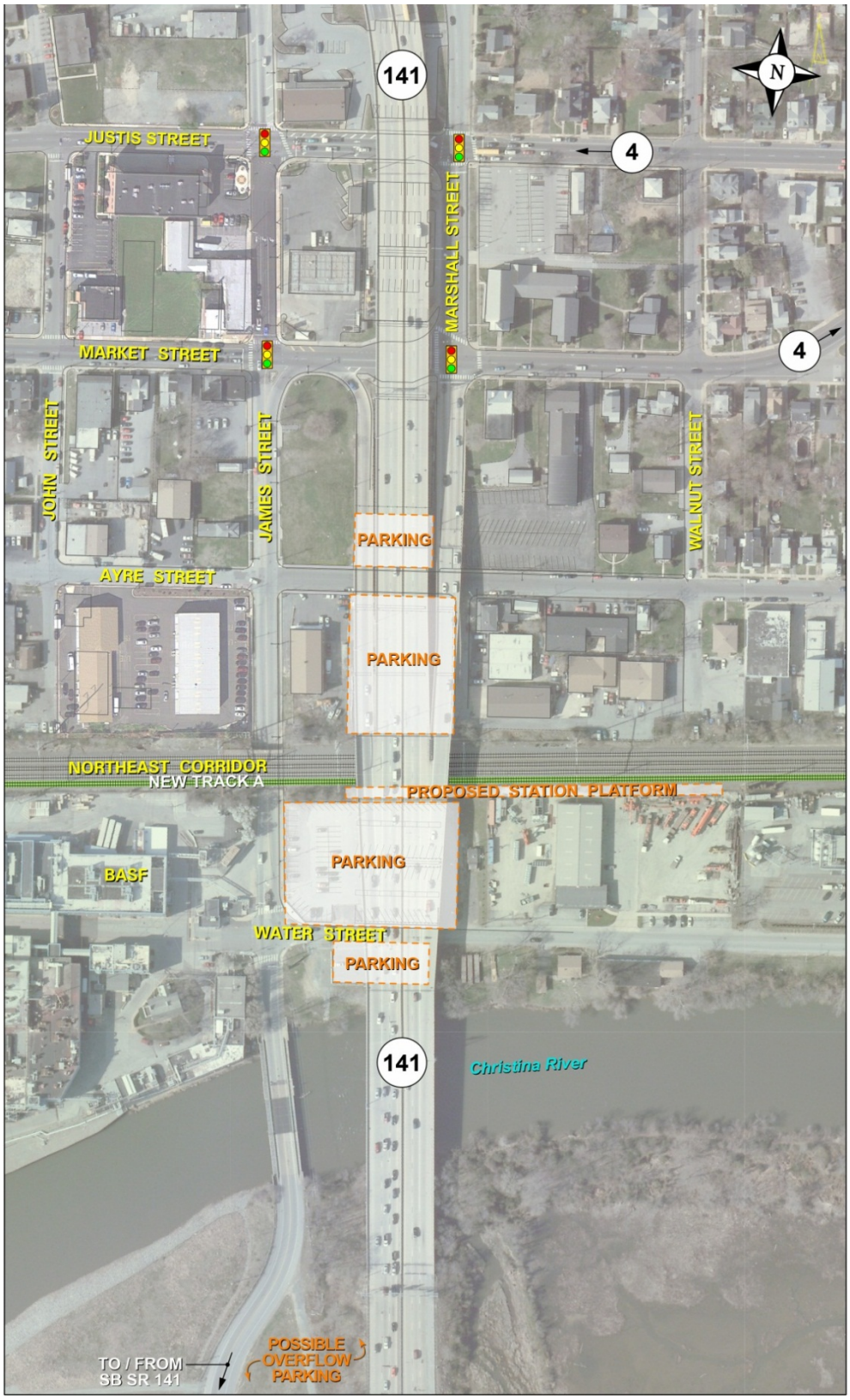


Figure 17. General station and parking layout.

PLATFORM AND PEDESTRIAN ACCESS

As noted above, the station will be served by a single high level platform on the south side of the NEC. The proposed station platform will be located adjacent to Track A, as a high-level platform cannot be placed adjacent to a freight track due to clearance requirements. The platform is proposed to be 600 feet long, 14 feet wide, and equipped with stair and ramp access, railings and fencing, and lighting.

ADA-compliant pedestrian access among the street, parking, and platform levels is challenging, as the platform is 21 feet higher than the lowest point on the James Street sidewalk. The project team developed three options to articulate that grade difference. All options include stair and ramp access between the parking lot level and the platform level, as well as stairs between James Street and the parking lot level.

- Option 1 would rebuild the entire retaining wall along James Street to incorporate a ramp between the sidewalk and parking lot levels. Patrons using the ramp would take the sidewalk from the railroad underpass south nearly to Water Street, then enter the ramp and return north to the parking lot. This option would result in about 96 parking spaces, the most of any option.

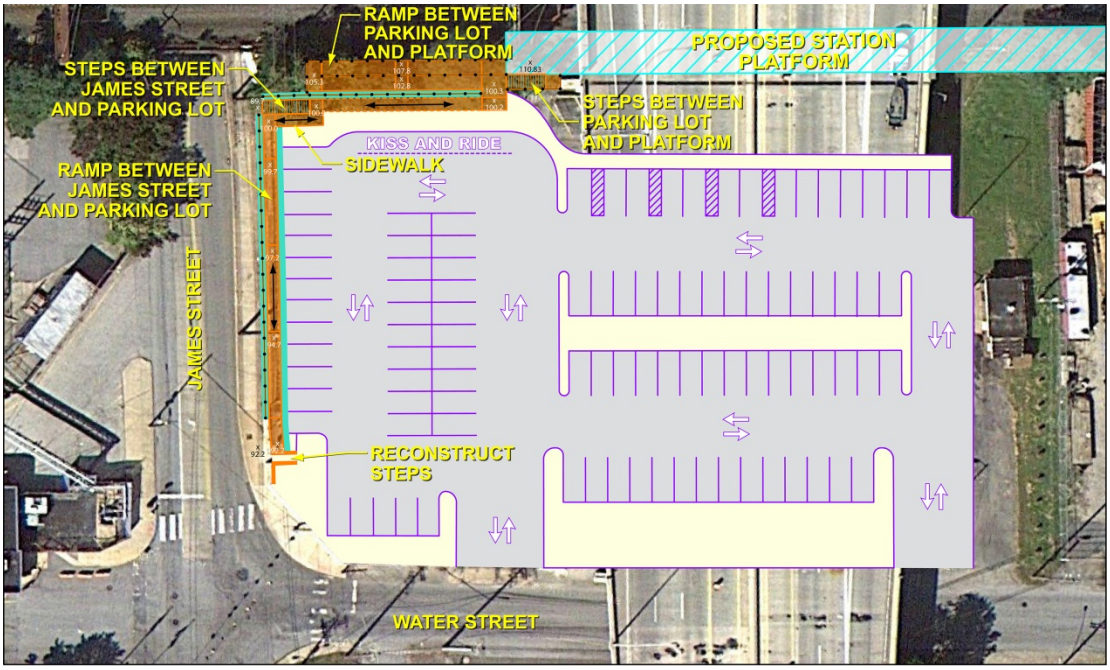


Figure 18. Parking and pedestrian access option 1.

- Option 2 would require less retaining wall work. Patrons using this option would take the sidewalk from the railroad underpass south to Water Street, turning east on Water Street almost to the existing driveway. At this point a small portion of the retaining wall would be removed to build a short switchback ramp to the parking lot level. Patrons would then cross the entire parking lot on a sidewalk to access the platform area. This option would have about 86 parking spaces. One concern with this option is that those patrons using the ramp would need to cross two parking lot aisles, potentially resulting in conflicts. However, the rest of their path through the parking lot would be on a dedicated sidewalk separated from motor vehicle traffic.

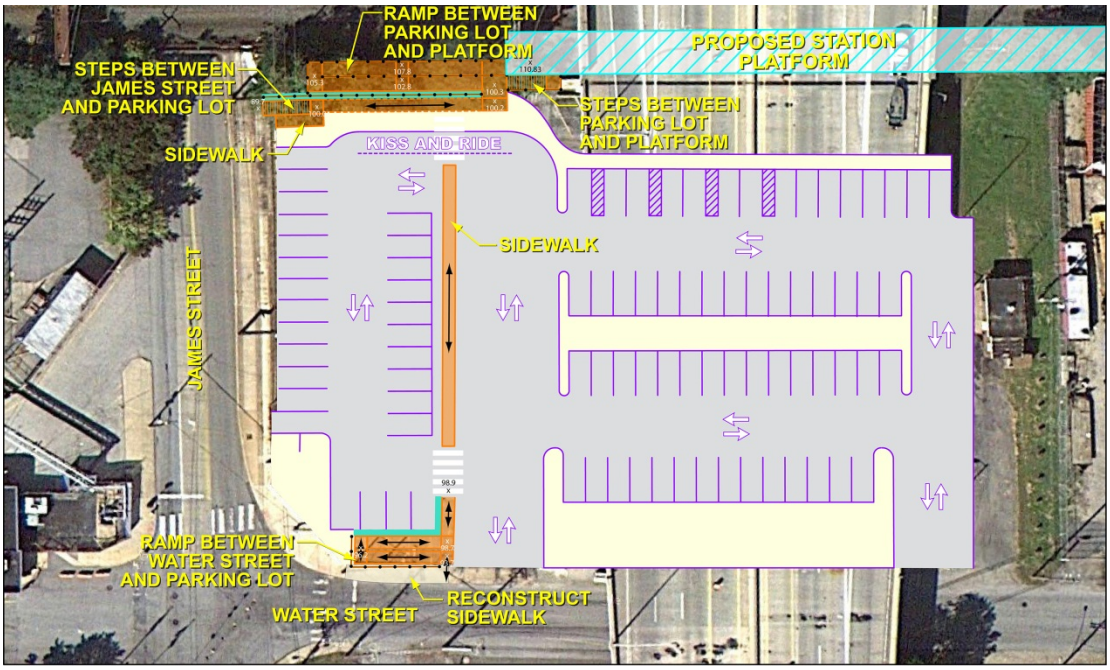


Figure 19. Parking and pedestrian access option 2.

- Option 3 is a variant on Option 1. Rather than rebuilding the entire James Street retaining wall, this option would impact about half of that wall. Patrons using the ramp would take the sidewalk from the railroad underpass south about halfway to Water Street, then enter a switchback ramp system to go up to the parking lot. This option would result in about 88 parking spaces. As preliminary design is further developed, it may be possible to add two or three parallel parking spaces adjacent to the ramp to provide the most parking possible.

