3.0 ALTERNATIVES TO THE PROPOSED PROJECT

3.1 INTRODUCTION

As stated in the *City Environmental Quality Review (*"*CEQR") Technical Manual*, CEQR requires that alternatives to a proposed project be identified and evaluated in an EIS, so that the decision-maker may consider whether alternatives exist that would minimize or avoid adverse environmental effects.

The *CEQR Technical Manual* notes that an ~~EIS~~Environmental Impact Statement ("EIS") should consider a range of reasonable alternatives to the project that have the potential to reduce or eliminate a proposed project's impacts and that are feasible, considering the objectives and capabilities of the project sponsor. If the EIS identifies a feasible alternative that eliminates or reduces significant adverse impacts, the lead agency may consider adopting that alternative as the proposed project. In some cases, this change may permit the agency to issue a negative declaration. The lead agency may also include planning alternatives that may have either similar, or in some cases greater, significant adverse environmental impacts than a proposed project, or may not address all of the goals and objectives of the proposed project. Such alternatives may serve as an analytical tool that demonstrates the environmental consequences of the planning decisions being made.

The selection of alternatives to a proposed project is determined by taking into account the nature of the specific project, its stated purpose and need, potential impacts, and the feasibility of potential alternatives. The *CEQR Technical Manual* notes that there is no prescribed number of alternatives that need to be examined. The only alternative required to be considered is the No-Action alternative, and a lead agency may exercise its discretion in selecting the remaining alternatives to be considered.

The alternatives to the Proposed Project evaluated in this chapter were selected in consultation with representatives of City agencies and members of the public during the scoping process. The alternatives to the Proposed Project evaluated in this chapter include:

- **No-Action Alternative.**

  The No-Action Alternative, analyzed throughout the document as the Future No-Action Condition, consists of normal and anticipated growth patterns by the 2015 and 2020 analysis years of the Proposed Project, along with other separately planned projects within the surrounding area, but does not include the construction of the proposed uses within the Development Area. Under this alternative, the Development Area would remain vacant and covered with vegetation, and Englewood Avenue would not be mapped and constructed. The adjacent existing Conservation Area, which is part of the overall Project Area, would not be mapped as parkland, and it is expected that no ~~changes or~~ development would occur within this area~~.~~, and minimal changes would occur due to the natural succession of plant and other species, as further discussed in **Section 3.2** of this chapter. Bricktown Way and Tyrellan Avenue within the Project Area would remain unmapped ~~as~~ private roadways ~~serving the Bricktown Centre~~.

- **Shortened Englewood Avenue Alternative.**

  This alternative assumes that Englewood Avenue would only be mapped and constructed from Arthur Kill Road ~~east~~eastward to ~~the~~its existing mapped area ~~of the roadway~~ which ~~currently terminates~~begins at the un-built Kent Street. ~~The~~ Englewood Avenue would not be constructed along the existing mapped but un-built portion ~~would remain un-built under this alternative, and Englewood Avenue would end at the un-built~~ from Kent Street ~~just east of the northeast corner of the proposed school site~~to Veterans Road West. Instead, a highly permeable, limited access, emergency roadway, as shown in **Figure 3-1**~~. Conceptual plans for this alternative roadway call for its eastern terminus to include~~, would be constructed which would be accessible by emergency vehicles only and would restrict unauthorized vehicular access through mechanisms

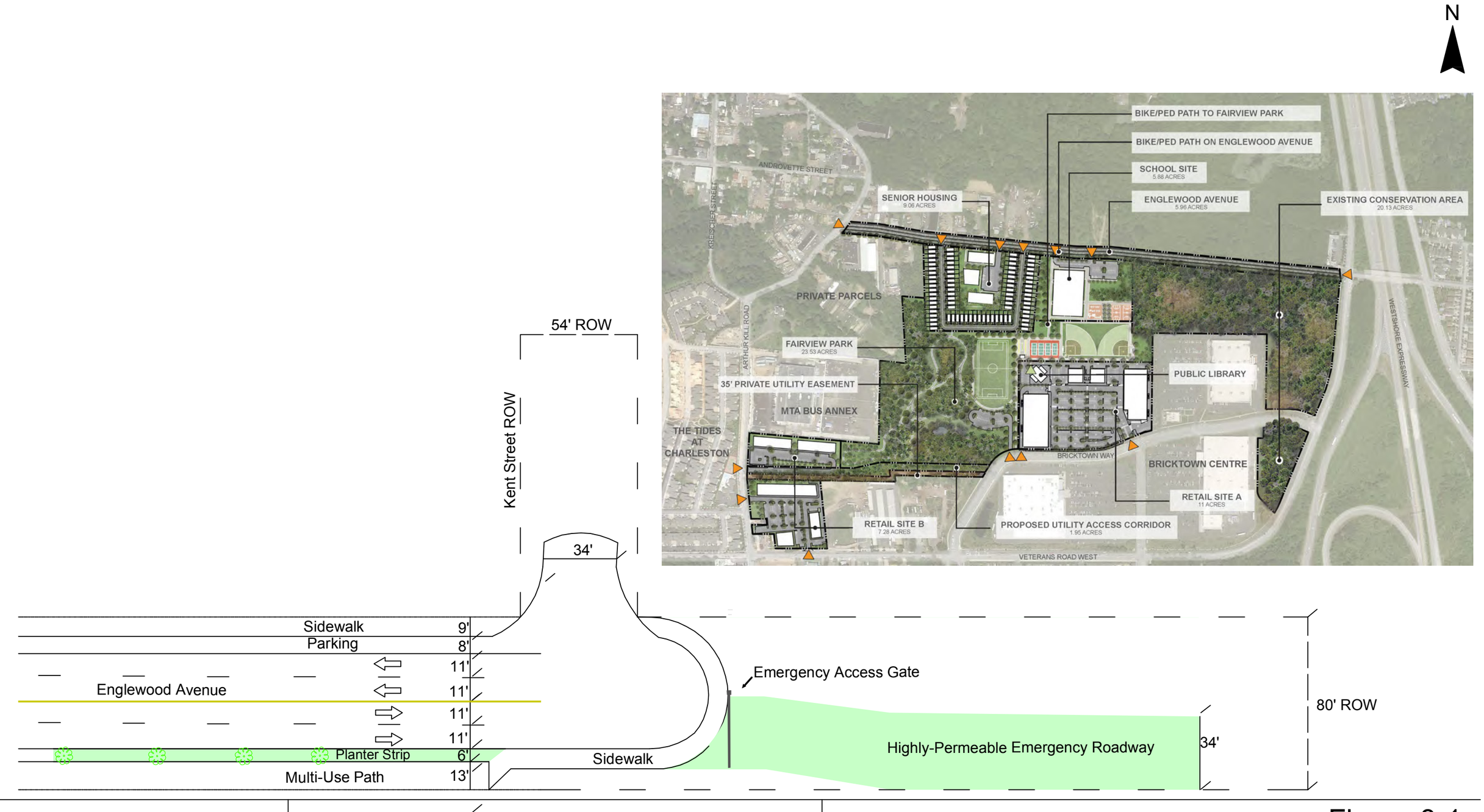

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Figure 3-1

Shortened Englewood Avenue with Kent Street Turn-Around and 34' Emergency Roadway

like siren-activated gates and/or removable bollards. The conceptual plan in **Figure 3-1** includes a turn-around meeting ~~NYC~~New York City Fire Department (FDNY) requirements for emergency access ~~and a limited access single-lane emergency roadway extending east to Veterans Road West.~~

. It is expected that the road would be 34 feet wide and would be sited on the southernmost portion of the 80-foot mapped right of way. Currently, the state owns the northern 45 feet and the city owns the southern 35 feet of this right of way. Unlike the Proposed Project and the 40-Foot Wide Alternative, this alternative ~~build-out of Englewood Avenue~~ would not require a transfer of state-owned property to the City. This alternative would not continue the 19-foot wide bicycle and pedestrian greenway shown in **Figure 1-5**, east of Kent Street, which would therefore compromise a goal of the Proposed Project. The remainder of the Development Area would be constructed as planned under the Proposed Project.

~~This alternative has the potential to minimize some of the potential significant adverse impacts on one archaeological site that would occur with the Proposed Project. This prehistoric site was located during the Phase IB survey on a small, pronounced knoll or hill with a flat summit just south of the proposed route of Englewood Avenue. The completion of that portion of Englewood Avenue and the pedestrian/bicycle path along the northern boundary of the Conservation Area has the potential to adversely impact this prehistoric site. It is also possible that other remains of prehistoric occupation are present in the 80-foot wide roadway corridor where Englewood Avenue is to be extended.~~ Compared to the Proposed Project, this alternative would likely result in fewer potential significant adverse impacts to potential archaeological resources and to several natural resources areas, discussed in greater detail in **Section 3.3** of this chapter. ~~***Construction*** activities have the potential to adversely impact intact archaeological resources that may be present along this linear corridor. Under the Shortened Englewood Avenue Alternative, no roadway construction would occur through this sensitive area, and thus the potential for impacts at this location would not be a concern. All of the other development components would still be constructed in the Development Area.~~

~~This alternative would reduce some of the potential significant adverse impacts on natural resources relative to the Proposed Project, as identified in **Chapter 2.8**, particularly within the area where Englewood Avenue would be constructed eastward along the existing mapped portion to Veterans Road West. With the exception of a dirt track, this area is not developed and is currently in its natural state. Under this alternative, this area would remain in its natural state, between the Conservation Area and CPPSPP. The approximately 0.07 acres of NYSDEC-regulated wetlands and USACE jurisdictional wetlands that would be impacted under the Proposed Project would not be impacted under this alternative. Under the Shortened Englewood Avenue Alternative, topographical changes would not occur. The Shortened Englewood Avenue Alternative would also not directly impact wildlife that use the area between the CPPSPP and the Conservation Area. This undisturbed continuous canopy would not be disturbed under this alternative, and thus the bifurcating of valuable habitat for fauna between CPPSPP and the Conservation Area would not occur.~~

~~The State-listed rare red-maple sweetgum swamp habitat is present in this portion of the mapped area of Englewood Avenue. Under the Proposed Project, this removal would result in further encroachment to this rare habitat and would result in a degree of impact, although after construction activities cease, it is not anticipated that further impacts to the forest would occur under the Proposed Project, and it is anticipated that stormwater would be managed so as not to increase erosion of the habitat. However, under this alternative, the removal of approximately 0.26 acres of this habitat type would not occur. In addition, 319 of the surveyed trees that are over six inches at diameter breast height (dbh) in this area would not be impacted under this alternative, as they would under the Proposed Project. Approximately one acre, or 4.5 percent of potential boneset habitat, would be removed by the construction of Englewood Avenue. Listed species occur in the CPPSPP and the Conservation Area. Many of these species either move between these two areas or depend on the contiguous habitats to provide a vegetated buffer from~~

~~anthropogenic disturbance. The bifurcating of habitats would have a negative effect on wildlife under the Proposed Project. Such impacts would not occur under this alternative.~~

With identified transportation improvement measures in place, the majority of potential significant traffic impacts are projected to be mitigated under the Shortened Englewood Avenue Alternative. ~~However, unmitigable impacts would remain at the intersections of:~~

- ~~Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp,~~
- ~~Boscombe Avenue/Outerbridge Crossing ramps,~~
- ~~Sharrotts Road/Arthur Kill Road, and~~
- ~~Englewood Avenue/Arthur Kill Road.~~

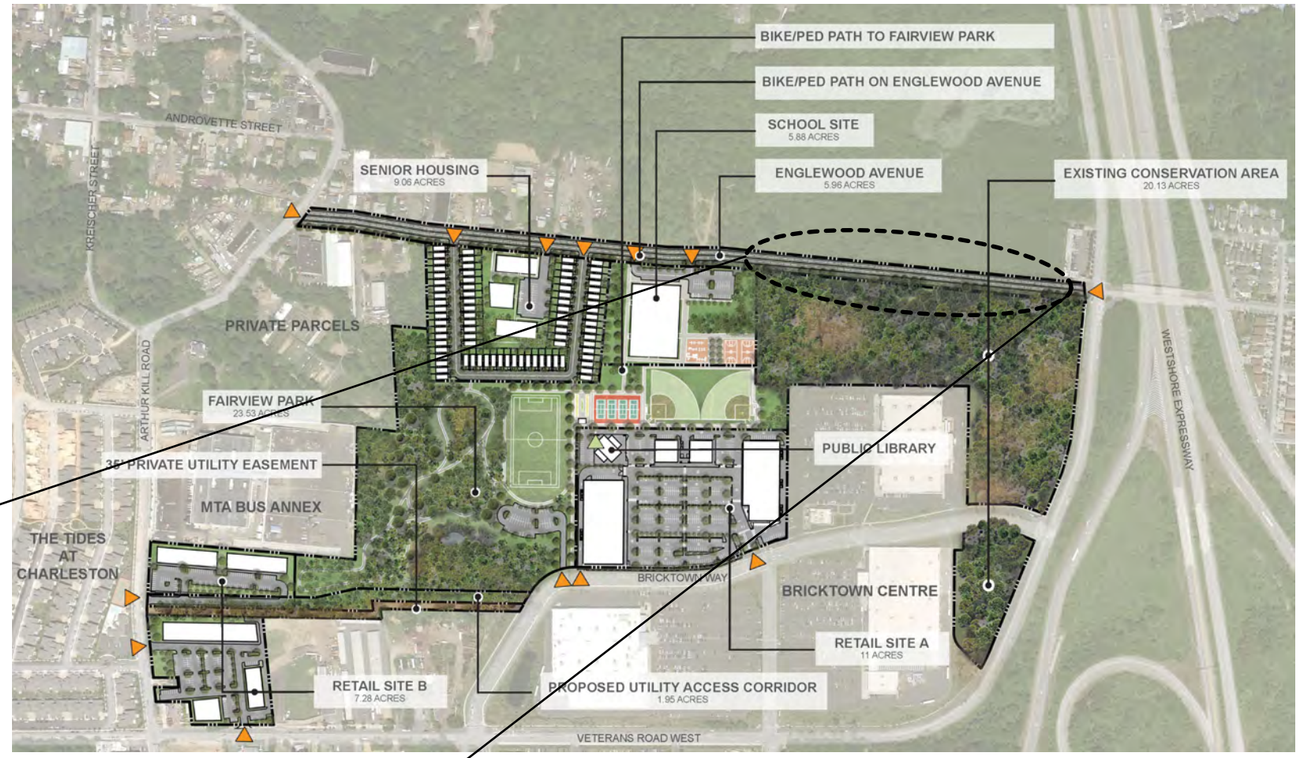
~~Under the Shortened Englewood Avenue Alternative, traffic impacts were identified at five signalized intersections and one unsignalized intersection during the weekday AM peak hour, at seven signalized intersections during the weekday MD peak hour, at nine signalized intersections and one unsignalized intersection during the weekday PM peak hour, and at 11 signalized intersections and one unsignalized intersection during the Saturday MD peak hour. Under the Proposed Project, traffic impacts were identified at six signalized intersections and the same unsignalized intersection during the weekday AM peak hour, at eight signalized intersections during the weekday MD peak hour, at 11 signalized intersections and one unsignalized intersection during the weekday PM peak hour, and at 11 signalized intersections and the same unsignalized intersection during the Saturday MD peak hour.~~ Those improvement measures identified for the Proposed Project would generally be the same as under this alternative, but more unmitigable significant traffic impacts would remain under this Alternative than under the Proposed Project~~.~~ (see **Section 3.3** of this chapter for greater detail).

- **40-Foot Wide Englewood Avenue Alternative.**

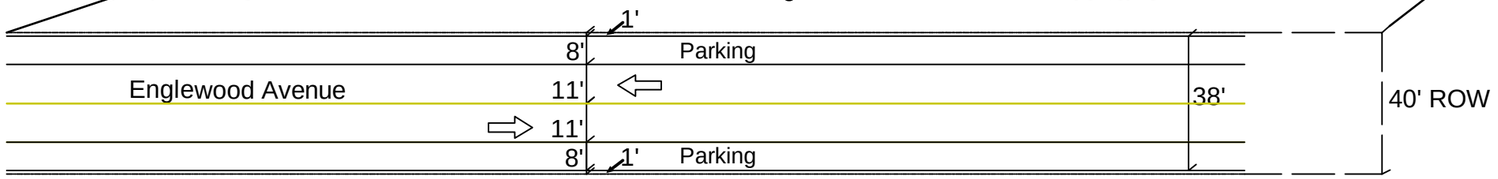
This alternative assumes that Englewood Avenue would be mapped and constructed from Arthur Kill Road ~~east~~eastward to Veterans Road West~~;~~, however, east of the presently mapped but un-built Kent Street, the roadway and sidewalk areas would be constructed to a total width of 40 feet, as shown in **Figure 3-2**, instead of the current 80-foot wide scenario under the Proposed Project. ~~Unlike~~This alternative would not continue the 19-foot wide bicycle and pedestrian greenway shown in **Figure 1-5**, east of Kent Street, which would therefore compromise a goal of the Proposed Project. Much like the Proposed Project, this alternative build-out of this eastern portion of Englewood Avenue would require ~~less state-owned property to be transferred to the City.~~state-owned property to be transferred to the City, conservatively expected to be the full amount of state-owned property. The State owns the northern 45 feet of the 80-foot mapped right of way. Under this alternative, Englewood Avenue would be 40 feet wide, extending southward from the northern edge of the 80-foot wide right-of-way. The northern portion of this right-of-way generally contains an existing dirt path and trail, while the southern portion of the right-of-way contains wetland areas. The location of the 40-foot wide road along the northern side of the right-of-way would minimize disturbance to these wetland areas, as it would be placed within the more disturbed northern portion of the right-of-way. The remainder of the Development Area would be constructed as planned under the Proposed Project.

The 40-foot Wide Englewood Avenue Alternative would not alter the findings for the majority of the technical areas discussed for the Proposed Project, with the exception of the technical areas of Historic and Cultural Resources, Natural Resources, Water and Sewer Infrastructure, ***Transportation***~~,~~ and Construction, which are further discussed below.

This alternative has the potential to minimize some of the potential significant adverse impacts on one archaeological site that would occur with the Proposed Project~~.~~ because the 40-foot Wide Englewood Avenue Alternative would be expected to impact a smaller portion of this archaeological site. Construction activities associated with the completion of the Englewood



Typical Segment East of Kent Street with 40' ROW: Parking on Both Sides and No Sidewalks



Typical Segment East of Kent Street with 40' ROW: Parking and Sidewalk on South Side

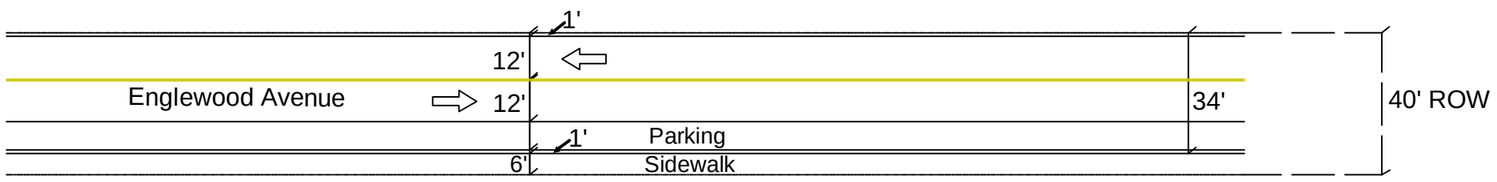


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Figure 3-2
40' ROW Options: Englewood Avenue
East of Kent Street

Avenue extension and construction of the pedestrian/bicycle path likely include cutting, filling, grading, paving, and installation of public services and utility lines. All these activities have the potential to adversely impact intact archaeological resources that may be present along this linear corridor. Under this ~~40-foot wide~~ alternative ~~for Englewood Avenue~~, roadway construction would be limited ~~in width~~within a 40-foot right of way, and thus the potential for impacts at this location would be lower than under the Proposed Project. All of the other development components would still be constructed on the Development Area.

~~This~~As further discussed in **Section 3.4** of this chapter, this alternative would reduce some of the potential significant adverse impacts on natural resources relative to the Proposed Project, within the area where Englewood Avenue is proposed to be extended eastward along the existing mapped portion to Veterans Road West. This area is not developed and is currently in its natural state with trees and wetlands. The development of Englewood Avenue under the ~~80-foot wide concept plan~~Proposed Project would impact approximately 0.07 acres of NYSDEC-regulated wetlands and USACE jurisdictional wetlands. These wetlands are of greater value because they also coincide with the red-maple sweetgum swamp community. Under this alternative's 40-foot wide roadway, the impacts would be reduced to approximately 0.~~05~~008 acres~~.~~... Actions to mitigate the impacts to these regulated and jurisdictional wetlands under this alternative would still be required by regulatory agencies. This alternative would still directly impact wildlife that use the area between the CPPSPP and the Conservation Area. Thus the impacts to wildlife within the adjacent Conservation Area and CPPSPP under this alternative would be the same as the Proposed Project. ~~Under~~However, fewer trees would be removed under this alternative, approximately ~~170~~135 surveyed trees over a six-inch dbh ~~would be removed~~, as compared to the expected 319 surveyed trees under the 80-foot wide roadway of the Proposed Project. ~~The implementation of this alternative would also remove approximately 0.22 acres of red-maple sweetgum swamp, as compared to 0.26 acres under the Proposed Project. However, all~~, All of the other noted potential significant adverse impacts to Natural Resources in the remainder of the Development Area would remain and not change under this alternative.

The findings for transportation from the analysis for the Proposed Project would not change under this alternative. Under this alternative, this section of the 40-foot wide Englewood Avenue would contain one travel lane in each direction, as compared to two travel lanes under the Proposed Project. This type of 40-foot wide roadway segment can accommodate expected future traffic volumes, including existing traffic diverting to this new roadway segment and trips generated by the Proposed Project's school and senior housing sites accessed from Englewood Avenue. To ensure a conservative approach, the traffic analysis of the Proposed Project presented in **Chapter 2.13** conservatively assumed only one travel lane in each direction on the eastbound approach of the Englewood Avenue/Veterans Road West intersection. Those analyses demonstrate that the projected future traffic volumes heading east from the Project Area on Englewood Avenue or west from Veterans Road West toward the Project Area could be accommodated with acceptable traffic operations at the Englewood Avenue/Veterans Road West intersection. No significant adverse impacts would occur under this alternative, provided the same transportation improvement measures as discussed in **Chapter 4.0** were implemented.

Under both the Proposed Project and the 40-Foot Wide Englewood Avenue Alternative, traffic impacts were identified at the same seven ~~five~~ signalized intersections ~~and one unsignalized intersection~~ during the weekday AM peak hour, at nine ~~six~~ signalized intersections during the weekday MD peak hour, at 11 signalized intersections and one unsignalized intersection during the weekday PM peak hour, and at 11 ~~10~~ signalized intersections ~~and one unsignalized intersection~~ during the Saturday MD peak hour. Those improvement measures identified for the Proposed Project to mitigate these impacts would be the same under this Alternative.

- **Arthur Kill Access Road Alternative.**

This alternative assumes that an east-west access road would be constructed along the ~~planned~~ 50-foot wide, 1.95-acre ~~utility corridor~~Proposed Utility Access Corridor from Arthur Kill Road

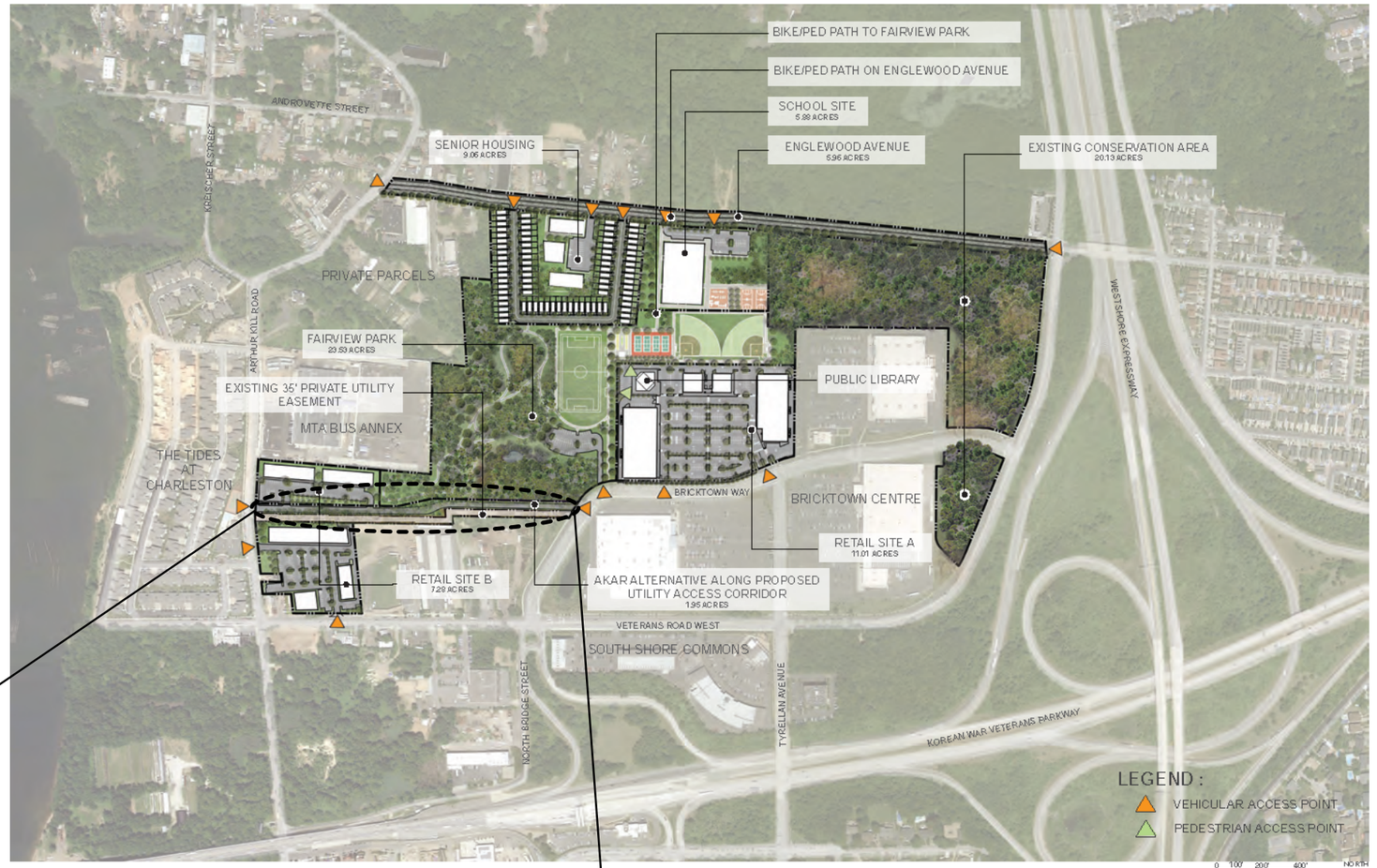
through Retail Site "B" and eastward to a connection with Bricktown Way ~~near the southeast corner of Fairview Park~~, as shown in **Figure 3-3**. Under the Proposed Project, the ~~utility corridor~~Proposed Utility Access Corridor would remain in its general natural state and the roadway would not be constructed. Under this alternative, the access road would be constructed. The remainder of the Development Area would be constructed as planned under the Proposed Project, including Englewood Avenue and ~~its full east-west mapping and construction from Arthur Kill Road to Veterans Road West, as well as the public mapping of privately owned Bricktown Way and Tyrellan Avenue~~all mapping actions.

This alternative has the potential for greater impacts on historic and cultural resources than the Proposed Utility Access Corridor under the Proposed Project. Although all of the development components would still be constructed on the retail, park, senior housing and school sites, this alternative includes the additional construction of ~~the~~an access road ~~from Arthur Kill Road through Retail Site "B" to Bricktown Way.~~. Construction within this ~~portion of the Project Area~~parcel has the potential to disturb or destroy a portion of one prehistoric archaeological site (Block 7487, Lot 100), identified in the JMA 1999 Phase IB survey, resulting in potential adverse impacts to archaeological resources. ~~At this site (Block 7487, Lot 100), the areas for this access road runs just north of the existing 35-foot-wide sanitary sewer easement that runs from Bricktown Way to Arthur Kill Road. A portion of the access road corridor in the eastern half of Block 7487 and bordering on Bricktown Centre appears to have been included in the JMA 1999 Phase IB survey area.~~ However, the western half of Block 7487, including the access road corridor has not been previously surveyed. ~~It is possible that remains of prehistoric occupation are present on this parcel. It is possible that intact prehistoric resources are located in this corridor.~~ The construction of the access road under this alternative could disturb or destroy any such resources in this area. Further research on the potential presence of such resources and designs for this connecting roadway during planning stages would determine whether such impacts would occur and potential ways to avoid or minimize them.

~~–~~This access road alternative would also alter existing natural resources ~~within this area for the access road.~~. This ~~area~~parcel is currently vacant and covered with low-level vegetation, within the Successional Old Field-Variant 1 mapped ecological community (see **Chapter 2.8**~~). Only seven~~**, Figure 2.8-4**). Because of series of grade changes between Retail Site "A" and Arthur Kill Access Road, changes to the surrounding topography would likely be required to construct this alternative. Seven additional trees with a ~~breast-height diameter~~dbh of six inches or more would be removed if this access road were constructed~~.~~ instead of a utility corridor. Construction of the Arthur Kill Access Road would eliminate approximately ~~2.5~~1.85 acres or 11.4 percent of the open area habitat presently found within the Development Area, which is ~~a~~potentially suitable for boneset habitat, and grading ~~a~~and cut/fill actions necessary to establish roadway surface and grade would result in changes in topography. ~~However, if the utility easement corridor is modified and~~If the Arthur Kill Access Road ~~developed under this alternative~~Alternative is constructed, it is anticipated that up to an additional), 0.~~067~~009 acres of ~~U.S. Army Corps of Engineers (USACE) regulated wetlands~~Wetland NB would be impacted~~, consisting of~~ , forWetlands ~~H (0.035 ac), HA (0.006 ac), NB, (0.009 ac) and NW (0.017),~~ which ~~would require~~ additional mitigation would be required by the USACE. ~~Wetlands H, HA,~~Wetland NB~~, and NW are all~~ is a small emergent ~~wetlands~~wetland (see **Chapter 2.8**).

This alternative would not significantly alter the findings for water and sewer infrastructure from the analysis provided for the Proposed Project. Additional stormwater runoff from the roadway's impervious surfaces would occur, as this area would contain the access roadway with a reasonable worst case of up to approximately 84,770 square feet of new pavement for the access road in the 1.95-acre ~~utility corridor~~Proposed Utility Access Corridor area. This would have to be addressed in the overall drainage plans for the Project Area.

With identified transportation improvement measures in place, all potential significant traffic impacts are projected to be mitigated under the Arthur Kill Access Road Alternative, with the exception of those noted at the intersections of:



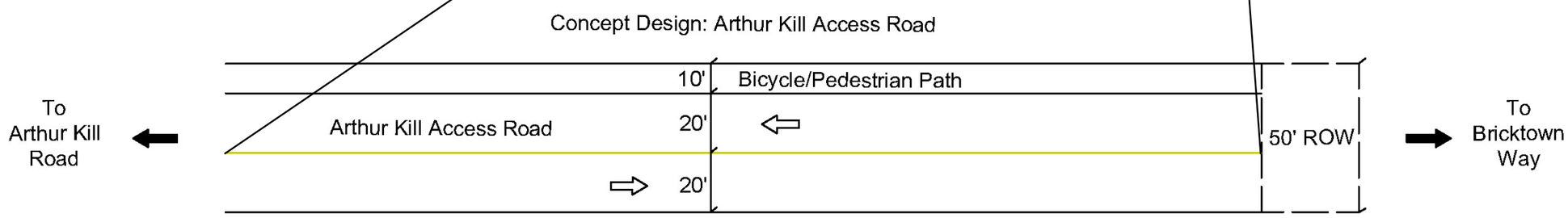


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Figure 3-3

Conceptual Site Plan

Arthur Kill Access Road Alternative

- Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp; and
- Boscombe Avenue/Outerbridge Crossing ramps~~; and~~.
- ~~Sharrotts Road/Arthur Kill Road.~~

Under the Arthur Kill Access Road Alternative, traffic impacts were identified at seven ~~six~~ signalized intersections ~~and one unsignalized intersection~~ during the weekday AM peak hour, at nine ~~eight~~ signalized intersections during the weekday MD peak hour, at 11 signalized intersections and one unsignalized intersection during the weekday PM peak hour, and at 11 signalized intersections ~~and one unsignalized intersection~~ during the Saturday MD peak hour. Under the Proposed Project, traffic impacts were identified at the same seven ~~six~~ signalized intersections ~~and the same unsignalized intersection~~ during the weekday AM peak hour, at the same nine ~~eight~~ signalized intersections during the weekday MD peak hour, at the same 11 signalized intersections and the same unsignalized intersection during the weekday PM peak hour, and at the same 11 signalized intersections ~~and the same unsignalized intersection~~ during the Saturday MD peak hour. Those improvement measures identified for the Proposed Project would generally be the same under this alternative. Some additional timing changes ~~(~~at the intersection~~s~~ of ~~Veterans Road West/Bricktown Way-Korean War Veterans Parkway Off-Ramp and~~ Allentown Lane-Veterans Road West/Arthur Kill Road~~)~~ that would be required under this alternative but would not be required under the Proposed Project, and some additional phasing changes at the intersection of Veterans Road West/Bricktown Way-Korean War Veterans Parkway Off-Ramp that would be required under the Proposed Project but ~~that~~ would not be required under this alternative.

- **No Unmitigated Impact Alternative.**

  Under this alternative, elements of the Proposed Project would be reduced or eliminated in a manner that would remove the unmitigated impacts of the Proposed Project as identified in **Chapter 4: Mitigation** and **Chapter 7: Unavoidable Adverse Impacts.** As noted in those chapters, the Proposed Project would result in unmitigated adverse impacts on natural resources and on historic and cultural resources, and could result in potentially unmitigated traffic impacts in one or more peak traffic period at the Boscombe Avenue/Outerbridge Crossing ramps intersection in 2015 and 2020, and at the Veterans Road West/Bricktown Way/Korean War Veterans Parkway ramps intersection in 2020.

The Proposed Project in 2020 would potentially result in impacts on fringed boneset, a threatened plant species, by reducing by approximately 78 percent the open field-type habitats within the Development Area where that species is presently found and is generally conducive to its growth. As discussed in **Chapter 2.8**, the potential extent of the impact and the effectiveness of possible mitigation measures depend on how much of these areas would change through natural succession from open field to more woody habitats not suitable for boneset growth. Under worst-case conditions, three of the Proposed Project's development components – Retail Site "B" (which would already be substantially reduced to avoid unmitigated Traffic Operations impacts under this alternative) and the senior housing and school sites – would have to be substantially reduced. The school site design concept was based on designs requirements for similar schools within Staten Island, anticipated student enrollment and capacity needs, and applicable zoning and land use regulations. Any substantial reduction in size would likely make these design and construction requirements untenable. Likewise, if the senior housing site were reduced to avoid a reduction in the open field-type habitat that presently covers over half of that parcel, that project component would not achieve the project's goals and objectives due to a substantial reduction in units.

Development of the Englewood Avenue segment between the CPPSPP and the Conservation Area in 2020 would result in a number of significant impacts on wetlands, flora and fauna within and between those two natural areas. While the types of potential mitigation measures presented in **Chapter 4** could reduce these impacts substantially, elements of these wetland and natural resource impacts would remain under both the Proposed Project's 80-foot wide roadway design and the 40-foot wide alternative discussed in this chapter. Other than the no-action alternative, the only alternative that would avoid some of these unmitigated impacts would be the Shortened Englewood Avenue alternative that would avoid the construction of this portion of the roadway and have a minimal-impact emergency vehicle access roadway extending to Veterans Road West.

3.2 NO-ACTION ALTERNATIVE

The No-Action Alternative, required to be considered under CEQR guidelines, demonstrates environmental conditions that would exist if the Proposed Project were not implemented. Essentially equivalent to the analysis of the future without the project, or the Future No-Action Condition, the No-Action Alternative provides a baseline for the evaluation of each type of potential impact associated with the proposed project.

The No-Action Alternative, analyzed throughout the document as the Future No-Action Condition, consists of normal and anticipated growth patterns by the 2015 and 2020 analysis years of the Proposed Project, as well as any other separately planned projects within the surrounding area, but does not include the construction of the proposed uses within the Development Area. Under this alternative, the Proposed Project would not be constructed and the Development Area is expected to remain in a natural state. However, many of the ecological communities in the Development Area that are currently dominated by herbaceous vegetation (e.g., the successional old fields, pasturelands, etc.), could convert, in whole or in part, to wooded habitats through natural succession by 2020. This natural conversion may alter or reduce the amount of suitable habitat within the Development Area capable of supporting the existing plant species observed in those areas in the 2012 and 2013 natural resources surveys (e.g., boneset). If the pastureland habitat is continued to be utilized by equestrians, it is anticipated that this ecological community would persist through 2020. Under this alternative, Englewood Avenue would not be mapped and constructed~~. While~~ and the adjacent Conservation Area, which is part of the overall Project Area, would not be mapped as parkland, ~~it is expected that no~~No other changes or development within the Conservation Area would occur under this alternative.

The No-Action Alternative uses existing conditions as a baseline and adds to it changes known or expected to be in place by the 2015 and 2020 analysis years. For many technical areas, the No-Action

Alternative incorporates known development projects that are likely to be built by the analysis years. This includes development currently under construction or which can be reasonably anticipated due to the current level of planning and public approvals. The Future No-Action Condition analyses for some technical areas, such as traffic, use a background growth factor to account for a general level of growth expected in the future. Such growth factors (e.g., an annual percentage increase in background traffic volumes) may also be used in the absence of known development projects. The No-Action Alternative analyses must also consider other future changes that will affect the environmental setting~~. These could~~, such as the possibility of natural succession from herbaceous to wooded areas as noted above. These could also include technology changes (such as advances in vehicle pollution control and roadway improvements), changes to City policies (such as zoning regulations), or changes in public policy.

Land Use, Zoning and Public Policy

Under the No-Action Alternative, the Project Area is expected to remain in its existing vacant condition. No other projected or potential development is planned or considered likely to occur in the Project Area by the 2015 analysis year or 2020 analysis year of the Proposed Project. Under the No-Action Alternative, ~~the Project Area would also not be rezoned from M1-1, and~~ the existing zoning district would remain M1-1 because the Project Area would also not be rezoned.

The No-Action Alternative would not further the goals of the City's Waterfront Revitalization Plan ("WRP") or Working West Shore 2030. It is expected that the City will continue to refine polices and guidelines over the next several years related to sustainability with PlaNYC 2030; however, as the area would remain vacant, new development compatible with the PlanNYC's sustainability would not occur. It is also expected that the City will continue to refine polices and guidelines over the next several years related to the goals and objectives of Working West Shore 2030, the guiding document and framework to improve the area's infrastructure and create jobs while managing the area's growth and preserving its open spaces. The City has already committed to short-term initiatives, as described in the West Shore 2030 Three-Year Work Plan. It is expected that several of these initiatives would be completed or underway by the 2015 and 2020 study years. However, creation of the proposed mixed-use residential, commercial and recreational development, which is called for in this plan's three-year action plan, would not occur under the No-Action Alternative.

Socioeconomic Conditions

As noted above, under the No-Action Alternative, the Project Area is expected to remain in its existing vacant condition through the 2015 and 2020 analysis years. No new jobs would be created in the Development Area, and the economic goals of the Working West Shore 2030 related to the Proposed Project would not be met. Such goals include the creation of new jobs, preservation of open space and improvement of community services, for example.The projected generation of over ~~700~~816 new jobs under the Proposed Project would not occur under the No-Action Alternative. ~~The~~Neither he Proposed Project nor the No-Action Alternative would ~~not~~ result in any significant adverse socioeconomic impacts~~, nor would any occur under the No-Action Alternative.~~..

Community Facilities and Services

Under the No-Action Alternative, the Development Area would not be redeveloped and the area would remain vacant. No changes to police and fire services, health care, libraries, educational facilities or child care services would occur as a result of the No-Action Alternative, as the Development Area would remain vacant, and thus no impacts would occur. No impacts were projected either under the Proposed Project. However, under the No-Action Alternative, the proposed school and public library that would be developed under the Proposed Project would not be constructed.

Open Space

Under the No-Action Alternative, the Development Area would not be redeveloped and the area would remain vacant. No new public open space would be created within the Development Area. While the existing 20-acre Conservation Area would remain undeveloped, it would not be mapped as new parkland, and the existing 23-acre portion of the Development Area planned for Fairview Park would remain in its natural vegetative state, used by area residents as unofficial passive open space.

Under the Proposed Project, approximately 43 acres of new parkland would be mapped. This 43-acres of new parkland includes the mapping of the existing 20-acre Conversation Area and the mapping and construction of the proposed 23-acre Fairview Park with approximately 7.5 acres of new active open space and approximately 15.5 acres of passive open space. ~~The new mapped parkland would result in a net improvement in open space conditions in the study area.~~ The Proposed Project would create additional open space demands in the area due to new residential and commercial uses which would not occur under the No-Action Alternative. However, after accounting for this, less overall open space would be available for area residents under the No-Action Alternative, as the proposed 23-acre Fairview Park would not be constructed. Neither the Proposed Project nor the No-Action Alternative is projected to result in any indirect adverse open space impacts.

Shadows

Under the No-Action Alternative, no new development or buildings would be constructed on sites within the Development Area, and as such, no new net incremental shadows would be cast. However, under the Proposed Project, no impacts on the nearby sensitive open space resources (the Conservation Area and CPPSPP) were identified by the analysis years of 2015 or 2020.

Historic and Cultural Resources

Under the No-Action Alternative, it is projected that no major changes would occur on the Project Area site. Remaining vacant, it is anticipated that there would be no new threats to the archaeological sites present. It is anticipated that buried archaeological resources would remain *in situ*. ~~However, the threat of vandalism, or unauthorized digging, is ever-present, and the situation is not likely to change.~~

In comparison, the Proposed Project includes identified adverse impacts to prehistoric resources within the Development Area. By the year 2015 the proposed development activities would potentially disturb or destroy portions of one archaeological site located on Retail Site "A." Construction in the remainder of the Project Area by the year 2020 has the potential to disturb or destroy portions of several more historic or prehistoric archaeological ~~site~~sites located within the remaining sections of the Project Area that were identified through prior archaeological survey work or that may exist in areas not previously studied. These impacts would not occur under the No-Action Alternative.

Urban Design and Visual Resources

Under the No-Action Alternative, the Development Area would remain vacant and Englewood Avenue would not be constructed. Therefore, changes related to urban design and visual resources would not occur. The Proposed Project includes changes to the urban design and visual context in the area, with the mapping and construction of new streets and development of new buildings; however, no significant adverse impacts were identified. Neither the Proposed Project nor the No-Action Alternative is projected to result in any adverse impacts to Urban Design or Visual Resources.

Natural Resources

Under the No-Action Alternative, the Development Area is expected to remain in ~~its existing~~a vacant condition. No other projected or potential development is planned or considered likely to occur in the Development Area by the 2015 or 2020 analysis years. As such, conditions related to natural resources would ~~not change over existing conditions, and no impacts would occur.~~ be similar to existing conditions,

and no impacts would occur. However, many of the ecological communities in the Development Area that are currently dominated by herbaceous vegetation (e.g., the successional old fields, pasturelands, etc.), could convert, in whole or in part, to wooded habitats through natural succession by 2020. This natural conversion may alter or reduce the amount of suitable habitat within the Development Area capable of supporting the existing plant species observed in those areas in the 2012 and 2013 natural resources surveys (e.g., boneset).

In comparison, the Proposed Project includes identified adverse impacts to wetlands and habitats within the Development Area, which would not occur under the No-Action Alternative. Under the Proposed Project, the developments from the 2015 analysis year would remove or alter approximately 20.5 acres of habitat for flora and fauna in the ~~area~~Development Area, and would impact 538 of the surveyed trees. ~~Two~~One endangered and one threatened plant species were also observed within the proposed areas of the 2015 year developments. The removal of a group of plants of one of these species ~~would be viewed as~~(i.e. Torrey's mountain mint) is a significant adverse impact ~~by regulatory agencies.~~. Implementation of developments under the 2020 year analysis would impact approximately 0.~~30~~107 acres of wetland habitats, none of which would be determined to be jurisdictional, and remove approximately 1,156 of the surveyed trees. Under the 2020 year analysis for the No-Action Alternative, these conditions would generally not be altered, with the exception of any natural succession changes. The construction of Englewood Avenue would result in substantial direct impacts to wildlife that uses the CPPSPP and the Conservation Area. These impacts would not occur under the No-Action Alternative.

Hazardous Materials

Under the No-Action Alternative, the Project Area is expected to remain in its existing vacant condition. No other development is planned or considered likely to occur in the Project Area by the 2015 or 2020 analysis years of the proposed Charleston Mixed-Use Development. As such, conditions related to hazardous materials would not change over existing conditions, and no impacts would occur. ~~No such impacts were identified as part of the Proposed Project.~~

Water and Sewer Infrastructure

Under the No-Action Alternative, the Development Area is expected to remain in its existing vacant condition. No other projected development is planned or considered likely to occur in the Development Area by the 2015 or 2020 analysis years. Therefore, total water, wastewater and stormwater generation in the Development Area and the area for the construction of Englewood Avenue under the No-Action Alternative would be similar to existing conditions. Under the Proposed Project, the Development Area would require new potable water and generate additional sanitary and stormwater waste. Under the Proposed Project, development by the year 2015 would generate a water supply demand of approximately 86,100 gpd and wastewater generation of approximately 50,400 gpd, while development by the year 2020 would generate a water supply demand of approximately 189,400 gpd and wastewater generation of approximately 121,400 gpd.

Under the Proposed Project, the 3,964,450 square-foot Project Area would have a total of 716,552 square feet of impervious surface area by the 2015 analysis year, while by the year 2020, the 3,964,450 square-foot Project Area would have a total of 1,607,269 square feet of impervious surface area. Currently, the vacant and undeveloped portion of the Project Area is approximately 95 percent (3,772,786 square feet) covered in permeable grass/softscape, and the only impermeable surfaces in the Project Area under existing conditions are the paved Bricktown Way and Tyrellan Avenue, which account for five percent (191,664 square feet) of the total Project Area. These conditions would remain under the No-Action Alternative. Consequently, stormwater runoff under the Proposed Project, which would require management, would be greater than under the No-Action Alternative. The increased sanitary and stormwater sewage demands due to the Proposed Project would require revisions to applicable NYCDEP Drainage Plans for the affected watersheds. However, no impacts were identified under the Proposed Project.

Solid Waste and Sanitation Services

Under the No-Action Alternative, the Development Area is expected to remain in its existing vacant condition. No other projected development is planned or considered likely to occur in the Development Area by the 2015 or 2020 analysis years, and total solid waste generation in the Project Area under the No-Action Alternative is expected to remain at zero. Under the Proposed Project, the Development Area would generate new solid waste from buildings constructed in the area. The proposed development of the park, Retail Site "A" and the library by 2015 would create an incremental solid waste generation of approximately 39,002 pounds (19.5 tons) of solid waste per week, while by the year 2020, the Proposed Project would generate incremental solid waste at a rate of 69,080 pounds (approximately 34.5 tons) per week (of this amount, about 4.9 tons per week would be handled by the New York City Department of Sanitation (DSNY~~,~~), and private carters would handle about 29.6 tons per week). However, no impacts were identified under the Proposed Project.

Energy

Under the No-Action Alternative, total energy consumption in the Development Area is expected to remain at zero, as the Development Area would remain vacant. Under the Proposed Project, the Development Area would require energy to power the proposed buildings on the development sites. Under the Proposed Project, development the year 2015 would create an incremental energy demand for approximately 45,939,000 thousand BTUs in annual energy use, while by the year 2020, the Proposed Project would create a total incremental energy demand for approximately 127,729,601 thousand BTUs in annual energy use. However, no impacts were identified under the Proposed Project.

Transportation

As further discussed in **Chapter 2.13**, the Future No-Action condition traffic analysis identifies how the study area's transportation system is projected to operate in the future without the Proposed Project, and includes anticipated future increases in background traffic volumes for the 2015 and 2020 analysis years. With these increases under the No-Action Alternative, by the year 2015 ten of the 24 study area intersections are projected to have one or more congested movements in one or more of the analyzed peak hours. Under the No-Action Alternative by the year 2020, 11 of the 24 study area intersections are projected to have one or more congested movements in one or more of the analyzed peak hours. Under the Proposed Project (by the year 2020), 17 ~~16~~ of the 24 study area intersections are projected to have one or more congested movements in one or more of the analyzed peak hours. Detailed comparisons of future traffic conditions under the Proposed Project and the No-Action alternatives are presented in **Section 2.13.4** of **Chapter 2.13**.

Air Quality

Under the No-Action Alternative, no development would occur in the Development Area, and thus no new stationary sources would be constructed. Air Quality emissions from mobile sources would be similar to, but slightly higher due to natural traffic growth, when compared to emission levels under existing conditions. While the Proposed Project would result in increases in stationary and mobile source emissions, no significant adverse impacts were identified.

Greenhouse Gas Emissions

Under the No-Action Alternative, the Development Area is expected to remain in its existing vacant condition~~, as is the area for the construction of Englewood Avenue.~~. No other projected development is planned or considered likely to occur in the Project Area by the 2015 or 2020 analysis years. Therefore, the generation of greenhouse gas (GHG) emissions in the Project Area under the No-Action Alternative is expected to remain at zero, as no operations occur on the area and no vehicle trips are generated to/from the Project Area. Under the Proposed Project, new GHG emissions would be generated; however, significant adverse impacts were not identified.

Noise

Under the No-Action Alternative, no development would occur in the Development Area~~ or the area for the construction of Englewood Avenue.~~ .The noise levels from mobile sources on surrounding roadways would be similar to, but slightly higher due to natural traffic growth, when compared to noise levels under existing conditions. Under the Proposed Project, noise levels would be further increased from additional vehicular traffic; however, significant adverse impacts were not identified.

Public Health

Under the No-Action Alternative, no construction activities would occur within the Development or Project Areas, and no impacts to hazardous materials, air quality and other public health concerns would thus occur. No such impacts were identified under the Proposed Project.

Neighborhood Character

Under the No-Action Alternative, the character of the neighborhood is not expected to substantially change. Existing conditions in the Development Area would remain, and no impacts would occur. Under the Proposed Project, the character of the neighborhood would be altered with the proposed residential, educational, recreational and retail developments under the 2015 and 2020 year analysis; however, no significant adverse impacts to neighborhood character due to the Proposed Project were identified.

Construction

Under the No-Action Alternative, no construction activities would occur within the Development Area or the area for the construction of Englewood Avenue, and thus no impacts would occur. Under the Proposed Project, the Development Area would ~~witness~~undergo construction over several years on the retail, park, senior housing, and school sites, along with the construction of Englewood Avenue, removing natural resources on these sites and potentially destroying prehistoric resources, none of which would occur under the No-Action Alternative.

3.3 SHORTENED ENGLEWOOD AVENUE ALTERNATIVE

This alternative assumes that Englewood Avenue would only be mapped and constructed from Arthur Kill Road eastward to the un-built Kent Street. From Kent Street to Veterans Road West, the existing mapped but un-built portion of Englewood Avenue, would contain a highly permeable, limited access, 34-foot wide emergency roadway, as shown in previous **Figure 3-1**. Within this section of Englewood Avenue, the northern 45 feet of the 80-foot mapped right-of-way roadway bed, extending for approximately 1,488 feet westward from Veterans Road West, is owned by the State of New York and the southern 35 feet is owned by the City of New York. Under the Proposed Project a transfer of property from the State to the City would be required. Under this alternative, no property transfer would be required as the emergency roadway would be sited entirely within the City's right of way along the southern edge of Englewood Avenue's mapped 80-foot right-of-way.