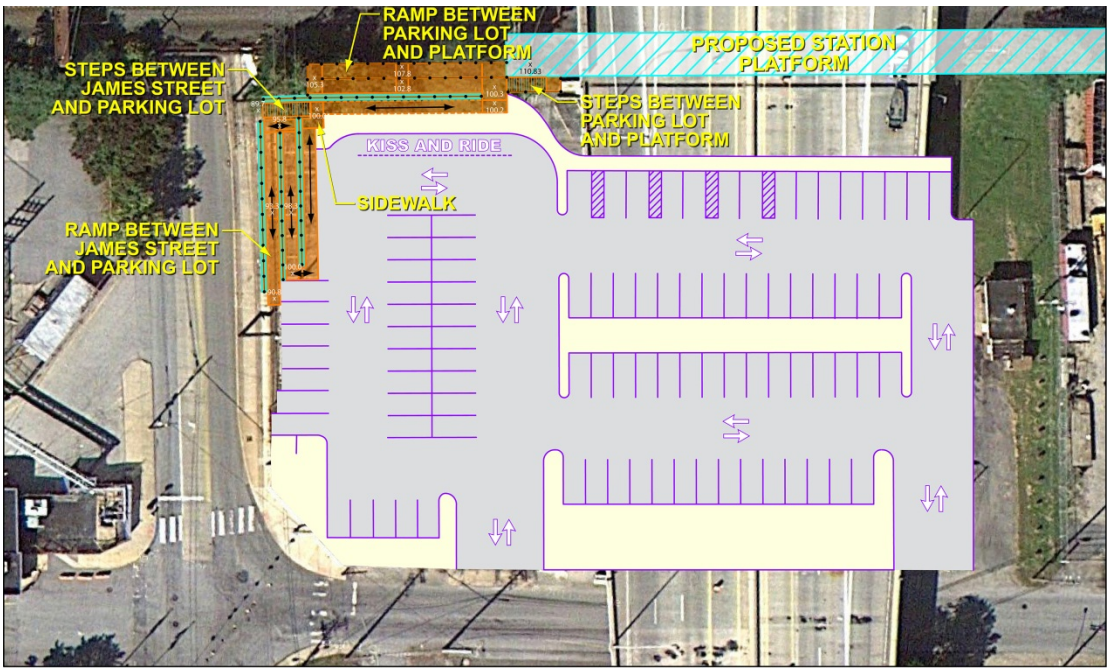


Figure 20. Parking and pedestrian access option 3.

Both Advisory Committee members and the public in general were polled regarding their preference among the parking and pedestrian access options. Due to the relatively similarity among the options, there was no clear preference.

During the study process, the community noted that there are three distinct markets that must access the station: (1) local residents, (2) bus riders, and (3) commuters accessing the station by car. The needs of local residents, who would access the station on foot from their homes, will be similar to the needs of bus riders, who would access the station on foot from bus stops on Market and Justis Streets.

Pedestrian and Bus Transit Access

This aspect of the study looked at accessing the rail station by walking from downtown Newport, represented by the existing transit stops located on westbound Justis Street at Marshall Street and on eastbound Market Street at Marshall Street. The project team also examined the feasibility of providing bus access to the station by rerouting selected morning and evening peak hour trips directly to the station.

Existing Transit Service in the Newport Train Station Study Area

DART operates bus route 5 westbound along Justis Street and eastbound along Market Street through the study area. This is a very successful route that provides service south of Newport to Christiana Mall and north to Rodney Square in downtown Wilmington. Service on this line is provided seven days a week, Monday through Friday between the hours of 5:15 am and 11:30 pm. Newport is at the midpoint of route 5.

Westbound trips operating through the study area between the hours of 5:31 am and 9:15 am maintain an average headway (time between trips) of 17.2 minutes. Between 3:18 pm and 6:49 pm, eastbound headways are similar. For eastbound trips going through the area between 5:25 am and 9:37 am, the average headway between trips is 19 minutes. Westbound headways in the later afternoon/early evening are approximately 21 minutes.

In terms of pedestrian access between existing bus service and the proposed station, transit stops are located in close proximity on westbound Justis Street at Marshall Street and on eastbound Market Street at Marshall Street. The Justis Street stop, referred to as Del. Rt. 4 & Marshall St. on the public timetable, is located approximately one quarter mile from the station site. The Market Street stop, listed as Market St-NWPT & Marshall Street on the timetable, is located approximately one block south of the Justis Street stop and so is slightly closer to the proposed station. Both of the stops sit beneath the Route 141 Newport Viaduct. Table 1 provides information on passenger boardings and alightings at the two study area bus stops and Table 2 provides passenger load factor information.

Figure 21. Bus stop passenger boardings and alightings.

Ridership by Bus Stop Bus Stop ID & Name	Boardings	Alightings
93 Del Rt. 4 & Marshall St.	5	16
99 Market St.-NWPT & Marshall St.	27	9
Grand Total	32	25

Figure 22. Bus stop passenger load factor information.

Average Load Per Trip by Direction Bus Stop ID & Name	Outbound	Inbound
93 Del Rt. 4 & Marshall St.	16	
99 Market St.-NWPT & Marshall St.		13

The Justis Street stop has no existing amenities such as a bus shelter or benches. The left photo below was taken looking east on Justis Street, while the photo to the right was taken looking west. The bus stop sign is on the same post as the "West 4" signs.

Figure 23. Justis Street bus stop.

Given the availability of amenities such as a bench and bus pull off area, the Market Street bus stop pictured below provides a more user friendly environment for transit riders. Note that riders at both stops are afforded some degree of weather protection by the Newport Viaduct overhead.

Figure 24. Market Street bus stop.

Walk Access between Newport Train Station Location and Area Transit Stops

It is generally accepted that a typical transit rider will walk up to a quarter mile to a bus stop and a half mile to a rail station. Therefore the proposed Newport station and route 5 transit stops (and the bulk of downtown Newport) are located within a “reasonable” walking distance of one another. However, in assessing the quality of a "reasonable" walk, consideration must also be given to qualitative factors such as sidewalk continuity/condition, ease of street crossings, topography, sense of safety/security, and local street characteristics. See Figure 30 for walking routes.

Walk access from the Justis Street bus stop to the station: From the Justis Street bus stop, the assumed walk path would be to proceed westbound on the north side of Justis Street. Sidewalk conditions are fair to good. Justis Street at James Street is signalized, therefore crossing west/south at this intersection will not pose a problem. Walkers would then proceed southbound along the west side of James Street, which slopes downhill at a grade of approximately four percent toward Ayre Street. James Street at Market Street is signalized, therefore crossing the west leg of this intersection will not present a problem. However, pedestrians choosing to walk southbound on the east side of James Street will have difficulty crossing this intersection due to conflict with vehicles traveling northbound on James Street and turning right onto East Market Street. As indicated in Figure 25, this is a heavily utilized unsignalized traffic movement which requires pedestrians to stand on a small triangular traffic median.

Figure 25. Challenging pedestrian crossing at southwest corner of Market and James Streets.

Continuing southbound along the west side of James Street, pedestrians will cross Ayre Street. This intersection is controlled by an all-way stop condition and is generally comfortable for pedestrians. It should be noted that there is a large amount of truck traffic in this area.

Pedestrians will be required to walk under the James Street Bridge under the railroad, pictured in Figure 26. As noted previously, this may be an area of concern for some pedestrians who are traveling to and from the station during the early morning hours and at dusk. Lighting should be provided.

Figure 26. Pedestrian underpass on James Street.

Walk access from the Justis Street bus stop to the station: There are multiple options between the eastbound bus stop and the station.

- Option 1 would retain the eastbound bus stop in its current location, a protected pullout under the Route 141 viaduct. Patrons would walk west along Market Street, cross the Route 141 southbound on-ramp (there is no crosswalk at this location today), and continue west on Market and south on James. This option has the advantage of using all existing sidewalk and is commonly used by pedestrians today. However, an uncontrolled pedestrian crossing of the on-ramp, where motor vehicle traffic flows freely at all times, presents safety concerns.

- Option 2 would keep the same bus stop location. However, access would be through a new path adjacent to the skate park, taking patrons south to Ayre Street. This path exists in a rough form today, but would be widened, repaved, and well lit. Patrons would then walk west on Ayre Street to the underpass. The path would be largely under the Newport Viaduct and thus somewhat protected from weather. There are significant security concerns, however, as travelers along the path would not be visible to passing traffic. See Figure 27.

Figure 27. Potential path adjacent to the skate park, seen from Market Street.

- Option 3 was suggested by the Advisory Committee. Under that option, the bus stop would be moved west one block, along Market Street just west of James Street. This option would avoid the safety and security concerns of the first two options, as pedestrians would use existing sidewalks and crosswalks to access the station. However, the sidewalk at that bus stop location is too narrow to accommodate a shelter and there would be minor impacts to on-street parking.

Figure 28. Sidewalk on east side of James Street between the railroad bridge and Ayre Street.

Walk access from the station back to the bus stops: From the train station the assumed walk path will be to proceed north along James Street. James Street slopes uphill at a grade of approximately four percent toward Ayre Street. Pedestrian facility design accessibility standards in the Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act (ADA) of 1990 set a maximum running slope of a sidewalk at five percent to meet the ADA. Therefore, this grade is acceptable, although it could be challenging for some pedestrians. As previously noted pedestrians will have to walk under the James Street railroad bridge. Pedestrians remaining on the east side of James Street must pass a recessed stairway (see Figure 28) beyond the overpass that provided access to the former Newport station. This area may pose potential safety/security concerns. In the area of the railroad overpass the sightlines while walking northbound on the west side of James Street provide a better sense of safety and security.

Walkability summary: The quarter-mile distance between the train station and the route 5 bus stops can be characterized as a reasonable walk. Sidewalks are available for the length of the walk and they are in generally good condition. In most instances, pedestrians will cross streets at signalized intersections. However, potential areas of concern are at the access roadways from northbound James Street to eastbound Market Street, and from eastbound Market Street to southbound Route 141. Due to the grade of James Street, the walk from the bus stops to the station will present less of a challenge than the reverse trip. However, the walk uphill from the train station to the bus stops, pictured in Figure 29, may pose a challenge to some individuals. The sense of safety/security is good throughout the walk. The two points of potential concern are the right of way located under Route 141 and the recessed stairway on the east side of James Street that pedestrians would pass on the walk from the train station to the bus stops and downtown Newport.

Figure 29. Sidewalk on east side of James Street south of the railroad bridge.

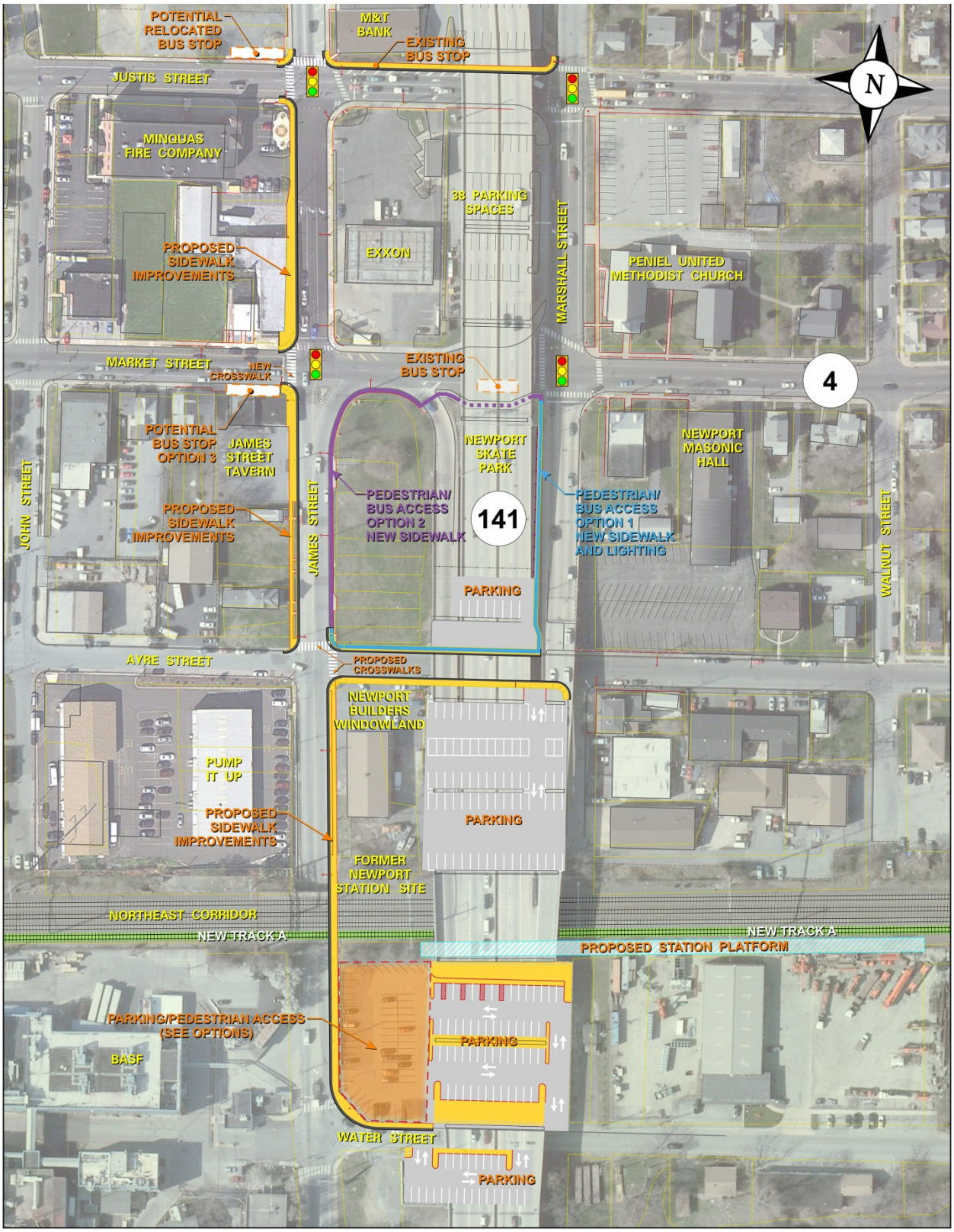


Figure 30. Pedestrian and transit access options**.**

Direct Bus Route 5 Access to the Station

An assessment was also conducted of whether or not it would be operationally feasible to directly serve the Newport train station by diverting selected A.M. /P.M. trips to the station. Consideration was also given to how diverting the line would affect the quality of route 5 service for riders who are not destined to the rail station.

Westbound route 5 service: Conceptually, westbound service could proceed via the regular route to Justis Street and Market Street. From the existing stop on Justis at Walnut, the bus would have to move to the south side of Justis Street to make the left turn on James Street. Trips diverting to the station would not be able to serve the existing stop on Justis Street west of Marshall due to the common bus operations practice of not serving a stop just before a left turn. The service would proceed south on James Street, then turn right on Ayre Street to a bus stop. Given the lack of routing options closer to the station, route 5 riders using this service would still be required to walk approximately one block to access the station. From the Ayre Street stop the service would continue west on Ayre Street, turn north on John Street, and then turn left on Justis Street to resume its regular route. The intersection of John Street at Market Street is not signalized, therefore the service will be impeded in returning to its regular route. This routing change would add 0.33 miles to the route.

Eastbound route 5 service: Eastbound route 5 service would operate via its regular route to Market Street and Mary Street, then turn south on Mary Street and east on Ayre Street to a bus stop located midblock between John and James Streets. Given the lack of routing options closer to the station, route 5 riders using this service would still be required to walk approximately one block to access the station. From this stop the service would continue east on Ayre Street, north on James Street, then east on Market where it would resume its regular route. This routing change would add 0.26 miles to the route. In addition, trips rerouted to serve the train station would miss the established stop at John and Market Streets.

Assessment of providing direct route 5 service to the station: The potential for extending direct service to the proposed station was assessed based on operational feasibility, how it would affect the quality of route 5 service for riders not destined to the station, and the quality of the connection for bus riders who want to transfer to commuter rail service.

Rerouting the service would add operating time, miles and operating cost to the service. It is not operationally feasible to provide selected eastbound and westbound route 5 trips to the station at the midpoint of the route due to overall scheduling, headway and transfer implications. In addition, this change would negatively affect through-riding customers and riders who use the service to connect to other DART bus lines. Given the fact that users of the selected trips will still be required to walk approximately one block to the train station, rerouting service would not provide a high-quality, seamless connection.

Conclusions

Rerouting selected route 5 trips to the Newport Train Station is not the recommended approach for connecting bus passengers to the station for the following reasons:

- It would not provide a true direct connection because transit riders would be required to walk at least one block to and from the station.
- It would negatively impact the quality of the service provided to existing riders who are not destined to the train stations.
- It could have potential system-wide scheduling, headway and transfer implications.
- It would add operating time, miles and cost to the service for what could be minimal benefit.

Therefore it is recommended that treatments be identified that improve existing amenities at area bus stops and walk access between these stops and the station. Potential improvements could include:

- Relocating the existing bus stops closer to Justis Street and provide shelters and other amenities. A potential location for the westbound stop on the northwest corner of Justis Street at James Street is pictured in Figure 28.
- Provide wayfinding signs between the bus stops and the station.
- Some Advisory Committee members suggested that accessibility improvements (curb ramps) at downtown Newport intersections be addressed in the short term. This is important so that patrons with disabilities can used fixed-route buses rather than relying on paratransit.

Figure 31. Potential bus stop relocation at the northwest corner of Justis and James Streets.

Motor Vehicle Access

As noted above, Newport has a well-developed street grid that provides a number of route choices for travelers. From a motor vehicle traffic standpoint, the center of Newport is formed by the intersection of two one-way street pairs. Market Street (eastbound) and Justis Street (westbound) are classified as SR 4. Marshall Street (northbound) and James Street (southbound) tie directly into the on- and off-ramps for SR 141, which passes overhead on the Newport Viaduct.

This feasibility study does not address traffic concerns in detail. However, ridership forecasts indicate that most of the traffic to and from the station is generated along the SR 141/41 corridor north and south of Newport. Traffic entering and exiting the station from northbound SR 141 is expected to pass through the center of Newport. Drivers entering from southbound SR 141 have two choices: exiting into downtown Newport, or continuing south to exit at South James Street, looping back to the north to the station and avoiding the downtown intersections. Drivers exiting to the south are likely to enter SR 141 at South James Street, also eliminating the need to pass through downtown Newport.

Furthermore, some general information is available from the Newark station to gauge peak traffic that is expected to be generated by a new station in Newport. Recent counts at Newark show that the busiest SEPTA trains on the Wilmington/Newark line are, not surprisingly, the express trains. About 30 percent of daily boardings toward Philadelphia are on the early morning express train, which leaves Newark at 6:46 am. About 34 percent of daily alightings arriving from Philadelphia are on the afternoon express (6:20 pm at Newark). It is reasonable to assume that similar percentages will apply in Newport, with the understanding that SEPTA's train schedule is likely to change prior to construction of a new station.

Of the 500 forecast trips to the Newport station, about 75 percent (375 trips) are expected to be by car. Applying the same percentage of riders per train as is currently found in Newark, about 55 cars are expected to arrive at the station for the morning express train, and about 65 cars are expected to leave the station after the afternoon express train arrives. Station arrivals tend to occur over a 15 to 20 minute period prior to the departure of a train, while cars usually depart within five minutes of their drivers leaving a train. It is anticipated that these relatively modest numbers of vehicles can be accommodated without significant impacts to traffic congestion. However, it should be acknowledged that very short-term, localized congestion may occur just after the afternoon express train arrives.

Regional Bicycle Access

DelDOT has initiated a study to identify a trail link between Newark and Wilmington. One option currently under consideration would pass through the station area, extending to the south along South James Street (eventually toward Newark) and to the east along Water Street (toward Wilmington). Harvey Hanna & Associates, a member of the Advisory Committee for the station project, has indicated that they are willing to discuss the use of some of their land to the east of the station site for a trail. These opportunities should be considered as the station project moves toward implementation.

TRANSIT-ORIENTED DEVELOPMENT OPPORTUNITIES

The project team conducted a high-level reconnaissance of potential market opportunities for TOD in Newport. As shown in the map below, Newport does not have large sites available for development or redevelopment. All sites will be infill opportunities. The full market scan can be found in Appendix B.

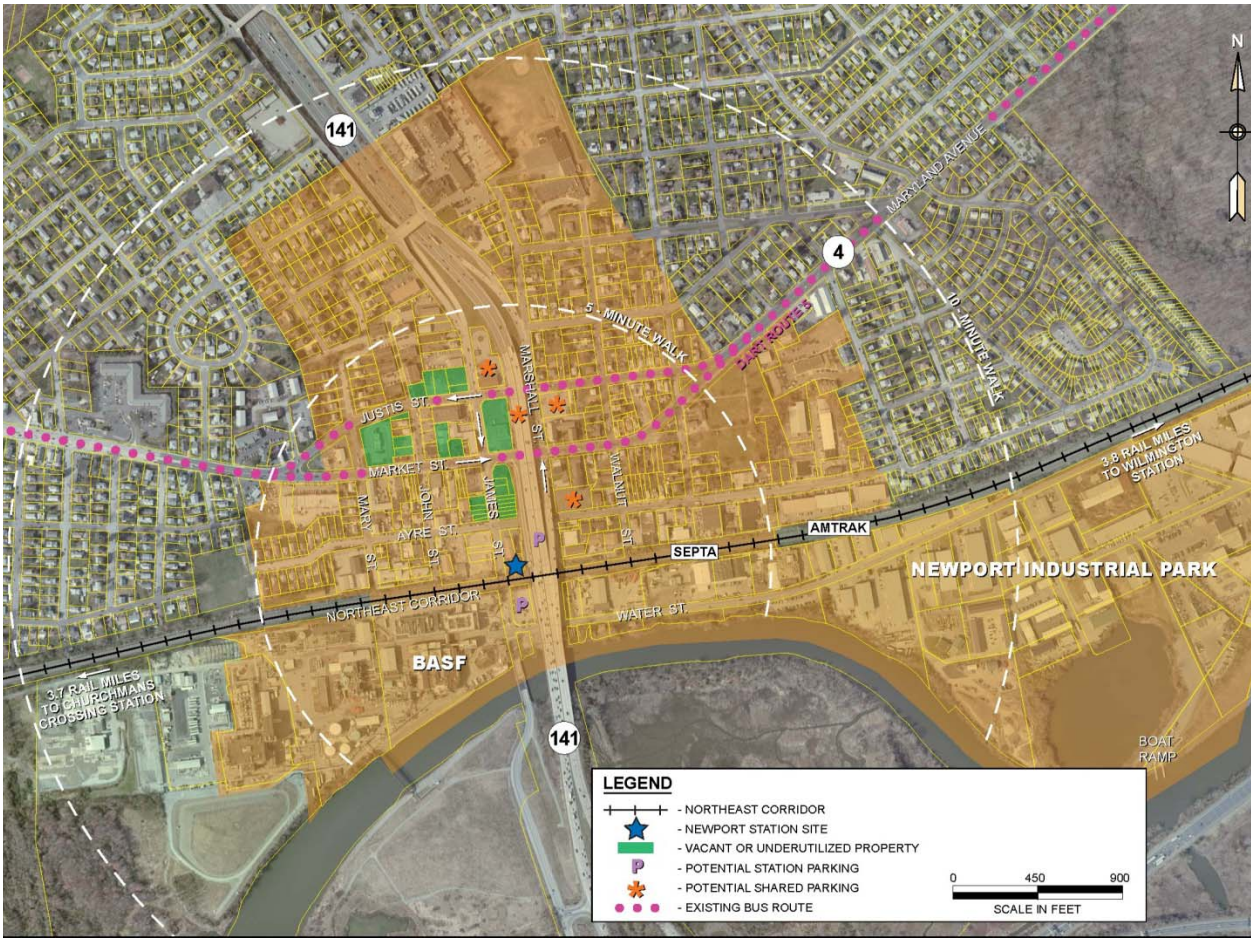


Figure 32. Vacant or underutilized properties in the station area.

Under current conditions without TOD, the Newport area has limited demand for office and residential development. However, the area has the potential to support about 130,000 square feet of retail uses, primarily food stores and pharmacies, general merchandise, and food service. There is currently more demand for these uses in the Newport area than is satisfied by local establishments.