The emergency road would only be used for emergency access into sections of the Project Area (e.g., school and senior housing sites) and unauthorized vehicular access would be restricted through mechanisms such as siren-activated gates or removable bollards. The conceptual plan in **Figure 3-1** includes a turn-around meeting FDNY requirements for emergency access. Generally, FDNY guidelines limit public roads ending in a cul-de-sac at 400 feet deep, due to operational concerns. However, longer sections as would be required in this scenario are possible with FDNY approval. The emergency access road under this alternative would be constructed to meet FDNY's specifications and load requirements and would provide emergency responders access to the northern 2020 development sites from the east of the Project Area.

Under the Proposed Project, the fully-constructed Englewood Avenue, which would include bicycle and pedestrian facilities, would be approximately 3,265 feet in length and would occupy approximately 5.9 acres. Under the Shortened Englewood Avenue Alternative, Englewood Avenue, from Arthur Kill Road to Kent Street, would ~~extent~~extend approximately 1,800 feet and occupy approximately 3.25 acres. The emergency road, which would extend another approximately 1,465 feet from the end of Englewood Avenue to Veterans Road West would occupy only approximately 1.2 acres, compared to approximately 2.7 acres for this portion of Englewood Avenue under the Proposed Project.

~~Within the existing 80-foot wide mapped portion of Englewood Avenue from Kent Street to Veterans Road West, approximately 45 feet of the 80-foot mapped right-of-way roadway bed, extending for approximately 1,488 feet westward from Veterans Road West, is owned by the State of New York. In order to construct Englewood Avenue to the full existing mapped width of 80 feet, a transfer of ownership of this area from the State to the City is required. There is no current acquisition agreement with the State. Under this alternative, the transfer of ownership would not be required, as a full-width roadway would not be extended eastward to Veterans Road West over the State-owned property.~~

Land Use, Zoning and Public Policy

Under this alternative, while proposed land uses within the Development Area would be the same as under the Proposed Project, the eastern portion of Englewood Avenue would ~~not be constructed, and that~~only contain a 34 foot-wide emergency access road thus allowing this section of the corridor area ~~would~~to remain more in its current and natural state, with ~~wetlands and other trees not disturbed~~less disturbance to some natural areas than under the Proposed Project (see **Chapter 2.8 and 3.3**). Zoning changes and their effects would be the same under this alternative as they would be under the Proposed Project. In addition, public policies discussed in **Chapter 2.1** would continue to be in effect under this alternative.

Socioeconomic Conditions

This alternative would not alter the findings for socioeconomic conditions from the analysis of the Proposed Project provided in **Chapter 2.2**. All of the development components would still be constructed on the retail, park, senior housing and school sites. This alternative would not result in any significant adverse impacts to socioeconomic conditions.

Community Facilities and Services

The findings of the community facility and services analysis for the Proposed Project provided in **Chapter 2.3** would not change under this alternative. –All of the development components would still be constructed on the retail, park, senior housing and school sites, and screening thresholds requiring further study would still not be exceeded. This alternative would not result in any significant adverse impacts to community facilities or services and would result in a new emergency road that would provide emergency vehicles access to the proposed school and housing sites.

Open Space

The findings of the open space analysis for the Proposed Project as provided in **Chapter 2.4** would also apply to this alternative. All of the development components would still be constructed on the retail, park, senior housing and school sites, and the analysis shows that the components would not result in any direct or indirect impacts to open spaces. This alternative would not result in any significant adverse impacts to open spaces. ~~As Englewood Avenue would not be constructed between the~~ Some changes to the adjacent CPPSPP and Conservation Area ~~to the south and CPPSPP to~~would occur as a result of the creation of the ~~north, this corridor~~emergency access road, which would ~~remain in its current and~~ somewhat alter the natural state and require topographic grade changes, utilizing construction with ~~wetlands and other trees not disturbed (see **Chapter 2.8**).~~highly permeable materials instead of conventional impermeable materials.

Shadows

The findings of the shadow analysis for the Proposed Project provided in **Chapter 2.5** would also apply to this alternative. All of the development components would still be constructed on the retail, park, senior housing and school sites, and shadows cast from the buildings expected on those sites would not reach the Conservation Area or CPPSPP. Thus, further shadow impact assessment would not be warranted. This alternative would not result in any significant adverse shadow impacts.

Historic and Cultural Resources

This alternative ~~has the potential to minimize some of the~~would result in fewer potential significant adverse impacts on ~~one~~ the potential archaeological ~~site that would occur with~~ resources within and/or south of Englewood Avenue compared to the Proposed Project.~~–~~ As previously noted in **Chapter 2.6**, construction within this portion of the Project Area by 2020 has the potential to disturb or destroy one prehistoric archaeological site that was identified through prior archaeological survey work, resulting in potential significant adverse impacts to archaeological resources. ~~At~~ Site A7-MCB-1 (NYS Site A08501.002767), ~~this prehistoric site~~ was located during the Phase IB survey on a small, pronounced knoll or hill with a flat summit just south of the proposed route of Englewood Avenue. The site~~, which~~ covers an area of approximately 65 feet by 25 feet~~,~~ and is considered to be archaeologically significant. ~~The completion of that portion of Englewood Avenue and the pedestrian/bicycle path along the northern boundary of the Conservation Area has the potential to adversely impact this prehistoric site.~~ It is also possible that other remains of prehistoric occupation are present in the 80-foot wide roadway corridor where Englewood Avenue is to be extended. Construction activities associated with the completion of the Englewood Avenue extension and construction of the pedestrian/bicycle path likely include cutting, filling, grading, paving, and installation of public services and utility lines. All these activities have the potential to adversely impact intact archaeological resources that may be present along this linear corridor. Under the Shortened Englewood Avenue Alternative, ~~no~~a more minimal roadway construction would occur through this sensitive area, ~~and~~because little to no utilities would be required for the emergency road thus the potential for impacts at this location would not be as much of a concern as under the Proposed Project. All of the other development components would still be constructed in the Development Area.

Urban Design and Visual Resources

The majority of the findings of the urban design and visual resource analysis for the Proposed Project provided in **Chapter 2.7** would not change under this alternative. All of the development components would still be constructed on the retail, park, senior housing and school sites, at the current build scenarios (footprints, heights, etc.). No additional buildings would be constructed under this alternative. ~~However, under~~Under this alternative, the existing view corridor down Englewood Avenue (looking eastward from Arthur Kill Road) would ~~remain its current state, and~~ be altered somewhat with the construction of the emergency access road. However, views ~~would continue to end at the existing~~into the natural areas ~~that~~to the east would ~~not~~ be ~~removed~~less impacted than under the Proposed ~~Project. This alternative would not result in any significant adverse impacts to urban design and visual resources~~Action.

Natural Resources

This alternative would reduce some, but not all of the potential significant adverse impacts on natural resources relative to the Proposed Project, as identified in **Chapter 2.8**, ~~particularly within~~ due to this alternative's construction of an emergency roadway with highly permeable paving material and the ~~area where Englewood Avenue would be constructed eastward along the existing mapped portion~~ restriction of vehicular use other than emergency vehicles from Kent Street to Veterans Road West. ~~–~~With the exception of a dirt track, this area is not developed and is currently in its natural state. Under this alternative, ~~this area would remain~~ the highly permeable emergency access road would be constructed to offer both turf protections and load support for the infrequent use by emergency vehicles, but require less topographical and grade alterations that under the Proposed Project with an 80-foot wide, four-lane, asphalt roadway. The area would remain partially in its natural state, between the Conservation Area and

CPPSPP~~. The approximately 0.07 acres of NYSDEC-regulated wetlands and USACE jurisdictional wetlands that~~ which would ~~be impacted under the Proposed Project would not be impacted~~not occur under the Proposed Project or the 40-Foot Wide Englewood Avenue Alternative. Additionally pedestrians and bicyclists would have the same access to this portion of Englewood Ave as they would in the No-Action alternative.

Under the Proposed Project, ~~for~~ the construction of Englewood Avenue~~, the current topography~~ may require substantial earthmoving activities in certain segments to create a road embankment capable of supporting the proposed city street, and the future contractor would need to comply with a sediment and erosion control plan during the construction activities. Under the Shortened Englewood Avenue Alternative, ~~such~~some grading would occur to meet the load requirements for the emergency access road, but there would be less topographical changes ~~would not occur~~required to construct the emergency access road due to its construction with highly permeable paving materials. Additionally, this portion of Englewood Avenue would require little to no utilities which would further reduce impacts to natural resources.

- Wetlands~~The Shortened Englewood Avenue Alternative~~
  - Under this alternative, there would be fewer impacts to wetlands - .054 acres of wetlands (Wetlands C) would be impacted, compared to the approximately 0.07 acres of NYSDEC-regulated wetlands and USACE jurisdictional wetlands that would be impacted under the Proposed Project.

- Wildlife and Fauna
  - This alternative also would not ~~directly~~significantly impact wildlife that use the area between the CPPSPP and the Conservation Area. ~~-~~The ~~existing~~ dirt track that separates the CPPSPP from the Conservation Area does not currently present an impediment to fauna transiting between the parcels~~, and the~~ and the infrequent use expected for the emergency access road would allow most fauna to move between parcels as they do today. This accessibility across the emergency road represents a reduction in impact compared to Englewood Avenue under the Proposed Project and the 40-Foot Wide Englewood Avenue Alternative.
  - As with the Proposed Project, an impact to the tree canopies ~~of the trees in both parcels intermingle in some locations, which provide an undisturbed continuous canopy. The CPPSPP is a NYSDEC Bird Conservation Area, and bird species, including listed species that live in the CPPSPP, likely transit past this corridor to the Conservation Area for usage of the habitat there. This undisturbed continuous canopy would not be disturbed under this alternative, and thus the bifurcating of valuable habitat for fauna between CPPSPP and the Conservation Area would not occur.~~ would exist because the new emergency access road would prevent the tree canopies from intermingling. However the impact would be lessened due to the reduction in width of the roadbed for this alternative compared with the Proposed Project.

~~The State-listed rare red-maple sweetgum swamp habitat is present in this portion of the mapped area of Englewood Avenue. Under the Proposed Project, this removal would result in further encroachment to this rare habitat and would result in a degree of impact, although after construction activities cease, it is not anticipated that further impacts to the forest would occur under the Proposed Project, and it is anticipated that stormwater would be managed so as not to increase erosion of the habitat. However, under this alternative, the removal of approximately 0.26 acres of this habitat type would not occur.~~

  - ~~In addition, 319 of the surveyed trees that are over six inches at diameter breast height (dbh) in this area would not be impacted under this alternative, as they would under the Proposed Project. Approximately one acre, or 4.5 percent of potential boneset habitat, would be removed by the construction of Englewood Avenue.~~ Listed species occur in the CPPSPP and the Conservation Area. Many of these species either move between these two areas or depend on the contiguous habitats to provide a vegetated buffer from anthropogenic disturbance. The bifurcating of habitats under this alternative would ~~have a~~

~~negative effect on wildlife~~occur less frequently than under the Proposed Project~~. Such impacts would not occur under this alternative~~ given the more narrow width of the emergency roadbed, its more permeable materials, and the infrequent use of the emergency access road.

- Flora
  - Fewer trees over six inches at dbh would be impacted under this alternative, 140, compared with 319 trees under the Proposed Project.
  - Boneset habitat is located on edges of the existing paved area of Englewood Avenue and extends eastward within the disturbed portions of the unbuilt right-of-way. Approximately one acre, or 4.5 percent of potential boneset habitat, would be additionally removed by the construction of the shortened Englewood Avenue. The full 80-foot width Englewood under the Proposed Project would remove approximately 2.2 acres or 10.3 percent of potential boneset habitat through habitat loss and/or direct removal of individual plants along its existing.

However, all of the other noted potential significant adverse impacts to Natural Resources in the remainder of the Development Area as discussed in **Chapter 2.8** would remain and not change under this alternative.

Hazardous Materials

The findings of the hazardous materials analysis for the Proposed Project as provided in **Chapter 2.9** would not change under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites. As with the Proposed Project, any development proposed for the area would be developed in accordance with applicable regulations and commitments and would result in no significant adverse soil and groundwater impacts. ~~This~~The potential for impacts would not change~~ if construction activities did not commence within this corridor~~ under this alternative.

Water and Sewer Infrastructure

The findings of the water and sewer infrastructure analysis for the Proposed Project provided in **Chapter 2.10** would not be significantly changed under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would require potable water and generate sanitary sewer waste. Stormwater runoff from Englewood Avenue would be reduced, as approximately 117,200 square feet of impervious surface would not be constructed, resulting in potential refinements in the amendments to the NYCDEP drainage plan for this area (see **Chapter 2.10** for further details). The emergency access road's permeable surface materials would reduce the impacts of the roadway's construction by allowing stormwater to naturally percolate into the soil and reduce potential impacts due to road surface runoff on adjacent wetlands and other sensitive areas. Other methods of providing this level of protection would be defined by the permitting agencies (USACE and NYSDEC) in consultation with the FDNY and NYCDOT (for roadway safety) and NYCDEP (for possible stormwater drainage systems).

Solid Waste and Sanitation Services

The findings for solid waste and sanitation services from the analysis for the Proposed Project provided in **Chapter 2.11** would not change under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would generate solid waste. It is ~~possible~~likely that under this alternative less construction waste would be generated from the construction and excavation activities associated with the development of the full Englewood Avenue. This alternative would not result in any significant adverse solid waste impacts.

Energy

~~This~~The finding for energy from the analysis for the Proposed Project provided in **Chapter 2.12** would not change under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would require energy to be provided to the respective new buildings. This alternative would not result in any significant adverse energy impacts.

Transportation

The Shortened Englewood Avenue Alternative involves ~~improving~~ the construction, in year 2020, of Englewood Avenue only ~~to its current eastern terminus, east of~~ Arthur Kill Road ~~and to the end of the existing mapped portion of the roadway, in year 2020.~~to Kent Street. Under this alternative, Englewood Avenue would not be fully constructed ~~between Arthur Kill Road and~~out to Veterans Road West, as planned under the Proposed Project. Under this alternative ~~roadway configuration~~, the proposed school and senior housing development would be accessible to vehicular traffic only from Arthur Kill road via Englewood Avenue. Emergency vehicles only would have access to these sites through the limited access emergency roadway.

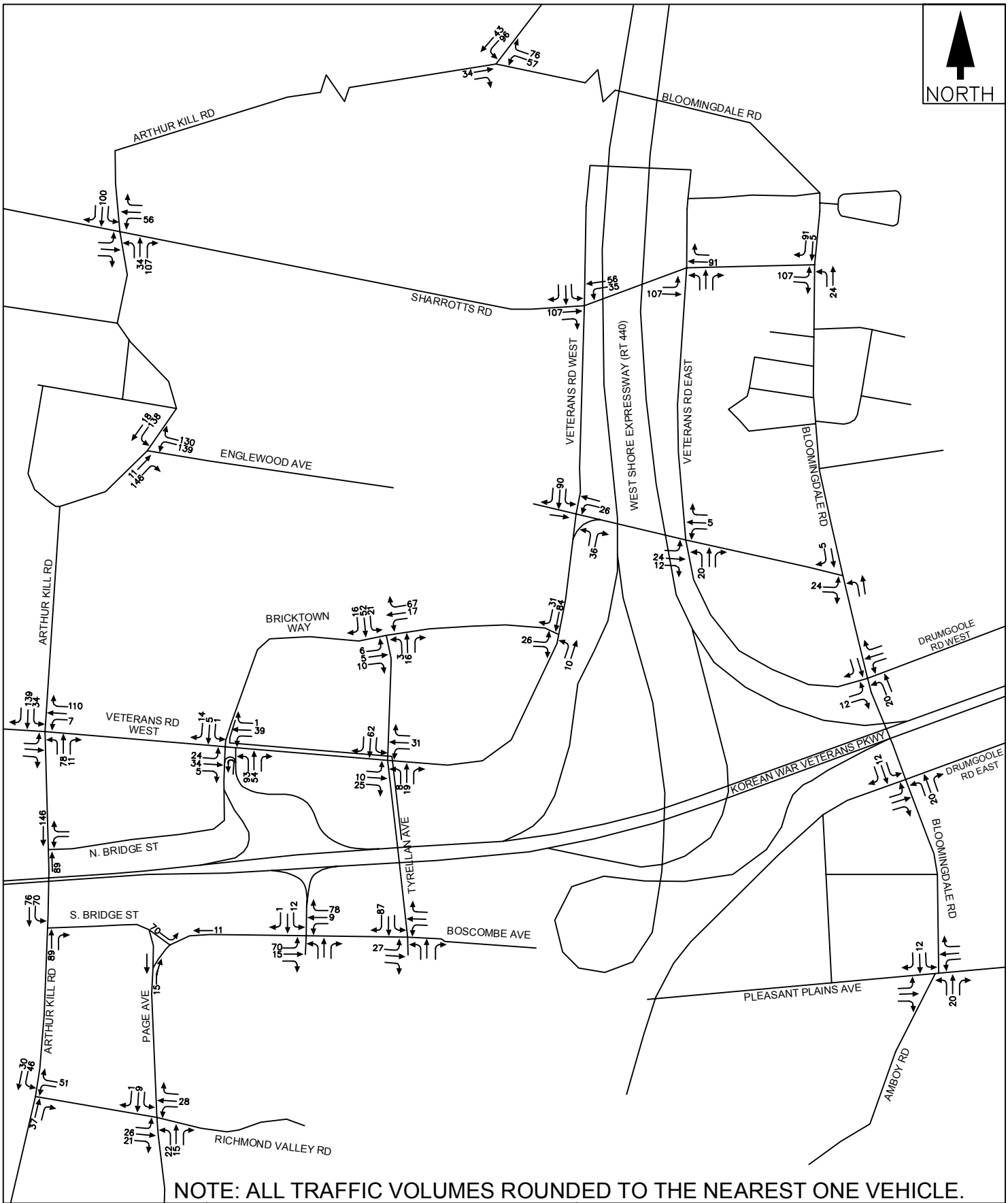
The primary traffic implication of this alternative is that Englewood Avenue would not serve "through" traffic between Arthur Kill Road and Veterans Road West. The potential traffic impacts associated with this alternative were assessed by reassigning the year 2020 project-generated vehicle trips (see **Chapter 2.13**) during each of the four analysis peak hours (i.e., weekday AM, weekday midday, weekday PM, and Saturday midday) in accordance with the access scheme under this alternative, as described above. The projected diversion of portions of the east-west traffic using Sharrotts Road to the full-length Englewood Avenue under the Proposed Project would also not occur under this alternative. A complete traffic analysis was performed for all study area intersections for this alternative.

Figures 3-4a through **3-4d** illustrate the peak hour site-generated trip assignments at all study intersections under this alternative in the 2020 analysis year. These site-generated trip assignments were then added to the corresponding Future No-Action traffic volumes in the 2020 analysis year to arrive at the total traffic volumes under the Shortened Englewood Avenue Alternative, shown in **Figures 3-4e** through **3-4h** for the four traffic analysis periods.

Table 3-1 presents the corresponding traffic operations analysis results for the study intersections under this alternative. As shown in **Table 3-1**, this alternative is projected to result in the following potential significant traffic impacts:

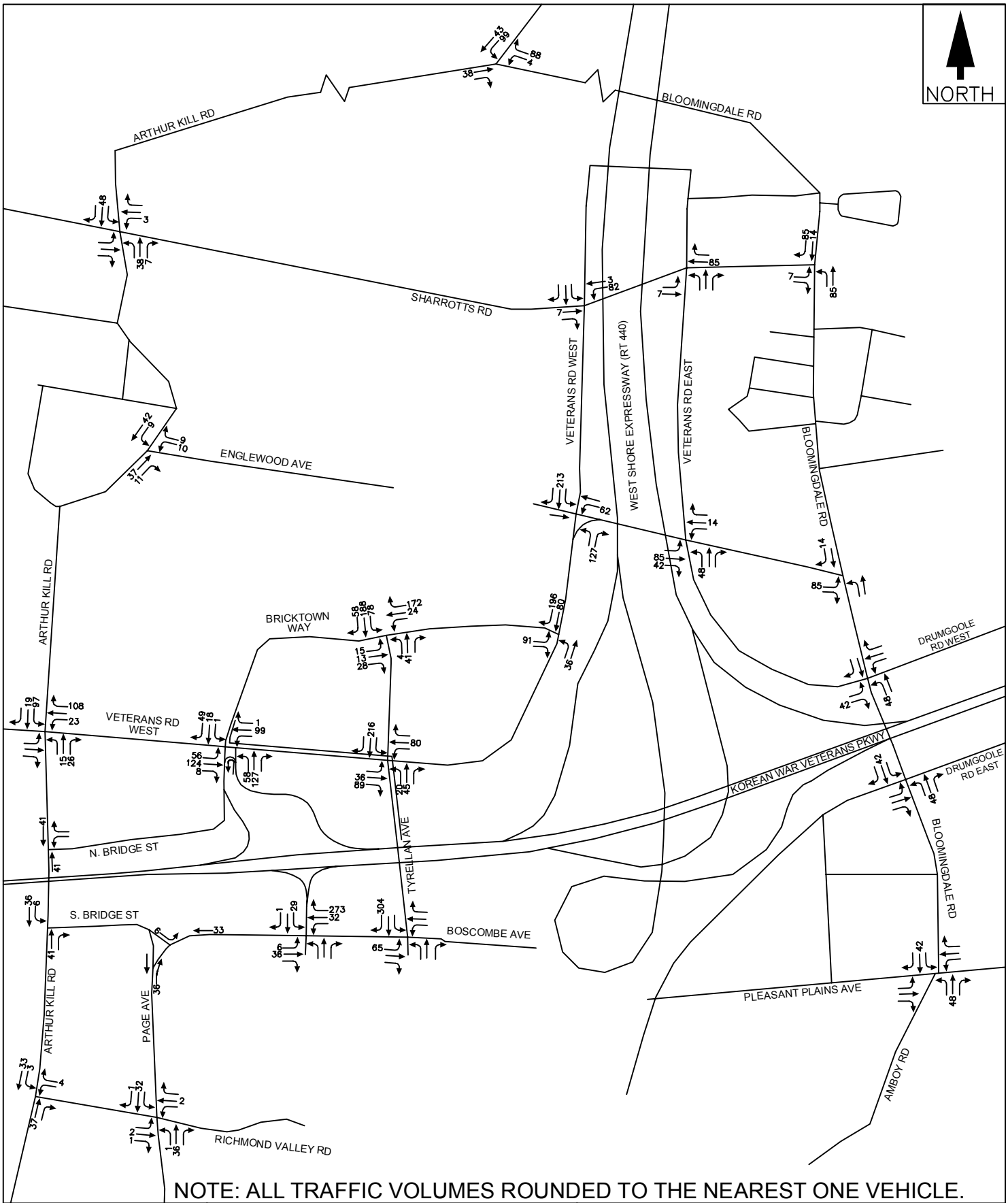
Allentown Lane-Veterans Road West/Arthur Kill Road:

- Weekday AM peak hour – Delay on the southbound approach is projected to increase from 21.4 ~~20.1~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 252.8 ~~228.1~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Weekday midday peak hour – Delay for the westbound right-turn lane is projected to increase from 28.7 ~~27.6~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 72.8 ~~68.6~~ seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative. Delay on the southbound approach is projected to increase from 30.4 ~~26.7~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 162.3 ~~140.3~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Weekday PM peak hour – Delay on the southbound approach is projected to increase from 133.7 ~~113.5~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 385.5 ~~353.8~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.



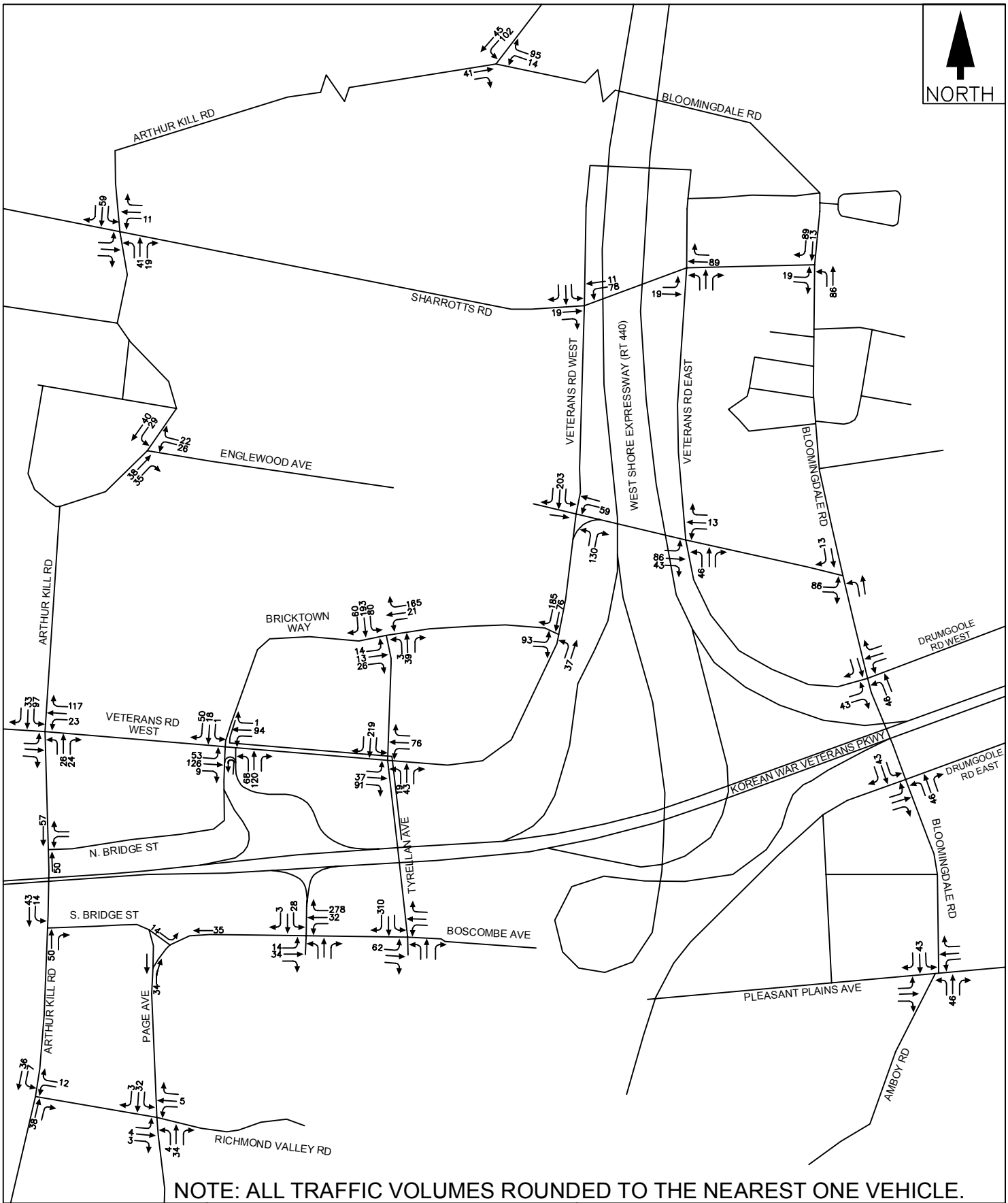
NOTE: ALL TRAFFIC VOLUMES ROUNDED TO THE NEAREST ONE VEHICLE.

AECOM	Charleston Development EIS Staten Island, NY	Site-Generated Traffic Assignments Year 2020 Shortened Englewood Avenue Alternative Weekday AM Peak Hour Figure 3-4a



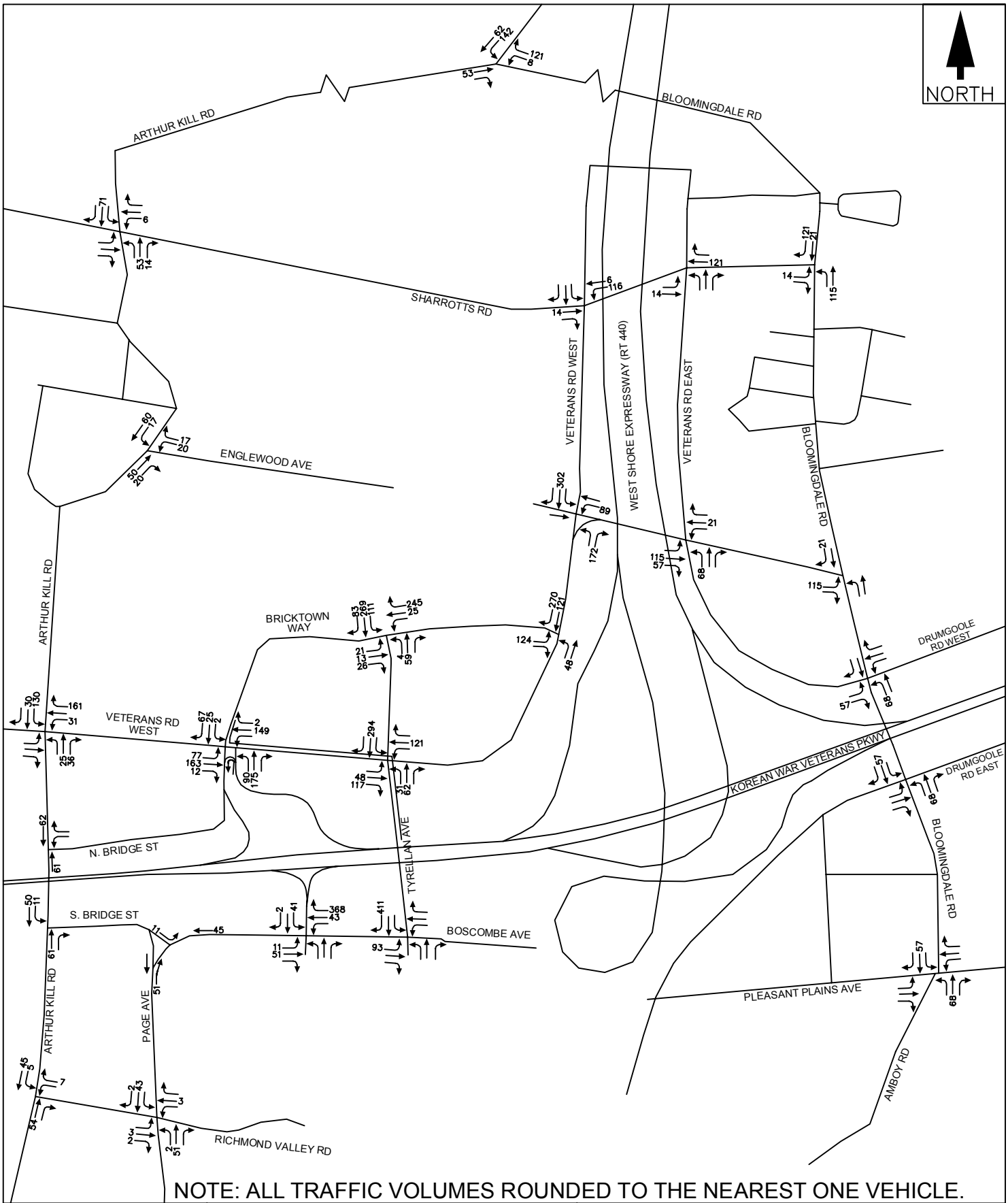
NOTE: ALL TRAFFIC VOLUMES ROUNDED TO THE NEAREST ONE VEHICLE.

AECOM	Charleston Development EIS Staten Island, NY	Site-Generated Traffic Assignments Year 2020 Shortened Englewood Avenue Alternative Weekday Midday Peak Hour Figure 3-4b



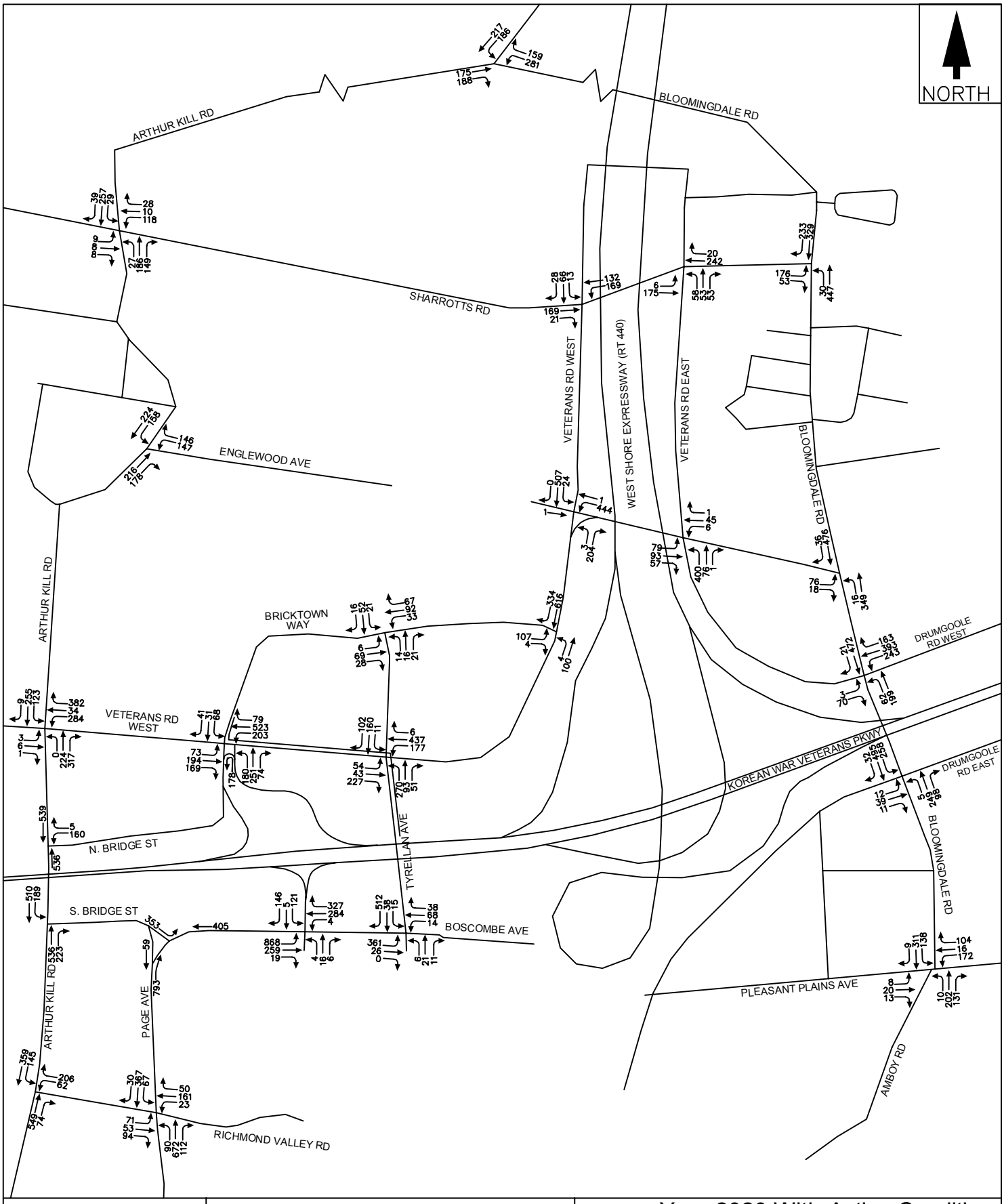
NOTE: ALL TRAFFIC VOLUMES ROUNDED TO THE NEAREST ONE VEHICLE.

AECOM	Charleston Development EIS Staten Island, NY	Site-Generated Traffic Assignments Year 2020 Shortened Englewood Avenue Alternative Weekday PM Peak Hour Figure 3-4c



NOTE: ALL TRAFFIC VOLUMES ROUNDED TO THE NEAREST ONE VEHICLE.

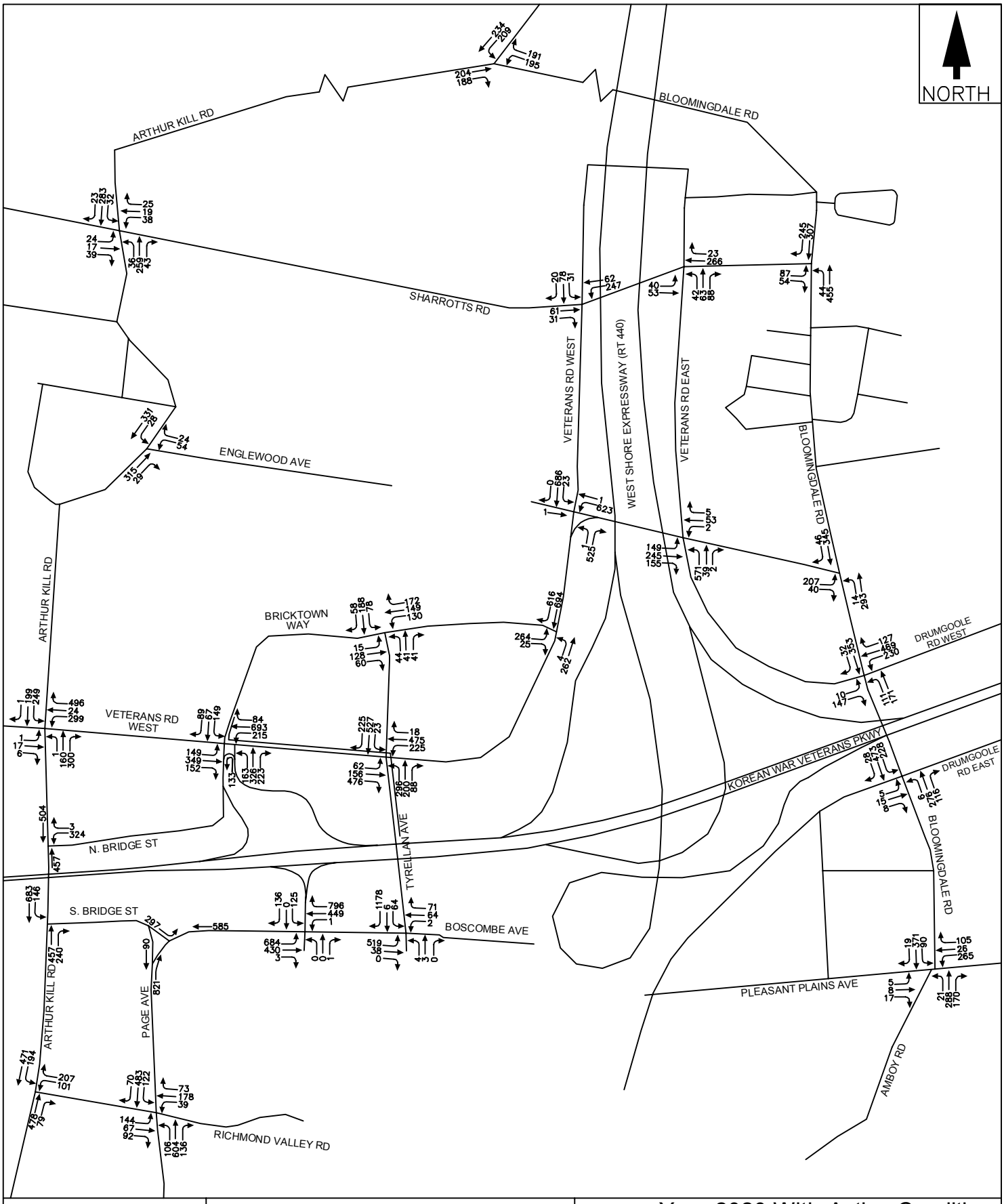
AECOM	Charleston Development EIS Staten Island, NY	Site-Generated Traffic Assignments Year 2020 Shortened Englewood Avenue Alternative Saturday Midday Peak Hour Figure 3-4d



AECOM

Charleston Development EIS
Staten Island, NY

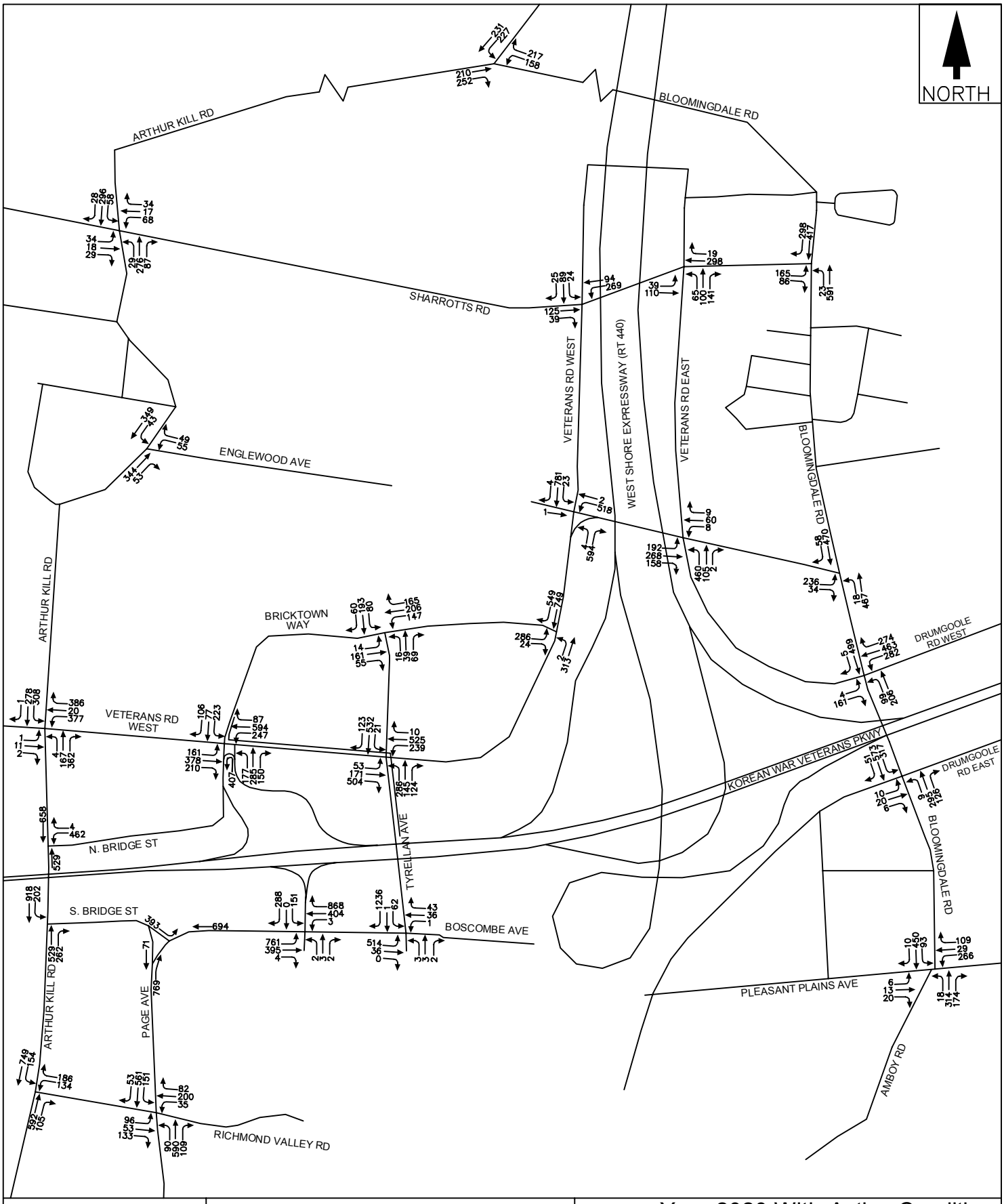
Year 2020 With-Action Condition
Traffic Volumes
Shortened Englewood Avenue Alternative
Weekday AM Peak Hour
Figure 3-4e



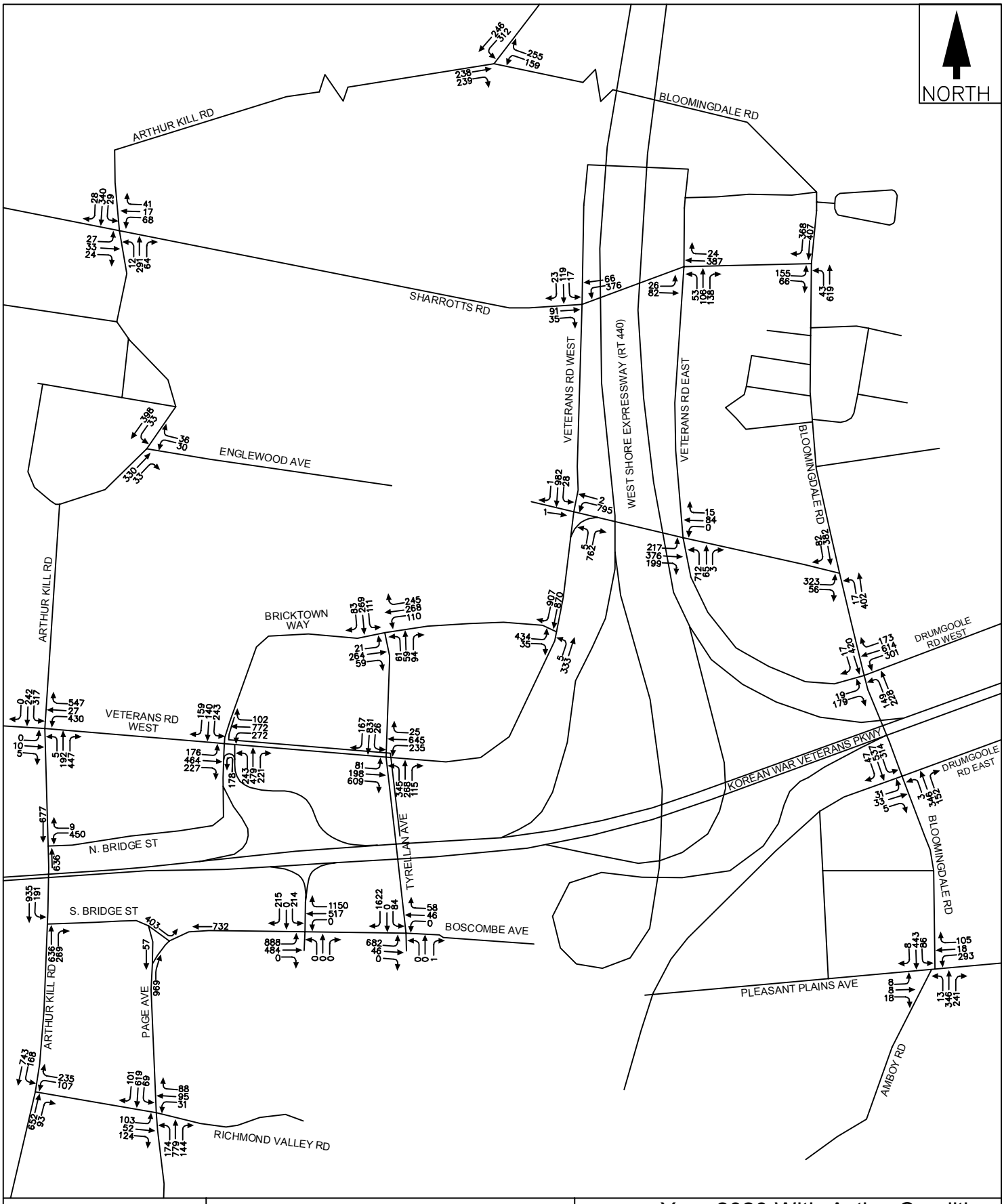
AECOM

Charleston Development EIS
Staten Island, NY

Year 2020 With-Action Condition
Traffic Volumes
Shortened Englewood Avenue Alternative
Weekday Midday Peak Hour
Figure 3-4f



AECOM	Charleston Development EIS Staten Island, NY	Year 2020 With-Action Condition Traffic Volumes Shortened Englewood Avenue Alternative Weekday PM Peak Hour Figure 3-4g



AECOM	Charleston Development EIS Staten Island, NY	Year 2020 With-Action Condition Traffic Volumes Shortened Englewood Avenue Alternative Saturday Midday Peak Hour Figure 3-4h

- Saturday midday peak hour – Delay for the westbound right-turn lane is projected to increase from 24.3 ~~23.3~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 85.1 ~~78.6~~ seconds per vehicle (LOS "F" ~~"E"~~) under the Shortened Englewood Avenue Alternative. Delay on the southbound approach is projected to increase from 111.0 ~~81.6~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 467.4 ~~414.1~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

Richmond Valley Road/Arthur Kill Road:

- Weekday AM peak hour – Delay on the southbound approach is projected to increase from 13.6 ~~13.5~~ seconds per vehicle (LOS "B") under Future No-Action conditions to 53.1 ~~37.7~~ seconds per vehicle (LOS "D") under The Shortened Englewood Avenue Alternative.
- Weekday midday peak hour – Delay on the southbound approach is projected to increase from 99.8 ~~87.9~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 146.1 ~~132.1~~ seconds per vehicle (LOS "F") under The Shortened Englewood Avenue Alternative.
- Weekday PM peak hour – Delay on the westbound approach is projected to increase from 49.0 ~~46.6~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 56.1 ~~52.6~~ seconds per vehicle (LOS "E" ~~"D"~~) under The Shortened Englewood Avenue Alternative. Delay on the southbound approach is projected to increase from 220.9 ~~202.6~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 288.5 ~~269.0~~ seconds per vehicle (LOS "F") under The Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay on the westbound approach is projected to increase from 56.6 seconds per vehicle (LOS "E") under Future No-Action conditions to 61.1 seconds per vehicle (LOS "E") under The Shortened Englewood Avenue Alternative. Delay on the southbound approach is projected to increase from 216.3 ~~184.7~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 295.1 ~~251.7~~ seconds per vehicle (LOS "F") under The Shortened Englewood Avenue Alternative.

Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp:

- Weekday AM peak hour – Delay for the westbound left-turn lane is projected to increase from 100.4 ~~80.0~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 161.1 ~~127.8~~ seconds per vehicle (LOS "F") under The Shortened Englewood Avenue Alternative.
- Weekday midday peak hour – Delay for the eastbound left-turn lane is projected to increase from 59.6 ~~36.3~~ seconds per vehicle (LOS "E" ~~"D"~~) under Future No-Action conditions to 385.8 ~~128.8~~ seconds per vehicle (LOS "F") under The Shortened Englewood Avenue Alternative. Delay for the eastbound through/right-turn lane is projected to increase from 30.9 seconds per vehicle (LOS "C") under Future No-Action conditions to 48.8 seconds per vehicle (LOS "D") under The Shortened Englewood Avenue Alternative. Delay for the westbound left-turn lane is projected to increase from 228.0 ~~62.9~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 954.7 ~~354.7~~ seconds per vehicle (LOS "F") under The Shortened Englewood Avenue Alternative. ~~Delay for the northbound approach is projected to increase from 35.5 seconds per vehicle (LOS "D") under Future No-Action conditions to 94.8 seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.~~
- Weekday PM peak hour – Delay for the eastbound left-turn lane is projected to increase from 51.9 ~~29.7~~ seconds per vehicle (LOS "D" ~~"C"~~) under Future No-Action conditions to 322.9 ~~58.8~~ seconds per vehicle (LOS "F" ~~"E"~~) under the Shortened Englewood Avenue Alternative. Delay for the eastbound through/right-turn lane is projected to increase from 34.3 seconds per vehicle (LOS "C") under Future No-Action conditions to 69.7 seconds per vehicle (LOS "E") under The Shortened Englewood Avenue Alternative. ~~Delay for the northbound approach is projected to increase from 34.3 seconds per vehicle (LOS "C") under Future No-Action conditions to 81.7 seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.~~

- Saturday midday peak hour – Delay for the eastbound left-turn lane is projected to increase from 186.6 ~~39.5~~ seconds per vehicle (LOS "F" ~~"D"~~) under Future No-Action conditions to 656.1 ~~320.7~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay for the eastbound through/right-turn lane is projected to increase from 38.3 ~~29.4~~ seconds per vehicle (LOS "D" ~~"C"~~) under Future No-Action conditions to 110.8 ~~50.4~~ seconds per vehicle (LOS "F" ~~"D"~~) under the Shortened Englewood Avenue Alternative. Delay for the westbound left-turn lane is projected to increase from 709.9 ~~210.9~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 1,141.0 ~~1,~~146.0 seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay for the northbound approach is projected to increase from 36.9 ~~54.0~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 88.1 ~~248.3~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay for the southbound through/right-turn lane is projected to increase from 40.5 ~~40.6~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 76.8 ~~77.5~~ seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative.

Veterans Road West/Tyrellan Avenue:

- Weekday AM peak hour – Delay for northbound left-turn movements is projected to increase from 51.7 seconds per vehicle (LOS "D") under Future No-Action conditions to 88.3 seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Weekday midday peak hour – Delay for the eastbound approach is projected to increase from 40.8 seconds per vehicle (LOS "D") under Future No-Action conditions to 68.7 seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative. Delay for the westbound approach is projected to increase from 38.8 seconds per vehicle (LOS "D") under Future No-Action conditions to 46.4 seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative. Delay for northbound left-turn movements is projected to increase from 390.4 ~~78.8~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 1,234.0 ~~338.3~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay for the southbound approach is projected to increase from 33.1 seconds per vehicle (LOS "C") under Future No-Action conditions to 63.6 seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative.
- Weekday PM peak hour – Delay for the eastbound approach is projected to increase from 41.0 seconds per vehicle (LOS "D") under Future No-Action conditions to 69.0 seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative. Delay for the westbound approach ~~left-turn movements~~ is projected to increase from 53.4 ~~28.9~~ seconds per vehicle (LOS "D" ~~"C"~~) under Future No-Action conditions to 79.3 ~~47.3~~ seconds per vehicle (LOS "E" ~~"D"~~) under the Shortened Englewood Avenue Alternative. Delay for northbound left-turn movements is projected to increase from 140.4 ~~31.9~~ seconds per vehicle (LOS "F" ~~"C"~~) under Future No-Action conditions to 552.2 ~~119.9~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay for the eastbound approach is projected to increase from 55.9 seconds per vehicle (LOS "E") under Future No-Action conditions to 130.5 seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay for the westbound approach ~~left-turn movements~~ is projected to increase from 100.2 ~~53.8~~ seconds per vehicle (LOS "F" ~~"D"~~) under Future No-Action conditions to 170.8 ~~165.4~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay for northbound left-turn movements is projected to increase from 749.7 ~~168.5~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 1,382.0 ~~802.7~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay for the southbound approach is projected to increase from 35.7 seconds per vehicle (LOS "D") under Future No-Action conditions to 102.7 seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

Boscombe Avenue/Outerbridge Crossing Ramps:

- Weekday AM peak hour – Delay in the eastbound left-turn lane is projected to increase from 52.0 ~~53.5~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 89.7 ~~91.7~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay in the westbound right-turn lane is projected to increase from 43.8 ~~41.6~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 76.4 ~~68.1~~ seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative.
- Weekday midday peak hour – Delay in the westbound through/left-turn lane is projected to increase from 69.8 ~~66.4~~ seconds per vehicle (LOS "E") under Future No-Action conditions to 86.8 ~~81.7~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay in the westbound right-turn lane is projected to increase from 267.0 ~~103.1~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 616.6 ~~442.4~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Weekday PM peak hour – Delay in the eastbound left-turn lane is projected to increase from 55.0 ~~53.5~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 74.7 ~~73.8~~ seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative. Delay in the westbound right-turn lane is projected to increase from 154.0 ~~107.4~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 413.7 ~~362.5~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay in the southbound left-turn lane is projected to increase from 58.9 ~~55.8~~ seconds per vehicle (LOS "E") under Future No-Action conditions to 83.8 ~~77.3~~ seconds per vehicle (LOS "F" ~~"E"~~) under the Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay in the eastbound left-turn lane is projected to increase from 33.8 ~~35.7~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 48.7 ~~50.3~~ seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative. Delay in the westbound through/left-turn lane is projected to increase from 83.9 ~~76.2~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 126.1 ~~116.7~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay in the westbound right-turn lane is projected to increase from 513.2 ~~286.0~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 950.2 ~~722.4~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

Boscombe Avenue/Tyrellan Avenue:

- Weekday midday peak hour – Delay in the southbound right-turn lane is projected to increase from 78.5 ~~50.8~~ seconds per vehicle (LOS "E" ~~"D"~~) under Future No-Action conditions to 315.9 ~~268.1~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Weekday PM peak hour – Delay in the southbound right-turn lane is projected to increase from 89.9 ~~59.7~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 316.4 ~~270.4~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay for eastbound left-turns are projected to increase from 29.7 seconds per vehicle (LOS "C") under Future No-Action conditions to 46.8 seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative. Delay in the southbound right-turn lane is projected to increase from 218.0 ~~156.3~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 534.2 ~~470.2~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

Englewood Avenue/Veterans Road West:

- Saturday midday peak hour – Delay in the westbound left-turn lane is projected to increase from 44.5 ~~45.2~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 77.3 ~~78.4~~ seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative.

Englewood Avenue/Veterans Road East:

- Weekday PM peak hour – Delay in the eastbound through/left-turn lane is projected to increase from 29.9 seconds per vehicle (LOS "C") under Future No-Action conditions to 49.3 seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay in the eastbound through/left-turn lane is projected to increase from 108.7 ~~94.5~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 218.1 ~~201.8~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

Veterans Road East-Drumgoole Road West/Bloomingdale Road:

- Weekday midday peak hour – Delay in the eastbound right-turn lane is projected to increase from 34.9 ~~35.3~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 55.3 ~~55.9~~ seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative. ~~Delay in the northbound left-turn lane is projected to increase from 23.7 seconds per vehicle (LOS "C") under Future No-Action conditions to 46.4 seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative.~~
- Weekday PM peak hour – ~~Delay in the eastbound right-turn lane is projected to increase from 33.1 seconds per vehicle (LOS "C") under Future No-Action conditions to 45.3 seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative.~~ Delay in the northbound left-turn lane is projected to increase from 27.1 seconds per vehicle (LOS "C") under Future No-Action conditions to 68.1 seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay in the eastbound right-turn lane is projected to increase from 43.0 ~~43.3~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 122.7 ~~126.0~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay in the northbound left-turn lane is projected to increase from 35.3 ~~36.4~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 144.5 ~~150.3~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

Pleasant Plains Avenue-Amboy Road/Bloomingdale Road:

- Weekday AM peak hour – Delay on the southbound approach is projected to increase from 61.0 ~~64.8~~ seconds per vehicle (LOS "E") under Future No-Action conditions to 80.2 ~~84.3~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.
- Weekday PM peak hour – Delay on the southbound approach is projected to increase from 30.2 ~~30.9~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 46.8 ~~49.7~~ seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay on the southbound approach is projected to increase from 30.5 ~~30.6~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 47.2 ~~47.6~~ seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative.

Arthur Kill Road/Bloomingdale Road:

- Weekday midday peak hour – Delay on the westbound approach is projected to increase from 18.2 seconds per vehicle (LOS "B") under Future No-Action conditions to 53.6 seconds per vehicle (LOS "D") under the Shortened Englewood Avenue Alternative.
- Weekday PM peak hour – Delay on the westbound approach is projected to increase from 23.2 ~~19.5~~ seconds per vehicle (LOS "C" ~~"B"~~) under Future No-Action conditions to 129.7 ~~96.8~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative. Delay on the northbound approach is projected to increase from 29.7 ~~27.9~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 64.4 ~~53.7~~ seconds per vehicle (LOS "E" ~~"D"~~) under the Shortened Englewood Avenue Alternative.
- Saturday midday peak hour – Delay on the westbound approach is projected to increase from 31.3 ~~22.8~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 250.3 ~~188.4~~ seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

~~**Sharrotts Road/Arthur Kill Road:**~~

- ~~Weekday PM peak hour – Delay on the eastbound approach is projected to increase from 20.7 seconds per vehicle (LOS "C") under Future No-Action conditions to 38.7 seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative.~~
- ~~Saturday midday peak hour – Delay on the eastbound approach is projected to increase from 24.5 seconds per vehicle (LOS "C") under Future No-Action conditions to 36.1 seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative. Delay on the westbound approach is projected to increase from 24.2 seconds per vehicle (LOS "C") under Future No-Action conditions to 39.6 seconds per vehicle (LOS "E") under the Shortened Englewood Avenue Alternative.~~

Englewood Avenue/Arthur Kill Road:

- Weekday AM peak hour – Delay on the westbound approach is projected to increase from 10.8 seconds per vehicle (LOS "B") under Future No-Action conditions to 150.0 seconds per vehicle (LOS "F") under the Shortened Englewood Avenue Alternative.

Transportation improvement measures were then investigated to identify those that mitigate the potential significant traffic impacts identified above. The following transportation system improvement measures would be required to mitigate the potential significant traffic impacts under this alternative:

Allentown Lane-Veterans Road West/Arthur Kill Road:

- Restripe the northbound approach to accommodate one 12 foot shared through/left-turn lane and one 12 foot exclusive right-turn lane.
- Restripe the southbound approach to accommodate one 10 foot exclusive left-turn lane and one 11 foot shared through/right-turn lane.
- During the weekday AM peak hour, reallocate five seconds of green time from the east-west phase, and eight seconds of green time from the north-south phase to create a new southbound lagging phase with a westbound right-turn overlap (13 seconds total). As part of this mitigation measure, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected left-turn arrow for the southbound lagging phase.
- During the weekday midday peak hour, reallocate three seconds of green time from the north-south phase to the east-west phase.
- During the Saturday midday peak hour, reallocate four ~~three~~ seconds of green time from the north-south phase to the east-west phase.

Richmond Valley Road/Arthur Kill Road:

- Restripe the southbound approach to accommodate one 10 foot exclusive through lane and one 10 foot exclusive left-turn lane.
- During the weekday PM peak hour, reallocate one second of green time from the north-south phase to the westbound phase.
- During the Saturday midday peak hour, reallocate two seconds of green time from the north-south phase to the westbound phase.

Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp:

- Widen the northbound approach to accommodate an exclusive right-turn lane, and widen the eastbound approach to accommodate an exclusive right-turn lane.
- During the weekday midday peak hour, reallocate six seconds of green time from the east-west phase, and five seconds of green time from the northbound phase to implement a concurrent east-west left-turn phase with a northbound right-turn overlap (11 seconds total).
- During the Saturday midday peak hour, implement a concurrent east-west left-turn phase with a northbound right-turn overlap, as well as a concurrent north-south phase. Reallocate 33 seconds to the east-west phase, 17 seconds to the northbound phase. 14

seconds to the north-south phase, 15 seconds to the southbound phase, and 11 seconds to the concurrent east-west left-turn phase.

- As part of these mitigation measures, upgraded traffic signal hardware will be required to accommodate the proposed phasing changes. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including protected left-turn arrows for the approaches requiring leading and lagging phases.

- ~~With the improvements described above in place, significant traffic impacts at this intersection are projected to remain for:~~
  - ~~Eastbound left-turn movements during the weekday midday, weekday PM, and Saturday midday peak hours;~~
  - ~~The eastbound through/right-turn lane during the Saturday midday peak hour;~~
  - ~~Westbound left-turn movements during the weekday midday and Saturday midday peak hours; and~~
  - ~~The northbound approach during the weekday midday, weekday PM, and Saturday midday peak hours.~~

Veterans Road West/Tyrellan Avenue:

- Eliminate a portion of the raised median on the southbound and eastbound approaches to accommodate one exclusive left-turn lane on each approach.
- Modify the traffic signal phasing during the weekday AM peak hour to create a concurrent east-west phase, and allocate 53 seconds to the east-west phase and 37 seconds to the north-south phase.
- During the weekday midday peak hour, modify the signal phasing to accommodate a lagging westbound phase and three phases for northbound and southbound movements: a southbound leading phase, a concurrent north-south phase, and a lagging northbound phase. Allocate 27 seconds to the east-west phase, 15 seconds to the westbound lagging phase, 17 seconds to the southbound leading phase, 17 seconds to the concurrent north-south phase, and 14 seconds to the lagging northbound phase. ~~During the weekday midday peak hour, modify the signal phasing to create a lagging northbound phase and reallocate 12 seconds from the north-south phase to the lagging northbound phase.~~
- During the weekday PM peak hour, modify the signal phasing to accommodate a lagging westbound phase and three phases for northbound and southbound movements: a southbound leading phase, a concurrent north-south phase, and a lagging northbound phase. Allocate 28 seconds to the east-west phase, 15 seconds to the westbound lagging phase, 16 seconds to the southbound leading phase, 17 seconds to the concurrent north-south phase, and 14 seconds to the lagging northbound phase. ~~During the weekday PM peak hour, modify the signal phasing to create a lagging northbound phase and reallocate 19 seconds from the north-south phase to the lagging northbound phase.~~
- During the Saturday midday peak hour, modify the signal phasing to accommodate a lagging westbound phase and three phases for northbound and southbound movements: a southbound leading phase, a concurrent north-south phase, and a lagging northbound phase. Allocate 26 seconds to the east-west phase, 15 ~~11~~ seconds to the westbound lagging phase, 18 seconds to the southbound leading phase, 17 seconds to the concurrent north-south phase, and 14 ~~16~~ seconds to the lagging northbound phase.
- As part of these mitigation measures, upgraded traffic signal hardware will be required to accommodate the proposed phasing changes. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including protected left-turn arrows for the approaches requiring leading and lagging phases.

- With the improvements described above in place, significant traffic impacts at this intersection are projected to remain for the eastbound approach during the Saturday midday peak hour.

Boscombe Avenue/Outerbridge Crossing Ramps:

- Widen the on-ramp to the eastbound Outerbridge Crossing to accommodate a second receiving lane with an appropriate transition taper.
- Modify the traffic signal hardware to provide for a westbound right-turn overlap phase to operate concurrently with the north-south phase. As part of this mitigation measure, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected right-turn arrow for the westbound approach.
- During the weekday AM peak hour, reallocate one second of green time from the east-west phase to the eastbound phase.
- During the weekday midday peak hour, reallocate one second of green time from eastbound phase to the east-west phase.
- During the weekday PM peak hour, reallocate four seconds of green time from the east-west phase and provide two seconds to the eastbound phase and two seconds to the north-south phase.
- During the Saturday midday peak hour, reallocate three ~~two~~ seconds~~s~~ of green time from the southbound phase and add one second of green time to the eastbound phase and two seconds to the east-west phase.
- With the improvements described above in place, potential significant traffic impacts at this intersection are projected to remain for:
  - Eastbound left-turn movements during the weekday AM, weekday midday, ~~and~~ and weekday PM peak hours;
  - ~~The westbound through/left-turn lane during the weekday midday peak hour;~~

Boscombe Avenue/Tyrellan Avenue:

- Modify the traffic signal hardware to provide for a southbound right-turn overlap phase to operate concurrently with a new eastbound-only lagging phase. As part of this mitigation measure, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected left-turn arrow for the eastbound approach and a protected right-turn arrow for the southbound approach.
- During the weekday midday peak hour, reallocate 17 seconds of green time from the east-west phase to the lagging eastbound phase with the southbound right-turn overlap.
- During the weekday PM peak hour, reallocate 16 seconds of green time from the east-west phase to the lagging eastbound phase with the southbound right-turn overlap.
- During the Saturday midday peak hour, reallocate 17 ~~19~~ seconds of green time from the east-west phase to the lagging eastbound phase with the southbound right-turn overlap.

Englewood Avenue/Veterans Road West:

- During the Saturday midday peak hour, reallocate three seconds of green time from the north-south phase to the east-west phase.

Englewood Avenue/Veterans Road East:

- During the weekday PM peak hour, reallocate one second of green time from the northbound phase to the east-west phase.
- During the Saturday midday peak hour, reallocate five seconds of green time from the northbound phase to the east-west phase.

Veterans Road East-Drumgoole Road West/Bloomingdale Road:

- ~~Prohibit on-street parking on the west side of Bloomingdale Road between Veterans Road East and Churchill Avenue, and restripe the southbound approach to accommodate one 12-foot through lane and one 12-foot through/right-turn lane.~~
- During the weekday midday peak hour, reallocate one second of green time from the westbound ~~north-south~~ phase to the eastbound phase.
- During the weekday PM peak hour, reallocate three ~~one~~ seconds of green time from the westbound ~~northbound~~ phase to the north-south ~~eastbound~~ phase. Modify the eastbound only phase to an east-west phase (i.e., allow concurrent eastbound and westbound traffic movements).
- During the Saturday midday peak hour, modify the eastbound only phase to an east-west phase (i.e., allow concurrent eastbound and westbound traffic movements). Reallocate four ~~three~~ seconds of green time from the westbound ~~north-south~~ phase to the east-west ~~eastbound~~ phase, and reallocate another four seconds of green time from the westbound phase to the east-west phase.

Pleasant Plains Avenue-Amboy Road/Bloomingdale Road:

- During the weekday AM peak hour, reallocate one ~~three~~ second~~s~~ of green time from the east-west phase to the north-south phase.
- During the weekday PM peak hour, reallocate one second of green time from the east-west phase to the north-south phase.
- During the Saturday midday peak hour, reallocate one second of green time from the east-west phase to the north-south phase.

Arthur Kill Road/Bloomingdale Road:

- Restripe the westbound approach to accommodate one 11 foot exclusive left-turn lane and one 11-foot exclusive through lane.
- During the weekday PM peak hour, reallocate 18 ~~17~~ seconds of green time from the east-west phase to create a 15-second lagging westbound phase, and add three ~~two~~ seconds of green time to the northbound phase.
- During the Saturday midday peak hour, reallocate 19 ~~17~~ seconds of green time from the east-west phase to create a lagging westbound phase.
- As part of these mitigation measures, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected left-turn arrow for the westbound approach.

~~**Sharrotts Road/Arthur Kill Road:**~~

- ~~Under this alternative, the project is projected to result in unmitigable impacts on the eastbound approach at this stop-controlled intersection during the weekday PM peak hour, and on the eastbound and westbound approaches during the Saturday midday peak hour, according to CEQR criteria. It should be noted that the delays at this intersection are projected to exceed the CEQR threshold of mid-LOS "D" by 8.8 seconds on the eastbound approach during the weekday PM peak hour, and by 6.2 seconds and 9.7 seconds on the eastbound and westbound approaches, respectively, during the Saturday midday peak hour. Furthermore, all approaches at the intersection will operate under capacity with delays corresponding to LOS "E" or better—which represents an acceptable operational level for an unsignalized intersection—during all four peak hours analyzed. Therefore, no mitigation measures are proposed at this intersection for the potential significant traffic impacts identified during the weekday PM and Saturday midday peak hours, and unmitigable impacts will remain during these two peak hours under this alternative.~~

Englewood Avenue/Arthur Kill Road:

- Restripe the westbound approach to accommodate one exclusive left-turn lane and one exclusive right-turn lane.

- Restripe the northbound approach to accommodate one exclusive through lane and one exclusive right-turn lane.
- Restripe the southbound approach to accommodate one exclusive left-turn lane and one exclusive through lane.
- With this improvement, an unmitigable traffic impact of 3.0 ~~25.4~~ seconds beyond the allowable CEQR delay threshold of mid-LOS "D" (i.e., 30 seconds per vehicle) remains for the overall westbound approach during the weekday AM peak hour. Westbound left-turns from this approach are projected to operate under capacity with average delays corresponding to LOS "F" (55.9 ~~55.3~~ seconds vehicle) during the weekday AM peak hour. The overall westbound approach is projected to operate under capacity with average delays corresponding to LOS "D" (32.9 ~~32.6~~ seconds/vehicle), which exceeds the allowable CEQR delay increment for the approach by 3.0 ~~2.7~~ seconds/vehicle.

Table 3-2 presents the corresponding traffic operations analysis results with the transportation improvements identified above in place under the Shortened Englewood Avenue Alternative. With these transportation improvement measures in place, the majority of potential significant traffic impacts are projected to be mitigated under this alternative. However, unmitigable impacts would remain at the intersections of:

- ~~Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp,~~
- Boscombe Avenue/Outerbridge Crossing ramps,
- Veterans Road West/Tyrellan Avenue ~~Sharrotts Road/Arthur Kill Road~~, and
- Englewood Avenue/Arthur Kill Road.

Level-of-service comparisons of the Shortened Englewood Avenue Alternative, along with the other alternatives in this chapter, are provided in **Table 3-3** for the 2020 year. Impact comparisons between all the alternatives are provided in **Table 3-4**, and comparisons with mitigation measures are provided in **Table 3-5**.

Under the Shortened Englewood Avenue Alternative, traffic impacts were identified at six ~~five~~ signalized intersections and one unsignalized intersection during the weekday AM peak hour, at eight ~~seven~~ signalized intersections during the weekday MD peak hour, at ten ~~nine~~ signalized intersections ~~and one unsignalized intersection~~ during the weekday PM peak hour, and at 11 signalized intersections ~~and one unsignalized intersection~~ during the Saturday MD peak hour. Under the Proposed Project, traffic impacts were identified at seven ~~six~~ signalized intersections ~~and the same unsignalized intersection~~ during the weekday AM peak hour, at nine ~~eight~~ signalized intersections during the weekday MD peak hour, at 11 signalized intersections and one unsignalized intersection during the weekday PM peak hour, and at 11 signalized intersections ~~and the same unsignalized intersection~~ during the Saturday MD peak hour. Those improvement measures identified for the Proposed Project would generally be the same as under this alternative, but unmitigable significant traffic impacts would remain under this alternative unlike the Proposed Project, as all vehicular traffic from the school and housing would be require to travel west through the intersection of Englewood Avenue and Arthur Kill Road, and the surrounding intersections would experience increased traffic, due to the dead-end of Englewood Avenue, than under the Proposed Project. The projected diversion of portions of the east-west traffic using Sharrotts Road to the full-length Englewood Avenue, under the Proposed Project, would also not occur under this alternative.

~~As discussed in **Chapter 2.13,** a plan by NYSDOT to improve the southbound West Shore Expressway (WSE) ramp system and adjacent surface street intersections just north of the Project Area would potentially increase volumes at three Study Area intersections:~~

- ~~Veterans Road West/Englewood Avenue~~
- ~~Bricktown Way/Veterans Road West~~
- ~~Arthur Kill Road/Bloomingdale Road~~

~~The potential changes in traffic volumes and levels of service due to the proposed WSE ramps will be analyzed for the FEIS when sufficient information about this ramp improvement program is available. Until~~

~~results from those studies are available, it is conservatively assumed that at these three intersections a worsening of already identified significant traffic impacts and/or the creation of additional significant impacts would potentially occur in one or more peak hour in 2015 and 2020 due to increased traffic volumes associated with these ramp improvements. Those potential impacts would also occur under the Shortened Englewood Avenue Alternative.~~

Air Quality

This alternative would not alter the findings of the stationary source air quality analysis for the Proposed Project provided in **Chapter 2.14**. All of the other development components would still be constructed on the retail, park, senior housing and school sites Stationary source impacts under this alternative would remain the same as under the Proposed Project, and no significant adverse stationary source air quality impacts would occur.

Under this alternative, mobile source impacts within the studied off-site roadway network would change at several locations as discussed above in the traffic section for this alternative. The levels and changes under this alternative, as compared to the Future With-Action condition, in LOS, total volume, and net incremental volume at each analyzed intersection are summarized in **Tables 3-6** and **3-7**. ~~This alternative would result in a change in traffic patterns around the Development Area and several intersections would experience an increase in congestion (i.e., worse LOS condition) and traffic volume. However, based on **Table 3-6**,~~Subsequent CO and $PM_{2.5}$ screening results as shown in **Table 3-7a** indicate that 1) a further $PM_{2.5}$ microscale modeling is not warranted at any signalized intersections and 2) the selection of the worst-case intersections that would be subject to the CO microscale analysis under this alternative would be the same as under the Future With-Action Condition~~, based on: 1) worst-case LOS condition; and 2) overall highest traffic volume.~~. According to ~~**Table**~~**Tables 3-~~7~~8** and **2.14-5**, the maximum increase in traffic volume as compared to the Future With-Action Condition at any of these ~~four~~worst-case intersections selected for CO microscale analysis would be 140 during the worst-case Saturday period at the Intersection of Veterans Road West / North Bridge Street-Bricktown Way. Such an increase is less than 5 percent of total intersection volume and would result in negligible differences in microscale CO concentration levels, as compared to those predicted for the Proposed Project. Since the predicted CO levels for the Proposed Project are well below the CO NAAQS, this alternative would not result in significant adverse air quality impacts from mobile source operations.

Greenhouse Gas Emissions

The findings for greenhouse gas emissions from the analysis for the Proposed Project provided in **Chapter 2.15** would not be significantly changed under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would generate greenhouse gasses. Under this alternative, it is possible that slightly less greenhouse gas emissions during construction would be generated, ~~as no~~due to more minimal construction activities for the emergency roadway ~~would occur within this corridor area, which would remain in its current natural state~~be constructed of more sustainable and permeable materials.

Noise

The noise analysis findings for this alternative would not differ from those of the noise analysis under the Proposed Project as provided in **Chapter 2.16**. All of the other development components would still be constructed on the retail, park, senior housing and school sites Stationary source impacts under this alternative would remain the same as under the Proposed Project, and no significant adverse stationary source noise impacts would occur.

Mobile source impacts would be slightly different as compared to the Future With-Action Condition, given the small fractional change in traffic volume at each studied intersection (see **Table 2.20-6** previously provided). It is anticipated that the change in mid-block traffic volume within the studied roadway network would also be small, resulting in an equally small change in noise relative to the level projected under the Future With-Action condition. Therefore, the conclusion that 3-dBA or greater incremental noise would

only occur at two noise monitoring locations under the Proposed Project, Sites #4 and #7 (see **Chapter 2.16**), would be the same under this alternative.

The same PCE method applied at Site #4 under the Future With-Action Condition was used to project incremental noise along Englewood Avenue under this alternative. This site would be impacted by this alternative as Arthur Kill Road to Englewood Avenue would be the only access to and from the school and senior house site. The projected increase in noise at Site #4, under this alternative, is 9 dBA (as compared to 7 dBA under the Future With-Action Condition). However, the noise level would still be below the 65 dBA absolute impact threshold level, and the potential for a significant noise impact would not occur.

Public Health

The findings for public health from the analysis for the Proposed Project provided in **Chapter 2.17** would not change under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites. The Proposed Project would not result in unmitigated significant adverse impacts in technical areas such as air quality, hazardous materials, or noise. Further, the Proposed Project would not introduce any unusual circumstances that have potential public health consequences related to other issues. Therefore, a detailed public health assessment was not warranted as significant adverse impacts to public health are not expected to occur. This alternative would not alter this conclusion.

Neighborhood Character

This alternative would not alter the findings for neighborhood character from the analysis for the Proposed Project provided in **Chapter 2.18**. Neighborhood character is considered to be an amalgam of the various elements that give a neighborhood its distinct personality. As previously discussed in this section, this alternative would not result in any new significant adverse impacts to those components that make up neighborhood character. In fact, under this alternative, some of the potential adverse impacts to natural resources and historic/cultural resources would ~~no longer~~ be of less of concern, as this alternative would keep some of the areas in the eastern portion of the Englewood Avenue corridor in their current natural state, ~~where~~or result in reduced construction associated with emergency access road(as compared to the Proposed Project, which has significant impacts on potential archaeological and natural resources ~~may be present~~.

Construction

This alternative would not alter the findings for construction from the analysis for the Proposed Project provided in **Chapter 2.19**. All of the other development components would still be constructed on the retail, park, senior housing and school sites. It is possible that, under this alternative, less construction waste would be created, and less construction truck and other trips would be generated, with the construction of the more limited emergency access road and its more sustainable material, as compared to the Proposed Project.

~~Table 3-1~~

~~Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Shortened Englewood Avenue Alternative Traffic Conditions~~

DEIS Table (Superseded by FEIS Table)

Weekday AM Peak Hour (8:00 to 9:00 AM)

Intersection	Approach	Movement	2020 No-Action v/c	2020 No-Action Average Control Delay	2020 No-Action LOS	2020 With-Action v/c	2020 With-Action Average Control Delay	2020 With-Action LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS										
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	10.3	B	0.0	
	WB	LT	0.43	14.7	B	0.44	15.0	B	0.3	
	WB	R	0.61	18.7	B	0.85	31.4	C	12.7	
	NB	LTR	0.75	21.3	C	0.89	30.2	C	8.9	
	SB	LTR	0.60	20.1	C	1.43	228.2	F	208.1	yes
	Overall		**0.68**	**19.2**	**B**	**1.14**	**77.8**	**E**	**58.6**	
North Bridge Street / Arthur Kill Road	WB	LR	0.49	18.4	B	0.49	18.4	B	0.0	
	NB	T	0.54	12.1	B	0.65	14.0	B	1.9	
	SB	T	0.35	9.9	A	0.54	11.9	B	2.0	
	Overall		**0.52**	**13.2**	**B**	**0.58**	**14.2**	**B**	**1.0**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.1	C	0.75	32.7	C	6.6	
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9	
	SB	LT	0.68	13.5	B	1.01	51.2	D	37.7	yes
	Overall		**0.66**	**14.7**	**B**	**0.93**	**30.2**	**C**	**15.5**	
Richmond Valley Road / Page Avenue	EB	LTR	0.35	23.4	C	0.43	24.7	C	1.3	
	WB	LTR	0.38	24.1	C	0.43	25.0	C	0.9	
	NB	L	0.18	11.0	B	0.24	11.7	B	0.7	
	NB	TR	0.80	20.8	C	0.82	21.5	C	0.7	
	SB	LTR	0.55	15.5	B	0.57	15.9	B	0.4	
	Overall		**0.64**	**19.6**	**B**	**0.67**	**20.3**	**C**	**0.7**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.59	28.6	C	2.5	
	EB	R	0.40	11.8	B	0.12	11.1	B	-0.7	
	NB	T	0.12	11.0	B	0.40	11.8	B	0.8	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1	
	Overall		*****	**13.7**	**B**	*****	**15.2**	**B**	**1.4**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.24	23.5	C	0.37	26.3	C	2.8	
	EB	TR	0.53	26.9	C	0.60	28.5	C	1.6	
	WB	L	0.97	80.0	F	1.12	127.8	F	47.8	yes
	WB	TR	0.44	24.7	C	0.47	25.1	C	0.4	
	NB	LTR	0.54	30.0	C	0.78	36.5	D	6.5	
	NB	U-TURN	0.53	17.9	C	0.54	18.2	C	0.3	
	SB	L	0.27	30.6	C	0.27	30.7	C	0.1	
	SB	TR	0.23	30.1	C	0.31	31.5	C	1.4	
	Overall		*****	**31.7**	**C**	*****	**38.3**	**D**	**6.6**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.35	17.3	B	0.38	17.7	B	0.4	
	WB	LTR	0.40	17.9	B	0.43	18.3	B	0.4	
	WB	DefL	-	-	-	-	-	-	-	
	WB	TR	-	-	-	-	-	-	-	
	NB	DefL	0.60	24.4	C	0.69	28.4	C	4.0	
	NB	TR	0.18	15.6	B	0.21	15.9	B	0.3	
	SB	LTR	0.23	15.9	B	0.30	16.6	B	0.7	
	Overall		**0.50**	**18.4**	**B**	**0.56**	**19.4**	**B**	**1.0**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	53.5	D	1.14	91.7	F	38.2	yes
	EB	TR	0.25	4.9	A	0.26	4.9	A	0.0	
	WB	LT	0.72	40.3	D	0.75	41.5	D	1.2	
	WB	R	0.72	41.6	D	0.96	68.1	E	26.5	yes
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0	
	SB	L	0.54	42.8	D	0.61	45.6	D	2.8	
	SB	LT	0.02	30.6	C	0.02	30.6	C	0.0	
	SB	R	0.18	6.8	A	0.18	6.8	A	0.0	
	Overall		**0.99**	**38.4**	**D**	**1.23**	**58.9**	**E**	**20.5**	

Weekday Midday Peak Hour (12:00 to 1:00 PM)

Intersection	Approach	Movement	2020 No-Action v/c	2020 No-Action Average Control Delay	2020 No-Action LOS	2020 With-Action v/c	2020 With-Action Average Control Delay	2020 With-Action LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS										
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.04	10.5	B	0.04	10.5	B	0.0	
	WB	LT	0.54	16.8	B	0.59	17.9	B	1.1	
	WB	R	0.82	27.6	C	1.05	68.6	E	41.0	yes
	NB	LTR	0.63	17.7	B	0.69	19.4	B	1.7	
	SB	LTR	0.78	26.7	C	1.23	140.3	F	113.6	yes
	Overall		**0.80**	**22.3**	**C**	**1.14**	**66.2**	**E**	**43.9**	
North Bridge Street / Arthur Kill Road	WB	LR	0.64	21.1	C	0.64	21.1	C	0.0	
	NB	T	0.45	11.0	B	0.50	11.5	B	0.5	
	SB	T	0.52	11.3	B	0.57	11.9	B	0.6	
	Overall		**0.56**	**14.2**	**B**	**0.60**	**14.4**	**B**	**0.2**	
Richmond Valley Road / Arthur Kill Road	WB	LR	[illegible]	45.0	D	0.90	[illegible]	D	2.2	
	NB	TR	[illegible]	[illegible]	A	0.57	10.3	B	[illegible]	
	SB	LT	[illegible]	[illegible]	F	1.25	[illegible]	F	44.2	yes
	Overall		[illegible]	[illegible]	**D**	**1.14**	[illegible]	**E**	[illegible]	
Richmond Valley Road / Page Avenue	EB	LTR	0.81	37.2	D	0.82	37.7	D	0.5	
	WB	LTR	0.55	27.9	C	0.56	28.0	C	0.1	
	NB	L	0.33	13.4	B	0.35	13.9	B	0.5	
	NB	TR	0.74	19.1	B	0.78	20.4	C	[illegible]	
	SB	LTR	0.78	22.5	C	0.84	26.3	C	[illegible]	
	Overall		**0.79**	**23.9**	**C**	[illegible]	**25.5**	[illegible]	[illegible]	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.50	26.7	C	[illegible]	[illegible]	C	0.2	
	EB	R	0.16	11.3	B	0.16	11.5	B	0.2	
	NB	T	0.40	11.8	B	0.42	12.0	B	0.2	
	SB	T	0.31	11.2	B	0.33	11.4	B	0.2	
	Overall		*****	**14.1**	**B**	*****	**14.3**	**B**	**0.1**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.60	[illegible]	D	1.11	128.8	F	92.5	yes
	EB	TR	[illegible]	[illegible]	C	[illegible]	35.1	D	[illegible]	
	WB	L	[illegible]	[illegible]	E	1.66	354.7	F	[illegible]	yes
	WB	TR	[illegible]	[illegible]	C	[illegible]	27.3	C	[illegible]	
	NB	LTR	0.75	35.5	D	1.10	94.8	F	59.3	yes
	NB	U-TURN	0.35	14.7	B	0.37	15.4	C	0.7	
	SB	L	0.49	34.9	C	0.49	34.9	C	0.0	
	SB	TR	0.31	31.4	C	0.55	37.1	D	5.7	
	Overall		*****	**32.5**	**C**	*****	**79.2**	**E**	**46.6**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.57	20.3	C	0.69	22.8	C	2.5	
	WB	LTR	-	-	-	-	-	-	-	
	WB	DefL	0.58	27.5	C	0.76	43.4	D	15.9	
	WB	TR	0.40	18.2	B	0.46	19.1	B	0.9	
	NB	DefL	1.01	78.8	E	1.65	338.3	F	259.5	yes
	NB	TR	0.35	17.6	B	0.41	18.5	B	0.9	
	SB	LTR	0.54	20.1	C	0.73	24.6	C	4.5	
	Overall		**0.79**	**27.5**	**C**	**1.20**	**58.8**	**E**	**31.3**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	0.96	39.4	D	0.96	38.4	D	-1.0	
	EB	TR	0.37	5.8	A	0.40	6.0	A	0.2	
	WB	LT	1.00	66.4	E	1.06	81.7	F	15.3	yes
	WB	R	1.11	103.1	F	1.90	442.4	F	339.3	yes
	NB	LTR	0.01	30.6	C	0.01	30.6	C	0.0	
	SB	L	0.40	37.8	D	0.53	41.9	D	4.1	
	SB	LT	0.00	30.4	C	0.00	30.4	C	0.0	
	SB	R	0.15	6.6	A	0.15	6.6	A	0.0	
	Overall		**0.90**	**48.3**	**D**	**1.16**	**147.9**	**F**	**99.6**	

Weekday PM Peak Hour (5:00 to 6:00 PM)

Intersection	Approach	Movement	2020 No-Action v/c	2020 No-Action Average Control Delay	2020 No-Action LOS	2020 With-Action v/c	2020 With-Action Average Control Delay	2020 With-Action LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS										
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.4	B	0.02	10.4	B	0.0	
	WB	LT	0.68	20.8	C	0.74	23.1	C	2.3	
	WB	R	0.61	18.7	B	0.89	34.5	C	15.8	
	NB	LTR	0.68	18.9	B	0.75	21.3	C	2.4	
	SB	LTR	1.16	113.5	F	1.72	353.8	F	240.3	yes
	Overall		**0.92**	**47.8**	**D**	**1.30**	**131.0**	**F**	**83.2**	
North Bridge Street / Arthur Kill Road	WB	LR	0.95	31.3	C	0.95	31.3	C	0.0	
	NB	T	0.49	11.5	B	0.54	12.2	B	0.7	
	SB	T	0.64	12.2	B	0.71	13.2	B	1.0	
	Overall		**0.76**	**18.9**	**B**	**0.81**	**19.0**	**B**	**0.1**	
Richmond Valley Road / Arthur Kill Road	WB	LR	[illegible]	46.6	D	0.94	52.6	D	6.0	yes
	NB	TR	[illegible]	[illegible]	B	0.68	11.9	B	0.7	
	SB	LT	[illegible]	[illegible]	F	1.57	269.0	F	66.4	yes
	Overall		[illegible]	**109.7**	**F**	**1.37**	**142.8**	**F**	**33.1**	
Richmond Valley Road / Page Avenue	EB	LTR	0.69	29.9	C	0.71	30.5	C	0.6	
	WB	LTR	0.66	31.1	C	0.67	31.5	C	0.4	
	NB	L	0.31	13.5	B	0.35	14.4	B	0.9	
	NB	TR	[illegible]	[illegible]	B	0.72	18.8	B	1.0	
	SB	LTR	[illegible]	[illegible]	[illegible]	0.94	37.6	D	8.8	
	Overall		[illegible]	[illegible]	[illegible]	**0.85**	**28.8**	**C**	**3.5**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	[illegible]	[illegible]	[illegible]	0.64	30.1	C	0.7	
	EB	R	0.16	[illegible]	B	0.16	12.8	B	0.3	
	NB	T	0.38	11.6	[illegible]	0.39	11.8	B	0.2	
	SB	T	0.38	11.8	B	0.40	12.0	B	0.2	
	Overall		*****	**15.4**	**B**	*****	**15.7**	**B**	**0.3**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.52	[illegible]	C	0.89	58.8	E	29.1	yes
	EB	TR	[illegible]	[illegible]	C	0.88	40.8	D	11.8	
	WB	L	[illegible]	[illegible]	F	1.15	132.7	F	0.0	
	WB	TR	[illegible]	[illegible]	C	0.50	24.8	C	0.9	
	NB	LTR	0.73	34.3	C	1.07	81.7	F	47.4	yes
	NB	U-TURN	1.05	84.5	F	1.10	100.2	F	15.7	
	SB	L	0.76	45.6	D	0.76	45.8	D	0.2	
	SB	TR	0.32	31.5	C	0.58	37.7	D	6.2	
	Overall		*****	**42.9**	**D**	*****	**59.7**	**E**	**16.8**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.58	20.5	C	0.70	23.0	C	2.5	
	WB	LTR	-	-	-	-	-	-	-	
	WB	DefL	0.61	28.9	C	0.79	47.3	D	18.4	yes
	WB	TR	0.45	19.0	B	0.51	20.0	C	1.0	
	NB	DefL	0.72	31.9	C	1.13	119.9	F	88.0	yes
	NB	TR	0.31	17.1	B	0.36	17.8	B	0.7	
	SB	LTR	0.38	17.5	B	0.55	20.0	B	2.5	
	Overall		**0.66**	**21.2**	**C**	**0.96**	**32.8**	**C**	**11.6**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.03	53.5	D	1.09	73.8	E	20.3	yes
	EB	TR	0.33	4.7	A	0.36	4.9	A	0.2	
	WB	LT	0.66	30.8	C	0.72	32.6	C	1.8	
	WB	R	1.13	107.4	F	1.72	362.5	F	255.1	yes
	NB	LTR	0.11	34.2	C	0.11	34.2	C	0.0	
	SB	L	0.72	55.8	E	0.89	77.3	E	21.5	yes
	SB	LT	0.00	32.1	C	0.00	32.1	C	0.0	
	SB	R	0.41	12.0	B	0.42	12.1	B	0.1	
	Overall		**1.02**	**48.8**	**D**	**1.18**	**130.7**	**F**	**81.9**	

Saturday Midday Peak Hour (12:45 to 1:45 PM)

Intersection	Approach	Movement	2020 No-Action v/c	2020 No-Action Average Control Delay	2020 No-Action LOS	2020 With-Action v/c	2020 With-Action Average Control Delay	2020 With-Action LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS										
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.4	B	0.02	10.4	B	0.0	
	WB	LT	0.70	20.5	C	0.76	23.2	C	2.7	
	WB	R	0.76	23.3	C	1.09	78.6	E	55.3	yes
	NB	LTR	0.83	24.9	C	0.92	33.1	C	8.2	
	SB	LTR	1.07	81.6	F	1.86	414.1	F	332.5	yes
	Overall		**0.91**	**36.6**	**D**	**1.47**	**142.4**	**F**	**105.8**	
North Bridge Street / Arthur Kill Road	WB	LR	0.89	27.9	C	0.89	27.9	C	0.0	
	NB	T	0.59	12.9	B	0.66	14.1	B	1.2	
	SB	T	0.58	11.5	B	0.65	12.3	B	0.8	
	Overall		**0.71**	**17.4**	**B**	**0.75**	**17.8**	**B**	**0.4**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.93	51.2	D	0.94	53.1	D	1.9	
	NB	TR	0.67	11.5	B	0.72	12.6	B	1.1	
	SB	LT	1.38	184.7	F	1.53	251.7	F	67.0	yes
	Overall		**1.23**	**97.2**	**F**	**1.34**	**128.0**	**F**	**30.8**	
Richmond Valley Road / Page Avenue	EB	LTR	0.70	29.9	C	0.71	30.4	C	0.5	
	WB	LTR	0.50	26.6	C	0.51	26.8	C	0.2	
	NB	L	0.60	18.8	B	0.65	21.1	C	2.3	
	NB	TR	0.89	25.2	C	0.94	30.4	C	5.2	
	SB	LTR	0.77	21.3	C	0.86	27.3	C	6.0	
	Overall		**0.82**	**24.4**	**C**	**0.86**	**28.4**	**C**	**4.0**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.68	31.5	C	0.70	32.3	C	0.8	
	EB	R	0.10	10.9	B	0.10	11.1	B	0.2	
	NB	T	0.44	12.2	B	0.47	12.4	B	0.2	
	SB	T	0.38	11.8	B	0.40	12.0	B	0.2	
	Overall		*****	**15.8**	**B**	*****	**16.0**	**B**	**0.2**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.66	39.5	D	1.59	320.7	F	281.2	yes
	EB	TR	0.65	29.4	C	0.95	50.4	D	21.0	yes
	WB	L	1.35	210.9	F	3.42	1,146.0	F	935.1	yes
	WB	TR	0.58	25.0	C	0.68	28.1	C	3.1	
	NB	LTR	0.97	54.0	D	1.47	248.3	F	194.3	yes
	NB	U-TURN	0.59	24.4	C	0.63	27.0	D	2.6	
	SB	L	0.75	43.5	D	0.75	43.8	D	0.3	
	SB	TR	0.68	40.6	D	0.99	77.5	E	36.9	yes
	Overall		*****	**55.2**	**E**	*****	**208.0**	**F**	**152.8**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.64	21.8	C	0.81	26.9	C	5.1	
	WB	LTR	-	-	-	-	-	-	-	
	WB	DefL	0.88	53.8	D	1.23	165.4	F	111.6	yes
	WB	TR	0.61	21.9	C	0.71	24.6	C	2.7	
	NB	DefL	1.26	168.5	F	2.68	802.7	F	634.2	yes
	NB	TR	0.43	18.8	B	0.51	20.2	C	1.4	
	SB	LTR	0.60	20.9	C	0.82	27.6	C	6.7	
	Overall		**1.07**	**39.1**	**D**	**1.96**	**108.2**	**F**	**69.1**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.01	35.7	D	1.03	50.3	D	14.6	yes
	EB	TR	0.38	5.6	A	0.42	5.9	A	0.3	
	WB	LT	1.08	76.2	E	1.17	116.7	F	40.5	yes
	WB	R	1.55	286.0	F	2.53	722.4	F	436.4	yes
	NB	LTR	-	-	-	-	-	-	-	
	SB	L	0.36	34.3	C	0.44	35.4	D	1.1	
	SB	LT	-	-	-	-	-	-	-	
	SB	R	0.24	7.3	A	0.24	7.4	A	0.1	
	Overall		**1.03**	**88.3**	**F**	**1.32**	**244.1**	**F**	**-**	