TOD can enhance the market for development and/or redevelopment because rail service will give local residents more access to regional job opportunities. To the extent transit creates new demand, residential could be a prominent potential land use. Furthermore, to a lesser extent, the station will draw riders from outside Newport who may patronize local businesses on their way to or from the station. Available opportunity sites in Newport are of a size and configuration to accommodate mixed-use development consistent with the town's character. These would include relatively small floorplates on most sites, first-floor retail/professional office, and second-floor (and possibly third-floor) residential.

Similar types of small-scale TOD have been implemented in Riverside, Delran, and Palmyra along the River Line in New Jersey and in Riverdale on MARC's Camden Line. New development along South Main Street in Newark, although it is oriented to bus transit rather than rail, incorporates the same scale and pedestrian orientation to the street. Newport is the only small downtown on the NEC in Delaware, so it presents a unique opportunity.

Through the study process, Town representatives indicated that existing zoning will support this type of mixed-use development. In addition, much of Ayre Street has been identified as a potential redevelopment area. Furthermore, from discussions with the Town's engineer, there are no known infrastructure issues that would preclude this scale of development. All potentially developable parcels are served by public water and sewer and are not located in a floodplain or other environmentally sensitive area.

One parcel identified by the project team as having redevelopment potential is the Exxon station located at James and Justis Streets. The Town is understandably reluctant to discourage viable businesses such as the Exxon station. However, the Advisory Committee did note that the gas station is located on an unusually large parcel and that there may be opportunities that keep it at this location along with another complimentary land use. Additional opportunities that may arise if density bonuses could be used as a development tool, providing a market-based incentive for the property owner to redevelop rather than taking a proscriptive approach.

CONCLUSION

This study has found that a Newport commuter rail station is feasible based on anticipated ridership, community interest, and physical and operating constraints. This section outlines potential costs and next steps for station implementation.

Cost

A planning-level estimate of probable cost was developed for discussion purposes. This anticipated cost is broken into two parts.

1. Work performed by the project contractor is estimated at between $10 million and $11 million, including:

    - Over $8 million for platform, including stair and ramp access, railings and fencing, and lighting

    - About $2 million for parking and access, including parking lot improvements, access to James Street, sidewalk improvements, lighting, crosswalks, etc.

    Arrangements would need to be made to accommodate current BASF employee parking that uses part of the primary lot.

2. All track and overhead wiring work must be performed directly by Amtrak. A rough estimate for this work is between $11 million and $15 million. A more accurate cost estimate cannot be developed at the feasibility study stage due to the number of variables associated with Amtrak force account work.

The total project cost is estimated to be in the range of $21-26 million.

This cost estimate assumes that track can be placed on the former rail alignment of the Newport Industrial Track, without modifications to the James Street bridge or existing Amtrak tracks. Field survey indicates that these are reasonable assumptions. The estimate also assumes no new catenary poles, no station building/amenities, and that any overflow parking would be in a future phase. All railroad-related assumptions, which may change the cost estimate, must be confirmed with Amtrak as the project enters more detailed design.

Next Steps

The following steps should be taken to proceed with development of the Newport train station. To ensure continuity, the items listed below should be compiled into a concept design report that documents all decisions made. Assuming DelDOT/DTC is the implementing agency, as they have been for all suburban commuter rail stations in Delaware, the concept design report would be prepared as part of the Project Development (PD) phase in DelDOT's Capital Transportation Program.

Step	Responsible party	Remarks
Identify implementing agency	All stakeholders	Typically DelDOT/DTC
Facilitate MOU among DelDOT, WILMAPCO, Town, and all three railroads for construction, operations and maintenance	All stakeholders	
Confirm availability of former Town maintenance yard on south side of Ayre Street (owned by State) for parking	Implementing agency, Town of Newport	Assumes Town maintenance activities will remain at another site
Determine locally-preferred alternatives for pedestrian access/streetscape and parking lot configuration	Implementing agency	
Identify right of way needs for platform	Implementing agency	
Conduct traffic study to identify needed signal timing or street improvements	Implementing agency	
Prepare NEPA document and identify required environmental permits, if any	Implementing agency	No natural or cultural resource impacts are apparent
Confirm stormwater management waiver	Implementing agency, Town of Newport	
Identify potential utility impacts, if any	Implementing agency, Town of Newport, New Castle County	
Develop more detailed cost estimate for capital programming purposes	Implementing agency	
Obtain funding to move into final design, right-of-way acquisition, construction, and operation	All stakeholders, led by implementing agency	Lower-cost items such as pedestrian and bus stop improvements could move forward before full station funding is available
Incorporate this study into the Town's comprehensive plan, updating zoning and land development ordinances as needed to ensure feasibility of small-scale mixed-use development	Town of Newport	Could be implemented prior to obtaining funding for the station

APPENDIX A:
RIDERSHIP FORECASTING METHODOLOGY

The Delaware Department of Transportation's (DelDOT's) Peninsula Model, in conjunction with an off-model pivot analysis, was used to model and test the addition of the Newport Train Station. The new train station would be between the stations of Churchman's Crossing and Wilmington on the SEPTA Wilmington/Newark line. This line serves Center City Philadelphia commuters and provides a vital connection with communities along the I-95 corridor with a southern terminus in Newark, Delaware.

Highway Network Addition and TAZ Editing

The proposed station on the SEPTA Wilmington/Newark line is planned to be built in proximity to Route 141 in Newport. A new base network was generated by adding roadway detail to the existing Peninsula Model network and Traffic Analysis Zone (TAZ) splitting was performed in the Newport station study area by modifying the Peninsula Model TAZ structure.

Peninsula Model Study Area Zones - Existing Network and TAZs

Refined Peninsula Model - New Roadway Detail and TAZ Splitting

Edits Made to the Highway Network

- Added North Augustine Street between Boxwood Road and Justis Street/Market Street
- Added West Justis Street and made East Market Street one-way
- Adjusted ramp configuration at the Route 141/Route 4 interchange to match existing conditions
- Added Ayre Street between South Mary Street and South Augustine Street
- Extended South James Street from south of Market Street to the Route 141 southbound on/off ramps at Old Airport Road
- Added Water Street east of James Street

Refinements Made to the TAZ Structure

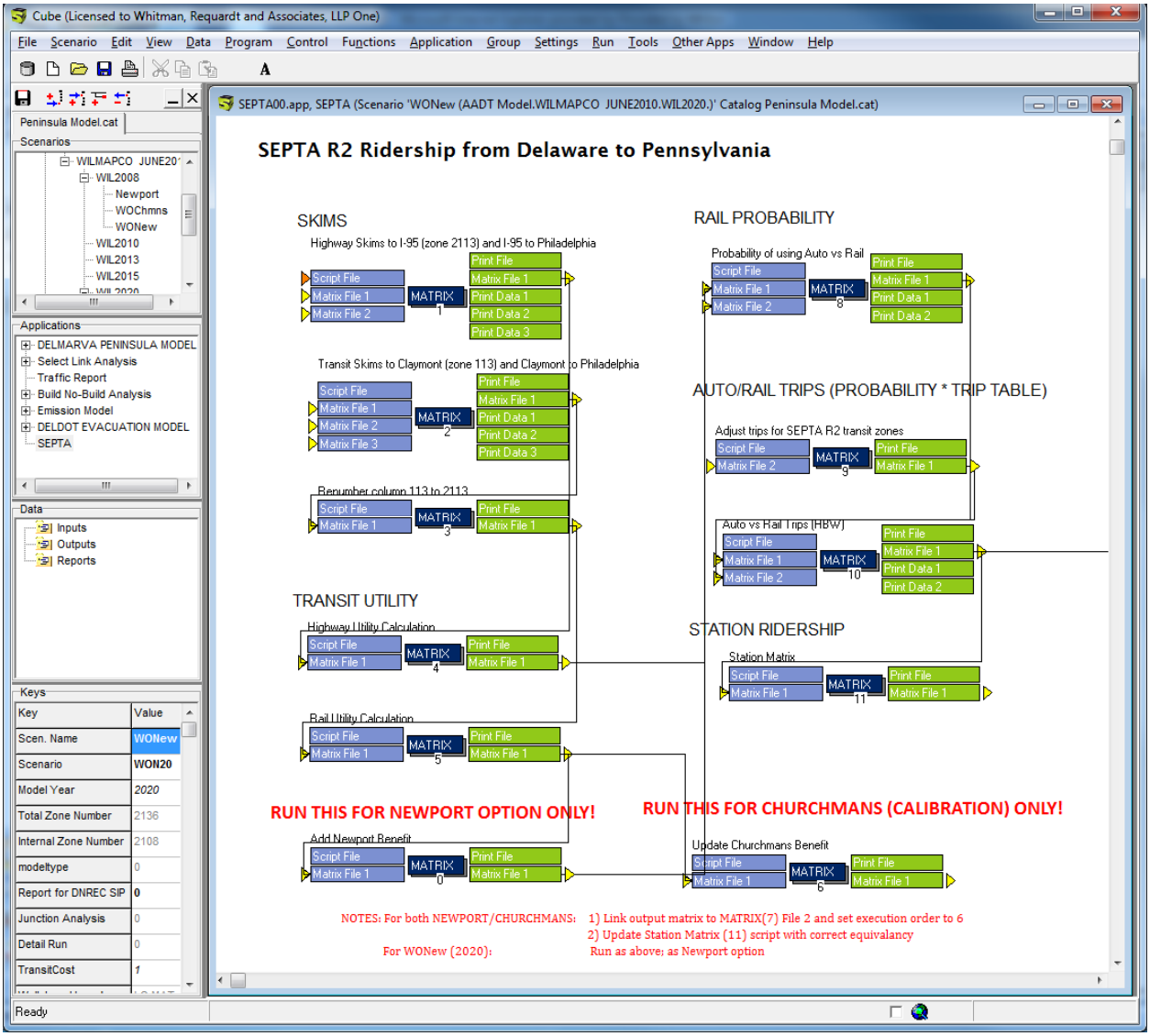
- Zone 99 was split into 99 and 346, separating the zonal traffic accessing the bridge (zone 99) over Route 141 (at Burnside Boulevard) from traffic with access to Kiamensi Road (zone 346) and Market Street.
- Zone 95 was split into 95 and 347. This separates traffic east (zone 95) and west (zone 347) of Augustine Street.
- Zone 94 was split into 94 and 348. Zone 348 is separated from old zone 94 by the railroad tracks. Water Street provides the only access to zone 348.
- Zone 97 (downtown Newport and adjacent area) was split into 97, 349, 350 and 351. Zone 97 is now the southeastern quadrant of old zone 97, south of Market Street and east of Route 141. Zones 349 and 350 are the residential part of Newport, north of Market Street and separated by Route 141. Zone 351 is now the southwestern quadrant of old zone 97, connecting James Street and Ayre Street.

Off-Model SEPTA Regional Rail Application

The Peninsula Model was run based on the updates and changes made to code in the Newport station as described previously. However, preliminary ridership resulting from this analysis indicated low ridership because the Peninsula Model is a Delaware/Maryland Eastern Shore model and traffic leaving the state to Pennsylvania is modeled by way of "external stations." These stations do not accurately capture transit ridership beyond the state line which, given the size and proximity of Center City Philadelphia, is not realistic.

This need for modeling transit ridership beyond the Delaware state border into Pennsylvania resulted in development of a separate off-model process. This process was used in conjunction with the Peninsula Model travel time skims to determine rail ridership beyond I-95 into Pennsylvania and finally to Philadelphia.

SEPTA Regional Rail Ridership Off-Model Application



Off-Model Pivot Calibration

1. Historical ridership data was obtained from the Delaware Transit Corporation (DTC) at the Wilmington/Newark line stations for model calibration.

2. Highway and transit travel skims were obtained from the calibrated Peninsula Model for two scenarios:

    a. Base Without Newport Scenario - with all four stations coded including Newark, Churchman's Crossing, Wilmington and Claymont.

    b. "With Newport" Scenario - created after calibration and including the Newport station coding.

3. The skims were determined from all zones within Delaware to the external station on I-95. Transit and highway utilities were calculated and the logit equation was used to determine probabilities of using the two modes to this external station and beyond into Pennsylvania.

4. The internal-external trip table was also obtained from the Peninsula Model for all three scenarios described in step 2. This I-E trip table was reduced by using the Pennsylvania Statewide Model external-internal trip table to determine the portion of trips from I-95 that travel to zones serviced by the SEPTA Wilmington/Newark line and beyond through transfers.
5. After calibrating the total ridership from the steps described above, the ride sheds for the existing four stations were determined. Also, the Newport ride shed was determined from the Drive to Rail benefits mapping and discussions with WILMAPCO.

6. Finally, these ride sheds were applied to the trip table from step 4 to generate ridership for all Delaware stations on the Wilmington/Newark line, including the proposed Newport station.

SEPTA Wilmington/Newark Line Ridership Model Results

Modeling results for the SEPTA Wilmington/Newark line for 2008 conditions (with and without Newport station) and the 2020 forecast year are shown in the following table. A ridership of 480 is expected at the Newport station in the base year, growing to 500 in the year 2020. These numbers indicate some riders shifting from the Churchman's Crossing station along with new riders at Newport station. Approximately 75% of all ridership was found to be drive trips at the Newport station. An overall ridership growth of about 21% is indicated in the forecast year 2020 for all stations.

SEPTA station	**Existing ridership (without Newport)**	**Existing ridership (if there was a Newport station)**	**Future ridership (with Newport)**	**Growth (2008-2020)**
Newark	500	500	710	42%
Churchman's Crossing	463	330	450	36%
Newport	**--**	**480**	**500**	4%
Wilmington	2,020	2,020	2,220	10%
Claymont	1,024	1,020	1,380	35%
TOTAL	**4,007**	**4,350**	**5,250**	21%

APPENDIX B:
TRANSIT-ORIENTED DEVELOPMENT MARKET RECONNAISSANCE

Table of Contents

Section 1 Introduction

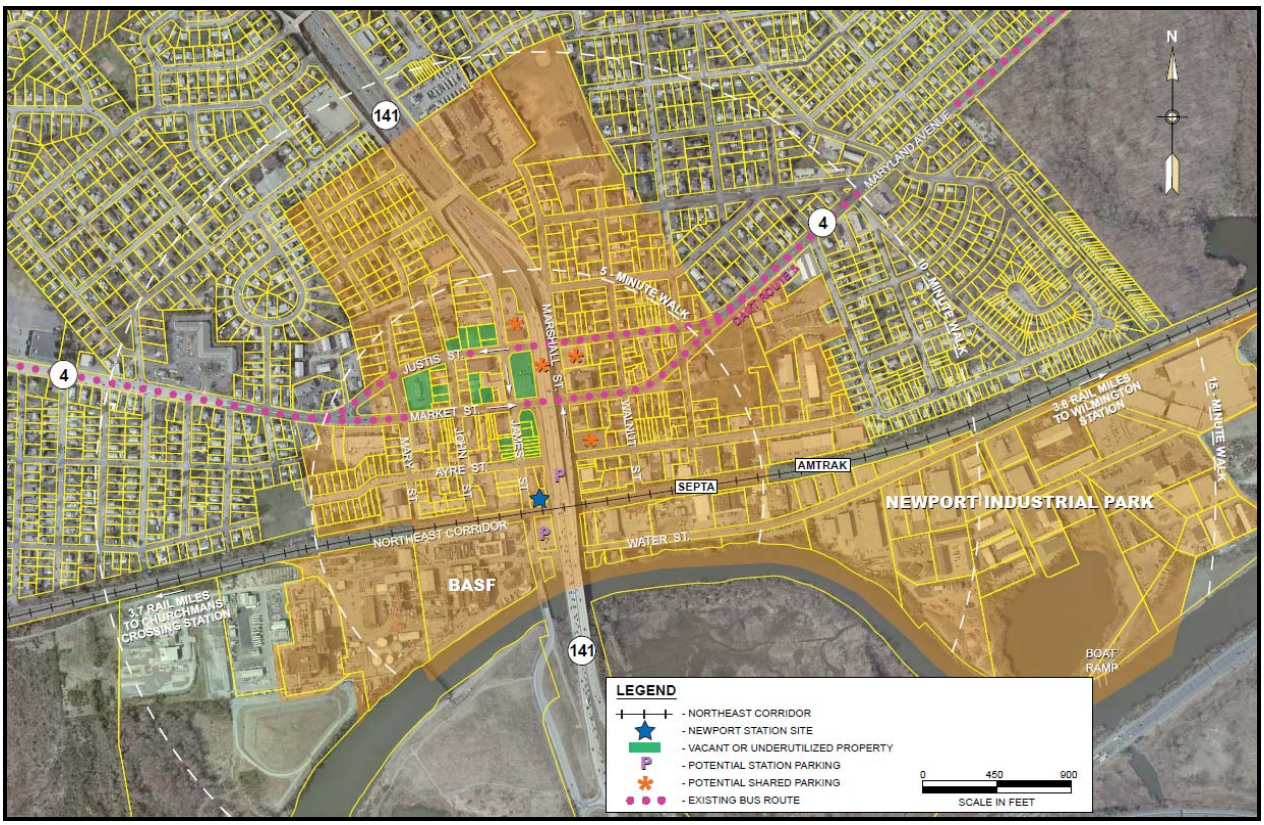
1.1 Purpose

BBP & Associates, LLC (BBP LLC) was tasked to conduct preliminary market reconnaissance in order to define and determine potential development uses at various vacant / underutilized properties located within a 15-minute walk shed of the Newport Transit Station in downtown Newport, Delaware. The following scan of market conditions considers factors that could influence future transit supportive development/redevelopment within this study area.

1.2 Study Area

The following aerial shows the Newport Transit Planning Area, including the location of the proposed Newport Transit Station and concentric rings indicating 5-, 10-, and 15-minute walk times. The green shaded areas indicate opportunity sites, where new development or redevelopment could potentially occur.

Map 1.1



Section 2 Demographic / Economic Profile

Section 2.1 Demographics

Population and household growth characteristics are key indicators of future demand for residential and non-residential development. Between 2000 and 2010, the Town of Newport's population and households decreased by 4 percent, while New Castle County's population increased by 7 percent over the same period.

Table 2.1

Demographic Changes 2000 - 20100						
Category	Newport, DE			New Castle County, DE		
	2000	2010	% Change	2000	2010	% Change
Population	1,122	1,080	-4%	500,265	534,207	7%
Households	456	438	-4%	188,935	201,648	7%
Median Income	$ 39,072	$ 47,545	22%	$ 52,668	$ 69,777	32%

Source: BBP LLC, ESRI, 2011

Newport's population's (25 years and older) educational attainment is an indicator of the strength of the workforce, and the population's ability to obtain differing degrees of employment. The population with a high school diploma or more (up through a graduate/professional degree) is 85 percent of the workforce, with the remaining without a high school diploma or less education.

Between 2005 and 2010, the state of Delaware, the Wilmington DE-MD-NJ Metro area, and New Castle County have experienced an increase in unemployment (data for the Town of Newport was not available). The unemployment rates have increased at roughly the same rate between the three jurisdictions with little variation between, therefore, it can be inferred that unemployment in the Town of Newport is increasing at approximately the same rate as the surrounding jurisdictions.

2.2 Industries by Business & Employees

In 2010, there were 239 businesses in Newport, with 1,628 employees working in the Town of Newport. In 2010, there were 510 resident of Newport, in the workforce, indicating there are 1,118 workers commuting into the Town of Newport. This could have implications for future activity in the transit station area, as some in-commuters could elect to use rail rather than their automobiles.

Table 2.2

Business Summary, 2010				
Category	Town of Newport		5-Mile Drive Time	New Castle County, DE
Number of Business	239		2,360	21,573
Number of Employees	1,628		33,059	255,673
Resident Workforce	510		19,429	232,121
Net Incommutation	69%	1,118		
Total Residents	1,080		47,512	534,207
Emp:Res Pop Ratio	0.55		0.70	0.48

Source: BBP LLC, ESRI, 2011

The business mix by industry in Table 2.3 shows the variety of businesses that are located in the Town of Newport in 2010. The highlighted businesses represent the type of businesses that are likely to locate in a Transit Oriented Development environment. Presently the businesses with the largest presence in the Town of Newport (within a one-mile radius) are Construction (71), Other Services (61), Retail Trade (46) and Professional Scientific (37).

Table 2.3

Business Mix by Industry, 2010				
Industry Type	Town of Newport		New Castle County, DE	
	No. of Bus.	% of Total	No. of Bus.	% of Total
Agriculture	0	0.0%	53	0.2%
Mining	0	0.0%	15	0.1%
Utilities	0	0.0%	29	0.1%
Construction	71	16.4%	2,028	9.4%
Manufacturing	31	7.2%	656	3.0%
Wholesale Trade	29	6.7%	937	4.3%
Retail Trade	46	10.6%	3,035	14.1%
Transportation and Warehousing	9	2.1%	391	1.8%
Information	7	1.6%	342	1.6%
Finance/Insurance	15	3.5%	1,574	7.3%
Real Estate	19	4.4%	989	4.6%
Professional, Scientific	37	8.6%	2,003	9.3%
Management	1	0.2%	378	1.8%
Waste Management/Remediation	21	4.9%	1,104	5.1%
Education	6	1.4%	533	2.5%
Health Care/Social Assistance	26	6.0%	1,708	7.9%
Arts, Entertainment, Recreation	9	2.1%	397	1.8%
Accomodation/Food Services	16	3.7%	1,298	6.0%
Other Services	61	14.1%	2,603	12.1%
Public Administration	12	2.8%	451	2.1%
Unclassified	16	3.7%	1,049	4.9%
	432	**100.0%**	**21,573**	**100%**

Source: BBP LLC, ESRI, 2011

The employee mix by industry in Table 2.4 is based on ESRI data for the Town of Newport for 2010. Table 2.4 shows the industries that employ the largest number of people in Newport, and are ranked based on the highest number of employees. The highlighted businesses represent the type of businesses that are likely to locate near a Transit Oriented Development. The top industries within a one-mile radius to the Town of Newport that are presently the highest for number of employees include Manufacturing (1,739), Construction (509), Wholesale Trade (283), Health Care/Social Assistance (256), and Professional/Scientific (235). Retail Trade was the eighth employing 199 employees. While it seemed like Retail Trade was a strong industry in the Town of Newport (the third highest number of businesses), it does not employ as many workers (have as many positions) as it initially seemed it would.