~~**Table 3-1 (continued)**~~

~~**Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Shortened Englewood Avenue Alternative Traffic Conditions**~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.52	17.8	B	0.56	18.7	B	0.9		0.68	22.2	C	0.78	26.8	C	4.6		0.65	20.7	C	0.74	23.8	C	3.1		0.80	27.6	C	0.93	41.2	D	13.6	
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.09	11.9	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0		0.06	11.7	B	0.06	11.7	B	0.0	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.10	17.8	B	0.10	17.8	B	-		0.15	18.3	B	0.15	18.3	B	0.0		0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	0.55	24.8	C	0.74	31.0	C	-		0.95	50.8	D	1.52	268.1	F	217.3	yes	0.99	59.7	E	1.52	270.4	F	210.7	yes	1.26	156.3	F	1.97	470.2	F	313.9	yes
	Overall		**0.53**	**19.0**	**B**	**0.64**	**22.2**	**C**	**3.2**		**0.80**	**32.8**	**C**	**1.11**	**151.2**	**F**	**118.4**		**0.80**	**38.1**	**D**	**1.08**	**159.5**	**F**	**121.4**		**1.00**	**88.2**	**F**	**1.39**	**282.7**	**F**	**194.5**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.8	B	0.56	21.1	C	3.3		0.41	18.3	B	0.60	22.1	C	3.8		0.64	22.4	C	0.90	37.0	D	14.6	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0		0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.07	7.3	A	0.08	7.4	A	0.1		0.14	7.7	A	0.17	7.9	A	0.2		0.17	7.9	A	0.20	8.1	A	0.2		0.18	8.0	A	0.21	8.2	A	0.2	
	SB	TR	0.38	9.1	A	0.42	9.4	A	0.3		0.52	10.2	B	0.62	12.3	B	2.1		0.42	9.5	A	0.50	10.2	B	0.7		0.62	11.0	B	0.74	12.6	B	1.6	
	Overall		**0.31**	**9.6**	**A**	**0.35**	**10.0**	**B**	**0.4**		**0.46**	**10.9**	**B**	**0.59**	**13.**	**B**	**1.6**		**0.41**	**10.6**	**B**	**0.54**	**12.2**	**B**	**1.6**		**0.63**	**12.8**	**B**	**0.80**	**17.3**	**B**	**4.5**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.01	10.2	B	0.0		0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.00	10.2	B	0.0	
	WB	L	0.44	14.8	B	0.47	15.3	B	0.5		0.49	15.5	B	0.54	16.5	B	1.0		0.42	14.7	B	0.49	15.5	B	0.8		0.96	45.2	D	1.08	78.4	E	33.2	yes
		LT	0.46	15.3	B	0.49	15.7	B	0.4		0.51	16.0	B	0.56	17.1	B	1.1		0.45	15.1	B	0.51	16.1	B	1.0		0.34	13.4	B	0.38	13.9	B	0.5	
	NB	L	0.01	10.3	B	0.01	10.3	B	0.0		0.00	10.2	B	0.00	10.2	B	0.0		0.01	10.3	B	0.01	10.3	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0	
		R	0.20	9.3	A	0.25	9.6	A	0.3		0.41	10.9	B	0.55	12.7	B	1.8		0.49	11.7	B	0.63	14.1	B	2.4		0.63	14.1	B	0.81	21.3	C	7.2	
	SB	LTR	0.13	10.9	B	0.15	11.0	B	0.1		0.16	11.1	B	0.21	11.4	B	0.3		0.16	11.1	B	0.20	11.4	B	0.3		0.21	11.4	B	0.28	11.9	B	0.5	
	Overall		*****	**12.6**	**B**	*****	**12.8**	**B**	**0.2**		*****	**13.1**	**B**	*****	**14.**	**B**	**0.9**		*****	**12.7**	**B**	*****	**13.9**	**B**	**1.2**		*****	**26.6**	**C**	*****	**41.2**	**D**	**14.5**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.38	16.7	B	0.6		0.58	20.3	C	0.72	24.7	C	4.4		0.63	28.2	C	0.93	44.2	D	16.0		1.12	94.5	F	1.38	201.8	F	107.3	yes
		R	0.05	13.1	B	0.08	13.4	B	0.3		0.12	13.7	B	0.20	14.4	B	0.7		0.08	13.8	B	0.12	14.7	B	0.9		0.18	14.2	B	0.32	15.7	B	1.5	
	WB	LTR	0.11	13.6	B	0.12	13.7	B	0.1		0.09	13.4	B	0.12	13.7	B	0.3		0.14	13.9	B	0.17	14.1	B	0.2		0.17	14.1	B	0.21	14.6	B	0.5	
	NB	LTR	0.27	9.5	A	0.28	9.6	A	0.1		0.26	9.4	A	0.28	9.5	A	0.1		0.26	9.4	A	0.28	9.5	A	0.1		0.34	10.0	A	0.37	10.2	B	0.2	
	Overall		**0.30**	**11.3**	**B**	**0.32**	**11.6**	**B**	**0.3**		**0.39**	**13.3**	**B**	**0.47**	**15.4**	**B**	**2.1**		**0.48**	**16.8**	**B**	**0.56**	**23.5**	**C**	**6.7**		**0.67**	**43.1**	**D**	**0.80**	**87.7**	**F**	**44.6**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.19	17.9	B	0.26	18.7	B	0.8		0.39	23.1	C	0.51	35.0	D	7.6		0.35	20.3	C	0.57	24.1	C	3.8		0.56	23.6	C	0.83	35.4	D	11.8	
	NB	LT	0.41	8.5	A	0.41	8.5	A	0.0		0.32	7.7	A	0.32	7.7	A	0.0		0.52	9.5	A	0.52	9.5	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.54	9.6	A	0.54	9.7	A	0.1		0.35	7.9	A	0.37	8.0	A	0.1		0.50	9.3	A	0.51	9.4	A	0.1		0.41	8.3	A	0.43	8.6	A	0.3	
	Overall		**0.43**	**9.9**	**A**	**0.45**	**10.2**	**B**	**0.3**		**0.37**	**10.2**	**B**	**0.45**	**12.**	**B**	**2.2**		**0.47**	**10.8**	**B**	**0.53**	**12.2**	**B**	**1.4**		**0.46**	**11.7**	**B**	**0.56**	**16.2**	**B**	**4.5**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.27	16.0	B	0.53	19.9	B	3.9		0.28	16.0	B	0.50	16.1	B	0.1		0.51	19.6	B	0.55	19.7	B	0.7		0.48	18.6	B	0.52	19.2	B	0.6	
	NB	LT	0.57	13.0	B	0.61	13.8	B	0.8		0.55	12.6	B	0.66	15.0	B	2.4		0.67	14.6	B	0.78	18.1	B	3.5		0.67	14.8	B	0.89	26.4	C	11.6	
	SB	TR	0.50	11.8	B	0.63	14.0	B	2.2		0.45	11.1	B	0.57	12.7	B	1.6		0.64	13.9	B	0.76	17.2	B	3.3		0.63	13.7	B	0.80	18.5	B	4.8	
	Overall		**0.45**	**12.9**	**B**	**0.59**	**15.1**	**B**	**2.2**		**0.44**	**12.5**	**B**	**0.52**	**14.1**	**B**	**1.6**		**0.61**	**15.2**	**B**	**0.69**	**18.0**	**B**	**2.8**		**0.59**	**15.0**	**B**	**0.74**	**21.7**	**C**	**6.7**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.02	22.7	C	0.0		0.06	23.1	C	0.06	23.1	C	0.0		0.02	22.7	C	0.02	22.7	C	0.0		0.12	23.7	C	0.12	23.7	C	0.0	
		R	0.34	27.7	C	0.41	29.4	C	1.7		0.63	35.3	D	0.87	55.9	E	20.6	yes	0.57	33.1	C	0.78	45.3	D	12.2	yes	0.79	43.3	D	1.15	126.0	F	82.7	yes
	WB	LTR	0.69	21.4	C	0.69	21.4	C	0.0		0.71	21.7	C	0.71	21.7	C	0.0		0.88	25.0	C	0.88	25.0	C	0.0		0.94	28.7	C	0.94	28.7	C	0.0	
	NB	L	0.39	24.2	C	0.57	34.1	C	9.9		0.44	23.7	C	0.78	46.4	D	22.7	yes	0.47	27.1	C	0.87	68.1	E	41.0	yes	0.64	36.4	D	1.18	150.3	F	113.9	yes
		T	0.39	17.2	B	0.39	17.2	B	0.0		0.32	16.3	B	0.32	16.3	B	0.0		0.37	16.7	B	0.37	16.7	B	0.0		0.40	17.2	B	0.40	17.2	B	0.0	
	SB	TR	0.99	36.5	D	0.99	36.5	D	0.0		0.62	20.3	C	0.62	20.3	C	0.0		0.87	31.4	C	0.87	31.4	C	0.0		0.69	21.4	C	0.69	21.4	C	0.0	
	Overall		**0.76**	**26.4**	**C**	**0.77**	**26.8**	**C**	**0.4**		**0.66**	**21.9**	**C**	**0.77**	**25.9**	**C**	**4.0**		**0.82**	**26.4**	**C**	**0.86**	**29.4**	**C**	**3.0**		**0.80**	**27.2**	**C**	**1.09**	**44.3**	**D**	**17.1**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0		0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.44	9.5	A	0.3		0.43	9.3	A	0.49	10.0	A	0.7		0.44	9.4	A	0.49	10.0	B	0.6		0.49	9.9	A	0.56	10.9	B	1.0	
	SB	L	0.61	11.9	B	0.63	12.3	B	0.4		0.47	10.4	B	0.50	11.2	B	0.8		0.66	13.1	B	0.70	14.6	B	1.5		0.71	15.6	B	0.79	19.4	B	3.8	
		TR	0.67	11.6	B	0.69	11.9	B	0.3		0.50	9.8	A	0.55	10.4	B	0.6		0.62	11.0	B	0.67	11.7	B	0.7		0.56	10.2	B	0.62	11.1	B	0.9	
	Overall		**0.50**	**11.3**	**B**	**0.51**	**11.6**	**B**	**0.3**		**0.37**	**10.0**	**A**	**0.40**	**10.6**	**B**	**0.6**		**0.48**	**11.2**	**B**	**0.51**	**12.0**	**B**	**0.8**		**0.54**	**11.8**	**B**	**0.59**	**13.2**	**B**	**1.4**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.09	14.8	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0		0.09	14.7	B	0.09	14.7	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	WB	L	0.36	18.2	B	0.36	18.2	B	0.0		0.58	22.4	C	0.58	22.4	C	0.0		0.55	21.8	C	0.55	21.8	C	0.0		0.57	22.1	C	0.57	22.1	C	0.0	
		T	0.02	14.1	B	0.02	14.1	B	0.0		0.04	14.2	B	0.04	14.2	B	0.0		0.04	14.2	B	0.04	14.2	B	0.0		0.02	14.1	B	0.02	14.1	B	0.0	
		R	0.21	16.1	B	0.21	16.1	B	0.0		0.22	16.2	B	0.22	16.2	B	0.0		0.22	16.1	B	0.22	16.1	B	0.0		0.20	15.9	B	0.20	15.9	B	0.0	
	NB	LTR	0.52	20.5	C	0.55	21.1	C	0.6		0.71	24.3	C	0.78	27.0	C	2.7		0.69	23.6	C	0.75	25.7	C	2.1		0.79	25.9	C	0.88	30.8	C	4.9	
	SB	LTR	1.08	64.8	E	1.13	84.3	F	19.5	yes	0.78	27.4	C	0.87	33.0	C	5.6		0.93	30.9	C	1.03	49.7	D	18.8	yes	0.86	30.6	C	0.99	47.6	D	17.0	yes
	Overall		**0.72**	**38.9**	**D**	**0.74**	**47.7**	**D**	**8.8**		**0.68**	**23.8**	**C**	**0.72**	**26.7**	**C**	**2.9**		**0.74**	**24.9**	**C**	**0.79**	**32.7**	**C**	**7.8**		**0.71**	**25.5**	**C**	**0.78**	**33.3**	**C**	**7.8**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.37	14.9	B	0.41	15.5	B	0.6		0.47	16.2	B	0.52	17.0	B	0.8		0.47	16.3	B	0.54	17.4	B	1.1	
	WB	LT	0.36	15.1	B	0.78	28.9	C	13.8		0.43	16.3	B	0.89	39.6	D	23.3		0.57	19.5	B	1.11	96.8	F	77.3	yes	0.65	22.8	C	1.34	188.4	F	165.6	yes
	NB	LR	0.60	26.1	C	0.87	41.0	D	14.9		0.56	25.1	C	0.75	32.2	C	7.1		0.66	27.9	C	0.96	53.7	D	25.8	yes	0.55	25.0	C	0.83	37.5	D	12.5	
	Overall		**0.47**	**18.8**	**B**	**0.82**	**29.5**	**C**	**10.7**		**0.49**	**18.7**	**B**	**0.83**	**29.8**	**C**	**11.1**		**0.61**	**21.0**	**C**	**1.04**	**56.7**	**E**	**35.7**		**0.61**	**20.7**	**C**	**1.11**	**86.4**	**F**	**65.7**	

~~**Table 3-1 (continued)**~~

~~**Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Shortened Englewood Avenue Alternative Traffic Conditions**~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Sharrots Road / Arthur Kill Road	EB	LTR	0.07	13.9	B	0.10	18.3	C	4.4		0.23	15.5	C	0.26	17.6	C	2.1		0.29	20.7	C	0.59	38.7	E	18.0	yes	0.54	24.5	C	0.66	36.1	E	11.6	yes
	WB	LTR	0.22	14.9	B	0.53	28.8	D	13.9		0.24	18.1	C	0.30	21.7	C	3.6		0.42	24.7	C	0.35	26.1	D	1.4		0.45	24.2	C	0.62	39.6	E	15.4	yes
	NB	LTR	0.03	8.0	A	0.03	8.3	A	0.3		0.03	8.0	A	0.04	8.1	A	0.1		0.03	8.0	A	0.03	8.2	A	0.2		0.01	8.0	A	0.01	8.2	A	0.2	
	SB	LTR	0.03	7.9	A	0.03	8.4	A	0.5		0.03	8.1	A	0.03	8.2	A	0.2		0.06	8.5	A	0.06	8.5	A	0.3		0.03	8.0	A	0.03	8.2	A	0.2	
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	1.20	150.0	F	139.2	yes	0.13	14.0	B	0.20	16.0	C	2.0		0.17	14.3	B	0.41	21.4	C	7.1		0.07	11.8	B	0.20	15.3	C	3.5	
	SB	LT	0.02	8.0	A	0.18	9.2	A	1.2		0.02	8.2	A	0.03	8.4	A	0.2		0.01	8.1	A	0.05	8.5	A	0.4		0.01	8.0	A	0.03	8.2	A	0.2	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.32	12.6	B	1.8		0.19	10.3	B	0.21	10.7	B	0.4		0.29	11.5	B	0.32	12.2	B	0.7		0.27	11.7	B	0.30	12.4	B	0.7	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.14	9.3	A	1.3		0.10	9.1	A	0.39	15.0	C	5.9		0.12	8.7	A	0.39	14.4	B	5.7		0.22	9.6	A	0.72	29.5	D	19.9	
		TR	0.08	7.9	A	0.11	8.4	A	0.5		0.16	9.2	A	0.27	12.3	B	3.1		0.16	8.7	A	0.29	11.9	B	3.2		0.27	9.9	A	0.48	17.5	C	7.6	
	WB	LT	0.12	8.3	A	0.14	8.9	A	0.6		0.32	10.5	B	0.42	14.7	B	4.2		0.39	11.3	B	0.52	16.8	C	5.6		0.39	11.8	B	0.60	22.3	C	10.5	
		TR	0.06	7.7	A	0.13	8.2	A	0.5		0.13	9.2	A	0.31	13.0	B	3.8		0.20	8.5	A	0.35	12.4	B	3.9		0.20	9.3	A	0.60	21.0	C	11.7	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	9.7	A	0.22	12.3	B	3.6		0.08	8.5	A	0.12	11.5	B	3.0		0.10	9.4	A	0.33	16.0	C	6.6	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	9.7	A	0.09	11.9	A	2.1		0.07	8.2	A	0.07	10.7	B	2.5		0.14	8.8	A	0.23	13.1	B	4.3	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.34	13.3	B	-		-	-	-	0.35	13.9	B	-		-	-	-	0.61	23.4	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.28	11.8	B	-		-	-	-	0.29	12.3	B	-		-	-	-	0.51	18.5	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.13	8.4	A	0.32	10.4	B	2.0		0.13	8.4	A	0.15	8.7	A	0.3		0.23	8.9	A	0.27	9.5	A	0.6		0.23	9.3	A	0.23	9.3	A	0.0	
	WB	LT	0.30	9.5	A	0.47	11.9	B	2.4		0.34	9.9	A	0.48	12.0	B	2.0		0.42	11.1	B	0.58	14.1	B	3.1		0.65	16.4	C	0.65	16.4	C	0.0	
	SB	LT	0.07	8.2	A	0.08	8.9	A	0.7		0.12	8.5	A	0.12	8.9	A	0.4		0.11	9.0	A	0.11	9.2	A	0.4		0.13	9.4	A	0.13	9.4	A	0.0	
		TR	0.09	8.0	A	0.11	8.7	A	0.8		0.09	8.1	A	0.10	8.6	A	0.4		0.10	9.0	A	0.11	8.9	A	0.4		0.14	9.2	A	0.14	9.2	A	0.0	
Sharrots Road / Veterans Road East	EB	LT	0.11	8.4	A	0.30	10.2	B	1.8		0.14	8.7	A	0.15	9.1	A	0.3		0.23	9.5	A	0.27	10.2	B	0.7		0.21	9.8	A	0.21	9.8	A	0.0	
	WB	TR	0.24	8.8	A	0.40	10.8	B	2.0		0.30	9.5	A	0.45	11.2	B	1.8		0.36	10.6	B	0.53	13.4	B	2.8		0.61	15.2	C	0.61	15.2	C	0.0	
	NB	LT	0.12	8.4	A	0.14	9.2	A	0.8		0.11	8.5	A	0.12	8.8	A	0.4		0.16	9.1	A	0.18	9.7	A	0.5		0.17	9.6	A	0.17	9.6	A	0.0	
		TR	0.10	7.6	A	0.11	8.4	A	0.8		0.16	8.1	A	0.17	8.5	A	0.4		0.24	9.0	A	0.26	9.7	A	0.7		0.28	9.9	A	0.28	9.9	A	0.0	

Notes:
v/c = volume-to-capacity ratio; LOS = Level-of-Service
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound
L = Left-Turn; T = Through; R = Right-Turn;
LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn
Average Control Delay shown in units of seconds/vehicle
- = No volumes for this approach or movement.

Table 3-1
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Shortened Englewood Avenue Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Sharrots Road / Arthur Kill Road	EB	LTR	0.17	26.0	C	0.17	26.0	C	0.0		0.45	31.0	C	0.45	31.0	C	0.0		0.41	30.0	C	0.41	30.0	C	0.0		0.88	59.8	E	0.88	59.8	E	0.0	
	WB	LTR	0.22	18.9	B	0.34	20.4	C	1.5		0.20	18.7	B	0.20	18.8	B	0.1		0.27	19.4	B	0.30	19.7	B	0.3		0.31	19.9	B	0.32	20.1	C	0.2	
	NB	LTR	0.43	15.9	B	0.72	22.9	C	7.0		0.50	16.7	B	0.58	18.1	B	1.4		0.54	17.3	B	0.63	19.3	B	2.0		0.43	15.4	B	0.52	16.8	B	1.4	
	SB	LTR	0.41	15.5	B	0.59	18.5	B	3.0		0.50	16.9	B	0.58	18.4	B	1.5		0.61	19.2	B	0.73	23.0	C	3.8		0.51	16.7	B	0.61	18.7	B	2.0	
	Overall		**0.32**	**16.6**	**B**	**0.51**	**20.9**	**C**	**4.3**		**0.39**	**18.7**	**B**	**0.43**	**19.7**	**B**	**1.0**		**0.47**	**19.5**	**B**	**0.54**	**21.7**	**C**	**2.2**		**0.50**	**25.2**	**C**	**0.56**	**25.3**	**C**	**0.1**	
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	10.3	B	0.0		0.04	10.5	B	0.04	10.5	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0	
	WB	LT	0.67	20.5	C	0.69	21.1	C	0.6		0.64	19.2	B	0.69	20.8	C	1.6		0.86	31.7	C	0.92	38.6	D	6.9		0.85	28.9	C	0.91	35.7	D	6.8	
		R	0.61	18.7	B	0.85	31.4	C	12.7		0.83	28.7	C	1.06	72.8	E	44.1	yes	0.63	19.1	B	0.90	36.4	D	17.3		0.78	24.3	C	1.10	85.1	F	60.8	yes
	NB	LTR	0.76	21.6	C	0.90	31.0	C	9.4		0.65	18.2	B	0.71	20.0	C	1.8		0.70	19.5	B	0.77	22.2	C	2.7		0.86	27.2	C	0.95	38.1	D	10.9	
	SB	LTR	0.63	21.4	C	1.48	252.8	F	231.4	yes	0.82	30.4	C	1.28	162.3	F	131.9	yes	1.22	133.7	F	1.79	385.5	F	251.8	yes	1.15	111.0	F	1.97	467.4	F	356.4	yes
	Overall		**0.72**	**20.6**	**C**	**1.17**	**81.0**	**F**	**60.4**		**0.83**	**23.9**	**C**	**1.17**	**72.7**	**E**	**48.8**		**1.04**	**55.1**	**E**	**1.35**	**140.0**	**F**	**84.9**		**1.00**	**45.4**	**D**	**1.54**	**157.5**	**F**	**112.1**	
North Bridge Street / Arthur Kill Road	WB	LR	0.30	15.9	B	0.30	15.9	B	0.0		0.58	19.7	B	0.58	19.7	B	0.0		0.83	23.0	C	0.83	23.0	C	0.0		0.79	22.7	C	0.79	22.7	C	0.0	
	NB	T	0.54	12.2	B	0.65	14.1	B	1.9		0.47	11.2	B	0.51	11.7	B	0.5		0.50	11.6	B	0.55	12.4	B	0.8		0.62	13.2	B	0.68	14.5	B	1.3	
	SB	T	0.49	11.3	B	0.67	14.2	B	2.9		0.57	11.9	B	0.62	12.6	B	0.7		0.73	13.6	B	0.80	15.0	B	1.4		0.66	12.4	B	0.72	13.4	B	1.0	
	Overall		**0.44**	**12.5**	**B**	**0.52**	**14.4**	**B**	**1.9**		**0.57**	**13.8**	**B**	**0.60**	**14.1**	**B**	**0.3**		**0.77**	**16.0**	**B**	**0.81**	**16.6**	**B**	**0.6**		**0.71**	**15.7**	**B**	**0.75**	**16.3**	**B**	**0.6**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.2	C	0.76	33.2	C	7.0		0.91	47.6	D	0.92	49.7	D	2.1		0.92	49.0	D	0.96	56.1	E	7.1	yes	0.96	56.6	E	0.98	61.1	E	4.5	yes
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9		0.53	9.8	A	0.57	10.3	B	0.5		0.65	11.3	B	0.68	12.0	B	0.7		0.67	11.6	B	0.72	12.7	B	1.1	
	SB	LT	0.68	13.6	B	1.02	53.1	D	39.5	yes	1.17	99.8	F	1.28	146.1	F	46.3	yes	1.46	220.9	F	1.61	288.5	F	67.6	yes	1.45	216.3	F	1.62	295.1	F	78.8	yes
	Overall		**0.66**	**14.8**	**B**	**0.94**	**31.0**	**C**	**16.2**		**1.09**	**57.8**	**E**	**1.17**	**79.0**	**E**	**21.2**		**1.29**	**118.9**	**F**	**1.40**	**152.8**	**F**	**33.9**		**1.29**	**112.8**	**F**	**1.42**	**149.5**	**F**	**36.7**	
Richmond Valley Road / Page Avenue	EB	LTR	0.34	23.3	C	0.43	24.7	C	1.4		0.83	38.9	D	0.84	39.5	D	0.6		0.71	30.6	C	0.73	31.1	C	0.5		0.74	31.3	C	0.75	31.9	C	0.6	
	WB	LTR	0.38	24.1	C	0.43	25.0	C	0.9		0.57	28.3	C	0.57	28.4	C	0.1		0.68	31.9	C	0.69	32.3	C	0.4		0.54	27.6	C	0.55	27.8	C	0.2	
	NB	L	0.18	11.0	B	0.25	11.8	B	0.8		0.36	13.9	B	0.38	14.4	B	0.5		0.35	14.3	B	0.29	12.7	B	-1.6		0.65	20.6	C	0.71	23.6	C	3.0	
		TR	0.80	20.7	C	0.81	21.3	C	0.6		0.74	19.0	B	0.77	20.2	C	1.2		0.69	17.7	B	0.72	18.6	B	0.9		0.89	24.9	C	0.94	29.9	C	5.0	
	SB	LTR	0.55	15.6	B	0.57	16.1	B	0.5		0.79	23.5	C	0.86	27.9	C	4.4		0.89	29.8	C	0.95	38.0	D	-		0.81	23.6	C	0.91	32.1	C	8.5	
	Overall		**0.63**	**19.5**	**B**	**0.67**	**20.3**	**C**	**0.8**		**0.81**	**24.5**	**C**	**0.85**	**26.4**	**C**	**1.9**		**0.82**	**25.9**	**C**	**0.87**	**28.3**	**C**	**2.4**		**0.83**	**25.4**	**C**	**0.87**	**30.2**	**C**	**4.8**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.59	28.6	C	2.5		0.50	26.7	C	0.51	26.9	C	0.2		0.62	29.4	C	0.64	30.0	C	0.6		0.68	31.4	C	0.70	32.1	C	0.7	
		R	0.12	11.0	B	0.12	11.1	B	0.1		0.16	11.4	B	0.16	11.6	B	0.2		0.16	12.6	B	0.17	12.8	B	0.2		0.10	11.0	B	0.10	11.2	B	0.2	
	NB	T	0.40	11.8	B	0.40	11.8	B	0.0		0.40	11.9	B	0.42	12.1	B	0.2		0.38	11.7	B	0.40	11.8	B	0.1		0.45	12.2	B	0.47	12.5	B	0.3	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1		0.32	11.2	B	0.34	11.4	B	0.2		0.38	11.8	B	0.40	12.0	B	0.2		0.38	11.8	B	0.41	12.1	B	0.3	
	Overall		*	**14.1**	**B**	*	**15.2**	**B**	**1.1**		*	**14.2**	**B**	*	**14.3**	**B**	**0.1**		*	**15.4**	**B**	*	**15.6**	**B**	**0.2**		*	**15.7**	**B**	*	**16.0**	**B**	**0.3**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.32	26.3	C	0.53	34.1	C	7.8		0.80	59.6	E	1.72	385.8	F	326.2	yes	0.79	51.9	D	1.59	322.9	F	271.0	yes	1.23	186.6	F	2.33	656.1	F	469.5	yes
		TR	0.56	27.6	C	0.63	29.4	C	1.8		0.67	30.9	C	0.93	48.8	D	17.9	yes	0.78	34.3	C	1.03	69.7	E	35.4	yes	0.85	38.3	D	1.15	110.8	F	72.5	yes
	WB	L	1.04	100.4	F	1.21	161.1	F	60.7	yes	1.37	228.0	F	2.99	954.7	F	726.7	yes	1.14	129.7	F	1.14	129.7	F	0.0		2.46	709.9	F	3.41	1,141.0	F	431.1	yes
		TR	0.59	27.1	C	0.63	27.9	C	0.8		0.66	28.5	C	0.76	31.2	C	2.7		0.61	26.9	C	0.71	29.3	C	2.4		0.77	30.7	C	0.93	41.3	D	10.6	
	NB	LTR	0.43	28.1	C	0.60	31.1	C	3.0		0.62	31.6	C	0.83	38.9	D	7.3		0.46	28.5	C	0.67	32.5	C	4.0		0.79	36.9	D	1.09	88.1	F	51.2	yes
		U-TURN	0.00	11.2	B	0.33	14.3	B	3.1		0.26	13.8	B	0.27	14.3	B	0.5		0.90	50.1	F	0.95	59.5	F	9.4		0.45	19.8	C	0.47	21.2	C	1.4	
	SB	L	0.27	30.6	C	0.27	30.7	C	0.1		0.49	34.9	C	0.49	34.9	C	0.0		0.76	45.6	D	0.76	45.8	D	0.2		0.75	43.5	D	0.75	43.8	D	0.3	
		TR	0.22	30.1	C	0.31	31.4	C	1.3		0.31	31.4	C	0.55	37.1	D	5.7		0.32	31.5	C	0.58	37.7	D	6.2		0.68	40.5	D	0.99	76.8	E	36.3	yes
	Overall		*	**34.3**	**C**	*	**41.3**	**D**	**7.0**		*	**49.6**	**D**	*	**126.1**	**F**	**76.5**		*	**41.3**	**D**	*	**62.9**	**E**	**21.6**		*	**103.3**	**F**	*	**179.3**	**F**	**76.0**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.43	29.7	C	0.48	30.5	C	0.8		0.84	40.8	D	1.02	68.7	E	27.9	yes	0.84	41.0	D	1.02	69.0	E	28.0	yes	0.97	55.9	E	1.19	130.5	F	74.6	yes
	WB	LTR	0.77	37.1	D	0.81	38.8	D	1.7		0.81	38.8	D	0.91	46.4	D	7.6	yes	0.96	53.4	D	1.06	79.3	E	25.9	yes	1.12	100.2	F	1.29	170.8	F	70.6	yes
	NB	DefL	0.86	51.7	D	1.02	88.3	F	36.6	yes	1.75	390.4	F	3.62	1,234.0	F	843.6	yes	1.17	140.4	F	2.11	552.2	F	411.8	yes	2.55	749.7	F	3.95	1,382.0	F	632.3	yes
		TR	0.25	23.6	C	0.29	24.0	C	0.4		0.48	27.3	C	0.56	29.2	C	1.9		0.42	26.2	C	0.50	27.6	C	1.4		0.59	29.9	C	0.70	33.5	C	3.6	
	SB	LTR	0.32	24.0	C	0.41	25.2	C	1.2		0.74	33.1	C	1.01	63.6	E	30.5	yes	0.52	26.8	C	0.75	32.7	C	5.9		0.82	35.7	D	1.13	102.7	F	67.0	yes
	Overall		**0.70**	**35.0**	**C**	**0.79**	**41.4**	**D**	**6.4**		**1.18**	**79.5**	**E**	**1.99**	**183.0**	**F**	**103.5**		**1.00**	**52.2**	**D**	**1.46**	**108.0**	**F**	**55.8**		**1.62**	**132.9**	**F**	**2.28**	**238.7**	**F**	**105.8**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	52.0	D	1.14	89.7	F	37.7	yes	0.95	38.9	D	0.96	35.5	D	-3.4		1.04	55.0	D	1.09	74.7	E	19.7	yes	1.01	33.8	C	1.02	48.7	D	14.9	yes
		TR	0.25	4.9	A	0.26	5.0	A	0.1		0.38	5.8	A	0.41	6.1	A	0.3		0.34	4.8	A	0.37	5.0	A	0.2		0.39	5.7	A	0.43	6.0	A	0.3	
	WB	LT	0.72	40.3	D	0.75	41.5	D	1.2		1.02	69.8	E	1.07	86.8	F	17.0	yes	0.68	31.1	C	0.73	32.9	C	1.8		1.10	83.9	F	1.20	126.1	F	42.2	yes
		R	0.76	43.8	D	0.99	76.4	E	32.6	yes	1.50	267.0	F	2.28	616.6	F	349.6	yes	1.25	154.0	F	1.84	413.7	F	259.7	yes	2.06	513.2	F	3.03	950.2	F	437.0	yes
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0		0.01	30.6	C	0.01	30.6	C	0.0		0.11	34.2	C	0.11	34.2	C	0.0		0.00	0.0	-	-	-	-	-	
	SB	L	0.55	43.2	D	0.62	46.1	D	2.9		0.42	38.5	D	0.55	42.9	D	4.4		0.75	58.9	E	0.93	83.8	F	24.9	yes	0.38	34.5	C	0.45	35.7	D	1.2	
		LT	0.02	30.6	C	0.02	30.6	C	0.0		0.00	30.4	C	0.00	30.4	C	0.0		0.00	32.1	C	0.00	32.1	C	0.0		-	-	-	-	-	-	-	
		R	0.18	6.8	A	0.18	6.8	A	0.0		0.15	6.6	A	0.15	6.6	A	0.0		0.41	12.0	B	0.42	12.1	B	0.1		0.24	7.3	A	0.24	7.3	A	0.0	
	Overall		**0.98**	**38.1**	**D**	**1.22**	**59.4**	**E**	**21.3**		**1.02**	**90.4**	**F**	**1.28**	**216.0**	**F**	**125.6**		**1.03**	**61.0**	**E**	**1.30**	**149.6**	**F**	**88.6**		**1.18**	**160.0**	**F**	**1.47**	**343.7**	**F**	**-**	

Table 3-1 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Shortened Englewood Avenue Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																		
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.53	18.0	B	0.57	18.9	B	0.9		0.71	23.0	C	0.81	28.1	C	5.1	
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.09	11.9	B	0.0	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0	
	SB	LT	0.10	17.8	B	0.10	17.8	B	-		0.14	18.3	B	0.14	18.3	B	0.0	
		R	0.58	25.5	C	0.76	32.4	C	-		1.06	78.5	E	1.63	315.9	F	237.4	yes
	Overall		**0.55**	**19.4**	**B**	**0.65**	**22.9**	**C**	**3.5**		**0.86**	**46.3**	**D**	**1.17**	**180.4**	**F**	**134.1**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.7	B	0.56	21.1	C	3.4	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0	
	NB	LT	0.07	7.4	A	0.08	7.4	A	0.0		0.15	7.8	A	0.18	8.0	A	0.2	
	SB	TR	0.51	10.3	B	0.59	11.1	B	0.8		0.66	11.9	B	0.85	15.9	B	4.0	
	Overall		**0.39**	**10.4**	**B**	**0.46**	**11.2**	**B**	**0.8**		**0.55**	**12.0**	**B**	**0.74**	**15.5**	**B**	**3.5**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.01	10.2	B	0.0	
	WB	L	0.44	14.8	B	0.47	15.2	B	0.4		0.48	15.5	B	0.54	16.4	B	0.9	
		LT	0.46	15.2	B	0.49	15.7	B	0.5		0.50	15.9	B	0.56	17.1	B	1.2	
	NB	L	0.01	10.4	B	0.02	10.4	B	0.0		0.00	10.2	B	0.01	10.3	B	0.1	
		R	0.21	9.3	A	0.24	9.3	A	0.0		0.43	11.1	B	0.56	12.9	B	1.8	
	SB	LTR	0.26	11.8	B	0.32	12.2	B	0.4		0.30	12.1	B	0.43	13.1	B	1.0	
	Overall		*****	**12.6**	**B**	*****	**12.8**	**B**	**0.2**		*****	**13.1**	**B**	*****	**14.1**	**B**	**1.0**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.39	16.8	B	0.7		0.61	20.9	C	0.75	25.9	C	5.0	
		R	0.05	13.1	B	0.08	13.4	B	0.3		0.12	13.7	B	0.20	14.4	B	0.7	
	WB	LTR	0.11	13.6	B	0.12	13.7	B	0.1		0.09	13.4	B	0.12	13.7	B	0.3	
	NB	LTR	0.27	9.5	A	0.28	9.6	A	0.1		0.25	9.4	A	0.28	9.5	A	0.1	
	Overall		**0.30**	**11.3**	**B**	**0.33**	**11.7**	**B**	**0.4**		**0.40**	**13.6**	**B**	**0.47**	**15.9**	**B**	**2.3**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.20	18.0	B	0.27	18.8	B	0.8		0.43	21.1	C	0.65	26.3	C	5.2	
	NB	LT	0.41	8.4	A	0.41	8.4	A	0.0		0.32	7.7	A	0.32	7.7	A	0.0	
	SB	TR	0.53	9.6	A	0.54	9.7	A	0.1		0.35	7.8	A	0.37	8.0	A	0.2	
	Overall		**0.43**	**9.9**	**A**	**0.46**	**10.3**	**B**	**0.4**		**0.38**	**10.5**	**B**	**0.46**	**13.0**	**B**	**2.5**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.30	16.3	B	0.56	20.6	C	4.3		0.28	16.0	B	0.30	16.1	B	0.1	
	NB	LT	0.63	14.2	B	0.67	15.2	B	1.0		0.57	13.0	B	0.68	15.5	B	2.5	
	SB	TR	0.56	12.7	B	0.70	15.6	B	2.9		0.48	11.4	B	0.59	13.2	B	1.8	
	Overall		**0.50**	**13.8**	**B**	**0.64**	**16.4**	**B**	**2.6**		**0.45**	**12.7**	**B**	**0.53**	**14.5**	**B**	**1.8**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.02	22.7	C	0.0		0.06	23.1	C	0.06	23.1	C	0.0	
		R	0.34	27.7	C	0.41	29.4	C	1.7		0.62	34.9	C	0.87	55.3	E	20.4	yes
	WB	LTR	0.69	21.3	C	0.69	21.3	C	0.0		0.71	21.6	C	0.71	21.6	C	0.0	
	NB	L	0.39	24.2	C	0.57	34.1	C	9.9		0.44	23.3	C	0.77	45.0	D	21.7	
		T	0.38	17.1	B	0.38	17.1	B	0.0		0.32	16.3	B	0.32	16.3	B	0.0	
	SB	TR	0.98	34.6	C	0.98	34.6	C	0.0		0.62	20.2	C	0.62	20.2	C	0.0	
	Overall		**0.76**	**25.7**	**C**	**0.77**	**26.1**	**C**	**0.4**		**0.65**	**21.8**	**C**	**0.76**	**25.7**	**C**	**3.9**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.44	9.4	A	0.2		0.43	9.3	A	0.48	10.0	A	0.7	
	SB	L	0.60	11.7	B	0.62	12.2	B	0.5		0.46	10.4	B	0.50	11.1	B	0.7	
		TR	0.67	11.6	B	0.69	11.9	B	0.3		0.50	9.8	A	0.55	10.4	B	0.6	
	Overall		**0.50**	**11.3**	**B**	**0.51**	**11.5**	**B**	**0.2**		**0.36**	**10.0**	**A**	**0.39**	**10.6**	**B**	**0.6**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.09	14.8	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	WB	L	0.36	18.2	B	0.36	18.2	B	0.0		0.58	22.3	C	0.58	22.3	C	0.0	
		T	0.02	14.1	B	0.02	14.1	B	0.0		0.04	14.2	B	0.04	14.2	B	0.0	
		R	0.21	16.1	B	0.21	16.1	B	0.0		0.22	16.2	B	0.22	16.2	B	0.0	
	NB	LTR	0.52	20.4	C	0.55	21.0	C	0.6		0.70	24.2	C	0.78	26.8	C	2.6	
	SB	LTR	1.07	61.0	E	1.12	80.2	F	19.2	yes	0.77	27.1	C	0.86	32.5	C	5.4	
	Overall		**0.71**	**37.2**	**D**	**0.74**	**45.8**	**D**	**8.6**		**0.67**	**23.6**	**C**	**0.72**	**26.4**	**C**	**2.8**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.38	15.0	B	0.42	15.6	B	0.6	
	WB	LT	0.41	15.8	B	0.82	31.9	C	16.1		0.52	18.2	B	0.96	53.6	D	35.4	yes
	NB	LR	0.61	26.5	C	0.88	42.5	D	16.0		0.59	26.0	C	0.79	34.2	C	8.2	
	Overall		**0.50**	**19.2**	**B**	**0.85**	**31.2**	**C**	**12.0**		**0.55**	**19.7**	**B**	**0.89**	**35.9**	**D**	**16.2**	

Intersection	Approach	Movement	Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																		
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.67	21.3	C	0.76	24.8	C	3.5		0.83	29.7	C	0.96	46.8	D	17.1	yes
		TR	0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.05	11.6	B	0.05	11.6	B	0.0		0.06	11.7	B	0.06	11.7	B	0.0	
	NB	LTR	0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	1.09	89.9	F	1.63	316.4	F	226.5	yes	1.41	218.0	F	2.12	534.2	F	316.2	yes
	Overall		**0.85**	**53.9**	**D**	**1.14**	**188.7**	**F**	**134.8**		**1.08**	**123.0**	**F**	**1.47**	**326.7**	**F**	**203.7**	
Bricktown Way / Veterans Road West	EB	L	0.41	18.2	B	0.60	22.0	C	3.8		0.64	22.3	C	0.89	36.6	D	14.3	
		R	0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.18	8.0	A	0.21	8.1	A	0.1		0.20	8.1	A	0.27	8.6	A	0.5	
	SB	TR	0.58	11.0	B	0.73	13.3	B	2.3		0.80	13.7	B	1.03	37.5	D	23.8	
	Overall		**0.51**	**11.4**	**B**	**0.68**	**13.8**	**B**	**2.4**		**0.74**	**14.2**	**B**	**0.98**	**33.3**	**C**	**19.1**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.00	10.2	B	0.0	
	WB	L	0.43	14.6	B	0.48	15.5	B	0.9		0.96	44.5	D	1.08	77.3	E	32.8	yes
		LT	0.45	15.1	B	0.51	16.1	B	1.0		0.34	13.4	B	0.38	13.9	B	0.5	
	NB	L	0.02	10.4	B	0.03	10.6	B	0.2		0.03	10.6	B	0.05	11.1	B	0.5	
		R	0.51	11.9	B	0.65	14.5	B	2.6		0.65	14.6	B	0.83	22.8	C	8.2	
	SB	LTR	0.32	12.2	B	0.43	13.1	B	0.9		0.39	12.8	B	0.56	14.4	B	1.6	
	Overall		*****	**12.8**	**B**	*****	**14.2**	**B**	**1.3**		*****	**24.4**	**C**	*****	**36.3**	**D**	**11.8**	
Englewood Avenue / Veterans Road East	EB	LT	0.81	29.9	C	0.96	49.3	D	19.4	yes	1.16	108.7	F	1.42	218.1	F	109.4	yes
		R	0.13	13.8	B	0.22	14.7	B	0.9		0.18	14.2	B	0.32	15.7	B	1.5	
	WB	LTR	0.14	13.9	B	0.17	14.1	B	0.2		0.17	14.1	B	0.21	14.6	B	0.5	
	NB	LTR	0.25	9.4	A	0.28	9.5	A	0.1		0.34	10.0	A	0.37	10.2	B	0.2	
	Overall		**0.49**	**17.7**	**B**	**0.57**	**25.7**	**C**	**8.0**		**0.68**	**49.9**	**D**	**0.81**	**96.3**	**F**	**46.4**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.42	20.9	C	0.61	25.2	C	4.3		0.62	25.0	C	0.88	40.6	D	15.6	
	NB	LT	0.51	9.5	A	0.51	9.5	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.50	9.2	A	0.51	9.4	A	0.2		0.41	8.3	A	0.43	8.5	A	0.2	
	Overall		**0.48**	**11.0**	**B**	**0.54**	**12.6**	**B**	**1.6**		**0.48**	**12.2**	**B**	**0.58**	**18.1**	**B**	**5.9**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.50	18.9	B	0.55	19.7	B	0.8		0.48	18.5	B	0.51	19.1	B	0.6	
	NB	LT	0.69	15.1	B	0.80	19.0	B	3.9		0.71	15.9	B	0.94	32.5	C	16.6	
	SB	TR	0.66	14.3	B	0.78	18.0	B	3.7		0.66	14.3	B	0.83	20.0	C	5.7	
	Overall		**0.62**	**15.5**	**B**	**0.70**	**18.7**	**B**	**3.2**		**0.62**	**15.7**	**B**	**0.77**	**24.7**	**C**	**9.0**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.02	22.7	C	0.0		0.12	23.7	C	0.12	23.7	C	0.0	
		R	0.56	33.0	C	0.77	44.5	D	11.5		0.78	43.0	D	1.15	122.7	F	79.7	yes
	WB	LTR	0.87	24.7	C	0.87	24.7	C	0.0		0.93	28.4	C	0.93	28.4	C	0.0	
	NB	L	0.47	27.1	C	0.87	68.1	E	41.0	yes	0.63	35.3	D	1.17	144.5	F	109.2	yes
		T	0.36	16.7	B	0.36	16.7	B	0.0		0.40	17.1	B	0.40	17.1	B	0.0	
	SB	TR	0.87	31.2	C	0.87	31.2	C	0.0		0.69	21.4	C	0.69	21.4	C	0.0	
	Overall		**0.81**	**26.2**	**C**	**0.85**	**29.2**	**C**	**3.0**		**0.80**	**27.0**	**C**	**1.08**	**43.3**	**D**	**16.3**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.44	9.4	A	0.49	10.0	A	0.6		0.49	9.9	A	0.56	10.9	B	1.0	
	SB	L	0.65	13.0	B	0.69	14.4	B	1.4		0.71	15.4	B	0.78	19.0	B	3.6	
		TR	0.62	10.9	B	0.67	11.6	B	0.7		0.56	10.2	B	0.62	11.1	B	0.9	
	Overall		**0.47**	**11.2**	**B**	**0.50**	**11.9**	**B**	**0.7**		**0.53**	**11.7**	**B**	**0.58**	**13.1**	**B**	**1.4**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.7	B	0.09	14.7	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	WB	L	0.55	21.8	C	0.55	21.8	C	0.0		0.56	22.0	C	0.56	22.0	C	0.0	
		T	0.04	14.2	B	0.04	14.2	B	0.0		0.02	14.1	B	0.02	14.1	B	0.0	
		R	0.21	16.1	B	0.21	16.1	B	0.0		0.19	15.8	B	0.19	15.8	B	0.0	
	NB	LTR	0.69	23.5	C	0.75	25.6	C	2.1		0.79	25.8	C	0.88	30.6	C	4.8	
	SB	LTR	0.92	30.2	C	1.02	46.8	D	16.6	yes	0.86	30.5	C	0.99	47.2	D	16.7	yes
	Overall		**0.74**	**24.6**	**C**	**0.78**	**31.5**	**C**	**6.9**		**0.71**	**25.4**	**C**	**0.77**	**33.1**	**C**	**7.7**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.47	16.3	B	0.52	17.2	B	0.9		0.48	16.4	B	0.55	17.5	B	1.1	
	WB	LT	0.67	23.2	C	1.20	129.7	F	106.5	yes	0.80	31.3	C	1.48	250.3	F	219.0	yes
	NB	LR	0.70	29.7	C	1.00	64.4	E	34.7	yes	0.59	26.2	C	0.87	42.0	D	15.8	
	Overall		**0.69**	**22.8**	**C**	**1.11**	**72.4**	**E**	**49.6**		**0.71**	**24.0**	**C**	**1.21**	**113.0**	**F**	**89.0**	

Table 3-1 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Shortened Englewood Avenue Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	1.20	150.0	F	139.2	yes	0.13	14.2	B	0.20	16.3	C	2.1		0.18	14.5	B	0.42	22.0	C	7.5		0.07	12.0	B	0.21	15.6	C	3.6	
	SB	LT	0.02	8.0	A	0.18	9.2	A	1.2		0.02	8.2	A	0.03	8.4	A	0.2		0.01	8.1	A	0.05	8.5	A	0.4		0.01	8.0	A	0.03	8.2	A	0.2	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.31	12.6	B	1.8		0.20	10.4	B	0.21	10.7	B	0.3		0.29	11.6	B	0.32	12.3	B	0.7		0.27	11.8	B	0.31	12.6	B	0.8	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.08	8.7	A	0.7		0.10	9.1	A	0.19	11.9	B	2.8		0.12	8.7	A	0.21	11.6	B	2.9		0.22	9.6	A	0.40	16.1	C	6.5	
		TR	0.08	7.9	A	0.11	8.5	A	0.6		0.15	9.2	A	0.28	12.5	B	3.3		0.16	8.7	A	0.29	12.1	B	3.4		0.27	9.9	A	0.48	17.6	C	7.7	
	WB	LT	0.12	8.3	A	0.15	8.8	A	0.5		0.31	10.5	B	0.42	14.3	B	3.8		0.38	11.2	B	0.51	16.4	C	5.2		0.39	11.7	B	0.55	19.9	C	8.2	
		TR	0.06	7.7	A	0.18	8.3	A	0.6		0.10	8.2	A	0.45	13.5	B	5.3		0.14	8.5	A	0.49	14.4	B	5.9		0.20	9.3	A	0.77	29.8	D	20.5	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	8.6	A	0.22	12.1	B	3.5		0.03	8.5	A	0.15	11.4	B	2.9		0.10	9.4	A	0.32	15.5	C	6.2	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	7.7	A	0.09	9.8	A	2.1		0.11	8.2	A	0.16	10.6	B	2.4		0.14	8.7	A	0.23	12.7	B	4.0	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.33	13.2	B	-		-	-	-	0.35	13.7	B	-		-	-	-	0.6	22.3	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.27	11.7	B	-		-	-	-	0.29	12.1	B	-		-	-	-	0.50	17.8	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.14	8.5	A	0.33	10.6	B	2.0		0.13	8.4	A	0.14	8.7	A	0.3		0.23	8.9	A	0.27	9.5	A	0.6		0.19	8.8	A	0.23	9.4	A	0.6	
	WB	LT	0.33	9.8	A	0.50	12.4	B	2.6		0.37	10.3	B	0.52	12.6	B	2.3		0.46	11.5	B	0.61	15.0	B	3.5		0.50	12.4	B	0.70	18.2	C	5.9	
	SB	LT	0.08	8.3	A	0.09	9.0	A	0.7		0.12	8.6	A	0.12	9.0	A	0.4		0.11	8.9	A	0.11	9.3	A	0.4		0.12	8.9	A	0.13	9.5	A	0.6	
		TR	0.09	8.0	A	0.11	8.8	A	0.8		0.09	8.1	A	0.10	8.5	A	0.4		0.10	8.5	A	0.11	9.0	A	0.5		0.13	8.7	A	0.14	9.3	A	0.6	
Sharrots Road / Veterans Road East	EB	LT	0.12	8.6	A	0.32	10.4	B	1.8		0.14	8.8	A	0.15	9.1	A	0.3		0.23	9.6	A	0.27	10.3	B	0.7		0.18	9.3	A	0.22	9.9	A	0.6	
	WB	TR	0.27	9.1	A	0.44	11.4	B	2.3		0.33	9.8	A	0.48	11.8	B	2.0		0.39	11.0	B	0.56	14.2	B	3.2		0.45	11.7	B	0.66	16.7	C	5.1	
	NB	LT	0.13	8.5	A	0.14	9.3	A	0.8		0.11	8.5	A	0.12	8.9	A	0.4		0.17	9.2	A	0.18	9.7	A	0.5		0.16	9.2	A	0.17	9.8	A	0.7	
		TR	0.11	7.8	A	0.12	8.6	A	0.8		0.16	8.2	A	0.18	8.6	A	0.4		0.25	9.1	A	0.27	9.8	A	0.7		0.26	9.2	A	0.28	10.0	A	0.8	

Notes:

v/c = volume-to-capacity ratio; LOS = Level-of-Service

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound

L = Left-Turn; T = Through; R = Right-Turn;

LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn

Average Control Delay shown in units of seconds/vehicle

- = No volumes for this approach or movement.

~~Table 3-2~~

~~Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Shortened Englewood Avenue Alternative Traffic Conditions~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	10.3	B	0.0		0.04	10.5	B	0.04	8.8	A	-1.7		0.02	10.4	B	0.02	10.4	B	0.0		0.02	10.4	B	0.02	8.7	A	-1.7	
	WB	LT	0.43	14.7	B	0.44	15.0	B	0.3		0.54	16.8	B	0.53	14.3	B	-		0.68	20.8	C	0.74	23.1	C	2.3		0.70	20.5	C	0.68	17.6	B	-2.9	
		R	0.61	18.7	B	0.85	31.4	-	-		0.82	27.6	C	0.94	37.7	D	-		0.61	18.7	B	0.89	34.5	-	-		0.76	23.3	C	0.97	42.8	D	19.5	
	NB	LTR	0.75	21.3	C	-	-	-	-		0.63	17.7	B	-	-	-	-		0.68	18.9	B	-	-	-	-		0.83	24.9	C	-	-	-	-	
		LT	-	-	-	0.38	13.5	B	-		-	-	-	0.28	14.5	B	-		-	-	-	0.25	12.1	B	-		-	-	-	0.33	14.9	B	-	
		R	-	-	-	0.61	17.7	B	-		-	-	-	0.58	19.6	B	-		-	-	-	0.59	17.1	B	-		-	-	-	0.83	28.9	C	-	
	SB	LTR	0.60	20.1	C	-	-	-	-		0.78	26.7	C	-	-	-	-		1.16	113.5	F	-	-	-	-		1.07	81.6	F	-	-	-	-	
		L	-	-	-	0.36	14.6	B	-		-	-	-	0.71	26.8	C	-		-	-	-	0.79	28.4	C	-		-	-	-	0.86	39.3	D	-	
		TR	-	-	-	0.45	14.7	B	-		-	-	-	0.38	15.7	B	-		-	-	-	0.46	14.7	B	-		-	-	-	0.41	16.1	B	-	
	Overall		**0.68**	**19.2**	**B**	**0.73**	**19.3**	**B**	**0.1**		**0.80**	**22.3**	**C**	**0.84**	**23.9**	**C**	**1.6**		**0.92**	**47.8**	**D**	**0.84**	**23.1**	**C**	**-24.7**		**0.91**	**36.6**	**D**	**0.92**	**29.0**	**C**	**-7.6**	
North Bridge Street / Arthur Kill Road	WB	LR	0.49	18.4	B	0.49	18.4	B	0.0		0.64	21.1	C	0.64	21.1	C	0.0		0.95	31.3	C	0.95	31.3	C	0.0		0.89	27.9	C	0.89	27.9	C	0.0	
	NB	T	0.54	12.1	B	0.65	14.0	B	1.9		0.45	11.0	B	0.50	11.5	B	0.5		0.49	11.5	B	0.54	12.2	B	0.7		0.59	12.9	B	0.66	14.1	B	1.2	
	SB	T	0.35	9.9	A	0.54	11.9	B	2.0		0.52	11.3	B	0.57	11.9	B	0.6		0.64	12.2	B	0.71	13.2	B	1.0		0.58	11.5	B	0.65	12.3	B	0.8	
	Overall		**0.52**	**13.2**	**B**	**0.58**	**14.2**	**B**	**1.0**		**0.56**	**14.2**	**B**	**0.60**	**14.4**	**B**	**0.2**		**0.76**	**18.9**	**B**	**0.81**	**19.0**	**B**	**0.1**		**0.71**	**17.4**	**B**	**0.75**	**17.8**	**B**	**0.4**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.1	C	0.75	32.7	C	6.6		0.89	45.0	D	0.90	47.2	D	2.2		0.91	46.6	D	0.89	42.4	D	-4.2		0.93	51.2	D	0.94	53.1	D	1.9	
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9		0.53	9.7	A	0.57	10.3	B	0.6		0.64	11.2	B	0.70	13.0	B	1.8		0.67	11.5	B	0.72	12.6	B	1.1	
	SB	LT	0.68	13.5	B	-	-	-	-		1.14	87.9	F	-	-	-	-		1.42	202.6	F	-	-	-	-		1.38	184.7	F	-	-	-	-	
		L	-	-	-	0.63	17.8	B	-		-	-	-	0.66	14.1	B	-		-	-	-	0.69	11.6	B	-		-	-	-	0.69	13.4	B	-	
		T	-	-	-	0.45	8.9	A	-		-	-	-	0.58	[illegible]	A	-		-	-	-	0.95	16.5	B	-		-	-	-	0.83	12.9	B	-	
	Overall		**0.66**	**14.7**	**B**	**0.72**	**15.8**	**B**	**1.1**		**1.06**	**51.8**	**D**	**0.74**	[illegible]	**B**	**-3.7**		[illegible]	**12.7**	**C**	**0.93**	**19.4**	**B**	**-90.3**		**1.23**	**97.2**	**F**	**0.86**	**19.7**	**B**	**-77.5**	
Richmond Valley Road / Page Avenue	EB	LTR	0.35	23.4	C	0.43	24.7	C	1.3		0.81	37.2	D	0.82	37.7	D	0.5		0.69	29.9	C	0.71	30.5	C	0.6		0.70	29.9	C	0.71	30.4	C	0.5	
	WB	LTR	0.38	24.1	C	0.43	25.0	C	0.9		0.55	27.9	C	0.56	28.0	C	0.1		0.66	31.1	C	0.67	31.5	C	0.4		0.50	26.6	C	0.51	26.8	C	0.2	
	NB	L	0.18	11.0	B	0.24	11.7	B	0.7		0.33	13.4	B	0.35	13.9	B	0.5		0.31	13.5	B	0.35	14.4	B	0.9		0.60	18.8	B	0.65	21.1	C	2.3	
		TR	0.80	20.8	C	0.82	21.5	C	0.7		0.74	19.1	B	0.78	20.4	C	1.3		0.69	17.8	B	0.72	18.8	B	1.0		0.89	25.2	C	0.94	30.4	C	5.2	
	SB	LTR	0.55	15.5	B	0.57	15.9	B	0.4		0.78	22.5	C	0.84	26.3	C	3.8		0.88	28.8	C	0.94	37.6	D	8.8		0.77	21.3	C	0.86	27.3	C	6.0	
	Overall		**0.64**	**19.6**	**B**	**0.67**	**20.3**	**C**	**0.7**		**0.79**	**23.9**	**C**	**0.83**	**25.5**	**C**	**1.6**		**0.81**	**25.3**	**C**	**0.85**	**28.8**	**C**	**3.5**		**0.82**	**24.4**	**C**	**0.86**	**28.4**	**C**	**4.0**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.59	28.6	C	2.5		0.50	26.7	C	0.51	26.9	C	0.2		0.62	29.4	C	0.64	30.1	C	0.7		0.68	31.5	C	0.70	32.3	C	0.8	
		R	0.40	11.8	B	0.12	11.1	B	-0.7		[illegible]	11.3	B	[illegible]	11.5	B	0.2		[illegible]	12.5	B	[illegible]	12.8	B	0.3		0.10	10.9	B	0.10	11.1	B	0.2	
	NB	T	0.12	11.0	B	0.40	11.8	B	0.8		0.40	11.8	B	[illegible]	12.0	B	0.2		0.38	11.6	B	0.40	11.8	B	0.2		0.44	12.2	B	0.47	12.4	B	0.2	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1		0.31	11.2	B	[illegible]	11.4	B	0.2		0.38	11.8	B	0.40	12.0	B	0.2		0.38	11.8	B	0.40	12.0	B	0.2	
	Overall		*	**13.7**	**B**	*	**15.2**	**B**	**1.4**		*	**14.1**	**B**	*	**14.3**	**B**	**0.1**		*	**15.4**	**B**	*	**15.7**	**B**	**0.3**		*	**15.8**	**B**	*	**16.0**	**B**	**0.2**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.24	23.5	C	0.32	23.0	C	-0.5		0.60	36.3	D	1.11	128.8	F	92.5	yes	0.52	29.7	C	0.89	58.8	E	29.1	yes	0.66	39.5	D	1.59	320.7	F	281.2	yes
		TR	0.53	26.9	C	0.54	25.1	C	-1.8		0.52	27.0	C	0.77	35.1	D	8.1		0.63	29.0	C	0.88	40.8	D	11.8		0.65	29.4	C	0.95	50.4	D	21.0	yes
	WB	L	0.97	80.0	F	0.95	73.3	E	-6.7		0.90	62.9	E	[illegible]	33.7	[illegible]	29.8	yes	1.15	132.7	[illegible]	1.15	132.7	F	0.0		1.35	210.9	F	3.42	1,146.0	F	935.1	yes
		TR	0.44	24.7	C	0.43	22.5	C	-2.2		0.55	26.2	C	[illegible]	27.3	C	1.1		0.44	23.0	C	0.50	24.8	C	0.9		0.58	25.0	C	0.68	28.1	C	3.1	
	NB	LTR	0.54	30.0	C	0.78	36.5	D	6.5		0.75	[illegible]	[illegible]	[illegible]	[illegible]	F	59.3	yes	0.73	[illegible]	C	1.07	81.7	F	47.4	yes	0.97	54.0	D	1.47	248.3	F	194.3	yes
		U-TURN	0.53	17.9	C	0.54	18.2	C	0.3		0.35	14.7	B	[illegible]	15.1	C	0.7		[illegible]	[illegible]	F	1.10	100.2	F	15.7		0.59	24.4	C	0.63	27.0	D	2.6	
	SB	L	0.27	30.6	C	0.32	34.0	C	3.4		0.49	34.9	C	0.49	34.9	C	0.0		0.76	45.8	D	0.76	45.8	D	0.2		0.75	43.5	D	0.75	43.8	D	0.3	
		TR	0.23	30.1	C	0.37	35.2	D	5.1		0.31	31.4	C	0.55	37.1	D	5.7		0.32	31.5	C	0.58	37.7	D	6.2		0.68	40.6	D	0.99	77.5	E	36.9	yes
	Overall		*	**31.7**	**C**	*	**32.2**	**C**	**0.5**		*	**32.5**	**C**	*	**79.2**	**E**	**46.6**		*	**42.9**	**D**	*	**67.5**	**E**	**24.6**		*	**55.2**	**E**	*	**208.0**	**F**	**152.8**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.35	17.3	B	-	-	-	-		0.57	20.3	C	-	-	-	-		0.58	20.5	C	-	-	-	-		0.64	21.8	C	-	-	-	-	
		L	-	-	-	0.18	16.1	B	-		-	-	-	0.17	15.9	B	-		-	-		0.16	15.7	B	-		-	-	-	0.59	41.0	D	-	
		TR	-	-	-	0.28	16.3	B	-		-	-	-	0.56	19.9	B	-		-	-		0.58	20.3	C	-		-	-	-	0.96	51.4	D	-	
	WB	LTR	0.40	17.9	B	0.41	18.0	B	0.1		-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		DefL	-	-	-	-	-	-	-		0.58	27.5	C	0.67	33.4	C	5.9		0.61	28.9	C	0.71	37.1	D	8.2		0.88	53.8	D	0.70	45.9	D	-7.9	
		TR	-	-	-	-	-	-	-		0.40	18.2	B	0.46	19.1	B	0.9		0.45	19.0	B	0.51	20.0	C	1.0		0.61	21.9	C	0.83	35.0	D	13.1	
	NB	DefL	0.60	24.4	C	0.67	27.6	C	3.2		1.01	78.8	E	0.96	73.8	E	-5.0		0.72	31.9	C	0.61	34.5	C	2.6		1.26	168.5	F	0.77	44.0	D	-124.5	
		TR	0.18	15.6	B	0.21	15.9	B	0.3		0.35	17.6	B	0.41	18.5	B	0.9		0.31	17.1	B	0.36	17.8	B	0.7		0.43	18.8	B	0.73	35.5	D	16.7	
	SB	LTR	0.23	15.9	B	-	-	-	-		0.54	20.1	C	-	-	-	-		0.38	17.5	B	-	-	-	-		0.60	20.9	C	-	-	-	-	
		L	-	-	-	0.03	14.2	B	-		-	-	-	0.09	21.3	C	-		-	-	-	0.09	26.3	C	-		-	-	-	0.08	19.8	B	-	
		TR	-	-	-	0.27	16.3	B	-		-	-	-	0.89	40.7	D	-		-	-	-	0.87	44.2	D	-		-	-	-	0.94	43.2	D	-	
	Overall		**0.50**	**18.4**	**B**	**0.54**	**18.7**	**B**	**0.3**		**0.79**	**27.5**	**C**	**0.95**	**32.3**	**C**	**4.8**		**0.66**	**21.2**	**C**	**0.85**	**28.5**	**C**	**7.3**		**1.07**	**39.1**	**D**	**1.39**	**42.9**	**D**	**3.8**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	53.5	D	1.14	91.7	F	38.2	yes	0.96	39.4	D	0.96	38.4	D	-1.0		1.03	53.5	D	1.09	73.8	E	20.3	yes	1.01	35.7	D	1.03	38.4	D	2.7	
		TR	0.25	4.9	A	0.26	4.9	A	0.0		0.37	5.8	A	0.40	6.0	A	0.2		0.33	4.7	A	0.36	4.9	A	0.2		0.38	5.6	A	0.41	5.1	A	-0.5	
	WB	LT	0.72	40.3	D	0.75	41.5	D	1.2		1.00	66.4	E	1.06	81.7	F	15.3	yes	0.66	30.8	C	0.72	32.6	C	1.8		1.08	76.2	E	1.08	74.4	E	-1.8	
		R	0.72	41.6	D	0.96	68.1	E	26.5	yes	1.11	103.1	F	1.90	442.4	F	339.3	yes	1.13	107.4	F	1.72	362.5	F	255.1	yes	1.55	286.0	F	1.29	157.2	F	-128.8	
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0		0.01	30.6	C	0.01	30.6	C	0.0		0.11	34.2	C	0.11	34.2	C	0.0		-	-	-	-	-	-	-	
	SB	L	0.54	42.8	D	0.61	45.6	D	2.8		0.40	37.8	D	0.53	41.9	D	4.1		0.72	55.8	E	0.89	77.3	E	21.5	yes	0.36	34.3	C	0.50	38.4	D	4.1	
		LT	0.02	30.6	C	0.02	30.6	C	0.0		0.00	30.4	C	0.00	30.4	C	0.0		0.00	32.1	C	0.00	32.1	C	0.0		-	-	-	-	-	-	-	
		R	0.18	6.8	A	0.18	6.8	A	0.0		0.15	6.6	A	0.15	6.6	A	0.0		0.41	12.0	B	0.42	12.1	B	0.1		0.24	7.3	A	0.25	8.3	A	1.0	
	Overall		**0.99**	**38.4**	**D**	**1.23**	**58.9**	**E**	**20.5**		**0.90**	**48.3**	**D**	**1.16**	**147.9**	**F**	**99.6**		**1.02**	**48.8**	**D**	**1.18**	**130.7**	**F**	**81.9**		**1.03**	**88.3**	**F**	**1.16**	**71.5**	**E**	**-**	

~~Table 3-2 (continued)~~

~~Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Shortened Englewood Avenue Alternative Traffic Conditions~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.52	17.8	B	0.56	18.7	B	0.9		0.68	22.2	C	0.68	22.8	C	0.6		0.65	20.7	C	0.66	21.6	C	0.9		0.80	27.6	C	0.81	28.5	C	0.9	
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.14	22.6	C	10.7		0.05	11.6	B	0.07	21.3	C	9.7		0.06	11.7	B	0.10	23.7	C	12.0	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.10	17.8	B	0.10	17.8	B	-		0.15	18.3	B	0.15	18.3	B	0.0		0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	0.55	24.8	C	0.74	31.0	C	-		0.95	50.8	D	1.02	53.2	D	2.4		0.99	59.7	E	1.05	61.3	E	1.6		1.26	156.3	F	1.28	150.7	F	-5.6	
	Overall		**0.53**	**19.0**	**B**	**0.64**	**22.2**	**C**	**3.2**		**0.80**	**32.8**	**C**	**1.01**	**38.2**	**D**	**5.4**		**0.80**	**38.1**	**D**	**1.03**	**43.1**	**D**	**5.0**		**1.00**	**88.2**	**F**	**1.19**	**97.1**	**F**	**8.9**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.8	B	0.56	21.1	C	3.3		0.41	18.3	B	0.60	22.1	C	3.8		0.64	22.4	C	0.90	37.0	D	14.6	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0		0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.07	7.3	A	0.08	7.4	A	0.1		0.14	7.7	A	0.17	7.9	A	0.2		0.17	7.9	A	0.20	8.1	A	0.2		0.18	8.0	A	0.21	8.2	A	0.2	
	SB	TR	0.38	9.1	A	0.42	9.4	A	0.3		0.52	10.2	B	0.62	11.3	B	1.1		0.42	9.5	A	0.50	10.2	B	0.7		0.62	11.0	B	0.74	12.6	B	1.6	
	Overall		**0.31**	**9.6**	**A**	**0.35**	**10.0**	**A**	**0.4**		**0.46**	**10.9**	**B**	**0.59**	**12.5**	**B**	**1.6**		**0.41**	**10.6**	**B**	**0.54**	**12.2**	**B**	**1.6**		**0.63**	**12.8**	**B**	**0.80**	**17.3**	**B**	**4.5**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.01	10.2	B	0.0		0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.00	8.5	A	-1.7	
	WB	L	0.44	14.8	B	0.47	15.3	B	0.5		0.49	15.5	B	0.54	16.5	B	1.0		0.43	14.7	B	0.49	15.5	B	0.8		0.96	45.2	D	0.97	42.5	D	-2.7	
		LT	0.46	15.3	B	0.49	15.7	B	0.4		0.51	16.0	B	0.56	17.1	B	1.1		0.45	15.1	B	0.51	16.1	B	1.0		0.34	13.4	B	0.34	11.5	B	-1.9	
	NB	L	0.01	10.3	B	0.01	10.3	B	0.0		0.00	10.2	B	0.00	10.2	B	0.0		0.01	10.3	B	0.01	10.3	B	0.0		0.02	10.4	B	0.02	12.3	B	1.9	
		R	0.20	9.3	A	0.25	9.6	A	0.3		0.4	10.2	B	0.5	12.7	B	1.8		0.49	11.7	B	0.63	14.1	B	2.4		0.63	14.1	B	0.81	21.3	C	7.2	
	SB	LTR	0.13	10.9	B	0.15	11.0	B	0.1		0.1	11.1	B	0.1	11.4	B	0.3		0.1	11.4	B	0.20	11.4	B	0.3		0.21	11.4	B	0.32	14.1	B	2.7	
	Overall		*	**12.6**	**B**	*	**12.8**	**B**	**0.2**		*	**13.**	**B**	*	**14.0**	**B**	**0.9**		*	**13.**	**B**	*	**13.9**	**B**	**1.2**		*	**26.6**	**C**	*	**27.7**	**C**	**1.1**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.38	16.7	B	0.6		0.5	20.3	C	0.2	24.2	C	4.4		0.8	28.2	C	0.94	44.2	D	16.0		1.12	94.5	F	1.10	81.6	F	-12.9	
		R	0.05	13.1	B	0.08	13.4	B	0.3		0.12	13.7	B	0.20	14.4	B	0.7		0.13	13.8	B	0.22	14.7	B	0.9		0.18	14.2	B	0.26	11.7	B	-2.5	
	WB	LTR	0.11	13.6	B	0.12	13.7	B	0.1		0.09	13.4	B	0.12	13.7	B	0.3		0.14	13.9	B	0.17	14.1	B	0.2		0.17	14.1	B	0.17	11.0	B	-3.1	
	NB	LTR	0.27	9.5	A	0.28	9.6	A	0.1		0.26	9.4	A	0.28	9.5	A	0.1		0.26	9.4	A	0.28	9.5	A	0.1		0.34	10.0	A	0.45	13.9	B	3.9	
	Overall		**0.30**	**11.3**	**B**	**0.32**	**11.6**	**B**	**0.3**		**0.39**	**13.3**	**B**	**0.47**	**15.4**	**B**	**2.1**		**0.48**	**16.8**	**B**	**0.56**	**23.5**	**C**	**6.7**		**0.67**	**43.1**	**D**	**0.79**	**40.6**	**D**	**-2.5**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.19	17.9	B	0.26	18.7	B	0.8		0.39	20.4	C	0.51	25.0	C	4.6		0.65	20.3	C	0.71	24.1	C	3.8		0.56	23.6	C	0.83	35.4	D	11.8	
	NB	LT	0.41	8.5	A	0.41	8.5	A	0.0		0.42	7.9	A	0.43	8.0	A	0.0		0.52	9.5	A	0.42	9.5	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.54	9.6	A	0.54	9.7	A	0.1		0.35	7.9	A	0.37	8.0	A	0.1		0.50	9.3	A	0.51	9.4	A	0.1		0.41	8.3	A	0.43	8.6	A	0.3	
	Overall		**0.43**	**9.9**	**A**	**0.45**	**10.2**	**B**	**0.3**		**0.37**	**10.2**	**B**	**0.45**	**12.4**	**B**	**2.2**		**0.47**	**10.8**	**B**	**0.53**	**12.2**	**B**	**1.4**		**0.46**	**11.7**	**B**	**0.56**	**16.2**	**B**	**4.5**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.27	16.0	B	0.53	19.9	B	3.9		0.28	16.0	B	0.30	16.1	B	0.1		0.51	19.0	B	0.55	19.7	B	0.7		0.48	18.6	B	0.52	19.2	B	0.6	
	NB	LT	0.57	13.0	B	0.61	13.8	B	0.8		0.55	12.6	B	0.66	15.0	B	2.4		0.67	14.6	B	0.78	18.1	B	3.5		0.67	14.8	B	0.89	26.4	C	11.6	
	SB	TR	0.50	11.8	B	0.63	14.0	B	2.2		0.45	11.1	B	0.57	12.7	B	1.6		0.54	13.9	B	0.76	17.2	B	3.3		0.63	13.7	B	0.80	18.5	B	4.8	
	Overall		**0.45**	**12.9**	**B**	**0.59**	**15.1**	**B**	**2.2**		**0.4**	**12.**	**B**	**0.5**	**14.1**	**B**	**1.6**		**0.**	**15.2**	**B**	**0.69**	**18.0**	**B**	**2.8**		**0.59**	**15.0**	**B**	**0.74**	**21.7**	**C**	**6.7**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.02	22.7	C	0.0		0.0	23.1	C	0.0	22.2	C	-0.9		0.0	22.1	C	0.02	21.8	C	-0.9		0.12	23.7	C	0.09	20.7	C	-3.0	
		R	0.34	27.7	C	0.41	29.4	C	1.7		0.3	35.1	D	0.47	42.1	D	7.8		0.2	33.1	C	0.69	36.7	D	3.6		0.79	43.3	D	0.84	41.4	D	-1.9	
	WB	LTR	0.69	21.4	C	0.69	21.4	C	0.0		0.6	21.7	C	0.6	21.7	C	0.0		0.8	25.0	C	0.88	25.0	C	0.0		0.94	28.7	C	0.94	28.7	C	0.0	
	NB	L	0.39	24.2	C	0.37	20.5	C	-3.7		0.44	23.7	C	0.46	21.7	C	-2.0		0.47	27.1	C	0.51	24.9	C	-2.2		0.64	36.4	D	0.74	38.4	D	2.0	
		T	0.39	17.2	B	0.39	17.2	B	0.0		0.32	16.3	B	0.34	17.2	B	0.9		0.37	16.7	B	0.38	17.7	B	1.0		0.40	17.2	B	0.47	20.5	C	3.3	
	SB	TR	0.99	36.5	D	0.59	17.2	B	-19.3		0.62	20.3	C	0.39	16.8	B	-3.5		0.87	31.4	C	0.54	18.5	B	-12.9		0.69	21.4	C	0.48	19.1	B	-2.3	
	Overall		**0.76**	**26.4**	**C**	**0.60**	**19.9**	**B**	**-6.5**		**0.66**	**21.9**	**C**	**0.62**	**22.2**	**C**	**0.3**		**0.82**	**26.4**	**C**	**0.70**	**23.5**	**C**	**-2.9**		**0.80**	**27.2**	**C**	**0.84**	**27.8**	**C**	**0.6**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0		0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.44	9.5	A	0.3		0.43	9.3	A	0.49	10.0	A	0.7		0.44	9.4	A	0.49	10.0	B	0.6		0.49	9.9	A	0.56	10.9	B	1.0	
	SB	L	0.61	11.9	B	0.63	12.3	B	0.4		0.47	10.4	B	0.50	11.2	B	0.8		0.66	13.1	B	0.70	14.6	B	1.5		0.71	15.6	B	0.79	19.4	B	3.8	
		TR	0.67	11.6	B	0.69	11.9	B	0.3		0.50	9.8	A	0.55	10.4	B	0.6		0.62	11.0	B	0.67	11.7	B	0.7		0.56	10.2	B	0.62	11.1	B	0.9	
	Overall		**0.50**	**11.3**	**B**	**0.51**	**11.6**	**B**	**0.3**		**0.37**	**10.0**	**A**	**0.40**	**10.6**	**B**	**0.6**		**0.48**	**11.2**	**B**	**0.51**	**12.0**	**B**	**0.8**		**0.54**	**11.8**	**B**	**0.59**	**13.2**	**B**	**1.4**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.10	16.6	B	1.8		0.06	14.5	B	0.06	14.5	B	0.0		0.09	14.7	B	0.09	15.3	B	0.6		0.06	14.5	B	0.07	15.1	B	0.6	
	WB	L	0.36	18.2	B	0.39	20.7	C	2.5		0.58	22.4	C	0.58	22.4	C	0.0		0.55	21.8	C	0.56	22.9	C	1.1		0.57	22.1	C	0.58	23.2	C	1.1	
		T	0.02	14.1	B	0.03	15.8	B	1.7		0.04	14.2	B	0.04	14.2	B	0.0		0.04	14.2	B	0.04	14.8	B	0.6		0.02	14.1	B	0.03	14.7	B	0.6	
		R	0.21	16.1	B	0.22	18.1	B	2.0		0.22	16.2	B	0.22	16.2	B	0.0		0.22	16.1	B	0.22	16.8	B	0.7		0.20	15.9	B	0.20	16.5	B	0.6	
	NB	LTR	0.52	20.5	C	0.51	18.4	B	-2.1		0.71	24.3	C	0.78	27.0	C	2.7		0.69	23.6	C	0.74	24.3	C	0.7		0.79	25.9	C	0.86	28.6	C	2.7	
	SB	LTR	1.08	64.8	E	1.02	40.7	D	-24.1		0.78	27.4	C	0.87	33.0	C	5.6		0.93	30.9	C	0.99	38.9	D	8.0		0.86	30.6	C	0.95	39.3	D	8.7	
	Overall		**0.72**	**38.9**	**D**	**0.73**	**28.4**	**C**	**-10.5**		**0.68**	**23.8**	**C**	**0.72**	**26.7**	**C**	**2.9**		**0.74**	**24.9**	**C**	**0.78**	**28.5**	**C**	**3.6**		**0.71**	**25.5**	**C**	**0.77**	**29.9**	**C**	**4.4**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.37	14.9	B	0.41	15.5	B	0.6		0.47	16.2	B	0.77	35.4	D	19.2		0.47	16.3	B	0.81	37.0	D	20.7	
	WB	LT	0.36	15.1	B	-	-	-	-		0.43	16.3	B	-	-	-	-		0.57	19.5	B	-	-	-	-		0.65	22.8	C	-	-	-	-	
		L	-	-	-	0.51	20.0	C	-		-	-	-	0.60	23.4	C	-		-	-	-	0.67	39.4	D	-		-	-	-	0.78	44.7	D	-	
		T	-	-	-	0.30	14.1	B	-		-	-	-	0.31	14.4	B	-		-	-	-	0.33	15.7	B	-		-	-	-	0.30	14.1	B	-	
	NB	LR	0.60	26.1	C	0.87	41.0	D	14.9		0.56	25.1	C	0.75	32.2	C	7.1		0.66	27.9	C	0.90	43.2	D	15.3		0.55	25.0	C	0.83	37.5	D	12.5	
	Overall		**0.47**	**18.8**	**B**	**0.67**	**25.3**	**C**	**6.5**		**0.49**	**18.7**	**B**	**0.67**	**22.2**	**C**	**3.5**		**0.61**	**21.0**	**C**	**0.87**	**35.3**	**D**	**14.3**		**0.61**	**20.7**	**C**	**0.86**	**34.9**	**C**	**14.2**	

~~Table 3-2 (continued)~~

~~Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Shortened Englewood Avenue Alternative Traffic Conditions~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Sharrots Road / Arthur Kill Road	EB	LTR	0.07	13.9	B	0.10	18.3	C	4.4		0.23	15.5	C	0.26	17.6	C	2.1		0.29	20.7	C	0.59	38.7	E	18.0	yes	0.54	24.5	C	0.66	36.1	E	11.6	yes
	WB	LTR	0.22	14.9	B	0.53	28.8	D	13.9		0.24	18.1	C	0.30	21.7	C	3.6		0.42	24.7	C	0.35	26.1	D	1.4		0.45	24.2	C	0.62	39.6	E	15.4	yes
	NB	LTR	0.03	8.0	A	0.03	8.3	A	0.3		0.03	8.0	A	0.04	8.1	A	0.1		0.03	8.0	A	0.03	8.2	A	0.2		0.01	8.0	A	0.01	8.2	A	0.2	
	SB	LTR	0.03	7.9	A	0.03	8.4	A	0.5		0.03	8.1	A	0.03	8.3	A	0.2		0.03	8.2	A	0.06	8.5	A	0.3		0.03	8.0	A	0.03	8.2	A	0.2	
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	-	-	-	-		0.13	14.3	B	-	-	-	-		0.11	14.3	B	-	-	-	-		0.07	11.8	B	-	-	-	-	
		L	-	-	-	0.77	55.3	F	-	yes	-	-	-	0.16	17.0	C	-		-	-	-	0.28	22.7	C	-		-	-	-	0.13	18.1	C	-	
		R	-	-	-	0.27	11.2	B	-		-	-	-	0.04	10.5	B	-		-	-	-	0.11	11.2	B	-		-	-	-	0.07	10.6	B	-	
	SB	LT	0.02	8.0	A	-	-	-	-		0.02	8.2	A	-	-	-	-		0.01	8.1	A	-	-	-	-		0.01	8.0	A	-	-	-	-	
		L	-	-	-	0.18	9.6	A	-		-	-	-	0.03	8.4	A	-		-	-	-	0.05	8.5	A	-		-	-	-	0.03	8.2	A	-	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.32	12.6	B	1.8		0.19	10.3	B	0.21	10.7	B	0.4		0.29	11.5	B	0.32	12.2	B	0.7		0.27	11.7	B	0.30	12.4	B	0.7	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.14	9.3	A	1.3		0.10	9.1	A	0.39	15.0	C	5.9		0.12	8.9	A	0.39	14.4	B	5.7		0.22	9.6	A	0.72	29.5	D	19.9	
		TR	0.08	7.9	A	0.11	8.4	A	0.5		0.15	9.2	A	0.27	12.3	B	3.1		0.13	8.8	A	0.23	11.9	B	3.2		0.27	9.9	A	0.48	17.5	C	7.6	
	WB	LT	0.12	8.3	A	0.14	8.9	A	0.6		0.32	9.5	A	0.62	14.7	B	4.2		0.39	11.1	B	0.52	16.8	C	5.6		0.39	11.8	B	0.60	22.3	C	10.5	
		TR	0.06	7.7	A	0.13	8.2	A	0.5		0.11	8.2	A	0.31	11.6	B	3.4		0.14	8.7	A	0.35	12.4	B	3.9		0.20	9.3	A	0.60	21.0	C	11.7	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	8.7	A	0.22	12.3	B	3.6		0.03	8.5	A	0.15	11.5	B	3.0		0.10	9.4	A	0.33	16.0	C	6.6	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	7.7	A	0.09	9.9	A	2.1		0.11	8.2	A	0.17	10.7	B	2.5		0.14	8.8	A	0.23	13.1	B	4.3	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.34	13.3	B	-		-	-	-	0.35	13.9	B	-		-	-	-	0.61	23.4	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.28	12.8	B	-		-	-	-	0.29	12.3	B	-		-	-	-	0.51	18.5	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.13	8.4	A	0.32	10.4	B	2.0		0.13	8.4	A	0.15	8.9	A	0.5		0.09	8.9	A	0.27	9.5	A	0.6		0.23	9.3	A	0.23	9.3	A	0.0	
	WB	LT	0.30	9.5	A	0.47	11.9	B	2.4		0.34	9.7	A	0.48	12.0	B	3.0		0.42	11.1	B	0.58	14.1	B	3.1		0.65	16.4	C	0.65	16.4	C	0.0	
	SB	LT	0.07	8.2	A	0.08	8.9	A	0.7		0.12	8.5	A	0.12	8.9	A	0.4		0.11	8.8	A	0.11	9.2	A	0.4		0.13	9.4	A	0.13	9.4	A	0.0	
		TR	0.09	8.0	A	0.11	8.7	A	0.8		0.09	8.1	A	0.10	8.4	A	0.4		0.10	8.5	A	0.11	8.9	A	0.4		0.14	9.2	A	0.14	9.2	A	0.0	
Sharrots Road / Veterans Road East	EB	LT	0.11	8.4	A	0.30	10.2	B	1.8		0.14	8.7	A	0.15	9.0	A	0.3		0.23	9.5	A	0.27	10.2	B	0.7		0.21	9.8	A	0.21	9.8	A	0.0	
	WB	TR	0.24	8.8	A	0.40	10.8	B	2.0		0.30	9.5	A	0.45	11.2	B	1.8		0.36	10.6	B	0.53	13.4	B	2.8		0.61	15.2	C	0.61	15.2	C	0.0	
	NB	LT	0.12	8.4	A	0.14	9.2	A	0.8		0.11	8.5	A	0.12	8.8	A	0.4		0.16	9.1	A	0.18	9.7	A	0.5		0.17	9.6	A	0.17	9.6	A	0.0	
		TR	0.10	7.6	A	0.11	8.4	A	0.8		0.16	8.1	A	0.17	8.5	A	0.4		0.24	9.0	A	0.26	9.7	A	0.7		0.28	9.9	A	0.28	9.9	A	0.0	

Notes:
v/c = volume-to-capacity ratio; LOS = Level-of-Service
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound
L = Left-Turn; T = Through; R = Right-Turn;
LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn
Average Control Delay shown in units of seconds/vehicle
- = No volumes for this approach or movement.

Table 3-2
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Shortened Englewood Avenue Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)							
			2020 No-Action			2020 Mitigated-Action					2020 No-Action			2020 Mitigated-Action				
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS																		
Sharrots Road / Arthur Kill Road	EB	LTR	0.17	26.0	C	0.17	26.0	C	0.0		0.45	31.0	C	0.45	31.0	C	0.0	
	WB	LTR	0.22	18.9	B	0.34	20.4	C	1.5		0.20	18.7	B	0.20	18.8	B	0.1	
	NB	LTR	0.43	15.9	B	0.72	22.9	C	7.0		0.50	16.7	B	0.58	18.1	B	1.4	
	SB	LTR	0.41	15.5	B	0.59	18.5	B	3.0		0.50	16.9	B	0.58	18.4	B	1.5	
	Overall		**0.32**	**16.6**	**B**	**0.51**	**20.9**	**C**	**4.3**		**0.39**	**18.7**	**B**	**0.43**	**19.7**	**B**	**1.0**	
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	13.5	B	3.2		0.04	10.5	B	0.04	8.8	A	-1.7	
	WB	LT	0.67	20.5	C	0.86	37.7	D	17.2		0.64	19.2	B	0.62	16.3	B	-2.9	
		R	0.61	18.7	B	0.65	13.9	B	-4.8		0.83	28.7	C	0.95	39.9	D	11.2	
	NB	LTR	0.76	21.6	C	-	-	-	-		0.65	18.2	B	-	-	-	-	
		LT	-	-	-	0.50	19.5	B	-		-	-	-	0.28	14.5	B	-	
		R	-	-	-	0.81	31.6	C	-		-	-	-	0.61	20.3	C	-	
	SB	LTR	0.63	21.4	C	-	-	-	-		0.82	30.4	C	-	-	-	-	
		L	-	-	-	0.25	11.1	B	-		-	-	-	0.74	28.2	C	-	
		TR	-	-	-	0.37	10.5	B	-		-	-	-	0.37	15.7	B	-	
	Overall		**0.72**	**20.6**	**C**	**0.64**	**22.0**	**C**	**1.4**		**0.83**	**23.9**	**C**	**0.86**	**25.0**	**C**	**1.1**	
North Bridge Street / Arthur Kill Road	WB	LR	0.30	15.9	B	0.30	15.9	B	0.0		0.58	19.7	B	0.58	19.7	B	0.0	
	NB	T	0.54	12.2	B	0.65	14.1	B	1.9		0.47	11.2	B	0.51	11.7	B	0.5	
	SB	T	0.49	11.3	B	0.67	14.2	B	2.9		0.57	11.9	B	0.62	12.6	B	0.7	
	Overall		**0.44**	**12.5**	**B**	**0.52**	**14.4**	**B**	**1.9**		**0.57**	**13.8**	**B**	**0.60**	**14.1**	**B**	**0.3**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.2	C	0.76	33.2	C	7.0		0.91	47.6	D	0.92	49.7	D	2.1	
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9		0.53	9.8	A	0.57	10.3	B	0.5	
	SB	LT	0.68	13.6	B	-	-	-	-		1.17	99.8	F	-	-	-	-	
		L	-	-	-	0.63	18.0	B	-		-	-	-	0.69	15.0	B	-	
		T	-	-	-	0.45	9.0	A	-		-	-	-	0.59	9.8	A	-	
	Overall		**0.66**	**14.8**	**B**	**0.73**	**15.9**	**B**	**1.1**		**1.09**	**57.8**	**E**	**0.76**	**18.8**	**B**	**-39.0**	
Richmond Valley Road / Page Avenue	EB	LTR	0.34	23.3	C	0.43	24.7	C	1.4		0.83	38.9	D	0.84	39.5	D	0.6	
	WB	LTR	0.38	24.1	C	0.43	25.0	C	0.9		0.57	28.3	C	0.57	28.4	C	0.1	
	NB	L	0.18	11.0	B	0.25	11.8	B	0.8		0.36	13.9	B	0.38	14.4	B	0.5	
		TR	0.80	20.7	C	0.81	21.3	C	0.6		0.74	19.0	B	0.77	20.2	C	1.2	
	SB	LTR	0.55	15.6	B	0.57	16.1	B	0.5		0.79	23.5	C	0.86	27.9	C	4.4	
	Overall		**0.63**	**19.5**	**B**	**0.67**	**20.3**	**C**	**0.8**		**0.81**	**24.5**	**C**	**0.85**	**26.4**	**C**	**1.9**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.59	28.6	C	2.5		0.50	26.7	C	0.51	26.9	C	0.2	
		R	0.12	11.0	B	0.12	11.1	B	0.1		0.16	11.4	B	0.16	11.6	B	0.2	
	NB	T	0.40	11.8	B	0.40	11.8	B	0.0		0.40	11.9	B	0.42	12.1	B	0.2	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1		0.32	11.2	B	0.34	11.4	B	0.2	
	Overall		*****	**14.1**	**B**	*****	**15.2**	**B**	**1.1**		*****	**14.2**	**B**	*****	**14.3**	**B**	**0.1**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.32	26.3	C	0.53	34.1	C	7.8		0.80	59.6	E	0.61	41.6	D	-18.0	
		T	-	-	-	0.35	23.9	C	-3.7		-	-	-	0.76	37.7	D	6.8	
		R	=	-	-	0.30	23.5	C	-4.1		-	-	-	0.33	26.9	C	-4.0	
		TR	0.56	27.6	C	-	-	-	-		0.67	30.9	C	-	-	-	-	
	WB	L	1.04	100.4	F	0.77	43.8	D	-56.6		1.37	228.0	F	0.83	56.2	E	-171.8	
		TR	0.59	27.1	C	0.63	27.9	C	0.8		0.66	28.5	C	0.87	40.5	D	12.0	
	NB	LTR	0.43	28.1	C	-	-	-	-		0.62	31.6	C	-	-	-	-	
		DefL	-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		T	-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		LT	-	-	-	0.50	29.2	C	1.1		-	-	-	0.68	36.9	D	5.3	
		R	-	-	-	0.21	26.1	C	-2.0		-	-	-	0.48	26.5	C	-5.1	
		U-TURN	0.00	11.2	B	0.33	14.3	B	3.1		0.26	13.8	B	0.27	14.3	B	0.5	
	SB	L	0.27	30.6	C	0.27	30.7	C	0.1		0.49	34.9	C	0.49	34.9	C	0.0	
		TR	0.22	30.1	C	0.31	31.4	C	1.3		0.31	31.4	C	0.55	37.1	D	5.7	
	Overall		*****	**34.3**	**C**	*****	**28.2**	**C**	**-6.1**		*****	**49.6**	**D**	*****	**37.2**	**D**	**-12.4**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.43	29.7	C	-	-	-	-		0.84	40.8	D	-	-	-	-	
		L	-	-	-	0.20	12.3	B	-		-	-	-	0.46	35.8	D	-	
		TR	-	-	-	0.20	11.2	B	-		-	-	-	0.90	44.8	D	-	
	WB	LTR	0.77	37.1	D	0.51	14.7	B	-22.4		0.81	38.8	D	-	-	-	-	
		DefL	-	-	-	-	-	-			-	-	-	0.67	40.3	D	-	
		TR	-	-	-	-	-	-			-	-	-	0.73	27.9	C	-	
	NB	DefL	0.86	51.7	D	0.89	54.1	D	2.4		1.75	390.4	F	0.92	65.3	E	-325.1	
		TR	0.25	23.6	C	0.26	21.6	C	-2.0		0.48	27.3	C	0.63	33.5	C	6.2	
	SB	LTR	0.32	24.0	C	-	-	-	-		0.74	33.1	C	-	-	-	-	
		L	-	-	-	0.04	19.1	B	-		-	-	-	0.08	20.4	C	-	
		TR	-	-	-	0.34	22.1	C	-		-	-	-	0.86	37.2	D	-	
	Overall		**0.70**	**35.0**	**C**	**0.66**	**22.4**	**C**	**-12.6**		**1.18**	**79.5**	**E**	**1.28**	**40.1**	**D**	**-39.4**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	52.0	D	1.13	86.3	F	34.3	yes	0.95	38.9	D	0.98	45.7	D	6.8	yes
		TR	0.25	4.9	A	0.26	5.0	A	0.1		0.38	5.8	A	0.41	6.1	A	0.3	
	WB	LT	0.72	40.3	D	0.78	44.9	D	4.6		1.02	69.8	E	1.03	71.4	E	1.6	
		R	0.76	43.8	D	0.24	0.3	A	-43.5		1.50	267.0	F	0.56	0.8	A	-266.2	
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0		0.01	30.6	C	0.01	30.6	C	0.0	
	SB	L	0.55	43.2	D	0.62	46.1	D	2.9		0.42	38.5	D	0.55	42.9	D	4.4	
		LT	0.02	30.6	C	0.02	30.6	C	0.0		0.00	30.4	C	0.00	30.4	C	0.0	
		R	0.18	6.8	A	0.17	6.8	A	0.0		0.15	6.6	A	0.15	7.0	A	0.4	
	Overall		**0.98**	**38.1**	**D**	**1.23**	**46.2**	**D**	**8.1**		**1.02**	**90.4**	**F**	**0.86**	**27.7**	**C**	**-62.7**	

Intersection	Approach	Movement	Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action					2020 No-Action			2020 Mitigated-Action				
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS																		
Sharrots Road / Arthur Kill Road	EB	LTR	0.41	30.0	C	0.41	30.0	C	0.0		0.88	59.8	E	0.88	59.8	E	0.0	
	WB	LTR	0.27	19.4	B	0.30	19.7	B	0.3		0.31	19.9	B	0.32	20.1	C	0.2	
	NB	LTR	0.54	17.3	B	0.63	19.3	B	2.0		0.43	15.4	B	0.52	16.8	B	1.4	
	SB	LTR	0.61	19.2	B	0.73	23.0	C	3.8		0.51	16.7	B	0.61	18.7	B	2.0	
	Overall		**0.47**	**19.5**	**B**	**0.54**	**21.7**	**C**	**2.2**		**0.50**	**25.2**	**C**	**0.56**	**25.3**	**C**	**0.1**	
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.4	B	0.02	10.4	B	0.0		0.02	10.4	B	0.02	8.1	A	-2.3	
	WB	LT	0.86	31.7	C	0.92	38.6	D	6.9		0.85	28.9	C	0.78	21.0	C	-7.9	
		R	0.63	19.1	B	0.90	36.4	D	17.3		0.78	24.3	C	0.95	38.2	D	13.9	
	NB	LTR	0.70	19.5	B	-	-	-	-		0.86	27.2	C	-	-	-	-	
		LT	-	-	-	0.25	12.1	B	-		-	-	-	0.35	15.7	B	-	
		R	-	-	-	0.61	17.6	B	-		-	-	-	0.91	38.6	D	-	
	SB	LTR	1.22	133.7	F	-	-	-	-		1.15	111.0	F	-	-	-	-	
		L	-	-	-	0.81	30.0	C	-		-	-	-	0.94	52.8	D	-	
		TR	-	-	-	0.46	14.7	B	-		-	-	-	0.43	17.1	B	-	
	Overall		**1.04**	**55.1**	**E**	**0.86**	**27.2**	**C**	**-27.9**		**1.00**	**45.4**	**D**	**0.95**	**32.3**	**C**	**-13.1**	
North Bridge Street / Arthur Kill Road	WB	LR	0.83	23.0	C	0.83	23.0	C	0.0		0.79	22.7	C	0.79	22.7	C	0.0	
	NB	T	0.50	11.6	B	0.55	12.4	B	0.8		0.62	13.2	B	0.68	14.5	B	1.3	
	SB	T	0.73	13.6	B	0.80	15.0	B	1.4		0.66	12.4	B	0.72	13.4	B	1.0	
	Overall		**0.77**	**16.0**	**B**	**0.81**	**16.6**	**B**	**0.6**		**0.71**	**15.7**	**B**	**0.75**	**16.3**	**B**	**0.6**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.92	49.0	D	0.90	44.4	D	-4.6		0.96	56.6	E	0.87	39.3	D	-17.3	
	NB	TR	0.65	11.3	B	0.70	13.1	B	1.8		0.67	11.6	B	0.77	15.3	B	3.7	
	SB	LT	1.46	220.9	F	-	-	-	-		1.45	216.3	F	-	-	-	-	
		L	-	-	-	0.72	12.1	B	-		-	-	-	0.86	23.5	C	-	
		T	-	-	-	0.95	16.7	B	-		-	-	-	0.89	16.3	B	-	
	Overall		**1.29**	**118.9**	**F**	**0.94**	**19.9**	**B**	**-99.0**		**1.29**	**112.8**	**F**	**0.88**	**20.5**	**C**	**-92.3**	
Richmond Valley Road / Page Avenue	EB	LTR	0.71	30.6	C	0.73	31.1	C	0.5		0.74	31.3	C	0.75	31.9	C	0.6	
	WB	LTR	0.68	31.9	C	0.69	32.3	C	0.4		0.54	27.6	C	0.55	27.8	C	0.2	
	NB	L	0.35	14.3	B	0.29	12.7	B	-1.6		0.65	20.6	C	0.71	23.6	C	3.0	
		TR	0.69	17.7	B	0.72	18.6	B	0.9		0.89	24.9	C	0.94	29.9	C	5.0	
	SB	LTR	0.89	29.8	C	0.95	38.0	-	-		0.81	23.6	C	0.91	32.1	C	8.5	
	Overall		**0.82**	**25.9**	**C**	**0.87**	**28.3**	**C**	**-**		**0.83**	**25.4**	**C**	**0.87**	**30.2**	**C**	**4.8**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.62	29.4	C	0.64	30.0	C	0.6		0.68	31.4	C	0.70	32.1	C	0.7	
		R	0.16	12.6	B	0.17	12.8	B	0.2		0.10	11.0	B	0.10	11.2	B	0.2	
	NB	T	0.38	11.7	B	0.40	11.8	B	0.1		0.45	12.2	B	0.47	12.5	B	0.3	
	SB	T	0.38	11.8	B	0.40	12.0	B	0.2		0.38	11.8	B	0.41	12.1	B	0.3	
	Overall		*****	**15.4**	**B**	*****	**15.6**	**B**	**0.2**		*****	**15.7**	**B**	*****	**16.0**	**B**	**0.3**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.79	51.9	D	0.89	53.3	D	1.4		1.23	186.6	F	0.65	42.3	D	-144.3	
		T	-	-	-	0.51	19.6	B	-32.3		-	-	-	0.80	34.5	C	-3.8	
		R	-	-	-	0.28	16.6	B	-35.3		-	-	-	0.39	24.5	C	-13.8	
		TR	0.78	34.3	C	-	-	-	-		0.85	38.3	D	-	-	-	-	
	WB	L	1.14	129.7	F	0.86	46.5	D	-83.2		2.46	709.9	F	0.90	63.5	E	-646.4	
		TR	0.61	26.9	C	0.54	19.0	B	-7.9		0.77	30.7	C	0.93	41.3	D	10.6	
	NB	LTR	0.46	28.5	C	-	-	-	-		0.79	36.9	D	-	-	-	-	
		DefL	-	-	-	-	-	-	-		-	-	-	0.75	38.9	D	2.0	
		T	-	-	-	-	-	-	-		-	-	-	0.89	48.0	D	11.1	
		LT	-	-	-	0.80	45.6	D	17.1		-	-	-	-	-	-	-	
		R	-	-	-	0.52	40.6	D	12.1		-	-	-	0.38	19.0	B	-17.9	
		U-TURN	0.90	50.1	F	0.95	59.5	F	9.4		0.45	19.8	C	0.47	21.2	C	1.4	
	SB	L	0.76	45.6	D	0.80	50.1	D	4.5		0.75	43.5	D	0.77	45.2	D	1.7	
		TR	0.32	31.5	C	0.61	39.7	D	8.2		0.68	40.5	D	0.83	45.4	D	4.9	
	Overall		*****	**41.3**	**D**	*****	**36.7**	**D**	**-4.7**		*****	**103.3**	**F**	*****	**40.1**	**D**	**-63.2**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.84	41.0	D	-	-	-	-		0.97	55.9	E	-	-	-	-	
		L	-	-	-	0.43	35.3	D	-		-	-	-	1.10	154.7	F	-	yes
		TR	-	-	-	0.88	41.8	D	-		-	-	-	1.09	90.4	F	-	yes
	WB	LTR	0.96	53.4	D	-	-	-	-		1.12	100.2	F	-	-	-	-	
		DefL	-	-	-	0.77	45.7	D	-		-	-	-	0.79	46.5	D	-	
		TR	-	-	-	0.83	32.5	C	-		-	-	-	1.15	107.2	F	-	
	NB	DefL	1.17	140.4	F	0.80	48.1	D	-92.3		2.55	749.7	F	0.91	61.7	E	-688.0	
		TR	0.42	26.2	C	0.55	31.2	C	5.0		0.59	29.9	C	0.79	40.5	D	10.6	
	SB	LTR	0.52	26.8	C	-	-	-	-		0.82	35.7	D	-	-	-	-	
		L	-	-	-	0.06	20.8	C	-		-	-	-	0.08	19.8	B	-	
		TR	-	-	-	0.66	28.9	C	-		-	-	-	0.93	42.8	D	-	
	Overall		**1.00**	**52.2**	**D**	**1.23**	**36.7**	**D**	**-15.5**		**1.62**	**132.9**	**F**	**1.51**	**71.0**	**E**	**-61.9**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	55.0	D	1.11	86.3	F	31.3	yes	1.01	33.8	C	1.00	42.2	D	8.4	
		TR	0.34	4.8	A	0.38	5.8	A	1.0		0.39	5.7	A	0.41	4.8	A	-0.9	
	WB	LT	0.68	31.1	C	0.86	43.1	D	12.0		1.10	83.9	F	1.10	82.3	F	-1.6	
		R	1.25	154.0	F	0.57	1.0	A	-153.0		2.06	513.2	F	0.74	0.6	A	-512.6	
	NB	LTR	0.11	34.2	C	0.09	31.9	C	-2.3		0.00	0.0	-	-	-	-	-	
	SB	L	0.75	58.9	E	0.81	61.1	E	2.2		0.38	34.5	C	0.56	40.6	D	6.1	
		LT	0.00	32.1	C	0.00	30.4	C	-1.7		-	-	-	-	-	-	-	
		R	0.41	12.0	B	0.39	9.7	A	-2.3		0.24	7.3	A	0.25	8.3	A	1.0	
	Overall		**1.03**	**61.0**	**E**	**1.32**	**34.6**	**C**	**-26.4**		**1.18**	**160.0**	**F**	**0.92**	**27.3**	**C**	**-**	