Table 2.4

Employee Mix by Industry, 2010				
Industry Type	**Town of Newport, 2010**		**New Castle County, DE**	
	Employees	**% of Total**	**Employees**	**% of Total**
Agriculture	0	0.00%	164	0.1%
Mining	0	0.00%	55	0.0%
Utilities	3	0.07%	621	0.2%
Construction	509	11.45%	15,278	6.0%
Manufacturing	1,739	39.13%	21,153	8.3%
Wholesale Trade	283	6.37%	10,158	4.0%
Retail Trade	199	4.48%	29,995	11.7%
Transportation and Warehousing	102	2.30%	5,444	2.1%
Information	19	0.43%	3,878	1.5%
Finance/Insurance	125	2.81%	22,932	9.0%
Real Estate	79	1.78%	5,793	2.3%
Professional, Scientific	235	5.29%	21,265	8.3%
Management	9	0.20%	683	0.3%
Waste Management/Remediation	97	2.18%	7,702	3.0%
Education	214	4.82%	15,326	6.0%
Health Care/Social Assistance	256	5.76%	38,849	15.2%
Arts, Entertainment, Recreation	34	0.77%	7,172	2.8%
Accomodation/Food Services	138	3.11%	19,968	7.8%
Other Services	177	3.98%	12,793	5.0%
Public Administration	212	4.77%	15,545	6.1%
Unclassified	14	0.32%	899	0.4%
	4,444	**100%**	255,673	100%

Source: BBP LLC, ESRI, 2011

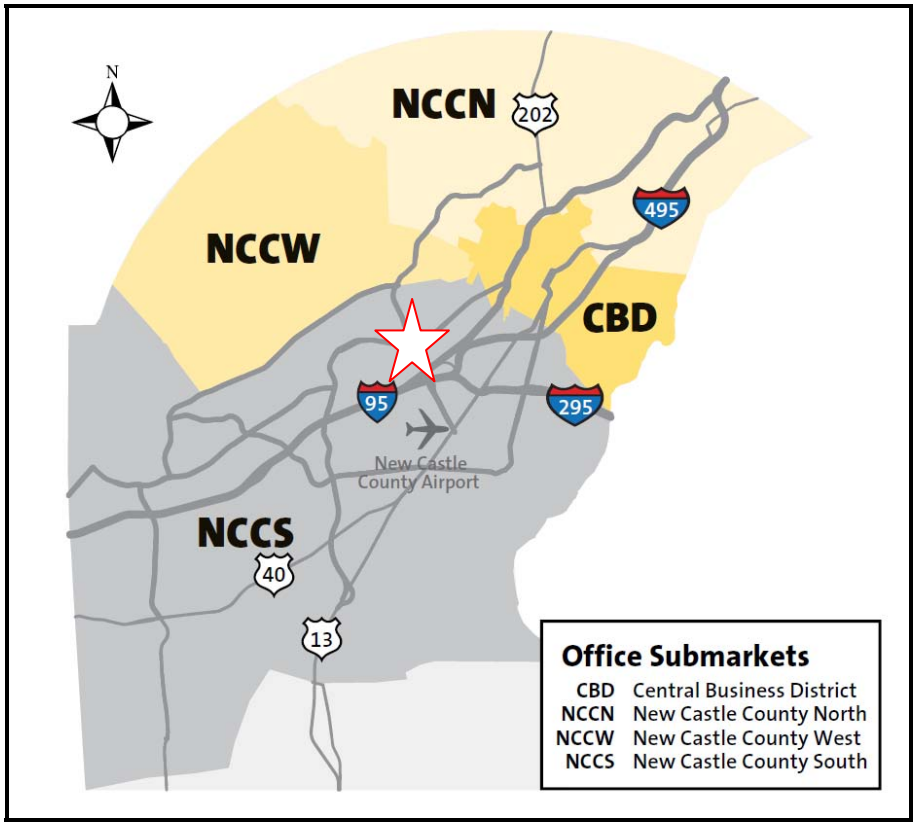
Section 3 Office Market

3.1 Study Area

The Town of Newport is situated within the broad context of the Wilmington (New Castle County) regional office market and is specifically located within the New Castle County South (NCCS) submarket. For comparison purposes, the office submarkets within the Wilmington regional office market will be examined and include:

- Wilmington Central Business District (CBD)
- Wilmington North (NCCN)
- Wilmington South (NCCS)
- Wilmington West (NCCW)

Map 3.1



3.2 Regional & Local Office Market Profile

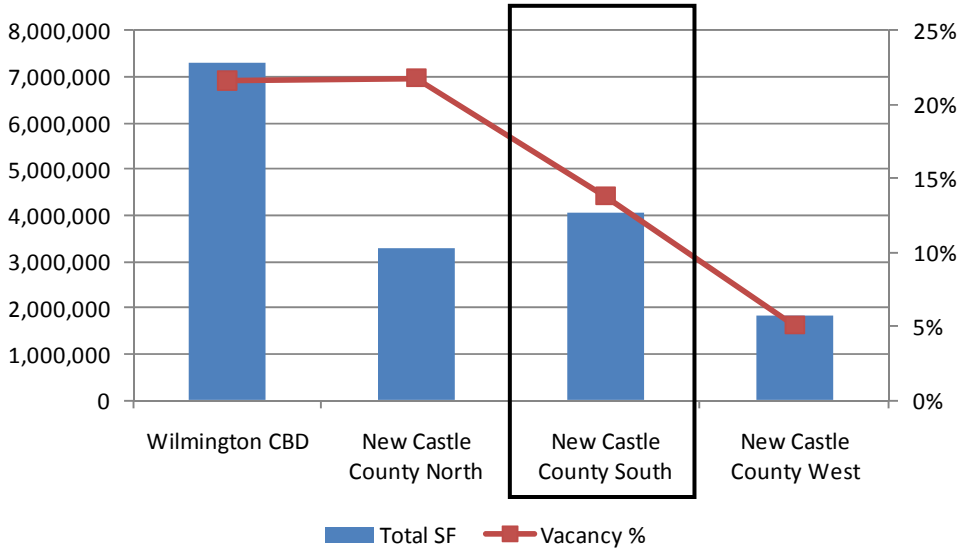
The Wilmington South submarket, which has the second largest inventory of leasable space in the greater Wilmington market and includes the Town of Newport, consists of approximately 4.1 million square feet of office space, of which 13.8 percent or 562,216 square feet is vacant. By comparison, the Central Business District (CBD) and Wilmington North submarkets have vacancy rates approaching 22 percent. Asking rents for the Wilmington South submarket average $21.88 for Class A space and $22.08 for Class B space.

Table 3.1

Office Trend Profile - Wilmington, Delaware (2nd Quarter - 2011)								
		Vacancy		Net Absorption		Under Construction	Asking Rent	
Submarket	Total SF	SF	%	Current	YTD		Class A	Class B
Wilmington CBD	7,316,709	1,555,812	21.60%	26,046	-52,372	-	$27.00	$20.92
Wilmington North	3,296,295	719,915	21.80%	-25,017	-89,107	-	$27.30	$22.09
Wilmington South	4,061,513	562,216	13.80%	-12,961	13,409	-	$21.88	$22.08
Wilmington West	1,836,729	93,925	5.10%	-8,547	-307	-	$27.98	$20.79
Suburban Total	9,194,537	1,376,056	15.00%	-46,525	-76,005	-	$25.14	$22.07
Totals	16,511,246	2,931,868	17.80%	-20,479	-128,377	-	$26.24	$21.71

Source: Grubb & Ellis, BBP LLC

Chart 3.1



Compared to the Wilmington regional office market area, the New Castle County South (NCCS), which includes the Town of Newport, has:

- 4.1 million square feet of office space, representing 24.5 percent of the total office square feet in the Wilmington regional office market area
- Significantly lower vacancy rate than the Wilmington regional office market area (13.8 percent compared to 17.8 percent of the Wilmington regional office market area)
- A positive net absorption of 13,409 square feet compared to the Wilmington regional office market area which has a negative net absorption of 128,377 square feet (Positive absorption occurs when the quantity of space becoming available in the market is less than the quantity of space being taken off the market)
- Lower Class A asking rents ($21.88) than the Wilmington regional office market area ($26.24)
- Higher Class B asking rents ($22.08) than the Wilmington regional office market area ($21.71)

3.3 Office Inventory by Type

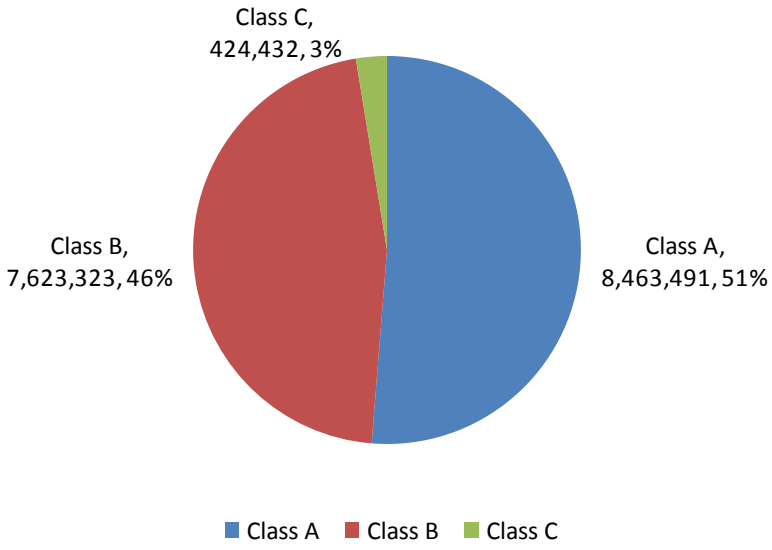
The Wilmington regional office market inventory is mainly composed of Class A office space, which accounts for 51 percent or 8.4 million square feet of the regional market area's total office inventory. Class B office space, which can be described as buildings that generally qualify as a more speculative investment and command lower rents or sales prices, accounts for 46 percent or 7.6 million square feet while Class C represents the remaining 3 percent or 424,432 square feet of the regions total office space.

Table 3.2

Office Trend Profile - Wilmington, Delaware (2nd Quarter - 2011)						
		Vacancy		Net Absorption		Under
By Class	Total SF	SF	%	Current	YTD	Construction
Class A	8,463,491	1,331,088	15.70%	-31,547	-100,468	-
Class B	7,623,323	1,450,929	19.00%	13,910	-29,426	-
Class C	424,432	149,851	35.30%	-2,842	1,517	-
Totals	16,511,246	2,931,868	19.80%	-20,479	-128,377	-

Source: Grubb & Ellis, BBP LLC

Chart 3.2


Class C, 424,432, 3%
Class B, 7,623,323, 46%
Class A, 8,463,491, 51%
Class A
Class B
Class C

Section 4 Retail Market

4.1 Retail Industry by Business & Employees

Out of the 46 retail businesses in the Town of Newport, the following are ranked based on the highest number of businesses per industry. The top six businesses categories (by number of businesses) are Motor Vehicle/Parts Dealer (13), Furniture/Home Furnishings (6) and Electronics Appliances (6), Miscellaneous Stores (5), Food & Beverage Stores (4), and Clothing/Clothing Accessories Stores (3). See Table 4.1.

Table 4.1

Retail Business Mix, 2010				
Industry Type	Town of Newport		New Castle County, DE	
	No. of Bus.	% of Total	No. of Bus.	% of Total
Motor Vehicle/Parts Dealer	13	28.3%	331	10.9%
Furniture/Home Furnishings	6	13.0%	201	6.6%
Electronics/Appliance	6	13.0%	198	6.5%
Building Materials/Garden	3	6.5%	232	7.6%
Food & Beverage Stores	4	8.7%	443	14.6%
Health & Personal Care	0	0.0%	225	7.4%
Gasoline Stores	2	4.3%	116	3.8%
Clothing/Clothing Accessories	3	6.5%	371	12.2%
Sporting Goods, Hobby, Book, Music	1	2.2%	238	7.8%
General Merchandise	2	4.3%	118	3.9%
Miscellaneous Stores	5	10.9%	507	16.7%
NonStore	1	2.2%	55	1.8%
	46	**100%**	**3,035**	**100%**

Source: BBP LLC, ESRI, 2011

The top industries that employ the most workers within the Retail Sector are ranked based on the highest number of employees within each retail type. The top five (based on number of employees) in the Town of Newport are Furniture/Home Furnishings (48), Motor Vehicle/Parts Dealer (38), Food & Beverage Stores (21), Gasoline Stores (18), and Miscellaneous Stores (18). See Table 4.2.