Table 3-2 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Shortened Englewood Avenue Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.53	18.0	B	0.57	18.9	B	0.9		0.71	23.0	C	0.70	23.5	C	0.5		0.67	21.3	C	0.68	22.2	C	0.9		0.83	29.7	C	0.84	31.1	C	1.4	
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.13	21.1	C	9.2		0.05	11.6	B	0.07	19.9	B	8.3		0.06	11.7	B	0.09	20.8	C	9.1	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.10	17.8	B	0.10	17.8	B	0.0		0.14	18.3	B	0.14	18.3	B	0.0		0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	0.58	25.5	C	0.76	32.4	C	6.9		1.06	78.5	E	1.09	76.9	E	-1.6		1.09	89.9	F	1.12	86.3	F	-3.6		1.41	218.0	F	1.42	215.3	F	-2.7	
	Overall		**0.55**	**19.4**	**B**	**0.65**	**22.9**	**C**	**3.5**		**0.86**	**46.3**	**D**	**1.06**	**51.4**	**D**	**5.1**		**0.85**	**53.9**	**D**	**1.07**	**58.0**	**E**	**4.1**		**1.08**	**123.0**	**F**	**1.28**	**136.8**	**F**	**13.8**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.7	B	0.56	21.1	C	3.4		0.41	18.2	B	0.60	22.0	C	3.8		0.64	22.3	C	0.89	36.6	D	14.3	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0		0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.07	7.4	A	0.08	7.4	A	0.0		0.15	7.8	A	0.18	8.0	A	0.2		0.18	8.0	A	0.21	8.1	A	0.1		0.20	8.1	A	0.27	8.6	A	0.5	
	SB	TR	0.51	10.3	B	0.59	11.1	B	0.8		0.66	11.9	B	0.85	15.9	B	4.0		0.58	11.0	B	0.73	13.3	B	2.3		0.80	13.7	B	1.03	37.5	D	23.8	
	Overall		**0.39**	**10.4**	**B**	**0.46**	**11.2**	**B**	**0.8**		**0.55**	**12.0**	**B**	**0.74**	**15.5**	**B**	**3.5**		**0.51**	**11.4**	**B**	**0.68**	**13.8**	**B**	**2.4**		**0.74**	**14.2**	**B**	**0.98**	**33.3**	**C**	**19.1**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.01	10.2	B	0.0		0.01	10.2	B	0.00	10.2	B	0.0		0.01	10.2	B	0.00	8.5	A	-1.7	
	WB	L	0.44	14.8	B	0.47	15.2	B	0.4		0.48	15.5	B	0.54	16.4	B	0.9		0.43	14.6	B	0.48	15.5	B	0.9		0.96	44.5	D	0.96	41.9	D	-2.6	
		LT	0.46	15.2	B	0.49	15.7	B	0.5		0.50	15.9	B	0.56	17.1	B	1.2		0.45	15.1	B	0.51	16.1	B	1.0		0.34	13.4	B	0.34	11.5	B	-1.9	
	NB	L	0.01	10.4	B	0.02	10.4	B	0.0		0.00	10.2	B	0.01	10.3	B	0.1		0.02	10.4	B	0.03	10.6	B	0.2		0.03	10.6	B	0.05	13.0	B	2.4	
		R	0.21	9.3	A	0.24	9.3	A	0.0		0.43	11.1	B	0.56	12.9	B	1.8		0.51	11.9	B	0.65	14.5	B	2.6		0.65	14.6	B	0.83	22.8	C	8.2	
	SB	LTR	0.26	11.8	B	0.32	12.2	B	0.4		0.30	12.1	B	0.43	13.1	B	1.0		0.32	12.2	B	0.43	13.1	B	0.9		0.39	12.8	B	0.63	17.4	B	4.6	
	Overall		*****	**12.6**	**B**	*****	**12.8**	**B**	**0.2**		*****	**13.1**	**B**	*****	**14.1**	**B**	**1.0**		*****	**12.8**	**B**	*****	**14.2**	**B**	**1.3**		*****	**24.4**	**C**	*****	**26.5**	**C**	**2.1**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.39	16.8	B	0.7		0.61	20.9	C	0.75	25.9	C	5.0		0.81	29.9	C	0.92	40.3	D	10.4		1.16	108.7	F	1.13	92.8	F	-15.9	
		R	0.05	13.1	B	0.08	13.4	B	0.3		0.12	13.7	B	0.20	14.4	B	0.7		0.13	13.8	B	0.21	13.9	B	0.1		0.18	14.2	B	0.26	11.7	B	-2.5	
	WB	LTR	0.11	13.6	B	0.12	13.7	B	0.1		0.09	13.4	B	0.12	13.7	B	0.3		0.14	13.9	B	0.16	13.4	B	-0.5		0.17	14.1	B	0.17	10.9	B	-3.2	
	NB	LTR	0.27	9.5	A	0.28	9.6	A	0.1		0.25	9.4	A	0.28	9.5	A	0.1		0.25	9.4	A	0.29	10.2	B	0.8		0.34	10.0	A	0.45	13.9	B	3.9	
	Overall		**0.30**	**11.3**	**B**	**0.33**	**11.7**	**B**	**0.4**		**0.40**	**13.6**	**B**	**0.47**	**15.9**	**B**	**2.3**		**0.49**	**17.7**	**B**	**0.57**	**22.4**	**C**	**4.7**		**0.68**	**49.9**	**D**	**0.80**	**45.9**	**D**	**-4.0**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.20	18.0	B	0.27	18.8	B	0.8		0.43	21.1	C	0.65	26.3	C	5.2		0.42	20.9	C	0.61	25.2	C	4.3		0.62	25.0	C	0.88	40.6	D	15.6	
	NB	LT	0.41	8.4	A	0.41	8.4	A	0.0		0.32	7.7	A	0.32	7.7	A	0.0		0.51	9.5	A	0.51	9.5	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.53	9.6	A	0.54	9.7	A	0.1		0.35	7.8	A	0.37	8.0	A	0.2		0.50	9.2	A	0.51	9.4	A	0.2		0.41	8.3	A	0.43	8.5	A	0.2	
	Overall		**0.43**	**9.9**	**A**	**0.46**	**10.3**	**B**	**0.4**		**0.38**	**10.5**	**B**	**0.46**	**13.0**	**B**	**2.5**		**0.48**	**11.0**	**B**	**0.54**	**12.6**	**B**	**1.6**		**0.48**	**12.2**	**B**	**0.58**	**18.1**	**B**	**5.9**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.30	16.3	B	0.56	20.6	C	4.3		0.28	16.0	B	0.30	16.1	B	0.1		0.50	18.9	B	0.55	19.7	B	0.8		0.48	18.5	B	0.51	19.1	B	0.6	
	NB	LT	0.63	14.2	B	0.67	15.2	B	1.0		0.57	13.0	B	0.68	15.5	B	2.5		0.69	15.1	B	0.80	19.0	B	3.9		0.71	15.9	B	0.94	32.5	C	16.6	
	SB	TR	0.56	12.7	B	0.70	15.6	B	2.9		0.48	11.4	B	0.59	13.2	B	1.8		0.66	14.3	B	0.78	18.0	B	3.7		0.66	14.3	B	0.83	20.0	B	5.7	
	Overall		**0.50**	**13.8**	**B**	**0.64**	**16.4**	**B**	**2.6**		**0.45**	**12.7**	**B**	**0.53**	**14.5**	**B**	**1.8**		**0.62**	**15.5**	**B**	**0.70**	**18.7**	**B**	**3.2**		**0.62**	**15.7**	**B**	**0.77**	**24.7**	**C**	**9.0**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.02	22.7	C	0.0		0.06	23.1	C	0.05	22.2	C	-0.9		0.02	22.7	C	0.03	23.1	C	0.4		0.12	23.7	C	0.22	23.2	C	-0.5	
		R	0.34	27.7	C	0.41	29.4	C	1.7		0.62	34.9	C	0.77	41.8	D	6.9		0.56	33.0	C	0.77	44.5	D	11.5		0.78	43.0	D	0.76	34.1	C	-8.9	
	WB	LTR	0.69	21.3	C	0.69	21.3	C	0.0		0.71	21.6	C	0.75	23.3	C	1.7		0.87	24.7	C	0.55	12.6	B	-12.1		0.93	28.4	C	0.61	13.8	B	-14.6	
	NB	L	0.39	24.2	C	0.57	34.1	C	9.9		0.44	23.3	C	0.77	45.0	D	21.7		0.47	27.1	C	0.69	36.0	D	8.9		0.63	35.3	D	0.72	32.1	C	-3.2	
		T	0.38	17.1	B	0.38	17.1	B	0.0		0.32	16.3	B	0.32	16.3	B	0.0		0.36	16.7	B	0.32	14.1	B	-2.6		0.40	17.1	B	0.33	13.6	B	-3.5	
	SB	TR	0.98	34.6	C	0.98	34.6	C	0.0		0.62	20.2	C	0.62	20.2	C	0.0		0.87	31.2	C	0.75	21.9	C	-9.3		0.69	21.4	C	0.57	16.1	B	-5.3	
	Overall		**0.76**	**25.7**	**C**	**0.77**	**26.1**	**C**	**0.4**		**0.65**	**21.8**	**C**	**0.76**	**25.2**	**C**	**3.4**		**0.81**	**26.2**	**C**	**0.64**	**18.7**	**B**	**-7.5**		**0.80**	**27.0**	**C**	**0.66**	**17.7**	**B**	**-9.3**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0		0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.44	9.4	A	0.2		0.43	9.3	A	0.48	10.0	A	0.7		0.44	9.4	A	0.49	10.0	A	0.6		0.49	9.9	A	0.56	10.9	B	1.0	
	SB	L	0.60	11.7	B	0.62	12.2	B	0.5		0.46	10.4	B	0.50	11.1	B	0.7		0.65	13.0	B	0.69	14.4	B	1.4		0.71	15.4	B	0.78	19.0	B	3.6	
		TR	0.67	11.6	B	0.69	11.9	B	0.3		0.50	9.8	A	0.55	10.4	B	0.6		0.62	10.9	B	0.67	11.6	B	0.7		0.56	10.2	B	0.62	11.1	B	0.9	
	Overall		**0.50**	**11.3**	**B**	**0.51**	**11.5**	**B**	**0.2**		**0.36**	**10.0**	**A**	**0.39**	**10.6**	**B**	**0.6**		**0.47**	**11.2**	**B**	**0.50**	**11.9**	**B**	**0.7**		**0.53**	**11.7**	**B**	**0.58**	**13.1**	**B**	**1.4**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.10	15.4	B	0.6		0.06	14.5	B	0.06	14.5	B	0.0		0.09	14.7	B	0.09	15.3	B	0.6		0.06	14.5	B	0.07	15.1	B	0.6	
	WB	L	0.36	18.2	B	0.37	19.0	B	0.8		0.58	22.3	C	0.58	22.3	C	0.0		0.55	21.8	C	0.56	22.9	C	1.1		0.56	22.0	C	0.58	23.1	C	1.1	
		T	0.02	14.1	B	0.02	14.7	B	0.6		0.04	14.2	B	0.04	14.2	B	0.0		0.04	14.2	B	0.04	14.8	B	0.6		0.02	14.1	B	0.03	14.7	B	0.6	
		R	0.21	16.1	B	0.21	16.7	B	0.6		0.22	16.2	B	0.22	16.2	B	0.0		0.21	16.1	B	0.22	16.8	B	0.7		0.19	15.8	B	0.20	16.5	B	0.7	
	NB	LTR	0.52	20.4	C	0.54	21.1	C	0.7		0.70	24.2	C	0.78	26.8	C	2.6		0.69	23.5	C	0.73	24.2	C	0.7		0.79	25.8	C	0.86	28.4	C	2.6	
	SB	LTR	1.07	61.0	E	1.08	64.3	E	3.3		0.77	27.1	C	0.86	32.5	C	5.4		0.92	30.2	C	0.98	36.9	D	6.7		0.86	30.5	C	0.95	38.8	D	8.3	
	Overall		**0.71**	**37.2**	**D**	**0.73**	**38.8**	**D**	**1.6**		**0.67**	**23.6**	**C**	**0.72**	**26.4**	**C**	**2.8**		**0.74**	**24.6**	**C**	**0.78**	**27.7**	**C**	**3.1**		**0.71**	**25.4**	**C**	**0.77**	**29.7**	**C**	**4.3**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.38	15.0	B	0.42	15.6	B	0.6		0.47	16.3	B	0.81	38.4	D	22.1		0.48	16.4	B	0.88	45.0	D	28.6	
	WB	LT	0.41	15.8	B	-	-	-	-		0.52	18.2	B	-	-	-	-		0.67	23.2	C	-	-	-	-		0.80	31.3	C	-	-	-	-	
		L	-	-	-	0.55	21.3	C	-		-	-	-	0.67	26.7	C	-		-	-	-	0.76	45.7	D	-		-	-	-	0.81	45.9	D	-	
		T	-	-	-	0.30	14.2	B	-		-	-	-	0.32	14.5	B	-		-	-	-	0.35	16.5	B	-		-	-	-	0.31	14.3	B	-	
	NB	LR	0.61	26.5	C	0.88	42.5	D	16.0		0.59	26.0	C	0.79	34.2	C	8.2		0.70	29.7	C	0.92	45.0	D	15.3		0.59	26.2	C	0.87	42.0	D	15.8	
	Overall		**0.50**	**19.2**	**B**	**0.70**	**26.1**	**C**	**6.9**		**0.55**	**19.7**	**B**	**0.72**	**23.5**	**C**	**3.8**		**0.69**	**22.8**	**C**	**0.90**	**38.2**	**D**	**15.4**		**0.71**	**24.0**	**C**	**0.90**	**39.2**	**D**	**15.2**	

Table 3-2 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Shortened Englewood Avenue Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	-	-	-	-		0.13	14.2	B	-	-	-	-		0.18	14.5	B	-	-	-	-		0.07	12.0	B	-	-	-	-	
		L	-	-	-	0.78	55.9	F	-	Yes	-	-	-	0.16	17.3	C	-		-	-	-	0.29	23.3	C	-		-	-	-	0.13	18.6	C	-	
		R	-	-	-	0.27	11.2	B	-		-	-	-	0.04	10.5	B	-		-	-	-	0.11	11.3	B	-		-	-	-	0.07	10.7	B	-	
	SB	LT	0.02	8.0	A	-	-	-	-		0.02	8.2	A	-	-	-	-		0.01	8.1	A	-	-	-	-		0.01	8.0	A	-	-	-	-	
		L	-	-	-	0.18	9.2	A	-		-	-	-	0.03	8.4	A	-		-	-	-	0.05	8.5	A	-		-	-	-	0.03	8.2	A	-	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.31	12.6	B	1.8		0.20	10.4	B	0.21	10.7	B	0.3		0.29	11.6	B	0.32	12.3	B	0.7		0.27	11.8	B	0.31	12.6	B	0.8	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.08	8.7	A	0.7		0.10	9.1	A	0.19	11.9	B	2.8		0.12	8.7	A	0.21	11.6	B	2.9		0.22	9.6	A	0.40	16.1	C	6.5	
		TR	0.08	7.9	A	0.11	8.5	A	0.6		0.15	9.2	A	0.28	12.5	B	3.3		0.16	8.7	A	0.29	12.1	B	3.4		0.27	9.9	A	0.48	17.6	C	7.7	
	WB	LT	0.12	8.3	A	0.15	8.8	A	0.5		0.31	10.5	B	0.42	14.3	B	3.8		0.38	11.2	B	0.51	16.4	C	5.2		0.39	11.7	B	0.55	19.9	C	8.2	
		TR	0.06	7.7	A	0.18	8.3	A	0.6		0.10	8.2	A	0.45	13.5	B	5.3		0.14	8.5	A	0.49	14.4	B	5.9		0.20	9.3	A	0.77	29.8	D	20.5	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	8.6	A	0.22	12.1	B	3.5		0.03	8.5	A	0.15	11.4	B	2.9		0.10	9.4	A	0.32	15.5	C	6.2	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	7.7	A	0.09	9.8	A	2.1		0.11	8.2	A	0.16	10.6	B	2.4		0.14	8.7	A	0.23	12.7	B	4.0	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.33	13.2	B	-		-	-	-	0.35	13.7	B	-		-	-	-	0.6	22.3	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.27	11.7	B	-		-	-	-	0.29	12.1	B	-		-	-	-	0.50	17.8	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.14	8.5	A	0.33	10.6	B	2.0		0.13	8.4	A	0.14	8.7	A	0.3		0.23	8.9	A	0.27	9.5	A	0.6		0.19	8.8	A	0.23	9.4	A	0.6	
	WB	LT	0.33	9.8	A	0.50	12.4	B	2.6		0.37	10.3	B	0.52	12.6	B	2.3		0.46	11.5	B	0.61	15.0	B	3.5		0.50	12.4	B	0.70	18.2	C	5.9	
	SB	LT	0.08	8.3	A	0.09	9.0	A	0.7		0.12	8.6	A	0.12	9.0	A	0.4		0.11	8.9	A	0.11	9.3	A	0.4		0.12	8.9	A	0.13	9.5	A	0.6	
		TR	0.09	8.0	A	0.11	8.8	A	0.8		0.09	8.1	A	0.10	8.5	A	0.4		0.10	8.5	A	0.11	9.0	A	0.5		0.13	8.7	A	0.14	9.3	A	0.6	
Sharrots Road / Veterans Road East	EB	LT	0.12	8.6	A	0.32	10.4	B	1.8		0.14	8.8	A	0.15	9.1	A	0.3		0.23	9.6	A	0.27	10.3	B	0.7		0.18	9.3	A	0.22	9.9	A	0.6	
	WB	TR	0.27	9.1	A	0.44	11.4	B	2.3		0.33	9.8	A	0.48	11.8	B	2.0		0.39	11.0	B	0.56	14.2	B	3.2		0.45	11.7	B	0.66	16.7	C	5.1	
	NB	LT	0.13	8.5	A	0.14	9.3	A	0.8		0.11	8.5	A	0.12	8.9	A	0.4		0.17	9.2	A	0.18	9.7	A	0.5		0.16	9.2	A	0.17	9.8	A	0.7	
		TR	0.11	7.8	A	0.12	8.6	A	0.8		0.16	8.2	A	0.18	8.6	A	0.4		0.25	9.1	A	0.27	9.8	A	0.7		0.26	9.2	A	0.28	10.0	A	0.8	

Notes:
v/c = volume-to-capacity ratio; LOS = Level-of-Service
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound
L = Left-Turn; T = Through; R = Right-Turn;
LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn
Average Control Delay shown in units of seconds/vehicle
- = No volumes for this approach or movement.

~~Table 3-3~~

~~Comparison of Peak Hour Level-of-Service Analysis Results for the Year 2020 Traffic Conditions Between Alternatives and the Proposed Project~~

Intersection	Weekday AM Peak Hour (8:00 to 9:00 AM)						Weekday Midday Peak Hour (12:00 to 1:00 PM)						Weekday PM Peak Hour (5:00 to 6:00 PM)						Saturday Midday Peak Hour (12:45 to 1:45 PM)					
	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.
SIGNALIZED INTERSECTIONS: OVERALL INTERSECTION LOS[1]																								
Allentown Lane-Veterans Rd West / Arthur Kill Road	B	D	B	E	D	C	C	D	C	E	D	D	D	F	D	F	F	F	D	F	D	F	F	F
North Bridge Street / Arthur Kill Road	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Richmond Valley Road / Arthur Kill Road	B	B	B	C	B	B	D	E	D	E	E	E	F	F	F	F	F	F	F	F	F	F	F	F
Richmond Valley Road / Page Avenue	B	B	B	C	B	B	C	C	C	C	C	C	C	C	C	F	C	C	C	C	C	C	C	C
South Bridge Street / Page Avenue-Boscombe Avenue	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Veterans Road West / Bricktown Way-KWVP westbound off-ramp	C	D	C	D	D	D	C	D	C	E	E	E	D	E	D	E	E	E	E	F	E	F	F	F
Veterans Road West / Tyrellan Avenue	B	B	B	B	B	B	C	E	C	E	E	E	C	C	C	C	C	C	D	F	D	F	F	F
Boscombe Avenue / Outerbridge Crossing ramps	D	D	D	E	D	D	D	E	D	E	E	E	D	F	D	F	F	F	F	F	F	F	F	F
Boscombe Avenue / Tyrellan Avenue	B	C	B	C	C	C	C	F	C	F	F	F	D	F	D	F	F	F	F	F	F	F	F	F
Bricktown Way / Veterans Road West	A	A	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Englewood Avenue / Veterans Road West	B	D	B	E	D	B	D	E	B	D	D	D	B	C	B	C	C	C	C	F	C	D	F	F
Englewood Avenue / Veterans Road East	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C	D	F	D	F	F	F
Englewood Avenue / Bloomingdale Road	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Sharrotts Road / Bloomingdale Road	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C
Veterans Road East-Drumgoole Road West / Bloomingdale Road	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	D	D	D
South Service Road-Drumgoole Road East / Bloomingdale Road	B	B	B	B	B	B	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	D	E	D	D	E	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Arthur Kill Road / Bloomingdale Road	B	C	B	C	C	C	B	C	B	C	C	C	B	E	B	E	E	E	C	F	C	F	F	F
UNSIGNALIZED INTERSECTIONS: CRITICAL MOVEMENT LOS[2]																								
Sharrots Road / Arthur Kill Road	B	C	B	D	C	C	C	C	C	C	C	C	C	D	C	E	D	D	C	D	C	E	D	D
Englewood Avenue / Arthur Kill Road	B	E	B	F	E	E	B	C	B	C	C	C	B	D	B	C	D	D	C	D	C	C	D	D
South Bridge Street / Arthur Kill Road	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Bricktown Way / Tyrellan Avenue	A	A	A	A	A	A	B	C	B	C	C	C	B	C	B	C	C	C	B	D	B	D	D	D
Sharrots Road / Veterans Road West	A	B	A	B	B	B	A	B	A	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C
Sharrots Road / Veterans Road East	A	A	A	B	A	A	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	C	B	B

Notes:

1) For signalized intersections, the overall LOS for intersection as a whole is shown.

2) For unsignalized intersections, the LOS for the critical movement (i.e., the stop-controlled movement with the highest delay) is shown.

DEIS Table (Superseded by FEIS Table)

~~**Table 3-4**~~

~~**Comparison of Peak Hour Traffic Impacts for the Year 2020 Traffic Conditions Between Alternatives and the Proposed Project**~~

Intersection	Weekday AM Peak Hour (8:00 to 9:00 AM)					Weekday Midday Peak Hour (12:00 to 1:00 PM)					Weekday PM Peak Hour (5:00 to 6:00 PM)					Saturday Midday Peak Hour (12:45 to 1:45 PM)				
	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.
SIGNALIZED INTERSECTIONS: IMPACTS																				
Allentown Lane-Veterans Rd West / Arthur Kill Road	X		X	X	X	X		X	X	X	X		X	X	X	X		X	X	X
North Bridge Street / Arthur Kill Road																				
Richmond Valley Road / Arthur Kill Road			X			X		X	X	X	X		X	X	X	X		X	X	X
Richmond Valley Road / Page Avenue																				
South Bridge Street / Page Avenue-Boscombe Avenue																				
Veterans Road West / Bricktown Way-KWVP westbound off-ramp	X		X	X	X	X		X	X	X	X		X	X	X	X		X	X	X
Veterans Road West / Tyrellan Avenue						X		X	X	X	X		X	X	X	X		X	X	X
Boscombe Avenue / Outerbridge Crossing ramps	X		X	X	X	X		X	X	X	X		X	X	X	X		X	X	X
Boscombe Avenue / Tyrellan Avenue						X		X	X	X	X		X	X	X	X		X	X	X
Bricktown Way / Veterans Road West																				
Englewood Avenue / Veterans Road West	X			X	X	X		X	X	X	X		X	X	X	X		X	X	X
Englewood Avenue / Veterans Road East											X			X	X	X		X	X	X
Englewood Avenue / Bloomingdale Road																				
Sharrotts Road / Bloomingdale Road																				
Veterans Road East-Drumgoole Road West / Bloomingdale Road	X			X	X	X		X	X	X	X		X	X	X	X		X	X	X
South Service Road-Drumgoole Road East / Bloomingdale Road																				
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	X		X	X	X						X		X	X	X	X		X	X	X
Arthur Kill Road / Bloomingdale Road											X		X	X	X	X		X	X	X
UNSIGNALIZED INTERSECTIONS: IMPACTS																				
Sharrots Road / Arthur Kill Road													X			X		X	X	X
Englewood Avenue / Arthur Kill Road	X		X	X	X						X			X	X					
South Bridge Street / Arthur Kill Road																				
Bricktown Way / Tyrellan Avenue																				
Sharrots Road / Veterans Road West																				
Sharrots Road / Veterans Road East																				

Notes:

X = Potential significant traffic impact identified.

~~Table 3-5~~

~~Comparison of Peak Hour Mitigation Measures for the Year 2020 Traffic Conditions Between Alternatives and the Proposed Project~~

Intersection	Weekday AM Peak Hour (8:00 to 9:00 AM)					Weekday Midday Peak Hour (12:00 to 1:00 PM)					Weekday PM Peak Hour (5:00 to 6:00 PM)					Saturday Midday Peak Hour (12:45 to 1:45 PM)				
	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.
SIGNALIZED INTERSECTIONS: MITIGATION																				
Allentown Lane-Veterans Rd West / Arthur Kill Road	Restripe, Timing	-	Restripe	Restripe, Timing	Restripe	Restripe	-	Restripe, Timing	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe, Timing	Restripe	-	Restripe, Timing	Restripe	Restripe, Timing
North Bridge Street / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Richmond Valley Road / Arthur Kill Road	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restriping, Timing	Restripe	Restripe	Restripe	-	Restriping	Restripe	Restripe
Richmond Valley Road / Page Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Bridge Street / Page Avenue-Boscombe Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veterans Road West / Bricktown Way-KWVP westbound off-ramp	Timing	-	Timing	Timing	Timing	Timing, Significant Impacts Remain	-	Significant Impacts Remain	Timing, Significant Impacts Remain	Timing, Significant Impacts Remain	Significant Impacts Remain	-	Significant Impacts Remain	Significant Impacts Remain	Timing, Significant Impacts Remain	Significant Impacts Remain	-	Significant Impacts Remain	Significant Impacts Remain	Significant Impacts Remain
Veterans Road West / Tyrellan Avenue	Median	-	Median	Median	Median	Median, Phasing, Timing	-	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	-	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	-	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing
Boscombe Avenue / Outerbridge Crossing ramps	Phasing, Significant Impacts Remain	-	Phasing, Significant Impacts Remain	Phasing, Significant Impacts Remain	Phasing, Significant Impacts Remain	Phasing, Timing, Significant Impacts Remain	-	Phasing, Significant Impacts Remain	Phasing, Timing, Significant Impacts Remain	Phasing, Timing, Significant Impacts Remain	Phasing, Significant Impacts Remain	-	Phasing, Significant Impacts Remain	Phasing, Significant Impacts Remain	Phasing, Significant Impacts Remain	Phasing, Timing	-	Phasing, Timing	Phasing, Timing	Phasing, Timing
Boscombe Avenue / Tyrellan Avenue	-	-	-	-	-	Phasing, Timing	-	Phasing, Timing	Phasing, Timing	Phasing, Timing	Phasing, Timing	-	Phasing, Timing	Phasing, Timing	Phasing, Timing	Phasing, Timing	-	Phasing, Timing	Phasing, Timing	Phasing, Timing
Bricktown Way / Veterans Road West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Englewood Avenue / Veterans Road West	Timing	-	-	Timing	Timing	Timing	-	-	Timing	Timing	Timing	-	-	Timing	Timing	Phasing, Timing	-	Timing	Phasing, Timing	Phasing, Timing
Englewood Avenue / Veterans Road East	-	-	-	-	-	-	-	-	-	-	Timing	-	-	Timing	Timing	Timing	-	Timing	Timing	Timing
Englewood Avenue / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrotts Road / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veterans Road East-Drumgoole Road West / Bloomingdale Road	Parking, Restripe, Phasing, Timing	-	Parking, Restripe	Parking, Restripe, Phasing, Timing	Parking, Restripe, Phasing, Timing	Parking, Restripe, Timing	-	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	-	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing
South Service Road-Drumgoole Road East / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	Timing	-	Timing	Timing	Timing	-	-	-	-	-	Timing	-	Timing	Timing	Timing	Timing	-	Timing	Timing	Timing
Arthur Kill Road / Bloomingdale Road	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe, Phasing, Timing	-	Restripe, Phasing, Timing	Restripe, Phasing, Timing	Restripe, Phasing, Timing	Restripe, Phasing, Timing	-	Restripe, Phasing, Timing	Restripe, Phasing, Timing	Restripe, Phasing, Timing
UNSIGNALIZED INTERSECTIONS: MITIGATION																				
Sharrots Road / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	Significant Impact Remains	-	-	Significant Impact Remains	-	Significant Impact Remains	Significant Impact Remains	Significant Impact Remains
Englewood Avenue / Arthur Kill Road	Restripe	-	Restripe, Significant Impact Remains	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe
South Bridge Street / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bricktown Way / Tyrellan Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrots Road / Veterans Road West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrots Road / Veterans Road East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:

Timing = Reallocation of green time at traffic signal required.

Phasing = Modification of phasing sequence at traffic signal required.

Restripe = Restriping of existing roadway(s) required.

Median = Modification of existing raised median(s) required.

Parking = Time-of-day restriction of on-street parking required.

Widen = Widening of existing roadway(s) required.

Significant Impact Remains = An unmitigatable significant traffic impact remains during this time period.

- = No mitigation required.

Table 3-6
Comparison of Peak Hour Level-of-Service and Total Traffic Volume with Future with-Action Conditions

Intersection	2020 With-Action								Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	LOS				Total Volume				LOS				Total Volume				LOS				Total Volume			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Arthur Kill Rd / Sharrotts Ave	C	C	D	D	685	807	921	923	D	C	E	E	864	825	963	953	C	C	D	D	685	807	921	923
Arthur Kill Rd / Englewood Ave	E	C	D	D	801	859	906	921	F	C	C	C	1066	769	880	840	E	C	D	D	801	859	906	921
Arthur Kill Rd / Allentown Ln (EB) Veterans Rd West (WB)	D	D	F	F	1240	1568	1702	1979	E	E	F	F	1520	1684	1817	2110	C	D	F	F	1219	1510	1647	1902
Arthur Kill Rd / North Bridge St	B	B	B	B	1112	1257	1610	1723	B	B	B	B	1236	1266	1633	1740	B	B	B	B	1112	1257	1610	1723
Arthur Kill Rd / South Bridge St	B	B	B	B	1330	1495	1869	1984	B	B	B	B	1454	1505	1892	2000	B	B	B	B	1330	1495	1869	1984
Arthur Kill Rd / Richmond Valley Rd	B	E	F	F	1339	1508	1895	1962	C	E	F	F	1391	1512	1904	1968	B	E	F	F	1339	1508	1895	1962
Page Ave / Richmond Valley Rd	B	B	C	C	1734	2086	2122	2337	C	C	C	C	1788	2090	2131	2343	B	C	C	C	1734	2086	2122	2337
Boscombe Ave / South Bridge Rd	B	B	B	B	1541	1775	1902	2133	B	B	B	B	1612	1781	1916	2144	B	B	B	B	1542	1775	1902	2133
Veterans Rd West / North Bridge St-Bricktown Way	D	E	E	F	1695	2520	2643	3340	D	E	E	F	1861	2642	2757	3480	D	E	E	F	1657	2415	2540	3196
KWVP WB Off-Ramp @ No Bridge St (Channelized UT)	-	-	-	-	691	598	1005	869	-	-	-	-	691	598	1005	869	-	-	-	-	691	598	1005	869
Bricktown Way / Tyrellan Ave	A	C	C	D	428	1095	1197	1638	A	C	C	D	428	1095	1197	1638	A	C	C	D	428	1095	1197	1638
Veterans Rd West / Tyrellan Ave	B	E	C	F	1363	2412	2355	3076	B	E	C	F	1456	2528	2451	3205	B	E	C	F	1363	2412	2355	3076
Boscombe Ave / Korean War Veterans Highway off/on Ramp	D	F	F	F	1977	2553	2800	3387	E	F	F	F	2047	2559	2814	3398	D	F	F	F	1977	2553	2800	3387
Boscombe Ave / Tyrellan Ave	C	F	F	F	1092	1878	1865	2435	C	F	F	F	1092	1878	1865	2435	C	F	F	F	1092	1878	1865	2435

Intersection	2020 With-Action								Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	LOS				Total Volume				LOS				Total Volume				LOS				Total Volume			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Veterans Rd West / Bricktown Way	A	B	B	B	785	1365	1385	1930	B	B	B	B	878	1481	1481	2059	A	B	B	B	785	1365	1385	1930
Veterans Rd West / Englewood Ave.	D	D	C	F	1270	1509	1567	2109	B	B	B	D	896	1476	1485	2051	D	D	C	F	1270	1509	1567	2109
Sharrotts Rd / SB West Shore Pkwy SR (Veterans Rd W)	B	B	B	C	439	504	621	682	B	B	B	C	574	512	646	699	B	B	B	C	439	504	621	682
Sharrotts Rd / NB West Shore Pkwy SR (Veteran Rd E)	A	B	B	B	440	548	731	773	B	B	B	C	575	556	756	789	A	B	B	B	440	548	731	773
Veterans Rd East / Englewood Rd	B	B	C	F	1088	1233	1316	1699	B	B	C	F	1057	1208	1249	1654	B	B	C	F	1088	1233	1316	1699
Bloomingdale Rd / Englewood Ave	B	B	B	B	1106	941	1296	1261	B	B	B	B	1071	933	1271	1241	B	B	B	B	1106	941	1296	1261
Sharrotts Rd / Bloomingdale Rd	B	B	B	C	1159	1159	1550	1611	B	B	B	C	1159	1159	1550	1610	B	B	B	C	1159	1159	1550	1611
Bloomingdale Rd / Drumgoole Rd West	C	C	C	D	1831	1672	2046	2139	C	C	C	E	1635	1656	2004	2111	C	C	C	D	1831	1672	2046	2139
Bloomingdale Rd / Drumgoole Rd East	B	B	B	B	1328	1170	1438	1493	B	B	B	B	1204	1160	1415	1476	B	B	B	B	1328	1170	1438	1493
Bloomingdale Rd / Amboy Rd (WB)- Pleasant Plains Ave (EB)	E	C	C	C	1192	1396	1519	1598	D	C	C	C	1138	1392	1510	1592	E	C	C	C	1192	1396	1519	1598
Bloomingdale Rd / Arthur Kill Rd	C	C	E	F	1184	1171	1248	1379	C	C	E	F	1184	1171	1248	1379	C	C	E	F	1184	1171	1248	1379

DEIS Table (Superseded by FEIS Table)

Note: Intersections bolded indicate those intersections that would witness different traffic volumes and air quality emissions under this alternative than under the Proposed Project.

Table 3-7

Differences in Peak Hour Level-of-Service and Incremental Traffic Volume as Compared to Future with-Action Conditions

Intersection	Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	Change in LOS				*Change in Total Volume*				*Change in LOS*				*Change in Total Volume*			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Arthur Kill Rd / Sharrotts Ave	C->D	no change	D->E	D->E	179	18	42	30	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / Englewood Ave	E->F	no change	D->C	D->C	265	-90	-26	-81	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / Allentown Ln (EB)-Veterans Rd West (WB)	D->E	D->E	No change	No change	280	116	115	131	D->C	no change	no change	no change	-21	-58	-55	-77
Arthur Kill Rd / North Bridge St	no change	no change	no change	no change	124	9	23	13	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / South Bridge St	no change	no change	no change	no change	124	10	23	16	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / Richmond Valley Rd	B->C	no change	no change	no change	54	4	9	8	no change	no change	no change	no change	0	0	0	2
Page Ave / Richmond Valley Rd	B->C	B->C	C->F	no change	54	4	9	6	no change	B->C	no change	no change	0	0	0	0
Boscombe Ave / South Bridge Rd	no change	no change	no change	no change	70	6	14	11	no change	no change	no change	no change	0	0	0	0
Veterans Rd West / North Bridge St-Bricktown Way	no change	no change	no change	no change	166	122	114	140	no change	no change	no change	no change	-38	-105	-103	-144
KWVP WB Off-Ramp @ No Bridge St (Channelized UT)	no change	no change	no change	no change	0	0	0	0	no change	no change	no change	no change	0	0	0	0
Bricktown Way / Tyrellan Ave	no change	no change	no change	no change	0	0	0	0	no change	no change	no change	no change	0	0	0	0
Veterans Rd West / Tyrellan Ave	no change	no change	no change	no change	93	116	96	129	no change	no change	no change	no change	0	0	0	0
Boscombe Ave / Korean War Veterans Highway off/on Ramp	D->E	no change	no change	no change	70	6	14	11	no change	no change	no change	no change	0	0	0	0
Boscombe Ave / Tyrellan Ave	no change	no change	no change	no change	0	0	0	0	no change	no change	no change	no change	0	0	0	0

DEIS Table (Superseded by FEIS Table)

Intersection	Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	Change in LOS				Change in Total Volume				Change in LOS				Change in Total Volume			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Veterans Rd West / Bricktown Way	A->B	no change	no change	no change	93	116	96	129	no change	no change	no change	no change	0	0	0	0
Veterans Rd West / Englewood Rd	D->B		C->B	F->D	-374	-33	-82	-58	no change	no change	no change	no change	0	0	0	0
Sharrotts Rd / SB West Shore Pkwy SR (Veterans Rd W)	no change	no change	no change	no change	135	8	25	17	no change	no change	no change	no change	0	0	0	0
Sharrotts Rd / NB West Shore Pkwy SR (Veteran Rd E)	A->B	no change	no change	B->C	135	8	25	16	no change	no change	no change	no change	0	0	0	0
Veterans Rd East / Englewood Rd	no change	no change	no change	no change	-331	-24	-67	-45	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Englewood Ave	no change	no change	no change	no change	-135	-8	-25	-17	no change	no change	no change	no change	0	0	0	0
Sharrotts Rd / Bloomingdale Rd	no change	no change	no change	no change	0	0	0	-1	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Drumgoole Rd West	no change	no change	no change	no change	-198	-16	-42	-28	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Drumgoole Rd East	no change	no change	no change	no change	-124	-10	-26	-17	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Amboy Rd (WB)-Pleasant Plains Ave (EB)	E->D	no change	no change	no change	-54	-4	-9	-6	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Arthur Kill Rd	no change	no change	no change	no change	0	0	0	0	no change	no change	no change	no change	0	0	0	0

Note: Intersections bolded indicate those intersections that would witness different traffic volumes and air quality emissions under this alternative than under the Proposed Project.

Table 3-3
Comparison of Peak Hour Level-of-Service Analysis Results for the Year 2020 Traffic Conditions Between Alternatives and the Proposed Project

Intersection	Weekday AM Peak Hour (8:00 to 9:00 AM)						Weekday Midday Peak Hour (12:00 to 1:00 PM)						Weekday PM Peak Hour (5:00 to 6:00 PM)						Saturday Midday Peak Hour (12:45 to 1:45 PM)					
	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	No-Action	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.
SIGNALIZED INTERSECTIONS: OVERALL INTERSECTION LOS[1]																								
Sharrots Road / Arthur Kill Road	B	B	B	C	B	B	B	B	B	B	B	B	B	C	B	C	C	C	C	C	C	C	C	C
Allentown Lane-Veterans Rd West / Arthur Kill Road	C	D	C	F	D	C	C	E	C	E	E	D	E	F	E	F	F	F	D	F	D	F	F	F
North Bridge Street / Arthur Kill Road	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Richmond Valley Road / Arthur Kill Road	B	B	B	C	B	B	E	E	E	E	E	E	F	F	F	F	F	F	F	F	F	F	F	F
Richmond Valley Road / Page Avenue	B	B	B	C	B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
South Bridge Street / Page Avenue-Boscombe Avenue	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Veterans Road West / Bricktown Way-KWVP westbound off-ramp	C	D	C	D	D	D	D	F	D	F	F	F	D	E	D	E	E	D	F	F	F	F	F	F
Veterans Road West / Tyrellan Avenue	C	D	C	D	D	D	E	F	E	F	F	F	D	F	D	F	F	F	F	F	F	F	F	F
Boscombe Avenue / Outerbridge Crossing ramps	D	D	D	E	D	D	F	F	F	F	F	F	E	F	E	F	F	F	F	F	F	F	F	F
Boscombe Avenue / Tyrellan Avenue	B	C	B	C	C	C	D	F	D	F	F	F	D	F	D	F	F	F	F	F	F	F	F	F
Bricktown Way / Veterans Road West	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C
Englewood Avenue / Veterans Road West	B	D	B	B	D	D	B	D	B	B	D	D	B	C	B	B	C	C	C	E	C	D	E	E
Englewood Avenue / Veterans Road East	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C	D	F	D	F	F	F
Englewood Avenue / Bloomingdale Road	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Sharrotts Road / Bloomingdale Road	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C
Veterans Road East-Drumgoole Road West / Bloomingdale Road	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	D	C	D	D	D
South Service Road-Drumgoole Road East / Bloomingdale Road	B	B	B	B	B	B	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	D	E	D	D	E	E	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Arthur Kill Road / Bloomingdale Road	B	C	B	C	C	C	B	D	B	D	D	D	C	E	C	E	E	E	C	F	C	F	F	F
UNSIGNALIZED INTERSECTIONS: CRITICAL MOVEMENT LOS[2]																								
Englewood Avenue / Arthur Kill Road	B	D	B	F	D	D	B	C	B	C	C	C	B	D	B	C	D	D	B	D	B	C	D	D
South Bridge Street / Arthur Kill Road	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Bricktown Way / Tyrellan Avenue	A	A	A	A	A	A	B	B	B	B	B	B	B	C	B	C	C	C	B	D	B	D	D	D
Sharrots Road / Veterans Road West	A	B	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C
Sharrots Road / Veterans Road East	A	B	A	B	B	B	A	B	A	B	B	B	B	B	B	B	B	B	B	C	B	C	C	C

Notes:
1) For signalized intersections, the overall LOS for intersection as a whole is shown.
2) For unsignalized intersections, the LOS for the critical movement (i.e., the stop-controlled movement with the highest delay) is shown.

Table 3-4
Comparison of Peak Hour Traffic Impacts for the Year 2020 Traffic Conditions Between Alternatives and the Proposed Project

Intersection	Weekday AM Peak Hour (8:00 to 9:00 AM)					Weekday Midday Peak Hour (12:00 to 1:00 PM)					Weekday PM Peak Hour (5:00 to 6:00 PM)					Saturday Midday Peak Hour (12:45 to 1:45 PM)				
	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With-Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.
SIGNALIZED INTERSECTIONS: IMPACTS																				
Sharrots Road / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allentown Lane-Veterans Rd West / Arthur Kill Road	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
North Bridge Street / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Richmond Valley Road / Arthur Kill Road	-	-	X	-	-	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
Richmond Valley Road / Page Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Bridge Street / Page Avenue-Boscombe Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veterans Road West / Bricktown Way-KWVP westbound off-ramp	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
Veterans Road West / Tyrellan Avenue	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
Boscombe Avenue / Outerbridge Crossing ramps	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
Boscombe Avenue / Tyrellan Avenue	-	-	-	-	-	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
Bricktown Way / Veterans Road West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Englewood Avenue / Veterans Road West	X	-	-	X	X	X	-	-	X	X	X	-	-	X	X	X	-	X	X	X
Englewood Avenue / Veterans Road East	-	-	-	-	-	-	-	-	-	-	X	-	X	X	X	X	-	X	X	X
Englewood Avenue / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrotts Road / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veterans Road East-Drumgoole Road West / Bloomingdale Road	X	-	-	X	X	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
South Service Road-Drumgoole Road East / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	X	-	X	X	X	-	-	-	-	-	X	-	X	X	X	X	-	X	X	X
Arthur Kill Road / Bloomingdale Road	-	-	-	-	-	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X
UNSIGNALIZED INTERSECTIONS: IMPACTS																				
Englewood Avenue / Arthur Kill Road	-	-	X	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-	-	-
South Bridge Street / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bricktown Way / Tyrellan Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrots Road / Veterans Road West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrots Road / Veterans Road East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
X = Potential significant traffic impact identified.

Table 3-5
Comparison of Peak Hour Mitigation Measures for the Year 2020 Traffic Conditions Between Alternatives and the Proposed Project

Intersection	Weekday AM Peak Hour (8:00 to 9:00 AM)					Weekday Midday Peak Hour (12:00 to 1:00 PM)					Weekday PM Peak Hour (5:00 to 6:00 PM)					Saturday Midday Peak Hour (12:45 to 1:45 PM)				
	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.	With- Action	No-Action Alt.	Englewood Avenue Alt.	Englewood Avenue 40' ROW Alt.	Arthur Kill Access Road Alt.
SIGNALIZED INTERSECTIONS: MITIGATION																				
Sharrots Road / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Allentown Lane-Veterans Rd West / Arthur Kill Road	Restripe	-	Restripe, Phasing, Timing	Restripe	Restripe	Restripe	-	Restripe, Timing	Restripe	Restripe, Timing	Restripe	-	Restripe	Restripe	Restripe, Timing	Restripe	-	Restripe, Timing	Restripe	Restripe, Timing
North Bridge Street / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Richmond Valley Road / Arthur Kill Road	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe, Timing	Restripe	Restripe	Restripe	-	Restripe, Timing	Restripe	Restripe
Richmond Valley Road / Page Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
South Bridge Street / Page Avenue-Boscombe Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veterans Road West / Bricktown Way-KWVP westbound off-ramp	Widen	-	Widen	Widen	Widen	Widen, Phasing, Timing	-	Widen, Phasing, Timing	Widen, Phasing, Timing	Widen, Timing	Widen, Timing	-	Widen, Timing	Widen, Timing	Widen, Timing	Widen, Phasing, Timing	-	Widen, Phasing, Timing	Widen, Phasing, Timing	Widen, Phasing, Timing
Veterans Road West / Tyrellan Avenue	Median, Phasing, Timimg	-	Median, Phasing, Timimg	Median, Phasing, Timimg	Median, Phasing, Timimg	Median, Phasing, Timing	-	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	-	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	Median, Phasing, Timing	-	Median, Phasing, Timing, Significant Impacts Remain	Median, Phasing, Timing	Median, Phasing, Timing
Boscombe Avenue / Outerbridge Crossing ramps	Widen, Phasing	-	Widen, Phasing, Timing, Significant Impacts Remain	Widen, Phasing	Widen, Phasing	Widen, Phasing, Timing	-	Widen, Phasing, Timing, Significant Impacts Remain	Widen, Phasing, Timing	Widen, Phasing, Timing	Widen, Phasing, Timing	-	Widen, Phasing, Timing, Significant Impacts Remain	Widen, Phasing, Timing	Widen, Phasing, Timing	Widen, Phasing, Timing	-	Widen, Phasing, Timing	Widen, Phasing, Timing	Widen, Phasing, Timing
Boscombe Avenue / Tyrellan Avenue	Phasing	-	Phasing	Phasing	Phasing	Phasing, Timing	-	Phasing, Timing	Phasing, Timing	Phasing, Timing	Phasing, Timing	-	Phasing, Timing	Phasing, Timing	Phasing, Timing	Phasing, Timing	-	Phasing, Timing	Phasing, Timing	Phasing, Timing
Bricktown Way / Veterans Road West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Englewood Avenue / Veterans Road West	Timing	-	-	Timing	Timing	Timing	-	-	Timing	Timing	Timing	-	-	Timing	Timing	Phasing, Timing	-	Timing	Phasing, Timing	Phasing, Timing
Englewood Avenue / Veterans Road East	-	-	-	-	-	-	-	-	-	-	Timing	-	Timing	Timing	Timing	Timing	-	Timing	Timing	Timing
Englewood Avenue / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrotts Road / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veterans Road East-Drumgoole Road West / Bloomingdale Road	Parking, Restripe, Timing	-	-	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	-	Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	-	Phasing, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing	-	Phasing, Timing	Parking, Restripe, Timing	Parking, Restripe, Timing
South Service Road-Drumgoole Road East / Bloomingdale Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	Timing	-	Timing	Timing	Timing	-	-	-	-	-	Timing	-	Timing	Timing	Timing	Timing	-	Timing	Timing	Timing
Arthur Kill Road / Bloomingdale Road	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe, Phasing, Timing	-	Restripe, Phasing, Timing	Restripe, Phasing, Timing	Restripe, Phasing, Timing	Restripe, Phasing, Timing	-	Restripe, Phasing, Timing	Restripe, Phasing, Timing	Restripe, Phasing, Timing
UNSIGNALIZED INTERSECTIONS: MITIGATION																				
Englewood Avenue / Arthur Kill Road	Restripe	-	Restripe, Significant Impacts Remain	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe	Restripe	-	Restripe	Restripe	Restripe
South Bridge Street / Arthur Kill Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bricktown Way / Tyrellan Avenue	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrots Road / Veterans Road West	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sharrots Road / Veterans Road East	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Timing = Reallocation of green time at traffic signal required.
Phasing = Modification of phasing sequence at traffic signal required.
Restripe = Restriping of existing roadway(s) required.
Median = Modification of existing raised median(s) required.
Parking = Time-of-day restriction of on-street parking required.
Widen = Widening of existing roadway(s) required.
Significant Impact Remains = An unmitigatable significant traffic impact remains during this time period.
- = No mitigation required.

Table 3-6
Comparison of Peak Hour Level-of-Service and Total Traffic Volume with Future with-Action Conditions

Intersection	2020 With-Action								Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	LOS				*Total Volume*				*LOS*				*Total Volume*				*LOS*				*Total Volume*			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Arthur Kill Rd / Sharrotts Ave	B	B	C	C	630	814	918	934	C	B	C	C	866	837	974	973	B	B	C	C	630	814	918	934
Arthur Kill Rd / Englewood Ave	D	C	D	D	747	867	905	933	F	C	C	C	1069	782	893	860	D	C	D	D	747	867	905	933
Arthur Kill Rd / Allentown Ln (EB)-Veterans Rd West (WB)	D	E	F	F	1357	1639	1802	2091	F	E	F	F	1637	1755	1917	2222	C	D	F	F	1336	1581	1747	2014
Arthur Kill Rd / North Bridge St	B	B	B	B	1116	1280	1630	1755	B	B	B	B	1240	1289	1653	1772	B	B	B	B	1116	1280	1630	1755
Arthur Kill Rd / South Bridge St	B	B	B	B	1334	1517	1887	2015	B	B	B	B	1458	1527	1910	2031	B	B	B	B	1334	1517	1887	2015
Arthur Kill Rd / Richmond Valley Rd	B	E	F	F	1342	1527	1912	1992	C	E	F	F	1394	1531	1921	1998	B	E	F	F	1342	1527	1912	1992
Page Ave / Richmond Valley Rd	B	C	C	C	1736	2109	2145	2372	C	C	C	C	1790	2113	2154	2378	B	C	C	C	1736	2109	2145	2372
Boscombe Ave / South Bridge Rd	B	B	B	B	1541	1786	1912	2150	B	B	B	B	1611	1792	1926	2161	B	B	B	B	1541	1786	1912	2150
Veterans Rd West / North Bridge St-Bricktown Way	D	F	E	F	1722	2536	2581	3357	D	F	E	F	1888	2658	2695	3497	D	F	D	F	1684	2431	2478	3213
KWVP WB Off-Ramp @ No Bridge St (Channelized UT)	-	-	-	-	582	567	941	815	-	-	-	-	582	567	941	815	-	-	-	-	582	567	941	815
Bricktown Way / Tyrellan Ave	A	B	C	D	436	1103	1204	1645	A	B	C	D	436	1103	1204	1645	A	B	C	D	436	1103	1204	1645
Veterans Rd West / Tyrellan Ave	D	F	F	F	1537	2655	2636	3416	D	F	F	F	1630	2771	2732	3545	D	F	F	F	1537	2655	2636	3416
Boscombe Ave / Korean War Veterans Highway off/on Ramp	D	F	F	F	1991	2620	2868	3484	E	F	F	F	2061	2626	2882	3495	D	F	F	F	1991	2620	2868	3484
Boscombe Ave / Tyrellan Ave	C	F	F	F	1110	1950	1939	2538	C	F	F	F	1110	1950	1939	2538	C	F	F	F	1110	1950	1939	2538
Veterans Rd West / Bricktown Way	B	B	B	C	1073	1749	1826	2456	B	B	B	C	1166	1865	1922	2585	B	B	B	C	1073	1749	1826	2456

Intersection	2020 With-Action								Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	LOS				Total Volume				LOS				Total Volume				LOS				Total Volume			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Veterans Rd West / Englewood Ave.	D	D	C	E	1615	1896	2024	2643	B	B	B	D	1184	1859	1928	2577	D	D	C	E	1615	1896	2024	2643
Sharrotts Rd / SB West Shore Pkwy SR (Veterans Rd W)	B	B	B	C	463	522	639	709	B	B	B	C	598	530	664	726	B	B	B	C	463	522	639	709
Sharrotts Rd / NB West Shore Pkwy SR (Veteran Rd E)	B	B	B	C	472	566	747	800	B	B	B	C	607	574	772	816	B	B	B	C	472	566	747	800
Veterans Rd East / Englewood Rd	B	B	C	F	1089	1244	1328	1716	B	B	C	F	758	1220	1261	1671	B	B	C	F	1089	1244	1328	1716
Bloomingdale Rd / Englewood Ave	B	B	B	B	1106	953	1308	1280	B	B	B	B	971	945	1283	1263	B	B	B	B	1106	953	1308	1280
Sharrotts Rd / Bloomingdale Rd	B	B	B	C	1267	1191	1580	1659	B	B	B	C	1267	1191	1580	1658	B	B	B	C	1267	1191	1580	1659
Bloomingdale Rd / Drumgoole Rd West	C	C	C	D	1823	1665	2036	2129	C	C	C	D	1627	1649	1994	2101	C	C	C	D	1823	1665	2036	2129
Bloomingdale Rd / Drumgoole Rd East	B	B	B	B	1322	1165	1431	1486	B	B	B	B	1198	1155	1408	1469	B	B	B	B	1322	1165	1431	1486
Bloomingdale Rd / Amboy Rd (WB)-Pleasant Plains Ave (EB)	E	C	C	C	1187	1390	1512	1591	D	C	C	C	1133	1386	1503	1585	E	C	C	C	1187	1390	1512	1591
Bloomingdale Rd / Arthur Kill Rd	C	D	E	F	1149	1217	1281	1442	C	D	E	F	1206	1221	1295	1450	C	D	E	F	1149	1217	1281	1442

Note: Intersections bolded indicate those intersections that would witness different traffic volumes and air quality emissions under this alternative than under the Proposed Project.

Table 3-7

Differences in Peak Hour Level-of-Service and Incremental Traffic Volume as Compared to Future with-Action Conditions

Intersection	Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	Change in LOS				*Change in Total Volume*				*Change in LOS*				*Change in Total Volume*			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
Arthur Kill Rd / Sharrotts Ave	B->C	no change	no change	no change	236	23	56	39	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / Englewood Ave	D->F	no change	D->C	D->C	322	-85	-12	-73	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / Allentown Ln (EB)-Veterans Rd West (WB)	D->F	no change	no change	no change	614	116	115	131	D->C	E->D	no change	no change	-21	-58	-55	-77
Arthur Kill Rd / North Bridge St	no change	no change	no change	no change	124	9	23	17	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / South Bridge St	no change	no change	no change	no change	124	10	23	16	no change	no change	no change	no change	0	0	0	0
Arthur Kill Rd / Richmond Valley Rd	B->C	no change	no change	no change	52	4	9	6	no change	no change	no change	no change	0	0	0	2
Page Ave / Richmond Valley Rd	B->C	no change	no change	no change	54	4	9	6	no change	no change	no change	no change	0	0	0	0
Boscombe Ave / South Bridge Rd	no change	no change	no change	no change	70	6	14	11	no change	no change	no change	no change	0	0	0	0
Veterans Rd West / North Bridge St-Bricktown Way	no change	no change	no change	no change	166	122	114	140	no change	no change	E->D	no change	-38	-105	-103	-144
KWVP WB Off-Ramp @ No Bridge St (Channelized UT)	no change	no change	no change	no change	0	0	0	0	no change	no change	no change	no change	0	0	0	0
Bricktown Way / Tyrellan Ave	no change	no change	no change	no change	0	0	0	0	no change	no change	no change	no change	0	0	0	0
Veterans Rd West / Tyrellan Ave	no change	no change	no change	no change	93	116	96	129	no change	no change	no change	no change	0	0	0	0
Boscombe Ave / Korean War Veterans Highway off/on Ramp	D->E	no change	no change	no change	70	6	14	11	no change	no change	no change	no change	0	0	0	0
Boscombe Ave / Tyrellan Ave	no change	no change	no change	no change	0	0	0	0	no change	no change	no change	no change	0	0	0	0
Veterans Rd West / Bricktown Way	no	no	no	no	93	116	96	129	no	no	no	no	0	0	0	0

Intersection	Shortened Englewood Avenue Alternative								Arthur Kill Access Road Alternative							
	Change in LOS				*Change in Total Volume*				*Change in LOS*				*Change in Total Volume*			
	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT	AM	MD	PM	SAT
	change	change	change	change					change	change	change	change				
Veterans Rd West / Englewood Rd	D->B	D->B	C->B	E->D	-431	-37	-96	-66	no change	no change	no change	no change	0	0	0	0
Sharrotts Rd / SB West Shore Pkwy SR (Veterans Rd W)	no change	no change	no change	no change	135	8	25	17	no change	no change	no change	no change	0	0	0	0
Sharrotts Rd / NB West Shore Pkwy SR (Veteran Rd E)	no change	no change	no change	no change	135	8	25	16	no change	no change	no change	no change	0	0	0	0
Veterans Rd East / Englewood Rd	no change	no change	no change	no change	-331	-24	-67	-45	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Englewood Ave	no change	no change	no change	no change	-135	-8	-25	-17	no change	no change	no change	no change	0	0	0	0
Sharrotts Rd / Bloomingdale Rd	no change	no change	no change	no change	0	0	0	-1	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Drumgoole Rd West	no change	no change	no change	no change	-196	-16	-42	-28	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Drumgoole Rd East	no change	no change	no change	no change	-124	-10	-23	-17	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Amboy Rd (WB)-Pleasant Plains Ave (EB)	E->D	no change	no change	no change	-54	-4	-9	-6	no change	no change	no change	no change	0	0	0	0
Bloomingdale Rd / Arthur Kill Rd	no change	no change	no change	no change	57	4	14	8	no change	no change	no change	no change	0	0	0	0

Note: Intersections bolded indicate those intersections that would witness different traffic volumes and air quality emissions under this alternative than under the Proposed Project.

Table 3-7a
Traffic Screening at Signalized Intersections

Intersection	Direction	2020 No-Action Vehicle Volume				2020 With-Action Additional Vehicles				Worst Case LOS - With Action (Peak Time Period)	Maximum Volume Increment	Pass/Fail CO Microscale Screening	Average Hourly Volume Incremental Trips (24-hr Average)	Maximum Incremental HDDV Equivalent Trips	Pass/Fail $PM_{2.5}$ Microscale Screening
		AM	MD	PM	SAT	AM	MD	PM	SAT						
Arthur Kill Rd / Allentown Ln (EB)-Veterans Rd West (WB)	EB	11	25	14	15	0	0	0	0	F (SAT)	413	Fail	146	10	Pass
	WB	583	688	643	812	117	131	140	192						
	NB	452	420	483	583	89	41	50	61						
	SB	213	333	456	399	173	116	130	160						
Arthur Kill Rd / North Bridge St	WB	165	328	466	459	0	0	0	0	A, B, or C		Pass	71	5	Pass
	NB	447	416	479	575	89	41	50	61						
	SB	393	463	601	615	146	41	57	62						
Arthur Kill Rd / Richmond Valley Rd	WB	217	304	308	335	51	4	12	7	F (AM)	164	Pass	54	4	Pass
	NB	586	521	660	691	37	37	38	54						
	SB	427	629	860	860	76	36	43	50						
Page Ave / Richmond Valley Rd	EB	171	299	275	274	47	3	7	5	A, B, or C		Pass	43	3	Pass
	WB	206	288	313	210	28	2	5	3						
	NB	837	809	751	1044	37	37	38	53						
	SB	453	642	730	744	10	33	35	45						
Boscombe Ave / South Bridge Rd	EB	342	381	449	449	70	6	14	11	A, B, or C		Pass	37	3	Pass
	NB	778	785	735	918	15	36	34	51						
	SB	394	552	659	687	11	33	35	45						

Table 3-7a
Traffic Screening at Signalized Intersections (continued)

Veterans Rd West / North Bridge St-Bricktown Way	EB	373	463	561	614	63	188	188	252	F (Sat)	762	Fail	169	12	Pass
	WB	766	891	833	995	40	100	95	151						
	NB	359	527	424	678	147	185	188	265						
	SB	121	237	337	448	20	68	69	94						
Veterans Rd West / Tyrellan Ave	EB	289	569	599	723	35	125	128	165	F (Sat)	673	Fail	133	10	Pass
	WB	589	639	697	784	31	80	76	121						
	NB	387	519	493	635	27	65	62	93						
	SB	210	559	458	730	62	216	219	294						
Boscombe Ave / Korean War Veterans Highway off/on Ramp	EB	1061	1075	1112	1310	85	42	48	62	F (Sat)	489	Fail	120	9	Pass
	WB	528	941	965	1257	87	305	310	411						
	NB	27	1	8	0	0	0	0	0						
	SB	259	231	408	413	13	30	31	16						
Boscombe Ave / Tyrellan Ave	EB	360	491	488	635	27	65	62	93	F (Sat)	504	Fail	101	7	Pass
	WB	119	137	80	104	0	0	0	0						
	NB	39	8	9	1	0	0	0	0						
	SB	478	945	990	1294	87	304	310	411						
Veterans Rd West / Bricktown Way	EB	86	197	216	346	26	91	93	124	A, B, or C		Pass	113	8	Pass
	NB	94	230	278	291	10	36	37	48						
	SB	835	1034	1037	1386	115	276	261	391						
Veterans Rd West / Englewood Rd	EB	1	1	1	1	0	0	0	0	D (Sat)	563	Fail	113	8	Pass
	WB	419	562	461	708	26	62	59	89						
	NB	172	399	469	596	36	127	130	172						
	SB	441	496	605	709	90	213	203	302						

Table 3-7a
Traffic Screening at Signalized Intersections (continued)

Veterans Rd East / Englewood Rd	EB	193	421	489	619	36	127	129	172	F (Sat)	261	Fail	52	4	Pass
	WB	47	46	63	78	5	14	13	21						
	NB	457	564	521	713	20	48	46	68						
Bloomingdale Rd / Englewood Ave	EB	70	162	184	264	24	85	86	115	A, B, or C		Pass	27	2	Pass
	NB	365	307	485	420	0	0	0	0						
	SB	507	377	515	443	5	14	13	21						
Sharrots Rd / Bloomingdale Rd	EB	122	133	232	208	107	7	19	14	A, B, or C		Pass	90	7	Pass
	NB	453	414	528	547	24	85	86	115						
	SB	466	453	614	633	96	99	102	142						
Bloomingdale Rd / Drumgoole Rd West	EB	61	115	122	142	12	42	43	57	D (Sat)	125	Fail	25	2	Pass
	WB	799	826	1020	1088	0	0	0	0						
	NB	241	234	259	309	20	48	46	68						
	SB	494	385	504	438	0	0	0	0						
Bloomingdale Rd / Drumgoole Rd East	EB	61	28	36	70	0	0	0	0	A, B, or C		Pass	25	2	Pass
	NB	332	350	384	433	20	42	46	68						
	SB	773	687	899	841	12	48	43	57						
Bloomingdale Rd / Amboy Rd (WB)-Pleasant Plains Ave (EB)	EB	41	30	40	33	0	0	0	0	A, B, or C		Pass	25	2	Pass
	WB	292	396	404	416	0	0	0	0						
	NB	323	432	460	532	20	42	46	68						
	SB	446	438	510	479	12	48	43	57						
Bloomingdale Rd / Arthur Kill Rd	EB	328	354	421	424	34	38	41	53	F (Sat)	386	Fail	126	9	Pass
	WB	264	301	312	354	139	142	147	204						
	NB	307	294	266	286	133	92	109	129						

3.4 40-FOOT WIDE ENGLEWOOD AVENUE ALTERNATIVE

By the year 2020, under the Proposed Project, Englewood Avenue would be fully mapped and constructed within an approximately 80-foot wide right-of-way across the northern border of the Project Area from Veterans Road West on the east to Arthur Kill Road on the west. Under the Proposed Project, the fully-constructed length of Englewood Avenue, which would include four travel lanes and bicycle and pedestrian facilities, would be approximately 3,265 feet (approximately 5.9 acres).

~~This alternative assumes that~~ The 1,800 feet of Englewood Avenue from Arthur Kill Road to the Kent Street that would be mapped and constructed to 80 feet in width as ~~proposed from Arthur Kill Road east to Veterans Road West.~~part of the Proposed Project would remain the same under this alternative. However, east of ~~its current terminus at the un-built~~ Kent Street, Englewood Avenue would taper down to a 40-foot wide roadway, as shown in **Figure 3-2** ~~previously provided~~. This portion of the proposed Englewood Avenue, extending approximately 1,465 feet west from Kent Street to Veterans Road West, is already mapped to a width of 80 feet. However, under this alternative, the constructed roadway would occupy only 40 feet of the mapped 80-foot width, with one travel lane provided in each direction, compared to two travel lanes ~~under the Proposed Project. The remaining approximately 1,800 feet of Englewood Avenue west of Kent Street that would be mapped and constructed to 80 feet in width as part of the Proposed Project would remain the same under this alternative~~in each direction under the Proposed Project. It is expected that the road would extend from five feet below the northern property line forty feet southward. The northern portion of the 80-foot mapped right-of-way generally contains an existing dirt path and trail, while the southern portion of the right-of-way contains wetland areas. The location of the 40-foot wide road along the northern side of the right-of-way would minimize disturbance to these wetland areas, as it would be placed within the more disturbed northern portion of the right-of-way. However, this alternative would not continue the 19-foot wide bicycle and pedestrian greenway shown in Figure 1-5, east of Kent Street, which would therefore compromise a goal of the Proposed Project.

~~Within~~ The northern 45 feet of the ~~existing~~ 80-foot wide mapped ~~portion of Englewood Avenue, an area~~right of ~~approximately 45 feet deep of the mapped roadway bed, extending for~~way is owned by the State of New York and approximately 1,488 feet ~~westward~~ from Kent Street to Veterans Road West~~, is owned by the State of New York.~~. In order to construct Englewood Avenue ~~to the full existing mapped width of 80 feet~~under the Proposed Project and this alternative, a transfer of ownership of this area from the State to the City is required. There is no current acquisition agreement with the State. ~~Due to its reduced width, this~~This alternative ~~build-out of Englewood Avenue~~ would require ~~less~~ almost the same amount of state-owned property ~~to be transferred to the City than~~, 40 feet, as would be required under the Proposed Project~~.~~, 45 feet.

The remainder of the proposed developments would be constructed as planned under the Proposed Project. The proposed retail stores, park, senior housing and school would still be constructed by the 2015 and 2020 analysis years within the Development Area.

The 40-foot Wide Englewood Avenue Alternative would not alter the findings for the majority of the technical areas discussed for the Proposed Project, with the exception of the technical areas of Historic and Cultural Resources, Natural Resources, Water and Sewer Infrastructure, Transportation, and Construction, which are further discussed below.

Historic and Cultural Resources

This alternative has the potential to minimize some of the potential significant adverse impacts on one archaeological site that ~~would occur with the Proposed Project.~~ may be located within the Englewood Avenue right of way. As previously noted in **Chapter 2.6**, ~~construction within this portion of the Project Area by 2020 has the potential to disturb or destroy~~ one prehistoric archaeological ~~site that~~site A7-MCB-1 (NYS Site A08501.002767), was identified through prior archaeological survey work~~, resulting in potential adverse impacts to archaeological resources. At Site A7-MCB-1 (NYS Site A08501.002767), this prehistoric site was located during the Phase IB survey on a small, pronounced knoll or hill with a flat~~

~~summit~~ just south of the proposed 80-foot wide route of Englewood Avenue. The site, which covers an area of approximately 65 feet by 25 feet, is considered to be archaeologically significant. ~~The completion of that portion of Englewood Avenue and the pedestrian/bicycle path along the northern boundary of the Conservation Area has the potential to adversely impact this prehistoric site.~~ It is also possible that other remains of prehistoric occupation are present in the 80-foot wide ~~roadway corridor where~~ right of way. The construction of Englewood Avenue ~~is to be extended. Construction activities associated with the completion of the Englewood Avenue extension and~~ under the Proposed Project has the potential to adversely impact this prehistoric site due to construction ~~of the pedestrian/bicycle path likely include~~activities such as cutting, filling, grading, paving, and installation of public services and utility lines. ~~All these activities have the potential to adversely impact intact archaeological resources that may be present along this linear corridor. Under this~~ Under the 40-~~foot~~Foot wide ~~alternative for~~ Englewood Avenue Alternative, roadway construction would be ~~limited in width~~reduced to 40 feet, on the northern portion of the right of way, and thus the potential for impacts ~~at this location~~to these prehistoric archaeological sites would be lower than under the Proposed Project. All of the other development components would still be constructed on the Development Area. As with the Proposed Project, additional archaeological field testing would be pursued pursuant to discussion with the New York City Landmarks Preservation Commission (NYCLPC),and, if needed OPRHP.

Natural Resources

This alternative would reduce some of the potential significant adverse impacts on natural resources relative to the Proposed Project, as identified in **Chapter 2.8**, ~~within the~~as this area ~~where Englewood Avenue is proposed to be extended eastward along the existing mapped portion to Veterans Road West. This area~~east of Kent Street is not developed and is currently in its natural state with trees and wetlands.

- Wetlands:
  - The development of Englewood Avenue under the ~~80-foot wide concept plan~~Proposed Project would impact approximately 0.~~07~~062 acres of NYSDEC-regulated wetlands and USACE jurisdictional wetlands~~. Under this~~ and .902 acres of regulated adjacent areas, compared to this alternative ~~of a 40-foot wide roadway, the~~which would reduce impacts ~~would be reduced~~ to approximately 0.~~05 acres.~~008 acres of wetlands and .504 acres of regulated adjacent areas. Actions to mitigate the impacts to these regulated and jurisdictional wetlands under this alternative would still be required by regulatory agencies.

- Wildlife and Fauna:
  - This alternative would still directly impact wildlife that use the area between the CPPSPP and the Conservation Area, as the 40-foot wide roadway would serve as an impediment to fauna transiting between the parcels, as it would under the Proposed ~~Project and~~Project's 80-foot wide roadway. Thus the impacts to wildlife ~~to~~in the adjacent Conservation Area and CPPSPP under this alternative would be the same as the Proposed Project.
  - The separation of the avian canopy would be lessened due to the reduction in width of the roadbed for this alternative, as compared with the Proposed Project.

- Flora:
  - Under this alternative, approximately ~~170~~135 surveyed trees over a six-inch ~~diameter breast height (~~dbh~~)~~ would be removed, as compared to the expected 319 surveyed trees ~~under~~that would be removed for the 80-foot wide roadway of the Proposed Project. ~~The implementation of this alternative would also remove approximately 0.22 acres of red-maple sweetgum swamp, as compared to 0.26 acres under the Proposed Project.~~

However, all of the other noted potential significant adverse impacts to Natural Resources in the remainder of the Development Area would remain ~~and not change~~ under this alternative~~.~~ as noted in **Chapter 2.8**.

Water and Sewer Infrastructure

The findings of the water and sewer infrastructure analysis for the Proposed Project provided in **Chapter 2.10** would not be significantly changed under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would require potable water and generate sanitary sewer waste. Stormwater runoff from Englewood Avenue would be reduced, as the construction of ~~the~~ta 40-foot ~~wide Englewood Avenue~~roadway under this alternative would generate less stormwater run-off from impervious surfaces than an 80-foot wide roadway, resulting in potential refinements in the amendments to the NYCDEP drainage plan for this area (see **Chapter 2.10** for further details).

Transportation

The findings for transportation from the analysis for the Proposed Project provided in **Chapter 2.13** would not change under this alternative. All of the Proposed Project's other components would still be constructed on the retail, park, senior housing and school sites. Under this alternative, this section of the 40-foot wide Englewood Avenue would contain one travel lane in each direction, as compared to two travel lanes ~~under the Proposed Project. However, significant adverse impacts to vehicular traffic are not expected regardless of whether or not this alternative occurs.~~ in each direction under the Proposed Project. However, toThis type of 40-foot wide roadway segment can accommodate expected future traffic volumes, including existing traffic diverting to this new roadway segment and trips generated by the Proposed Project's school and senior housing sites accessed from Englewood Avenue. ~~To~~ ensure a conservative approach, the traffic analysis of the Proposed Project presented in **Chapter 2.13** conservatively assumed only one travel lane in each direction on the eastbound approach of the Englewood Avenue/Veterans Road West intersection. Those analyses demonstrate that the projected future traffic volumes heading east from the Project Area on Englewood Avenue or west from Veterans Road West toward the Project Area could be accommodated with acceptable traffic operations at the Englewood Avenue/Veterans Road West intersection, therefore significant adverse impacts to vehicular traffic are not expected regardless of whether or not this alternative occurs. This type of 40-foot wide roadway segment can accommodate expected future traffic volumes, including existing traffic diverting to this new roadway segment and trips generated by the Proposed Project's school and senior housing sites accessed from Englewood Avenue. ~~.~~No significant adverse impacts would occur under this alternative, provided the same transportation improvement measures as discussed in **Chapter 2.21** were implemented.

Level-of-service comparisons of the 40-Foot Wide Englewood Avenue Alternative, along with the other alternatives in this chapter, are provided in previous **Table 3-3** for the 2020 year. Impact comparisons between all the alternatives are provided in previous **Table 3-4**, and comparisons with mitigation measures are provided in previous **Table 3-5**.

Under both the Proposed Project and the 40-Foot Wide Englewood Avenue Alternative, traffic impacts were identified at seven ~~five~~ signalized intersections ~~and one unsignalized intersection~~ during the weekday AM peak hour, at nine ~~six~~ signalized intersections during the weekday MD peak hour, at 11 signalized intersections and one unsignalized intersection during the weekday PM peak hour, and at 11 ~~10~~ signalized intersections ~~and one unsignalized intersection~~ during the Saturday MD peak hour. Those improvement measures identified for the Proposed Project to mitigate these impacts would be the same under this Alternative.

3.5 ARTHUR KILL ACCESS ROAD ALTERNATIVE

~~This~~Under this alternative ~~assumes that, in addition to~~, instead of the ~~proposed~~ 50-foot wide, 1.95-acre ~~corridor~~Proposed Utility Access Corridor extending from Arthur Kill Road through Retail Site "B" and eastward to Bricktown Way, an east-west access ~~road~~roadway would be constructed. ~~This access road under this~~The Arthur Kill Access Road alternative ~~scenario~~ could potentially be constructed

~~when~~concurrently with Retail Site "B~~" is constructed,"~~, though actual construction scenarios are not planned or known at this time. Under the Proposed Project, the ~~corridor~~Proposed Utility Access Corridor would remain in its natural state~~, and the roadway would not be constructed.~~ above grade. Under this alternative, this corridor would be constructed as an ~~access road as opposed to remaining in a natural state~~Arthur Kill Access Road. The remainder of the Development Area would be constructed as planned under the Proposed Project, including Englewood Avenue and its full east-west mapping and construction from Arthur Kill Road to Veterans Road West, and the mapping of Bricktown Way and Tyrellan Avenue.

Land Use, Zoning and Public Policy

Under this alternative, proposed land uses under the Proposed Project on the sites within the Development Area would not change. The proposed retail stores, park, senior housing and school would still be constructed by the 2015 and 2020 analysis years (see **Chapter 2.1**). The additional roadway under this alternative would be the only land use change, as this area would not remain in its vacant state covered with vegetation. Zoning changes and their effects would be the same under this alternative as they would be under the Proposed Project. In addition, public policies discussed in **Chapter 2.1** would continue to be effect under this alternative.

Socioeconomic Conditions

This alternative would not alter the findings for socioeconomic conditions from the analysis provided for the Proposed Project in **Chapter 2.2**. All of the development components would still be constructed on the retail, park, senior housing and school sites. This alternative would not result in any significant adverse impacts to socioeconomic conditions.

Community Facilities and Services

The findings of the community facility and services analysis provided for the Proposed Project in **Chapter 2.3** would not change under this alternative. All of the development components would still be constructed on the retail, park, senior housing and school sites, and thresholds requiring further study would still not be exceeded. This alternative would not result in any significant adverse impacts to community facilities or services.

Open Space

This alternative would not alter findings of the open space analysis provided for the Proposed Project in **Chapter 2.4**. All of the development components would still be constructed on the retail, park, senior housing and school sites, and the analysis shows that the components would not result in any direct or indirect impacts to open spaces. This additional roadway would also be constructed through the Retail Site "B" parcel along the southern border of the park to ~~Retail Site "A".~~Bricktown Way. Thus the only notable change under this alternative would be that this area would be used for vehicle access and would not remain in a vacant state (not publicly accessible) covered with vegetation. ~~This~~Minor changes to the grades of the surrounding parkland may occur with the construction of this access road, yet such changes would be minimal. It is also possible that a minor amount of litter from the roadway could result from development of this alternative. However, this alternative would not result in any significant adverse impacts to open space.

Shadows

The findings of the shadow analysis provided for the Proposed Project in **Chapter 2.5** would not change under this alternative. All of the development components would still be constructed on the retail, park, senior housing and school sites, and shadows cast from the buildings expected on those sites would still not reach the Conservation Area or CPPSPP. Further shadow assessment would not be warranted.

Historic and Cultural Resources

This alternative has the potential for greater impacts on historic and cultural resources than the Proposed Project as analyzed in **Chapter 2.6**. Although all of the development components would still be constructed on the retail, park, senior housing and school sites, this alternative includes the additional construction of the access road from Arthur Kill Road through Retail Site "B" towards Retail Site "A."

As previously noted in **Chapter 2.6**, construction within this portion of the Project Area has the potential to disturb or destroy one prehistoric archaeological site, resulting in potential adverse impacts to archaeological resources. At this site (Block 7487, Lot 100), the areas for this access road runs just north of the existing, private, 35-foot-wide sanitary sewer easement that runs from Bricktown Way to Arthur Kill Road. A portion of the access road corridor in the eastern half of Block 7487 and bordering on Bricktown Centre ~~appears to~~may have been included in the JMA 1999 Phase IB survey area. However, the western half of Block 7487, including the access road corridor has not been previously surveyed. It is possible that remains of prehistoric occupation are present on this parcel. Given the number of previously identified prehistoric sites and traces of occupation noted for the southwestern portion of Staten Island, including those located within the Project Area itself, it is possible that intact prehistoric resources are located in this corridor. The construction of the ~~access road~~Arthur Kill Access Road under this alternative could disturb or destroy any such resources in this area. Further research on the potential presence of such resources and designs for this connecting roadway during planning stages would determine whether such impacts would occur and potential ways to avoid or minimize them. As with the Proposed Project, additional archaeological field testing would be pursued following consultation with NYCLPC, and, if needed OPRHP. Therefore, no significant adverse impacts would occur under this alternative, provided the same remedial measures as discussed in **Chapter 2.8** were implemented.

Urban Design and Visual Resources

The findings of the urban design and visual resource analysis provided for the Proposed Project in **Chapter 2.7** would not change under this alternative. All of the development components would still be constructed on the retail, park, senior housing and school sites, at the current build scenarios (footprints, heights, etc.). No additional buildings would be constructed under this alternative. The additional roadway would provide views from Arthur Kill Road and Retail Site "B" eastward along the southern boundary of the proposed park towards Retail Site "A." These changes would not result in any significant adverse impacts to urban design and visual resources under this alternative.

Natural Resources

This alternative would not significantly alter findings of the natural resource analysis provided for the Proposed Project in **Chapter 2.8**. All of the development components would still be constructed on the retail, park, senior housing and school sites, and the removal and alternation of natural resources on those sites would still occur.

~~This alternative would also alter existing natural resources within this area for the access road. This area~~This area of the Proposed Utility Access Corridor is vacant and covered with low-level vegetation, within the Successional Old Field-Variant 1 mapped ecological community (see **Chapter 2.8**). Much of the corridor in which the Arthur Kill Access Road would be constructed are open fields that are ~~a~~currently habitat for boneset, and construction of the roadway would potentially eliminate up to approximately ~~2.5~~1.85 acres ~~or 11.4 percent~~, increasing the potential loss of the existing open ~~area~~field habitat ~~presently found~~from approximately 16.4 acres under the Proposed Project to 18.2 acres under this alternative. Of note, vegetation in this area may change by the 2020 analysis year without any proposed construction, due to the conversion to habitats dominated by woody vegetation. This natural conversion may alter or reduce the amount of suitable habitat within the ~~–~~Development Area capable of supporting the existing plant species, including bonesets. In addition, grading for this roadway would result in some changes in topography due to the required cut/fill actions necessary to establish the necessary roadway surface and grade. Only seven additional trees with a breast-height diameter of six inches or more would be removed if this access road were constructed~~. However, if the utility easement corridor is modified and the Arthur~~

~~Kill Access Road developed under this alternative, it is anticipated that an additional 0.067 acres of U.S. Army Corps of Engineers (USACE) regulated wetlands would be impacted, consisting of Wetlands H (0.035 ac), HA (0.006 ac), NB, (0.009 ac) and NW (0.017), which would require additional mitigation by the USACE. Wetlands H, HA, NB, and NW are all emergent wetlands (see **Chapter 2.8**).~~ instead of the Proposed Utility Access Corridor.

It is also anticipated under this alternative, that 0.009 acre USACE regulated Wetland NB would be impacted and require mitigation by the USACE (see **Chapter 2.8**). Wetland NB is located partially within the Proposed Utility Access Corridor and its removal would require actions to mitigate the loss of this emerging wetland habitat. Other than the additional loss of open field habitat and the impacts on this wetland, the impacts to natural resources under this alternative would be the same as those projected under the Proposed Project. All of the mitigation requirements for the Proposed Project would remain and be required, with the possible addition of further requirements for plants and wetlands replacements due to the construction of this alternative.

Hazardous Materials

The findings of the hazardous materials analysis provided for the Proposed Project in **Chapter 2.9** would not change under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites. As with the Proposed Project, any development proposed for the site would be developed in accordance with applicable regulations and commitments and would result in no significant adverse soil and groundwater impacts. This would not change if additional construction activities commenced within this access road corridor under this alternative.

Water and Sewer Infrastructure

This alternative would not significantly alter the findings for water and sewer infrastructure from the analysis provided for the Proposed Project in **Chapter 2.10**. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would require potable water and generate sanitary sewer waste. Additional stormwater runoff from the roadway's impervious surfaces would occur, as this area would contain the access roadway with a reasonable worst case of up to approximately 84,770 square feet of new pavement for the access road in the 1.95-acre ~~utility corridor~~Proposed Utility Access Corridor area. This would have to be addressed in the overall drainage plans for the Project Area, as discussed in **Chapter 2.10**.

Solid Waste and Sanitation Services

The findings for solid waste and sanitation services from the analysis provided for the Proposed Project in **Chapter 2.11** would not change under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would generate solid waste. It is possible that, under this alternative, some additional construction waste would be generated. However, this alternative would not result in any significant adverse solid waste impacts.

Energy

This alternative would not alter the findings for energy from the analysis provided for the Proposed Project in **Chapter 2.12**. All of the other development components would still be constructed on the retail, park, senior housing and school sites, which are the components that would require energy to be provided to the respective new buildings. This alternative would not result in any significant adverse energy impacts.

Transportation

~~This alternative includes the addition of a new access road, connecting Bricktown Way to the east and Arthur Kill Road to the west (i.e., north of the existing sanitary easement) in the year 2020.~~ Under this alternative, as with the Proposed Project, Englewood Avenue would be fully constructed between Arthur

Kill Road and Veterans Road West in 2020. The presence of the new ~~access road~~Arthur Kill Access Road would allow motorists traveling to and from Retail Site "A" and Fairview Park to bypass segments of Veterans Road West and Bricktown Way and access those areas directly via this additional new access road.

The potential traffic impacts associated with this alternative were assessed by reassigning the year 2020 site-generated vehicle trips (see **Chapter 2.13**) during each of the four analysis peak hours (i.e., weekday AM, weekday midday, weekday PM, and Saturday midday) in accordance with the access scheme described above. ~~In addition to this reassignment~~Additionally, a reassignment of background traffic along Englewood Avenue was also conducted (i.e., same as under the Proposed Project) to estimate the traffic diversions that would be expected to occur as a result of Englewood Avenue being extended east to connect to Veterans Road West. A complete traffic analysis was performed for all study intersections for the Arthur Kill Access Road Alternative.

Figures 3-5a through **3-5d** illustrate the peak hour site-generated trip assignments under this alternative in the 2020 analysis year. These site-generated trip assignments were then added to the corresponding Future No-Action traffic volumes in the 2020 analysis year to arrive at the total Future With-Action traffic volumes for this alternative, shown in **Figures 3-5e** through **3-5h**.

Table 3-8 presents the corresponding traffic operations analysis results for the study intersections under this alternative. As shown in **Table 3-8**, this alternative is projected to result in the following potential significant traffic impacts:

Allentown Lane-Veterans Road West/Arthur Kill Road:

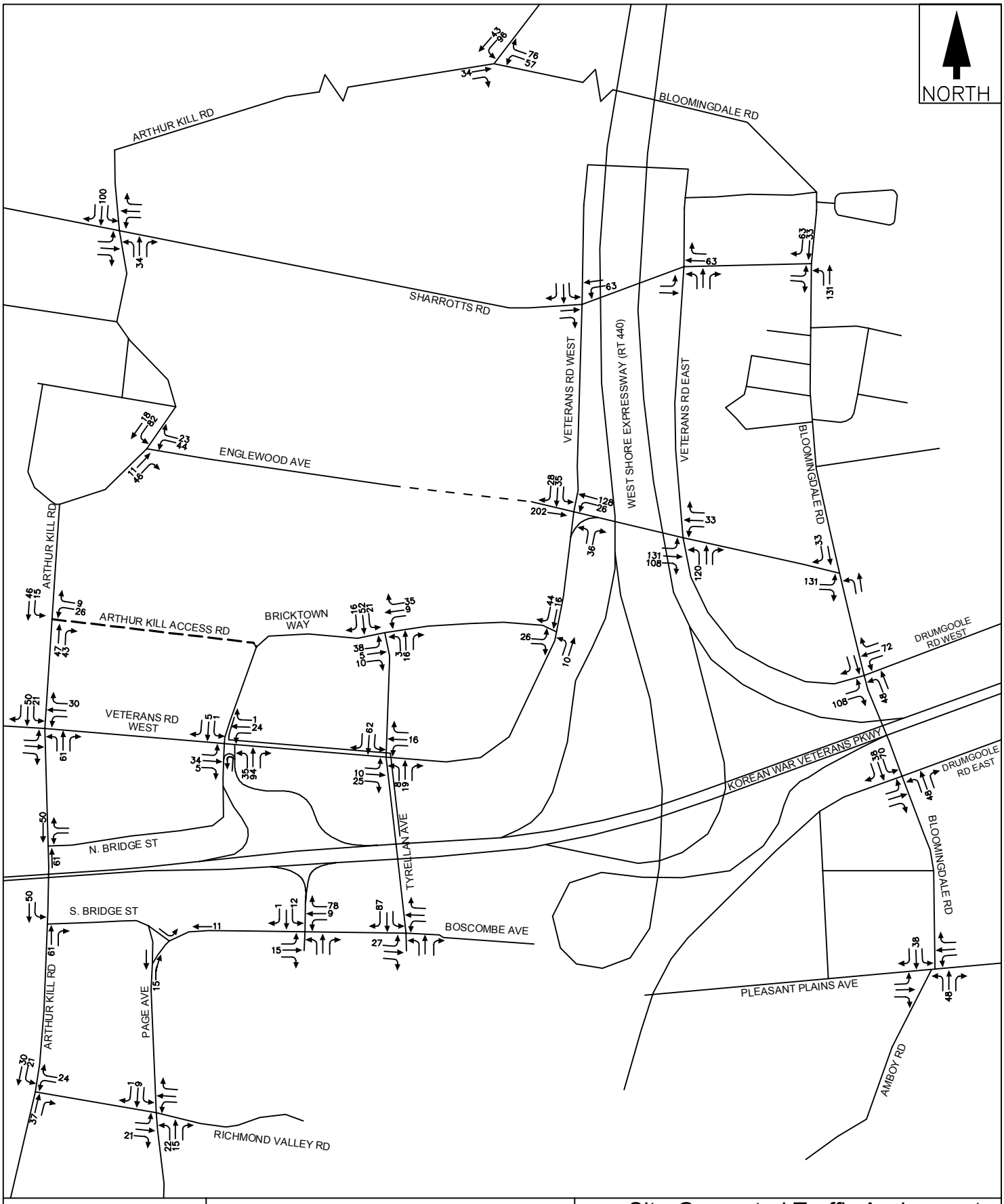
- Weekday AM peak hour – Delay on the southbound approach is projected to increase from 21.4 ~~20.1~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 70.0 ~~58.8~~ seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.
- Weekday midday peak hour – Delay on the southbound approach is projected to increase from 30.4 ~~26.7~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 109.2 ~~89.9~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Weekday PM peak hour – Delay on the southbound approach is projected to increase from 133.7 ~~113.5~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 301.9 ~~274.1~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Saturday midday peak hour – Delay on the southbound approach is projected to increase from 111.0 ~~81.6~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 354.9 ~~308.1~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Richmond Valley Road/Arthur Kill Road (same as under the Proposed Project):

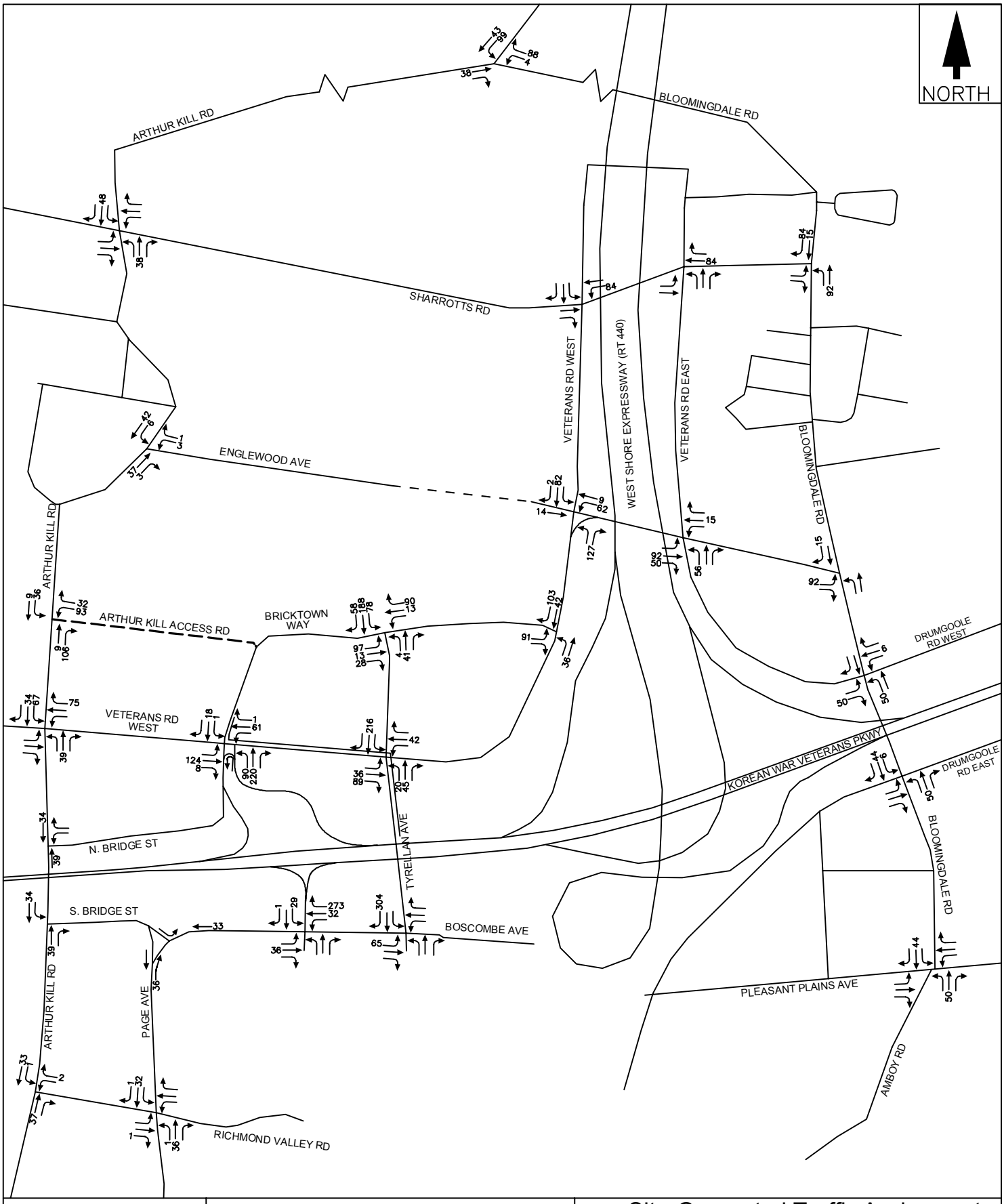
- Weekday midday peak hour – Delay for the southbound approach is projected to increase from 99.8 ~~87.9~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 142.1 ~~128.8~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Weekday PM peak hour – Delay for the westbound approach is projected to increase from 220.9 ~~202.6~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 275.3 ~~257.9~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Saturday midday peak hour – Delay for the westbound approach is projected to increase from 216.3 ~~184.7~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 284.1 ~~251.7~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp:

- Weekday AM peak hour – Delay for the westbound left-turn lane is projected to increase from 100.4 ~~80.0~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 142.3 ~~111.4~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.



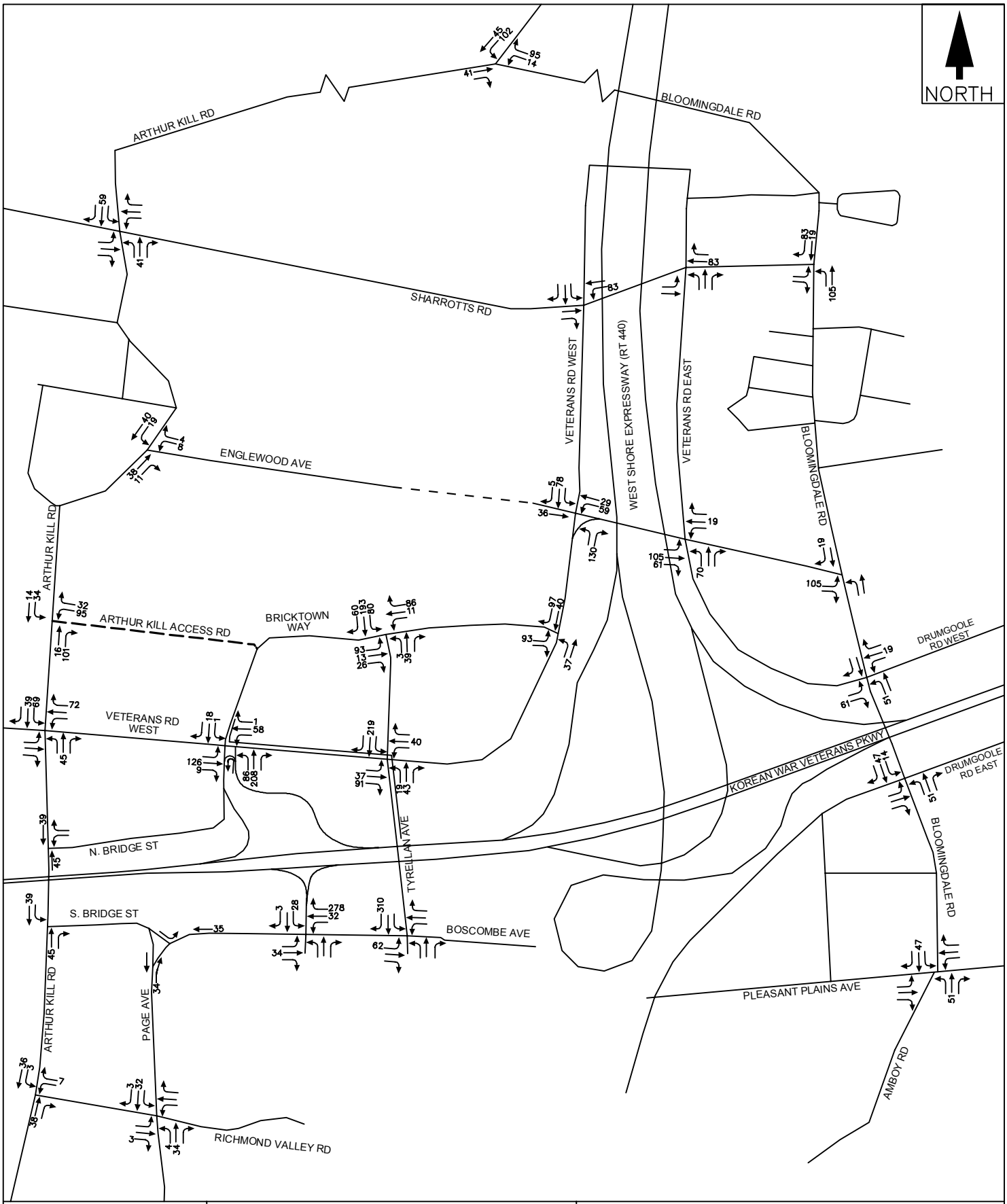
AECOM	Charleston Development EIS Staten Island, NY	Site-Generated Traffic Assignments Year 2020 for Arthur Kill Access Road Alternative Weekday AM Peak Hour Figure 3-5a



AECOM

Charleston Development EIS
Staten Island, NY

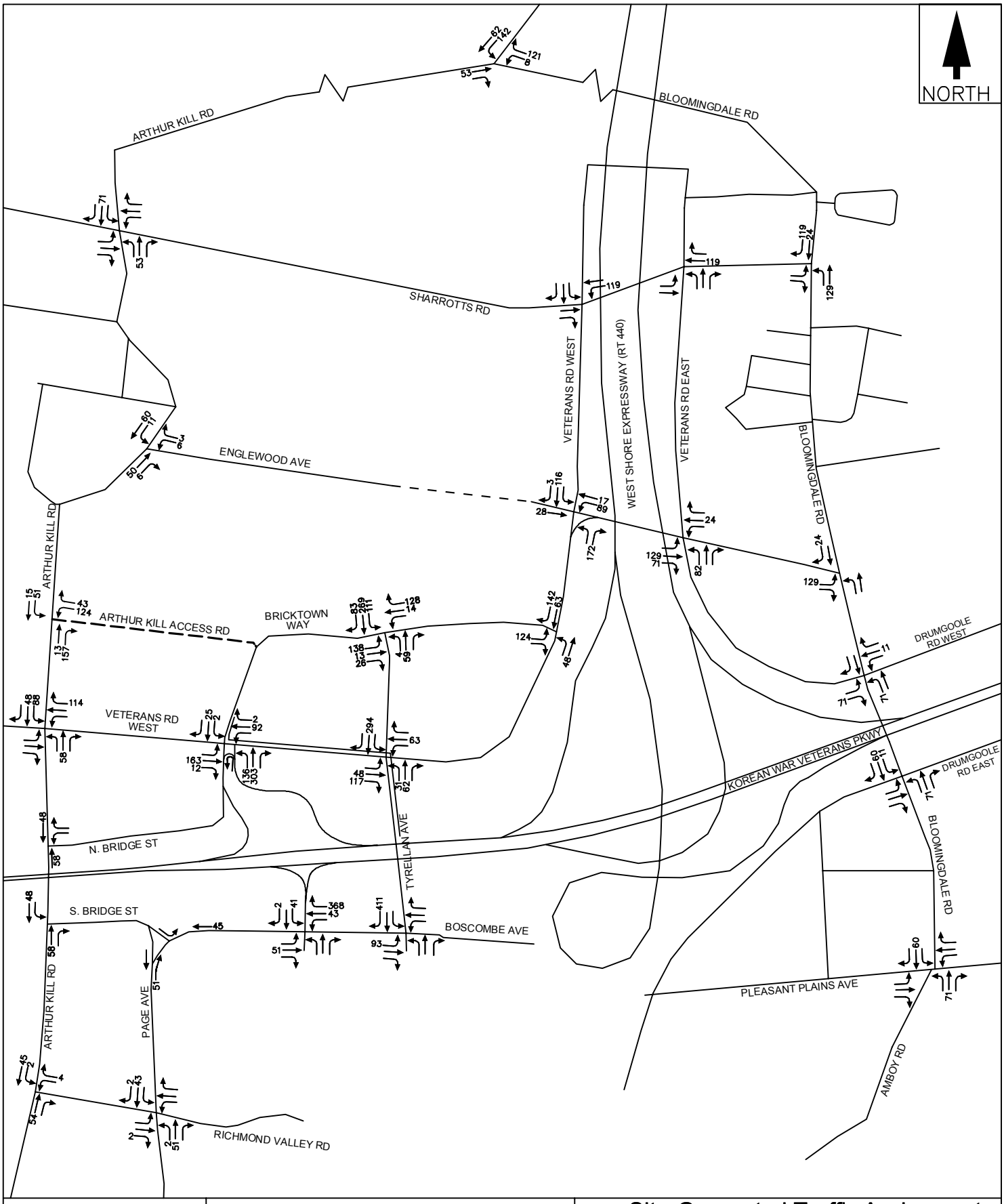
Site-Generated Traffic Assignments
Year 2020
for Arthur Kill Access Road Alternative
Weekday Midday Peak Hour
Figure 3-5b



AECOM

Charleston Development EIS
Staten Island, NY

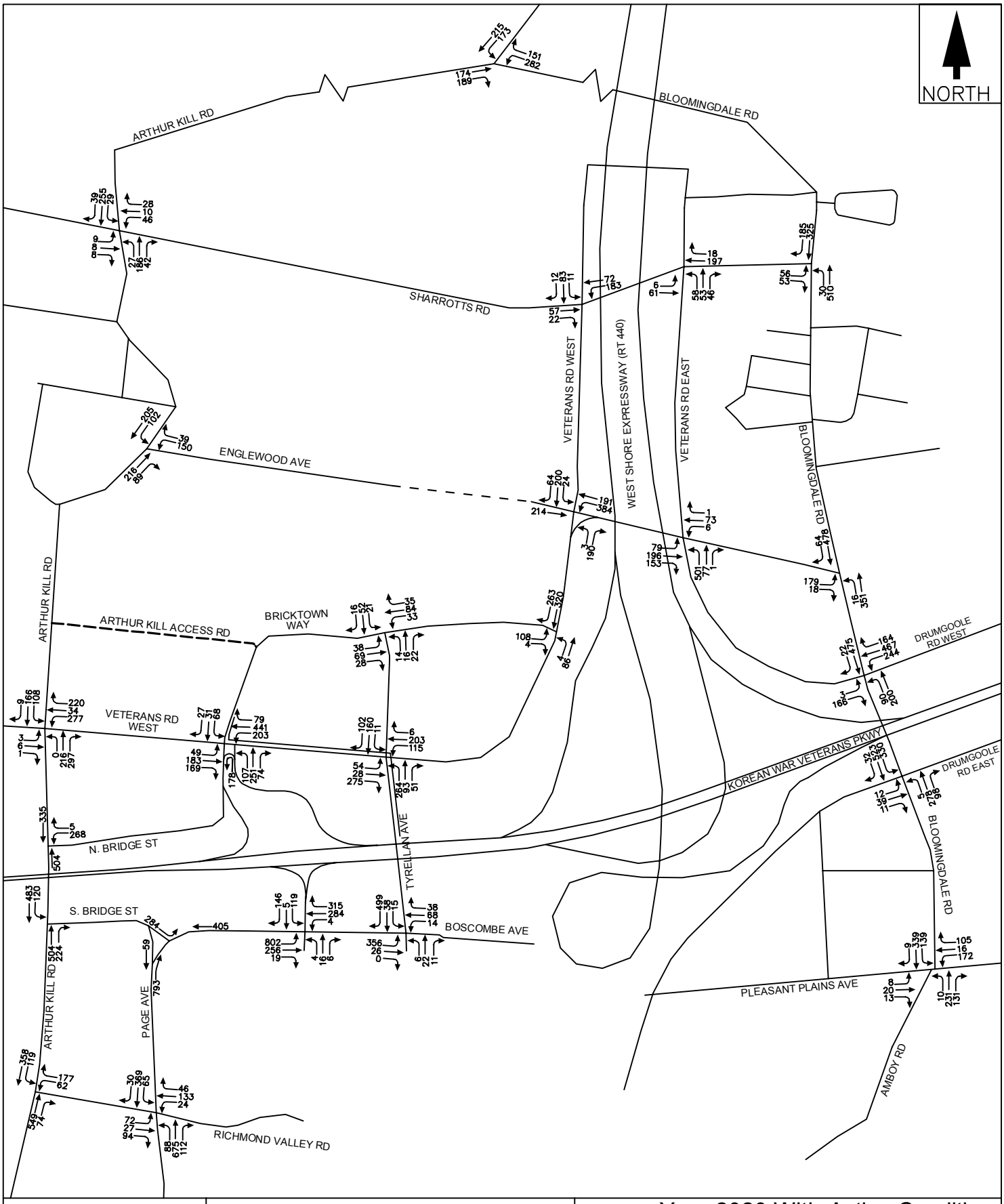
Site-Generated Traffic Assignments
Year 2020
for Arthur Kill Access Road Alternative
Weekday PM Peak Hour
Figure 3-5c