Table 4.2

Retail Employee Mix, 2010				
Industry Type	Town of Newport		New Castle County, DE	
	Employees	% of Total	Employees	% of Total
Motor Vehicle/Parts Dealer	38	19.1%	3,818	12.7%
Furniture/Home Furnishings	48	24.1%	1,513	5.0%
Electronics/Appliance	17	8.5%	886	3.0%
Building Materials/Garden	13	6.5%	3,859	12.9%
Food & Beverage Stores	21	10.6%	6,107	20.4%
Health & Personal Care	3	1.5%	2,274	7.6%
Gasoline Stores	18	9.0%	731	2.4%
Clothing/Clothing Accessories	6	3.0%	2,383	7.9%
Sporting Goods, Hobby, Book, Music	3	1.5%	1,938	6.5%
General Merchandise	11	5.5%	3,825	12.8%
Miscellaneous Stores	18	9.0%	2,412	8.0%
NonStore	3	1.5%	249	0.8%
	199	**100%**	**29,995**	**100%**

Source: BBP LLC, ESRI, 2011

4.2 Retail Leakage Analysis

The retail leakage analysis compares supply (sales) and demand (expenditures) to determine whether there is a net outflow of expenditures out of an area (e.g. leakage) or a net inflow of sales (e.g. surplus). Leakage generally indicates opportunities for new retail goods and services that can capture some of the leaked sales, while surplus generally indicates an area is saturated with retail goods and services.

The calculation of supportable square feet in the retail market sector is a function of the opportunity gap ("leakage") in a specific category and the average sales per square foot for that type of store. Opportunity gaps signify that household expenditure levels for a specific geography are higher than the corresponding retail sales estimates, and are shown in the "Retail Market Potential Supportable Square Feet" tables for specific retail categories in the geographies selected for this analysis. Average sales per square foot are typically expressed as a range of annual dollar amounts in a specific retail category. For example, casual family apparel stores such as Gap, Old Navy, Hollister and Abercrombie and Fitch had an average range of annual taxable sales per square foot of between $250 and $400 in 2007 according to the Urban Land Institute's *2007 Dollars and Cents of Shopping Centers*. Actual individual store results vary based on store size, location, and market characteristics. Supportable square feet for retail categories showing opportunity gaps are calculated for the study areas described in the next paragraph.

Out of the twelve Retail Categories chosen for assessment, only two showed an adequately met need. The remaining categories are experiencing leaked sales to areas outside of the designated study area, and may be able to be absorbed within the study area by new development. Table 4.3 provides this leakage data, showing the amount of consumer dollars that are spent outside the study area, by

category. Table 4.4 takes the leakage dollars, and calculates based on the category's typical sales per square foot, and estimates the approximate square footage per category that to be supported within the study area.

General Merchandise was the top category for leaked sales, and showed the highest supportable square footage (37,000), followed by Supermarkets (32,000), full Service Restaurants (15,600), and Clothing (15,500). Total supportable square footage for the selected retail categories, for this study area, is approximately 134,200 square feet.

Table 4.3

Retail Market Potential - Newport, DE 1-mile Radius				
Category	**No. Business**	**Expenditures**	**Sales**	**Retail Gap**
Daily Needs				
Supermarkets	1	$ 13,198,976	$ 1,345,590	$ (11,853,386)
Specialty Food Stores	1	$ 393,932	$ 27,072	$ (366,860)
Pharmacies & drug stores	1	$ 3,713,272	$ 273,684	$ (3,439,588)
GAFO				
General Merchandise	2	$ 8,905,777	$ 5,179,906	$ (3,725,871)
Clothing and clothing accessories	2	$ 3,528,558	$ 1,122,288	$ (2,406,270)
Furniture and home furnishing stores	6	$ 2,622,403	$ 5,006,209	$ 2,383,806
Electronic and appliance stores	5	$ 2,929,924	$ 4,546,250	$ 1,616,326
Sporting goods, hobby, book, and music stores	1	$ 1,117,642	$ 122,412	$ (995,230)
Office supplies, stationary, gift stores	1	$ 771,496	$ 342,208	$ (429,288)
Bldg Materials, Garden Equip & Supply stores	3	$ 3,253,718	$ 1,091,478	$ (2,162,240)
Food Service				
Full-service restaurants	8	$ 6,292,656	$ 2,694,867	$ (3,597,789)
Limited service eating places	7	$ 4,712,471	$ 2,442,735	$ (2,269,736)
Total:		**$ 51,440,825**	**$ 24,194,699**	**$ (27,246,126)**

Source: ESRI Business Information Solutions; BBP LLC, 2011

One Supermarket and one Specialty Food Store have been identified within the 1-mile radius of the proposed transit stop: Shop Rite Supermarket, and El Amigo's Grocery Store. In addition, six Furniture & Home Furnishing Stores were identified within 1-mile radius of the proposed transit stop: New Life Furniture Systems, A Levy Furniture, Solano's Restoration, Patrick Hassler Upholstery, BASF Corporation, and Olde Glory Antiques Treasures. This indicates demand for these specific retail categories are likely being met within the study area.

Table 4.4

Retail Market Potential Supportable Square Feet - Newport, DE (1-mile radius)				
	Leakage		Median Sales	Supportable Square Feet
Daily Needs				
Supermarkets	$	11,853,386	$370	32,036
Specialty Food Stores	$	366,860	$100	3,669
Pharmacies & drug stores	$	3,439,588	$430	7,999
GAFO				
General Merchandise	$	3,725,871	$100	37,259
Clothing and clothing accessories	$	2,406,270	$155	15,524
Furniture and home furnishing stores			$225	0
Electronic and appliance stores			$325	0
Sporting goods, hobby, book, and music stores	$	995,230	$150	6,635
Office supplies, stationary, gift stores	$	429,288	$190	2,259
Bldg Materials, Garden Equip & Supply stores	$	2,162,240	$325	6,653
Food Service				
Full-service restaurants	$	3,597,789	$230	15,643
Limited service eating places	$	2,269,736	$350	6,485
Total:	**$**	**31,246,258**		134,162

Source: ULI Dollars & Cents of Shopping Centers; BBP LLC 2011

We have also identified some of the shopping center nodes in the Newport, DE area. They are listed in the Table 4.5 below, *Shopping Centers in/near Newport, DE*. These shopping centers may be shopping areas where consumer dollars are spent outside of the designated study area.

Table 4.5

Shopping Centers in/near Newport, DE		
Center	**Location**	**Anchor**
Shop Rite Plaza	W. Newport Pike	Grocery Store
Boxwood Shopping Center	S. Maryland Ave.	Grocery Store
Prices Corner Shopping Center	Kirkwood Highway	Sears/JC Penny

Source: BBP, LLC, 2011

Section 5 Residential Market

5.1 Residential Building Permits

As residential building permits usually precede outlays for new home construction, they are often a leading indicator for the health of the residential market. Due to the global economic recession and the decline of the residential market, the amount of residential building permits issued has decreased drastically since 2005. Residential permits issued in New Castle County have declined significantly, from 1,057 in 2005 to 503 in 2010.

Table 5.1

Building Permits by Unit and Area 2005 - 2010							
Type	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
New Castle County, DE							
Single Family	1,057	1,028	784	414	430	503	4,216
Multifamily	-	-	-	52	124	-	176
Total	**1,057**	**1,028**	**784**	**466**	**554**	**503**	**4,392**
Town of Newport, DE							
Single Family	0	0	0	0	1	0	1
Multifamily	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**1**	**0**	**1**

Source: BBP LLC, U.S. Census Bureau, 2011

5.2 Residential Market Profile

Table 5.2

New Castle County, DE Residential Market Profile						
	July			Year-To-Date		
	2010	**2011**	**Change**	**2012**	**2013**	**Change**
New Listings	855	719	-15.90%	6,236	5,518	-11.50%
Closed Sales	304	415	36.50%	2,734	2,476	-9.40%
Pending Sales	311	380	22.20%	2,837	2,768	-2.40%
Median Sales Price	$242,000	$199,900	-17.40%	$214,000	$199,250	-6.90%
% of Original List Price Received at Sale	93.20%	90.90%	-2.50%	92.50%	20.20%	-78.20%
Average Days on Market Until Sale	65	93	43.10%	78	95	21.80%

Source: Patterson-Schwartz Real Estate, 201, BBP LLC

Table 5.3 shows the number of housing units by type for the Town of Newport, and housing units within the 5-minute drive shed of the proposed transit station. Two data sources were used for this analysis – ESRI for 2010, and the American Community Survey estimates for 2007 through 2009. The ACS estimates were used, as this is the most up to date source of data for the number of units by category (single-family and multifamily) category, as ESRI data only provided numbers from the year 2000, for this category.

In 2010, the Town of Newport had more renter-occupied housing (49 percent) than owner-occupied housing (40 percent), whereas housing units within a 5-minute driveshed had 64 percent owner-occupied, and 27 percent renter occupied.

In the 2007 to 2009 American Community Survey, the Town of Newport's housing stock was 70 percent single-family units, with 30 percent multi-family. The 5-minute driveshed's housing stock is 90 percent single-family units, and 10 percent multi-family. The town of Newport has less owner-occupied units, and less single-family units than the housing stock within the 5-minute driveshed.

Table 5.3

Housing Units by Type					
Town of Newport, 2010			**5 Minute Driveshed**		
2010 ESRI					
Type	Number	Percent	Type	Number	Percent
Owner-occ	197	40%	Owner-occ	13,057	64%
Renter-occ	243	49%	Renter-occ	5,426	27%
Vacant	54	11%	Vacant	1,761	9%
Total	**494**	**100%**	**Total**	**20,244**	**100%**
2007-2009 ACS Survey					
Type	Number	Percent	Type	Number	Percent
Single-Family	340	70%	Single-Family	17,085	90%
Multi-Family	144	30%	Multi-Family	1,878	10%
Total	**484**	**100%**	**Total**	**18,963**	**100%**

Source: ESRI, 2007-2009 ACS, BBP LLC, 2011

Section 6 Summary Conclusions

The new transit station and commuter rail service proposed for Newport will generate new activity in its direct vicinity, serving as a catalyst for the introduction of space and services where none presently exists. The availability of redevelopment sites in the station area enhances the opportunities for transit oriented development. Nonetheless, these two factors alone will not necessarily guarantee the attraction of investment to the area or the success of future development. However, the experience in similar environments has shown that TOD areas possess certain advantages with regard to attracting development. Although early projections point to relatively modest ridership at the Newport Station, particularly in the early years, the available opportunity sites are of a size and configuration to accommodate relatively modest redevelopment. In terms of accelerating TOD in the transit area, best practices show the application of public incentives to be effective.

Rail service in Newport will give local residents access to thousands of jobs on the eastern seaboard, particularly in the Philadelphia metropolitan area. For that reason, residential should be considered as a prominent potential land use for the transit area. True transit oriented development typically comprises a mix of relatively dense land uses, including commercial and residential. A common building configuration is ground floor retail or professional services with residential or commercial uses on the upper floors.

Housing development potential will be largely dependent on the transit area's ability to create demand where none is readily evident, as the market scan shows. Nonetheless, case studies have shown that not only do transit areas generate demand for housing, but that TOD housing typically commands premium price points. According to the Transportation Research Board, market support for TOD is typically propelled by increasing population growth (by key age cohorts attracted to TOD), traffic congestion, air pollution, affordable housing shortages, and key demographic shifts. National trends indicate that housing demand is changing dramatically because of profound demographic shifts, including the aging of baby boomers, the number of new immigrants, and the preference of younger adults who prefer urban, mixed-use environments. According to the Urban Land Institute, it is estimated that a third of all housing preference in these key demographic groups is for smaller housing choices including apartment units[1].

The findings of Section 4, the retail analysis, show support for most retail categories within a one-mile radius of the transit station. Although there are local shopping centers that serve the resident population of Newport, the activity-generating dynamic of the transit station will, of itself, create demand for retail in its direct proximity. Therefore, we conclude that, based on evident demand for 134,200 square feet of retail in a one-mile radius, there is a strong likelihood that the limited amount of ground floor retail that could be accommodated on the relatively small opportunity sites would be market supportable.

[1] Haughey, Richard M. "Higher-Density Development: Myth and Fact". Washington, D.C: ULI-the Urban Land Institute, 2005

Office market data for Wilmington are indicative of regional characteristics, and are derived from an inventory of what are mostly relatively large blocks of conventional, for lease office space. As the analysis of the Wilmington metro area office market in Section 3 shows, the Wilmington South submarket, which includes Newport, has a relatively low vacancy rate of 13.8 percent, compared to the Wilmington Central Business District at 21.6 percent and Wilmington North at 21.8 percent. This bodes well for new, strategically located inventory. Indeed, commercial office development will benefit from its unique orientation and proximity to transit at the Newport station, which offers unmatched access to the regional public transportation system. The relatively small blocks of office space which could be accommodated in the transit station area should appeal to local professional services businesses, as well as other small businesses and satellite offices of larger concerns.

There are many good examples of traditional transit villages that have been created in the Philadelphia metro area. The Newport transit area could enhance its transit village potential, both in terms of ridership and development opportunities at the immediate station, through a number of initiatives including enhanced pedestrian and bike access, vehicular access, park and ride facilities, shared parking, and a circulator bus system. All of these could be explored in a more detailed sector based market analysis.

Appendix

Demographic / Economic Profile

Demographics - In 2010, Newport's Population was 1.080, Households 438, with a Median Household Income of $47,545. The population breakdown of race and ethnicity shows that 66 percent of the population is "White Alone" with 14 percent "Black Alone" and 21 percent of "Hispanic Origin." The Town of Newport is no more diverse in race and ethnicity than the County, as the County is 67 percent "White Alone," 23 percent "Black Alone" and 8 percent of "Hispanic Origin." There are more people of Hispanic Origin in the Town of Newport, but more people considered "Black Alone" in the County. Additionally, 40 percent of all housing units are owner-occupied in the Town of Newport, compared to New Castle County, which has 65 percent owner-occupied housing.

Table 1

Population by Race/Ethnicity			
Town of Newport, 2010		**New Castle County, DE, 2010**	
Total Population	**1,080**	**Total Population**	**534,207**
White Alone	714	White Alone	359,521
Black Alone	149	Black Alone	122,333
American Indian Alone	8	American Indian Alone	1,603
Asian or Pacific Islander Alon	27	Asian or Pacific Islander Alon	21,902
Some Other Race Alone	89	Some Other Race Alone	17,629
Two or More Races	93	Two or More Races	11,753
Hispanic Origin	226	Hispanic Origin	42,737
Diversity Index	69.4	Diversity Index	56.8

Source: BBP LLC, ESRI, 2011

Table 2

General Demographics			
Town of Newport, 2010		**New Castle County, DE, 2010**	
Total Population	**1,080**	**Total Population**	**534,207**
Total Households	438	Total Households	201,648
Average Household Size	2.47	Average Household Size	2.56
Housing Units	494	Housing Units	218,249
Owner Occupied	40%	Owner Occupied	65%
Renter Occupied	11%	Renter Occupied	27%
Median Household Income	$ 47,545	Median Household Income	$ 69,777
Average Household Income	$ 59,750	Average Household Income	$ 98,578
Median Age	31.9	Median Age	36.9

Source: BBP LLC, ESRI, 2011

Between 2000 and 2010, Newport's population and households have decreased by 4 percent. However, the household median income has increased by 22percent. Compared to New Castle County, which has experienced an increase of population, household and income, Newport has remained steady, with only minimal decrease in population and households, and an increase in median income that is lower, yet comparable when considering there has been a decrease in population and households, to New Castle County's Median Income increase.

Table 3

Demographic Changes 2000 - 20100						
Category	Newport, DE			New Castle County, DE		
	2000	2010	% Change	2000	2010	% Change
Population	1,122	1,080	-4%	500,265	534,207	7%
Households	456	438	-4%	188,935	201,648	7%
Median Income	$ 39,072	$ 47,545	22%	$ 52,668	$ 69,777	32%

Source: BBP LLC, ESRI, 2011

Newport's population's (25 years and older) educational attainment is an indicator of the strength of the workforce, and the population's ability to obtain differing degrees of employment. The population with a high school diploma or more (up through a graduate/professional degree) is 85 percent of the workforce, with the remaining without a high school diploma or less education. In addition, 50 percent of the workforce population has some college or more education. In short, half of the population has college education, and have skills necessary to fill employment. When compared to the County's educational attainment, the Town of Newport is similar. The population with a high school diploma or more (up through a graduate/professional degree) is 89 percent, with the reaming without a high school diploma or less education. In addition, 60 percent of the workforce population throughout the County have some college, or more.

Table 4

Educational Attainment, 25 Years +					
Town of Newport, 2010			New Castle County, DE, 2010		
Category	Number	Percent	Category	Number	Percent
Total	**686**	**100%**	**Total**	**350,392**	**100%**
Less than 9th Grade	30	4%	Less than 9th Grade	11,913	3%
9th - 12th, No Diploma	72	11%	9th - 12th, No Diploma	25,579	7%
High School Graduate	243	35%	High School Graduate	104,417	30%
Some College, No Degree	150	22%	Some College,No Degree	67,976	19%
Associate's Degree	74	11%	Associate's Degree	26,279	8%
Bachelor's Degree	84	12%	Bachelor's Degree	68,326	20%
Grad/Prof Degree	33	5%	Grad/Prof Degree	45,551	13%

Source: BBP LLC, ESRI, 2011

Between 2005 and 2010, the state of Delaware, the Wilmington DE-MD-NJ Metro area, and New Castle County have experienced an increase in unemployment (data for the Town of Newport was not available). When compared, the labor force (number of people that live in the area that are able to work), have decreased, yet the number of people unemployed has increased. The unemployment rates have increased at roughly the same rate between the three jurisdictions in Table 5, with little variation between, therefore, it can be inferred that unemployment in the Town of Newport is increasing at approximately the same rate as the surrounding jurisdictions.

Table 5

Unemployment Snapshot							
Year	New Castle County			Wilmington, DE-MD-NJ Metro			Delaware
	Labor Force	Unemployed		Labor Force	Unemployed		Unemployment
2010	261,669	22,411	8.6%	343,029	30,904	9.0%	8.5%
2009	269,684	21,794	8.1%	351,844	29,831	8.5%	8.0%
2008	273,971	13,460	4.9%	357,008	18,181	5.1%	4.9%
2007	274,196	9,849	3.6%	356,915	13,445	3.8%	3.5%
2006	274,132	10,216	3.7%	357,166	14,018	3.9%	3.5%
2005	271,356	11,497	4.2%	352,775	15,321	4.3%	4.0%

Source: BBP LLC, Bureau of Labor Statistics, 2011

Industries by Business & Employees

In 2010, there were 239 businesses in Newport, with 1,628 employees working in the Town of Newport. In 2010, there were 510 resident of Newport, in the workforce, indicating there are 1,118 workers commuting into the Town of Newport.

Table 6

Business Summary, 2010				
Category	Town of Newport		5-Mile Drive Time	New Castle County, DE
Number of Business	239		2,360	21,573
Number of Employees	1,628		33,059	255,673
Resident Workforce	510		19,429	232,121
Net Incommutation	69%	1,118		
Total Residents	1,080		47,512	534,207
Emp:Res Pop Ratio	0.55		0.70	0.48

Source: BBP LLC, ESRI, 2011

The business mix by industry in Table 7 shows the variety of businesses that are located in the Town of Newport in 2010. The highlighted businesses represent the type of businesses that are likely to locate in a Transit Oriented Development environment. Presently the businesses with the largest presence in the Town of Newport (within a one-mile radius) are Construction (71), Other Services (61), Retail Trade (46) and Professional Scientific (37).

Table 7

Business Mix by Industry, 2010				
Industry Type	Town of Newport		New Castle County, DE	
	No. of Bus.	% of Total	No. of Bus.	% of Total
Agriculture	0	0.0%	53	0.2%
Mining	0	0.0%	15	0.1%
Utilities	0	0.0%	29	0.1%
Construction	71	16.4%	2,028	9.4%
Manufacturing	31	7.2%	656	3.0%
Wholesale Trade	29	6.7%	937	4.3%
Retail Trade	46	10.6%	3,035	14.1%
Transportation and Warehousing	9	2.1%	391	1.8%
Information	7	1.6%	342	1.6%
Finance/Insurance	15	3.5%	1,574	7.3%
Real Estate	19	4.4%	989	4.6%
Professional, Scientific	37	8.6%	2,003	9.3%
Management	1	0.2%	378	1.8%
Waste Management/Remediation	21	4.9%	1,104	5.1%
Education	6	1.4%	533	2.5%
Health Care/Social Assistance	26	6.0%	1,708	7.9%
Arts, Entertainment, Recreation	9	2.1%	397	1.8%
Accomodation/Food Services	16	3.7%	1,298	6.0%
Other Services	61	14.1%	2,603	12.1%
Public Administration	12	2.8%	451	2.1%
Unclassified	16	3.7%	1,049	4.9%
	432	**100.0%**	**21,573**	**100%**

Source: BBP LLC, ESRI, 2011

The employee mix by industry in Table 8 is based on ESRI data for the Town of Newport for 2010. Table 8 shows the industries that employ the largest number of people in Newport, and are ranked based on the highest number of employees. The highlighted businesses represent the type of businesses that are likely to locate near a Transit Oriented Development. The top industries within a one-mile radius to the Town of Newport that are presently the highest for number of employees include Manufacturing (1,739), Construction (509), Wholesale Trade (283), Health Care/Social Assistance (256), and Professional/Scientific (235). Retail Trade was the eighth employing 199 employees. While it seemed like Retail Trade was a strong industry in the Town of Newport (the third highest number of businesses), it does not employ as many workers (have as many positions) as it initially seemed it would.

Table 8

Employee Mix by Industry, 2010				
Industry Type	**Town of Newport, 2010**		**New Castle County, DE**	
	Employees	**% of Total**	**Employees**	**% of Total**
Agriculture	0	0.00%	164	0.1%
Mining	0	0.00%	55	0.0%
Utilities	3	0.07%	621	0.2%
Construction	509	11.45%	15,278	6.0%
Manufacturing	1,739	39.13%	21,153	8.3%
Wholesale Trade	283	6.37%	10,158	4.0%
Retail Trade	199	4.48%	29,995	11.7%
Transportation and Warehousing	102	2.30%	5,444	2.1%
Information	19	0.43%	3,878	1.5%
Finance/Insurance	125	2.81%	22,932	9.0%
Real Estate	79	1.78%	5,793	2.3%
Professional, Scientific	235	5.29%	21,265	8.3%
Management	9	0.20%	683	0.3%
Waste Management/Remediation	97	2.18%	7,702	3.0%
Education	214	4.82%	15,326	6.0%
Health Care/Social Assistance	256	5.76%	38,849	15.2%
Arts, Entertainment, Recreation	34	0.77%	7,172	2.8%
Accomodation/Food Services	138	3.11%	19,968	7.8%
Other Services	177	3.98%	12,793	5.0%
Public Administration	212	4.77%	15,545	6.1%
Unclassified	14	0.32%	899	0.4%
	4,444	**100%**	255,673	100%

Source: BBP LLC, ESRI, 2011

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