AECOM

Charleston Development EIS
Staten Island, NY

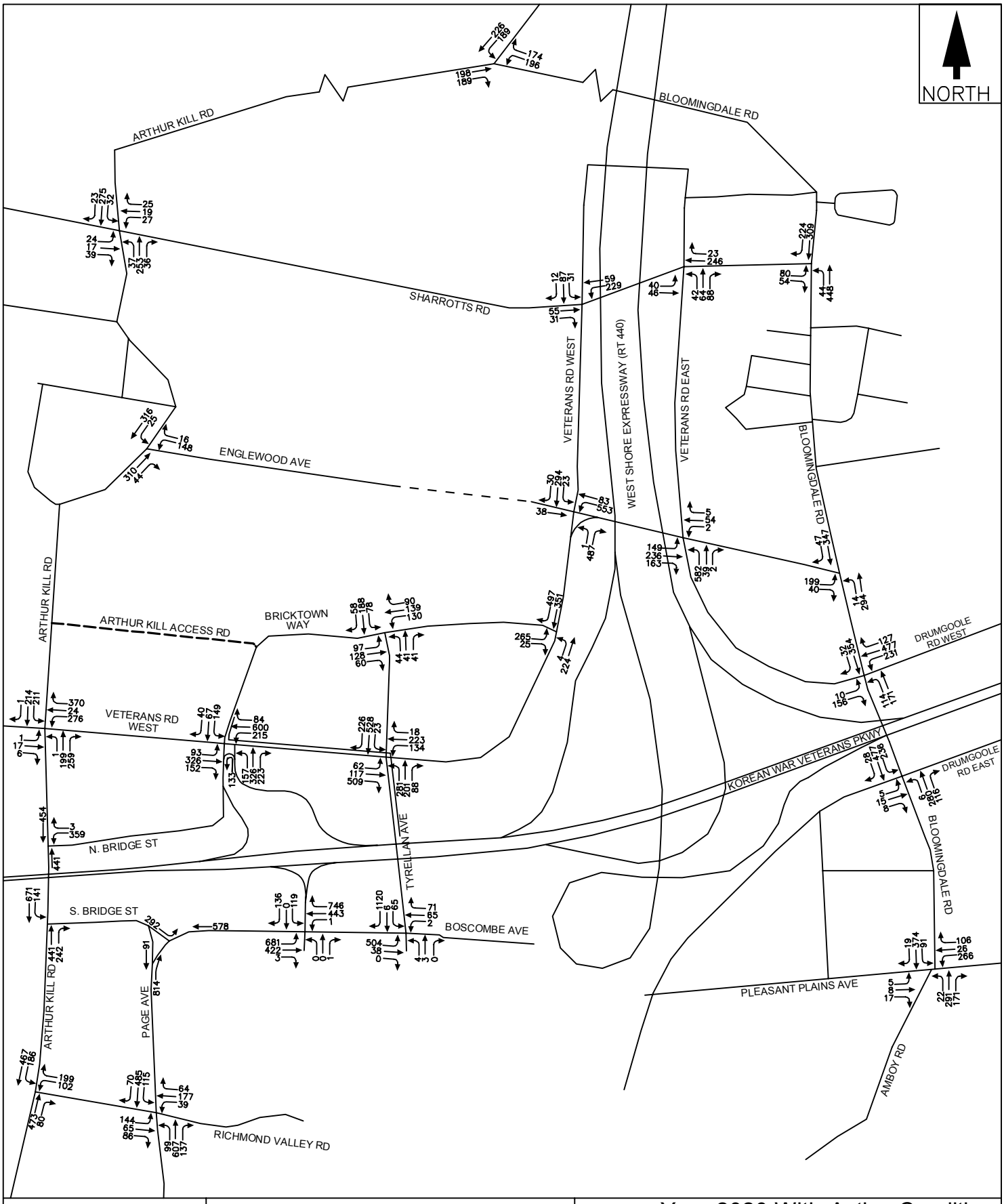
Site-Generated Traffic Assignments
Year 2020
for Arthur Kill Access Road Alternative
Saturday Midday Peak Hour
Figure 3-5d



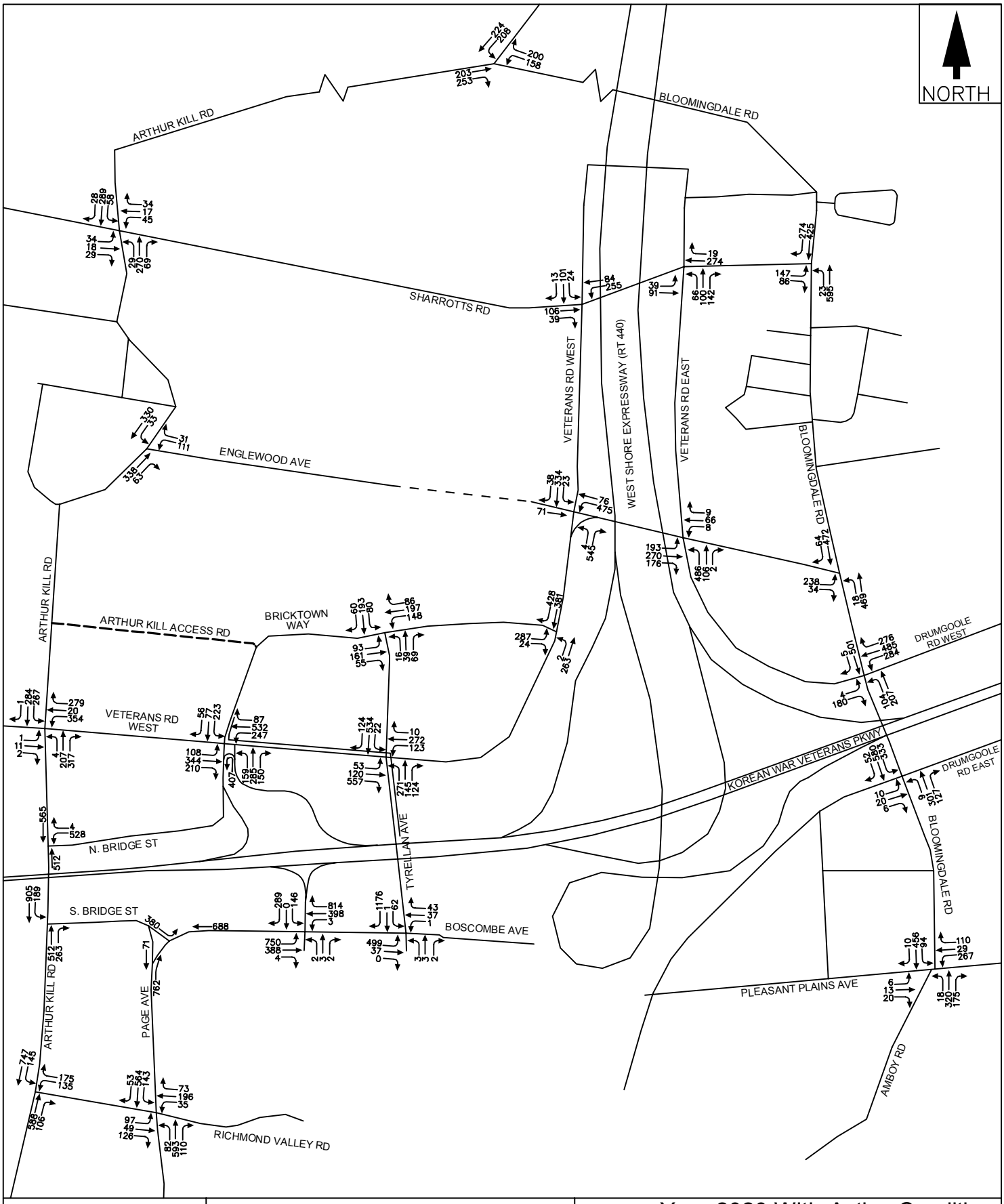
AECOM

Charleston Development EIS
Staten Island, NY

Year 2020 With-Action Condition
Traffic Volumes
for Arthur Kill Access Road Alternative
Weekday AM Peak Hour
Figure 3-5e



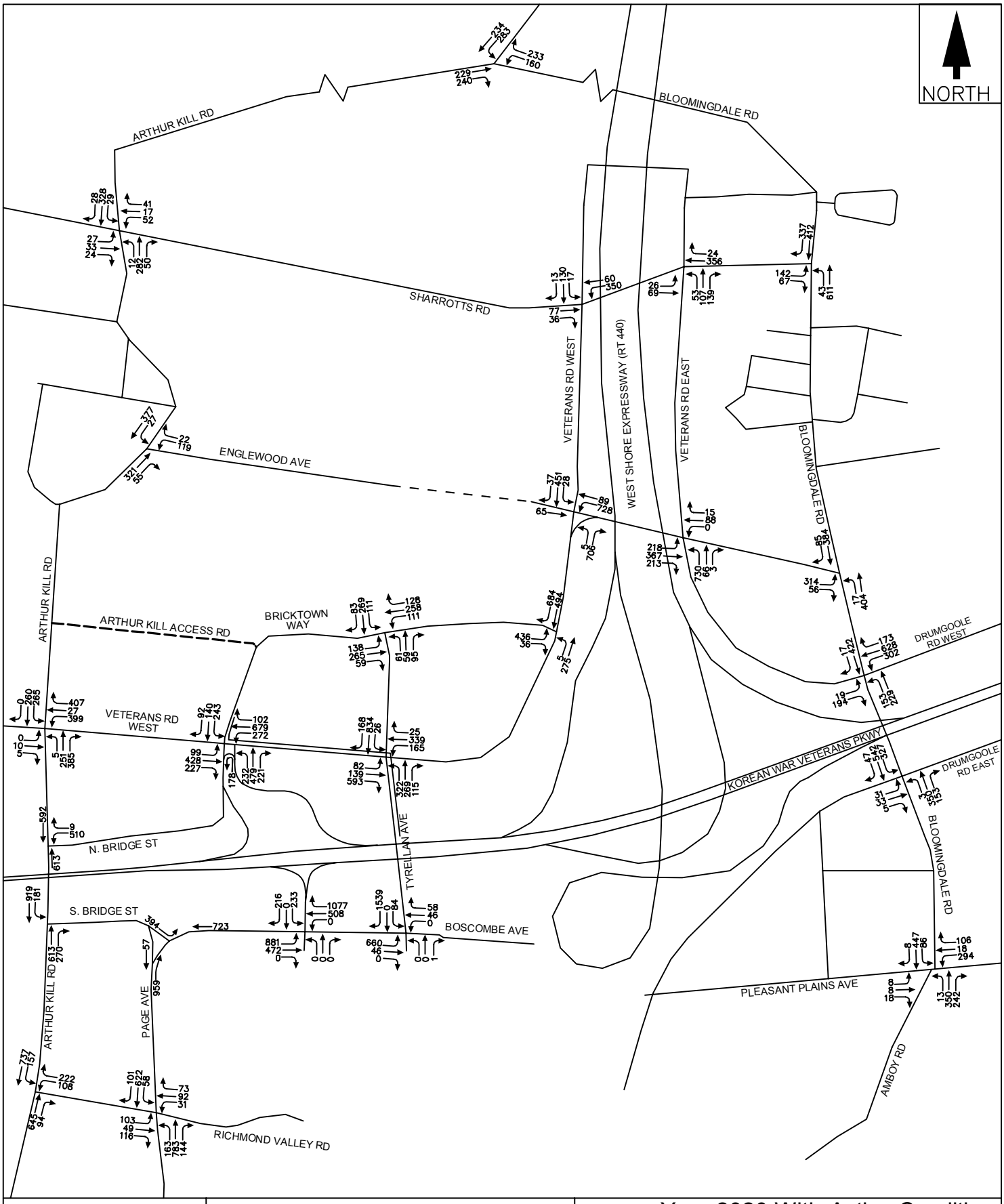
AECOM	Charleston Development EIS Staten Island, NY	Year 2020 With-Action Condition Traffic Volumes for Arthur Kill Access Road Alternative Weekday Midday Peak Hour Figure 3-5f



AECOM

Charleston Development EIS
Staten Island, NY

Year 2020 With-Action Condition
Traffic Volumes
for Arthur Kill Access Road Alternative
Weekday PM Peak Hour
Figure 3-5g



AECOM

Charleston Development EIS
Staten Island, NY

Year 2020 With-Action Condition
Traffic Volumes
for Arthur Kill Access Road Alternative
Saturday Midday Peak Hour
Figure 3-5h

- Weekday midday peak hour – Delay for the westbound left-turn lane is projected to increase from 228.0 ~~62.9~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 859.8 ~~262.2~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. ~~Delay for the northbound approach is projected to increase from 35.5 seconds per vehicle (LOS "D") under Future No-Action conditions to 92.0 seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.~~
- Weekday PM peak hour – Delay for the eastbound left-turn lane is projected to increase from 51.9 seconds per vehicle (LOS "D") under Future No-Action conditions to 66.6 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative. Delay for the eastbound through/right-turn lane is projected to increase from 34.3 seconds per vehicle (LOS "C") under Future No-Action conditions to 53.9 seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative. ~~Delay for the northbound approach is projected to increase from 34.3 seconds per vehicle (LOS "C") under Future No-Action conditions to 74.8 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.~~
- Saturday midday peak hour – Delay for the eastbound left-turn lane is projected to increase from 186.6 seconds per vehicle (LOS "F") under Future No-Action conditions to 217.7 seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay for the eastbound through/right-turn lane is projected to increase from 38.3 seconds per vehicle (LOS "D") under Future No-Action conditions to 87.7 seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay for the westbound left-turn lane is projected to increase from 709.9 ~~210.9~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 1,141.0 ~~921.8~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay for the northbound approach is projected to increase from 36.9 ~~54.0~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 83.7 ~~242.8~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Veterans Road West/Tyrellan Avenue (same as under the Proposed Project):

- Weekday ~~midday~~AM peak hour – Delay for northbound left-turn movements is projected to increase from 51.7 seconds per vehicle (LOS "D") under Future No-Action conditions to 88.3 seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Weekday midday peak hour – Delay on the eastbound approach is projected to increase from 40.8 seconds per vehicle (LOS "D") under Future No-Action conditions to 61.3 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative. Delay for northbound left-turn movements is projected to increase from 390.4 ~~78.8~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 1,234.0 ~~338.3~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay on the southbound approach is projected to increase from 33.1 seconds per vehicle (LOS "C") under Future No-Action conditions to 63.6 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.
- Weekday PM peak hour – Delay on the eastbound approach is projected to increase from 41.0 seconds per vehicle (LOS "D") under Future No-Action conditions to 58.9 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative. Delay for northbound left-turn movements is projected to increase from 140.4 ~~31.9~~ seconds per vehicle (LOS "F" ~~"C"~~) under Future No-Action conditions to 552.2 ~~119.9~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Saturday midday peak hour – Delay on the eastbound approach is projected to increase from 55.9 seconds per vehicle (LOS "E") under Future No-Action conditions to 113.2 seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay on the ~~for~~ westbound approach ~~left-turn movements~~ is projected to increase from 100.2 ~~53.8~~ seconds per vehicle (LOS "F" ~~"D"~~) under Future No-Action conditions to 116.1 ~~129.1~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay for northbound left-turn movements is projected to increase from 749.7 ~~168.5~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 1,382.0 ~~802.7~~ seconds per

vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay on the southbound approach is projected to increase from 35.7 seconds per vehicle (LOS "D") under Future No-Action conditions to 102.7 seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Boscombe Avenue/Outerbridge Crossing Ramps (same as under the Proposed Project):

- Weekday AM peak hour – Delay in the westbound right-turn lane is projected to increase from 43.8 ~~41.6~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 76.4 ~~68.1~~ seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.
- Weekday midday peak hour – Delay in the westbound through/left-turn lane is projected to increase from 69.8 ~~66.4~~ seconds per vehicle (LOS "E") under Future No-Action conditions to 86.8 ~~81.7~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay in the westbound right-turn lane is projected to increase from 267.0 ~~103.1~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 616.6 ~~442.4~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Weekday PM peak hour – Delay in the eastbound left-turn lane is projected to increase from 55.0 ~~53.5~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 60.9 ~~66.5~~ seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative. Delay in the westbound right-turn lane is projected to increase from 154.0 ~~107.4~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 413.7 ~~362.5~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. ~~Delay in the southbound left-turn lane is projected to increase from 55.8 seconds per vehicle (LOS "E") under Future No-Action conditions to 77.3 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.~~
- Saturday midday peak hour – Delay in the eastbound left-turn lane is projected to increase from 33.8 ~~35.7~~ seconds per vehicle (LOS "C" ~~"D"~~) under Future No-Action conditions to 45.3 ~~46.5~~ seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative. Delay in the westbound through/left-turn lane is projected to increase from 83.9 ~~76.2~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 126.1 ~~116.7~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay in the westbound right-turn lane is projected to increase from 513.2 ~~286.0~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 950.2 ~~772.4~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Boscombe Avenue/Tyrellan Avenue (same as under the Proposed Project):

- Weekday midday peak hour – Delay in the southbound right-turn lane is projected to increase from 78.5 ~~50.8~~ seconds per vehicle (LOS "E" ~~"D"~~) under Future No-Action conditions to 315.9 ~~268.1~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Weekday PM peak hour – Delay in the southbound right-turn lane is projected to increase from 89.9 ~~59.7~~ seconds per vehicle (LOS "F" ~~"E"~~) under Future No-Action conditions to 316.4 ~~270.4~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.
- Saturday midday peak hour – Delay for eastbound left-turn movements is projected to increase from 29.7 seconds per vehicle (LOS "C") under Future No-Action conditions to 46.8 seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative. Delay in the southbound right-turn lane is projected to increase from 218.0 ~~156.3~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 534.2 ~~470.2~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Englewood Avenue/Veterans Road West (same as under the Proposed Project):

- Weekday AM peak hour – Delay in the westbound left-turn lane is projected to increase from 14.8 seconds per vehicle (LOS "B") under Future No-Action conditions to 130.4 ~~132.2~~ seconds per vehicle (LOS "F") under Future With-Action conditions.

- Weekday midday peak hour – Delay in the westbound left-turn lane is projected to increase from 15.5 seconds per vehicle (LOS "B") under Future No-Action conditions to 90.8 ~~92.8~~ seconds per vehicle (LOS "F") under Future With-Action conditions.
- Weekday PM peak hour – Delay in the westbound left-turn lane is projected to increase from 14.6 ~~14.7~~ seconds per vehicle (LOS "B") under Future No-Action conditions to 61.5 ~~63.1~~ seconds per vehicle (LOS "E") under Future With-Action conditions.
- Saturday midday peak hour – Delay in the westbound left-turn lane is projected to increase from 44.5 ~~45.2~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 215.7 ~~218.0~~ seconds per vehicle (LOS "F") under Future With-Action conditions.

Englewood Avenue/Veterans Road East (same as under the Proposed Project):

- Weekday PM peak hour – Delay in the eastbound through/left-turn lane is projected to increase from 29.9 ~~28.2~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 57.8 ~~51.6~~ seconds per vehicle (LOS "E" ~~"D"~~) under the Arthur Kill Access Road Alternative.
- Saturday midday peak hour – Delay in the eastbound through/left-turn lane is projected to increase from 108.7 ~~94.5~~ seconds per vehicle (LOS "F") under Future No-Action conditions to 235.3 ~~219.3~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Veterans Road East-Drumgoole Road West/Bloomingdale Road (same as under the Proposed Project):

- Weekday AM peak hour – Delay in the eastbound right-turn lane is projected to increase from 27.7 seconds per vehicle (LOS "C") under Future No-Action conditions to 79.6 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative. Delay in the northbound left-turn lane is projected to increase from 24.2 seconds per vehicle (LOS "C") under Future No-Action conditions to 63.0 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.
- Weekday midday peak hour – Delay in the eastbound right-turn lane is projected to increase from 34.9 ~~35.3~~ seconds per vehicle (LOS "C" ~~"D"~~) under Future No-Action conditions to 62.5 ~~64.2~~ seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative. Delay in the northbound left-turn lane is projected to increase from 23.3 ~~23.7~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 46.4 ~~47.9~~ seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative.
- Weekday PM peak hour – Delay in the eastbound right-turn lane is projected to increase from 33.0 ~~33.1~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 53.9 ~~54.5~~ seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative. Delay in the northbound left-turn lane is projected to increase from 27.1 seconds per vehicle (LOS "C") under Future No-Action conditions to 76.2 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.
- Saturday midday peak hour – Delay in the eastbound right-turn lane is projected to increase from 43.0 ~~43.3~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 157.2 ~~159.0~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative. Delay in the northbound left-turn lane is projected to increase from 35.3 ~~36.4~~ seconds per vehicle (LOS "D") under Future No-Action conditions to 152.2 ~~158.2~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

Pleasant Plains Avenue-Amboy Road/Bloomingdale Road (same as under the Proposed Project):

- Weekday AM peak hour – Delay on the southbound approach is projected to increase from 61.0 ~~64.8~~ seconds per vehicle (LOS "E") under Future No-Action conditions to 115.6 ~~120.0~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative.

- Weekday PM peak hour – Delay on the southbound approach is projected to increase from 30.2 ~~30.9~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 49.7 ~~52.8~~ seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative.
- Saturday midday peak hour – Delay on the southbound approach is projected to increase from 30.5 ~~30.6~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 48.8 ~~49.6~~ seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative.

Arthur Kill Road/Bloomingdale Road (same as under the Proposed Project):

- Weekday midday peak hour – Delay on the westbound approach is projected to increase from 18.2 seconds per vehicle (LOS "B") under Future No-Action conditions to 53.6 seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative.
- Weekday PM peak hour – Delay on the westbound approach is projected to increase from 23.2 ~~19.5~~ seconds per vehicle (LOS "C" ~~"B"~~) under Future No-Action conditions to 129.7 ~~96.8~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative ~~Future With-Action conditions~~. Delay on the northbound approach is projected to increase from 29.7 ~~27.9~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 56.3 ~~53.7~~ seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative ~~Future With-Action conditions~~.
- Saturday midday peak hour – Delay on the westbound approach is projected to increase from 31.3 ~~22.8~~ seconds per vehicle (LOS "C") under Future No-Action conditions to 250.3 ~~188.4~~ seconds per vehicle (LOS "F") under the Arthur Kill Access Road Alternative ~~Future With-Action conditions~~.

~~**Sharrotts Road/Arthur Kill Road (same as under the Proposed Project):**~~

- ~~Saturday midday peak hour – Delay on the eastbound approach is projected to increase from 24.5 seconds per vehicle (LOS "C") under Future No-Action conditions to 34.9 seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative. Delay on the westbound approach is projected to increase from 24.2 seconds per vehicle (LOS "C") under Future No-Action conditions to 30.2 seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative.~~

Englewood Avenue/Arthur Kill Road (same as under the Proposed Project):

- ~~Weekday AM peak hour – Delay on the westbound approach is projected to increase from 10.8 seconds per vehicle (LOS "B") under Future No-Action conditions to 40.7 seconds per vehicle (LOS "E") under the Arthur Kill Access Road Alternative.~~
- Weekday PM peak hour – Delay on the westbound approach is projected to increase from 14.5 ~~14.3~~ seconds per vehicle (LOS "B") under Future No-Action conditions to 31.6 ~~33.8~~ seconds per vehicle (LOS "D") under the Arthur Kill Access Road Alternative.

Transportation improvement measures were then investigated to identify those that mitigate the potential significant traffic impacts identified above. The following transportation system improvement measures would be required to mitigate the potential significant traffic impacts under this alternative:

Allentown Lane-Veterans Road West/Arthur Kill Road:

- Restripe the southbound ~~northbound~~ approach to accommodate one 10 foot exclusive left-turn lane and one 11-foot shared through/right-turn lane.
- During the weekday midday peak hour, reallocate one second of green time from the east-west phase to the north-south phase.
- During the weekday PM peak hour, reallocate two seconds of green time from the east-west phase to the north-south phase.
- During the Saturday midday peak hour, reallocate two ~~three~~ seconds of green time from the east-west phase to the north-south phase.

Richmond Valley Road/Arthur Kill Road (same as under the Proposed Project):

- Restripe the southbound approach to accommodate one 10 foot through lane and one 10 foot exclusive left-turn lane.

Veterans Road West/Bricktown Way/Korean War Veterans Parkway westbound off-ramp:

- Widen the northbound approach to accommodate an exclusive right-turn lane, and widen the eastbound approach to accommodate an exclusive right-turn lane.
- During the weekday midday peak hour, reallocate one second of green time from the northbound phase and four seconds of green time from the southbound phase to the east-west ~~northbound~~ phase.
- During the weekday PM peak hour, reallocate two ~~one~~ seconds of green time from the northbound ~~southbound~~ phase to the east-west ~~northbound~~ phase.
- ~~, and Saturday midday peak hours.~~
- During the Saturday midday peak hour, implement a concurrent east-west left-turn phase with a northbound right-turn overlap, as well as a concurrent north-south phase. Reallocate 11 seconds from the northbound phase to the concurrent east-west left-turn phase. Reallocate five seconds from the east-west phase and nine seconds from the southbound phase to the concurrent north-south phase (14 seconds total).

Veterans Road West/Tyrellan Avenue (same as under the Proposed Project):

- Eliminate a portion of the raised median on the southbound and eastbound approaches to accommodate one exclusive left-turn lane on each approach.
- During the weekday AM peak hour, modify the traffic signal phasing to create a concurrent east-west phase, and allocate 53 seconds to the east-west phase and 37 seconds to the north-south phase.
- During the weekday midday, weekday PM, and Saturday midday peak hours, modify the traffic signal phasing to create a lagging westbound phase, and a lagging northbound phase. As part of this mitigation measure, upgraded traffic signal hardware will be required to accommodate the proposed phasing changes. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including protected left-turn arrows for the approaches requiring lagging phases.
- ~~During the weekday midday, weekday PM, and Saturday midday peak hours, modify the signal phasing to create a lagging westbound phase, and three phases for northbound and southbound movements: a southbound leading phase, a concurrent north-south phase, and a lagging northbound phase.~~
- During the weekday midday peak hour, allocate 27 seconds to the east-west phase, 18 ~~10~~ seconds to the westbound lagging phase, ~~16 seconds to the southbound leading phase,~~ 32 ~~17~~ seconds to the concurrent north-south phase, and 13 ~~19~~ seconds to the lagging northbound phase.
- During the weekday PM peak hour, allocate 29 seconds to the east-west phase, 22 ~~10~~ seconds to the westbound lagging phase, ~~16 seconds to the southbound leading phase,~~ 27 ~~17~~ seconds to the concurrent north-south phase, and 12 ~~19~~ seconds to the lagging northbound phase.
- During the Saturday midday peak hour, allocate 31 seconds to the east-west phase, 11 seconds to the westbound lagging phase, ~~18 seconds to the southbound leading phase,~~ 35 ~~17~~ seconds to the concurrent north-south phase, and 13 ~~16~~ seconds to the lagging northbound phase.

Boscombe Avenue/Outerbridge Crossing Ramps (same as under the Proposed Project):

- Widen the on-ramp to the eastbound Outerbridge Crossing to accommodate a second receiving lane with an appropriate transition taper. The City of New York is committed to building this improvement. This mitigation measure is pending further studies subsequent to 2015, and requires review and approval from NYCDOT.

- Modify the traffic signal hardware to provide for a westbound right-turn overlap phase to operate concurrently with the north-south phase. As part of this mitigation measure, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected right-turn arrow for the westbound approach.
- During the weekday midday peak hour, reallocate ~~one~~ one seconds of green time from the eastbound phase to the east-west phase.
- During the weekday PM peak hour, reallocate five seconds of green time from the east-west phase to eastbound phase.
- During the Saturday midday peak hour, reallocate three ~~two~~ seconds of green time from the southbound phase and add one second to the eastbound phase and two seconds to the east-west phase.

Boscombe Avenue/Tyrellan Avenue (same as under the Proposed Project):

- Modify the traffic signal hardware to provide for a southbound right-turn overlap phase to operate concurrently with a new eastbound-only lagging phase. As part of this mitigation measure, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected left-turn arrow for the eastbound approach and a protected right-turn arrow for the southbound approach.
- During the weekday midday peak hour, reallocate 17 seconds of green time from the east-west phase to the lagging eastbound phase with the southbound right-turn overlap.
- During the weekday PM peak hour, reallocate 16 seconds of green time from the east-west phase to the lagging eastbound phase with the southbound right-turn overlap.
- During the Saturday midday peak hour, reallocate 17 ~~19~~ seconds of green time from the east-west phase to the lagging eastbound phase with the southbound right-turn overlap.

Englewood Avenue/Veterans Road West (same as under the Proposed Project):

- During the weekday AM peak hour, reallocate five seconds of green time from the north-south phase to the east-west phase.
- During the weekday midday peak hour, reallocate four seconds of green time from the north-south phase to the east-west phase.
- During the weekday PM peak hour, reallocate two seconds of green time from the north-south phase to the east-west phase.
- During the Saturday midday peak hour, modify the traffic signal phasing to accommodate a lagging westbound phase. Reallocate 10 ~~six~~ seconds of green time from the north-south phase, plus one second of green time from the east-west phase, to the lagging westbound phase (11 seconds total). As part of this mitigation measure, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected left-turn arrow for the westbound approach.

Englewood Avenue/Veterans Road East (same as under the Proposed Project):

- During the weekday PM peak hour, reallocate two ~~one~~ seconds of green time from the northbound phase to the east-west phase.
- During the Saturday midday peak hour, reallocate five seconds of green time from the northbound phase to the east-west phase.

Veterans Road East-Drumgoole Road West/Bloomingdale Road (same as under the Proposed Project):

- Prohibit on-street parking on the west side of Bloomingdale Road between Veterans Road East and Churchill Avenue, and restripe the southbound approach to accommodate one 12-foot through lane and one 12-foot through/right-turn lane.

- During the weekday AM peak hour, reallocate two seconds of green time from the westbound phase to the eastbound phase~~, and reallocate 10 seconds from the north-south phase to create a northbound lagging phase with an eastbound right-turn overlap~~.
- During the weekday midday peak hour, reallocate two seconds of green time from the westbound phase to the eastbound phase.
- During the weekday PM peak hour, reallocate one second of green time from the westbound phase to the eastbound phase.
- During the Saturday midday peak hour, reallocate one second of green time from the westbound phase, plus three seconds of green time from the north-south phase, to the eastbound phase (four seconds total).

Pleasant Plains Avenue-Amboy Road/Bloomingdale Road (same as under the Proposed Project):

- During the weekday AM peak hour, reallocate four ~~three~~ seconds of green time from the east-west phase to the north-south phase.
- During the weekday PM peak hour, reallocate one second of green time from the east-west phase to the north-south phase.
- During the Saturday midday peak hour, reallocate one second of green time from the east-west phase to the north-south phase.

Arthur Kill Road/Bloomingdale Road (same as under the Proposed Project):

- Restripe the westbound approach to accommodate one ~~11~~ 10-foot exclusive left-turn lane and one ~~11~~ 10-foot exclusive through lane.
- During the weekday PM peak hour, reallocate 14 ~~13~~ seconds of green time from the east-west phase to create a ~~10~~ 11-second lagging westbound phase, and add three seconds of green time to the northbound phase.
- During the Saturday midday peak hour, reallocate 18 ~~17~~ seconds of green time from the east-west phase to create a lagging westbound phase.
- As part of these mitigation measures, upgraded traffic signal hardware will be required to accommodate the proposed phasing change. The new hardware will require a more robust and flexible traffic signal controller (ASTC 12) that could accommodate multiple traffic timing and phasing plans, including a protected left-turn arrow for the westbound approach.

~~**Sharrotts Road/Arthur Kill Road (same as under the Proposed Project):**~~

- ~~Under this alternative, the project is projected to result in unmitigable impacts on the eastbound and westbound approaches at this stop-controlled intersection during the Saturday midday peak hour, according to CEQR criteria. It should be noted that the delays at this intersection are projected to exceed the CEQR threshold of mid-LOS "D" by only 5.0 seconds on the stop-controlled eastbound approach, and by only 0.3 seconds on the stop-controlled westbound approach, and only during the Saturday midday peak hour. Furthermore, all approaches at the intersection will operate under capacity with delays corresponding to LOS "D" or better—which represents an acceptable operational level for an unsignalized intersection—during all four peak hours analyzed. Therefore, no mitigation measures are proposed at this intersection for the potential significant traffic impact identified during the Saturday midday peak hour, and an unmitigable impact will remain during that hour.~~

Englewood Avenue/Arthur Kill Road (same as under the Proposed Project):

- Restripe the westbound approach to accommodate one exclusive left-turn lane and one exclusive right-turn lane.

Table 3-9 presents the corresponding traffic operations analysis results for the study intersections with the transportation improvements identified above in place under this alternative. With these transportation improvement measures in place, all potential significant traffic impacts are projected to be mitigated under the Arthur Kill Access Road Alternative.

Level-of-service comparisons of the Arthur Kill Access Road Alternative along with the other alternatives in this chapter, are provided in previous **Table 3-3** for the 2020 year. Impact comparisons between all the alternatives are provided in previous **Table 3-4**, and comparisons with mitigation measures are provided in previous **Table 3-5**.

Under the Arthur Kill Access Road Alternative, traffic impacts were identified at seven ~~six~~ signalized intersections ~~and one unsignalized intersection~~ during the weekday AM peak hour, at nine ~~eight~~ signalized intersections during the weekday MD peak hour, at 11 signalized intersections and one unsignalized intersection during the weekday PM peak hour, and at 11 signalized intersections ~~and one unsignalized intersection~~ during the Saturday MD peak hour. Under the Proposed Project, traffic impacts were identified at the same seven ~~six~~ signalized intersections ~~and the same unsignalized intersection~~ during the weekday AM peak hour, at the same nine ~~eight~~ signalized intersections during the weekday MD peak hour, at the same 11 signalized intersections and the same unsignalized intersection during the weekday PM peak hour, and at the same 11 signalized intersections ~~and the same unsignalized intersection~~ during the Saturday MD peak hour. Those improvement measures identified for the Proposed Project would generally be the same under this alternative, with some additional timing changes ~~(~~at the intersection~~s~~ of ~~Veterans Road West/Bricktown Way-Korean War Veterans Parkway Off-Ramp and~~ Allentown Lane-Veterans Road West/Arthur Kill Road~~)~~ that would be required under this alternative but would not be required under the Proposed Project, and some additional phasing changes at the intersection of Veterans Road West/Bricktown Way-Korean War Veterans Parkway Off-Ramp that would be required under the Proposed Project but ~~that~~ would not be required under this alternative.

~~As discussed in **Chapter 2.13,** a plan by NYSDOT to improve the southbound West Shore Expressway (WSE) ramp system and adjacent surface street intersections just north of the Project Area would potentially increase volumes at three Study Area intersections:~~

- ~~Veterans Road West/Englewood Avenue~~
- ~~Bricktown Way/Veterans Road West~~
- ~~Arthur Kill Road/Bloomingdale Road~~

~~The potential changes in traffic volumes and levels of service due to the proposed WSE ramps will be analyzed for the FEIS when sufficient information about this ramp improvement program is available. Until results from those studies are available, it is conservatively assumed that at these three intersections a worsening of already identified significant traffic impacts and/or the creation of additional significant impacts would potentially occur in one or more peak hour in 2015 and 2020 due to increased traffic volumes associated with these ramp improvements. Those potential impacts would also occur under the Arthur Kill Access Road Alternative.~~

Air Quality

This alternative would not alter the findings of the stationary source air quality analysis for the Proposed Project provided in **Chapter 2.14**. All of the other development components would still be constructed on the retail, park, senior housing and school sites Stationary source impacts under this alternative would remain the same as under the Proposed Project, and no significant adverse stationary source air quality impacts would occur.

Mobile source impacts on the analyzed off-site roadway network would essentially remain the same as compared to the Future With-Action Condition, given the minimal change in traffic patterns around the Development Area. **Tables 2.20-6** and **2.20-7**, previously shown, summarize the changes under this alternative as compared to the Future With-Action Condition in LOS, total volume, and net incremental volume at each analyzed intersection. Therefore, this alternative would not result in significant adverse air quality impacts from mobile source operations.

Greenhouse Gas Emissions

This alternative would not significantly alter the findings for greenhouse gas emissions from the analysis for the Proposed Project provided in **Chapter 2.15**. All of the other development components would still

be constructed on the retail, park, senior housing and school sites, which are the components that would generate greenhouse gasses. Under this alternative, it is ~~possible~~expected that slightly more greenhouse gas emissions during construction would be generated, as construction activities for this additional access roadway would occur within this utility corridor area, which would no longer remain in its current natural state. However, significant adverse impacts are not expected.

Noise

The findings of the stationary source noise analysis for the Proposed Project provided in **Chapter 2.16** would not be altered under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites Stationary source impacts under this alternative would remain the same as under the Proposed Project, and no significant adverse stationary source noise impacts would occur.

Under this alternative, mobile source impacts within the studied off-site roadway network would essentially remain the same as compared to the Future With-Action Condition, given the minimal change in traffic patterns around the area. Therefore this alternative would not result in significant adverse noise impacts from mobile source operations.

Public Health

The findings for public health from the analysis provided for the Proposed Project in **Chapter 2.17** would not change under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites. The Proposed Project would not result in unmitigated significant adverse impacts in technical areas such as air quality, hazardous materials, or noise. Further, the Proposed Project would not introduce any unusual circumstances that have potential public health consequences related to other issues. Therefore, a detailed public health assessment was not warranted and significant adverse impacts to public health are not expected to occur. This alternative would not alter this conclusion.

Neighborhood Character

This alternative would not alter the findings for neighborhood character from the analysis provided for the Proposed Project in **Chapter 2.18**. As previously discussed in this section, this alternative would not result in any new significant adverse impacts to those components that make up neighborhood character. The only changes would be the new roadway land use and new views along the access roadway, which would carry additional vehicular traffic between Retail Site "A" and Bricktown Way to/from Retail Site "B" and Arthur Kill Road. Therefore, this alternative would not result in significant adverse impacts.

Construction

The findings from the construction analysis provided for the Proposed Project in **Chapter 2.19** would not be significantly changed under this alternative. All of the other development components would still be constructed on the retail, park, senior housing and school sites. It is ~~possible~~expected that, under this alternative, slightly more construction waste and more construction truck and other trips would be generated if this access road were constructed. It is expected that the construction of the additional access road would be completed in less than 12 months. This access road, under this alternative scenario, could potentially be constructed when Retail Site "B" is constructed, though actual construction scenarios are not planned or known at this time.

~~Table 3-8~~

~~Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Arthur Kill Access Road Alternative Traffic Conditions~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action				
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS																																
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	10.3	B	0.0		0.04	10.5	B	0.04	10.5	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0	
	WB	LT	0.43	14.7	B	0.43	14.7	B	0.0		0.54	16.8	B	0.54	16.8	B	0.0		0.68	20.8	C	0.68	20.8	C	0.0		0.70	20.5	C	0.70	20.5	C	0.0	
		R	0.61	18.7	B	0.49	16.0	B	-2.7		0.82	27.6	C	0.78	25.1	C	-2.5		0.61	18.7	B	0.64	19.3	B	0.6		0.76	23.3	C	0.80	25.7	C	2.4	
	NB	LTR	0.75	21.3	C	0.84	26.1	C	4.8		0.63	17.7	B	0.68	18.9	B	1.2		0.68	18.9	B	0.74	20.6	C	1.7		0.83	24.9	C	0.90	30.8	C	5.9	
	SB	LTR	0.60	20.1	C	0.97	58.8	E	38.7	yes	0.78	26.7	C	1.10	89.9	F	63.2	yes	1.16	113.5	F	1.54	274.1	F	160.6	yes	1.07	81.6	F	1.62	308.1	F	226.5	yes
	Overall		**0.68**	**19.2**	**B**	**0.73**	**29.7**	**C**	**10.5**		**0.80**	**22.3**	**C**	**0.94**	**40.4**	**D**	**18.1**		**0.92**	**47.8**	**D**	**1.11**	**104.9**	**F**	**57.1**		**0.91**	**36.6**	**D**	**1.21**	**103.2**	**F**	**66.6**	
North Bridge Street / Arthur Kill Road	WB	LR	0.49	18.4	B	0.49	18.4	B	0.0		0.64	21.1	C	0.64	21.1	C	0.0		0.95	31.3	C	0.95	31.3	C	0.0		0.89	27.9	C	0.89	27.9	C	0.0	
	NB	T	0.54	12.1	B	0.61	13.4	B	1.3		0.45	11.0	B	0.49	11.5	B	0.5		0.49	11.5	B	0.54	12.1	B	0.6		0.59	12.9	B	0.66	14.0	B	1.1	
	SB	T	0.35	9.9	A	0.42	10.5	B	0.6		0.52	11.3	B	0.56	11.8	B	0.5		0.64	12.2	B	0.69	12.8	B	0.6		0.58	11.5	B	0.63	12.1	B	0.6	
	Overall		**0.52**	**13.2**	**B**	**0.56**	**13.7**	**B**	**0.5**		**0.56**	**14.2**	**B**	**0.59**	**14.4**	**B**	**0.2**		**0.76**	**18.9**	**B**	**0.79**	**19.0**	**B**	**0.1**		**0.71**	**17.4**	**B**	**0.75**	**17.7**	**B**	**0.3**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.1	C	0.67	28.6	C	2.5		0.89	45.0	D	0.90	46.4	D	1.4		0.91	46.6	D	0.93	49.9	D	3.3		0.93	51.2	D	0.94	53.1	D	1.9	
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9		0.53	9.7	A	0.57	10.3	B	0.6		0.64	11.2	B	0.68	11.9	B	0.7		0.67	11.5	B	0.72	12.6	B	1.1	
	SB	LT	0.68	13.5	B	0.86	23.3	C	9.8		1.14	87.9	F	1.24	128.2	F	40.3	yes	1.42	202.6	F	1.54	257.9	F	55.3	yes	1.38	184.7	F	1.53	251.7	F	67.0	yes
	Overall		**0.66**	**14.7**	**B**	**0.80**	**19.1**	**B**	**4.4**		**1.06**	**5.3**	**D**	**1.13**	**70.1**	**E**	**18.3**		**1.3**	**109**	**F**	**1.35**	**137.0**	**F**	**27.3**		**1.23**	**97.2**	**F**	**1.34**	**128.0**	**F**	**30.8**	
Richmond Valley Road / Page Avenue	EB	LTR	0.35	23.4	C	0.38	23.9	C	0.5		0.81	3[illegible]	[illegible]	0.81	37.2	D	0.0		0.[illegible]	29.[illegible]	C	0.70	30.1	C	0.2		0.70	29.9	C	0.70	30.1	C	0.2	
	WB	LTR	0.38	24.1	C	0.38	24.1	C	0.0		0.55	2[illegible]	[illegible]	0.55	27.9	D	0.0		0.[illegible]	31.[illegible]	C	0.66	31.1	C	0.0		0.50	26.6	C	0.50	26.6	C	0.0	
	NB	L	0.18	11.0	B	0.24	11.7	B	0.7		0.33	1[illegible]	B	0.35	13.9	B	0.5		0.[illegible]	13.[illegible]	B	0.35	14.4	B	0.9		0.60	18.8	B	0.65	21.1	C	2.3	
		TR	0.80	20.8	C	0.82	21.5	C	0.7		0.74	19.1	B	0.76	20.4	C	1.3		0.69	17.6	B	0.72	18.8	B	1.0		0.89	25.2	C	0.94	30.4	C	5.2	
	SB	LTR	0.55	15.5	B	0.57	15.9	B	0.4		0.78	22.5	C	0.84	26.3	C	3.8		0.88	28.8	C	0.94	37.6	D	8.8		0.77	21.3	C	0.86	27.3	C	6.0	
	Overall		**0.64**	**19.6**	**B**	**0.65**	**20.0**	**B**	**0.4**		**0.79**	**23.9**	**C**	**0.83**	**25.4**	**C**	**1.5**		**0.81**	**25.3**	**C**	**0.85**	**28.7**	**C**	**3.4**		**0.82**	**24.4**	**C**	**0.85**	**28.4**	**C**	**4.0**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.47	26.1	C	0.0		0.50	26.7	C	0.50	26.7	C	0.0		0.62	29.4	C	0.62	29.4	C	0.0		0.68	31.5	C	0.68	31.5	C	0.0	
		R	0.40	11.8	B	0.12	11.1	B	-0.7		0.1[illegible]	11.6	B	0.16	11.[illegible]	[illegible]	[illegible]		0.[illegible]	12.[illegible]	B	0.[illegible]	12.8	B	0.3		0.10	10.9	B	0.10	11.1	B	0.2	
	NB	T	0.12	11.0	B	0.40	11.8	B	0.8		0.40	11.8	B	0.42	12.0	B	0.2		0.[illegible]	11.[illegible]	B	0.[illegible]	11.8	B	0.2		0.44	12.2	B	0.47	12.4	B	0.2	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1		0.3[illegible]	11.2	B	0.33	11.[illegible]	B	0.2		0.38	11.[illegible]	B	0.40	12.0	B	0.2		0.38	11.8	B	0.40	12.0	B	0.2	
	Overall		*	**13.7**	**B**	*	**14.1**	**B**	**0.4**		*	**14.1**	**B**	*	**14.2**	**B**	**0.1**		*	**15.4**	**B**	*	**15.4**	**B**	**0.0**		*	**15.8**	**B**	*	**15.8**	**B**	**0.0**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.24	23.5	C	0.21	22.9	C	-0.6		0.60	36.3	D	0.55	33.6	C	-2.7		0.52	29.7	C	[illegible]	29.6	C	-0.1		0.66	39.5	D	0.66	39.8	D	0.3	
		TR	0.53	26.9	C	0.58	28.1	C	1.2		0.52	27.0	C	0.73	33.1	C	6.1		0.63	29.0	C	0.82	36.1	D	7.1		0.65	29.4	C	0.89	41.8	D	12.4	
	WB	L	0.97	80.0	F	1.07	111.4	F	31.4	yes	0.90	6[illegible]	F	1.45	26[illegible]	F	100.3	yes	1.15	132.7	F	1.15	132.7	F	0.0		1.35	210.9	F	2.93	921.8	F	710.9	yes
		TR	0.44	24.7	C	0.38	23.9	C	-0.8		0.55	26.2	C	0.52	25.7	C	-0.5		0.44	23.9	C	0.43	23.9	C	0.0		0.58	25.0	C	0.58	26.1	C	1.1	
	NB	LTR	0.54	30.0	C	0.69	33.4	C	3.4		0.75	3[illegible]	[illegible]	1.10	9[illegible]	F	6.5	yes	0.7[illegible]	34[illegible]	C	1.05	74.8	E	40.5	yes	0.97	54.0	D	1.45	242.8	F	188.8	yes
		U-TURN	0.53	17.9	C	0.54	18.2	C	0.3		0.35	1[illegible]	[illegible]	0.37	15.4	C	0.7		1.0[illegible]	84[illegible]	F	1.10	100.2	F	15.7		0.59	24.4	C	0.63	27.0	D	2.6	
	SB	L	0.27	30.6	C	0.27	30.7	C	0.1		0.49	1[illegible]	[illegible]	0.49	31.[illegible]	C	1.0		0.[illegible]	45.[illegible]	D	0.76	45.8	D	0.2		0.75	43.5	D	0.75	43.8	D	0.3	
		TR	0.23	30.1	C	0.25	30.4	C	0.3		0.31	31.4	C	0.37	32.4	C	1.0		0.32	31.5	C	0.38	32.6	C	1.1		0.68	40.6	D	0.76	44.6	D	4.0	
	Overall		*	**31.7**	**C**	*	**36.2**	**D**	**4.4**		*	**32.5**	**C**	*	**68.9**	**E**	**36.4**		*	**42.9**	**D**	*	**64.9**	**E**	**22.0**		*	**55.2**	**E**	*	**182.6**	**F**	**127.4**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.35	17.3	B	0.37	17.5	B	0.2		0.57	20.3	C	0.66	22.0	C	1.7		0.58	20.5	C	0.66	22.2	C	1.7		0.64	21.8	C	0.75	24.5	C	2.7	
	WB	LTR	0.40	17.9	B	0.35	17.3	B	-0.6		-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		DefL	-	-	-	-	-	-	-		0.58	27.5	C	0.72	39.0	D	11.5		0.61	28.9	C	0.74	40.2	D	11.3		0.88	53.8	D	1.14	129.1	F	75.3	yes
		TR	-	-	-	-	-	-	-		0.40	18.2	B	0.33	17.3	B	-0.9		0.45	19.0	B	0.42	18.5	B	-0.5		0.61	21.9	C	0.56	20.9	C	-1.0	
	NB	DefL	0.60	24.4	C	0.69	28.4	C	4.0		1.01	78.8	E	1.65	338.3	F	259.5	yes	0.72	31.9	C	1.13	119.9	F	88.0	yes	1.26	168.5	F	2.68	802.7	F	634.2	yes
		TR	0.18	15.6	B	0.21	15.9	B	0.3		0.35	17.6	B	0.41	18.5	B	0.9		0.31	17.1	B	0.36	17.8	B	0.7		0.43	18.8	B	0.51	20.2	C	1.4	
	SB	LTR	0.23	15.9	B	0.30	16.6	B	0.7		0.54	20.1	C	0.73	24.6	C	4.5		0.38	17.5	B	0.55	20.0	B	2.5		0.60	20.9	C	0.82	27.6	C	6.7	
	Overall		**0.50**	**18.4**	**B**	**0.53**	**19.2**	**B**	**0.8**		**0.79**	**27.5**	**C**	**1.19**	**60.0**	**E**	**32.5**		**0.66**	**21.2**	**C**	**0.93**	**32.5**	**C**	**11.3**		**1.07**	**39.1**	**D**	**1.92**	**108.7**	**F**	**69.6**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	53.5	D	1.05	57.2	E	3.7		0.96	39.4	D	0.96	32.9	C	-6.5		1.03	53.5	D	1.07	66.5	E	13.0	yes	1.01	35.7	D	1.01	46.5	D	10.8	yes
		TR	0.25	4.9	A	0.26	4.9	A	0.0		0.37	5.8	A	0.40	6.0	A	0.2		0.33	4.7	A	0.36	4.9	A	0.2		0.38	5.6	A	0.42	5.9	A	0.3	
	WB	LT	0.72	40.3	D	0.75	41.5	D	1.2		1.00	66.4	E	1.06	81.7	F	15.3	yes	0.66	30.8	C	0.72	32.6	C	1.8		1.08	76.2	E	1.17	116.7	F	40.5	yes
		R	0.72	41.6	D	0.96	68.1	E	26.5	yes	1.11	103.1	F	1.90	442.4	F	339.3	yes	1.13	107.4	F	1.72	362.5	F	255.1	yes	1.55	286.0	F	2.53	722.4	F	436.4	yes
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0		0.01	30.6	C	0.01	30.6	C	0.0		0.11	34.2	C	0.11	34.2	C	0.0		-	-	-	-	-	-	-	
	SB	L	0.54	42.8	D	0.61	45.6	D	2.8		0.40	37.8	D	0.53	41.9	D	4.1		0.72	55.8	E	0.89	77.3	E	21.5	yes	0.36	34.3	C	0.44	35.4	D	1.1	
		LT	0.02	30.6	C	0.02	30.6	C	0.0		0.00	30.4	C	0.00	30.4	C	0.0		0.00	32.1	C	0.00	32.1	C	0.0		-	-	-	-	-	-	-	
		R	0.18	6.8	A	0.18	6.8	A	0.0		0.15	6.6	A	0.15	6.6	A	0.0		0.41	12.0	B	0.42	12.1	B	0.1		0.24	7.3	A	0.24	7.4	A	0.1	
	Overall		**0.99**	**38.4**	**D**	**1.03**	**44.4**	**D**	**6.0**		**0.90**	**48.3**	**D**	**1.16**	**147.7**	**F**	**99.4**		**1.02**	**48.8**	**D**	**1.25**	**129.0**	**F**	**80.2**		**1.03**	**88.3**	**F**	**1.32**	**243.7**	**F**	**-**	

~~**Table 3-8 (continued)**~~

~~**Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Arthur Kill Access Road Alternative Traffic Conditions**~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action				
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS																																
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.52	17.8	B	0.56	18.7	B	0.9		0.68	22.2	C	0.78	26.8	C	4.6		0.65	20.7	C	0.74	23.8	C	3.1		0.80	27.6	C	0.93	41.2	D	13.6	
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.09	11.9	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0		0.06	11.7	B	0.06	11.7	B	0.0	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.10	17.8	B	0.10	17.8	B	-		0.15	18.3	B	0.15	18.3	B	0.0		0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	0.55	24.8	C	0.74	31.0	C	-		0.95	50.8	D	1.52	268.1	F	217.3	yes	0.99	59.7	E	1.52	270.4	F	210.7	yes	1.26	156.3	F	1.97	470.2	F	313.9	yes
	Overall		**0.53**	**19.0**	**B**	**0.64**	**22.2**	**C**	**3.2**		**0.80**	**32.8**	**C**	**1.11**	**151.2**	**F**	**118.4**		**0.80**	**38.1**	**D**	**1.08**	**159.5**	**F**	**121.4**		**1.00**	**88.2**	**F**	**1.39**	**282.7**	**F**	**194.5**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.8	B	0.56	21.1	C	3.3		0.41	18.3	B	0.60	22.1	C	3.8		0.64	22.4	C	0.90	37.0	D	14.6	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0		0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.07	7.3	A	0.07	7.3	A	0.0		0.14	7.7	A	0.15	7.8	A	0.1		0.17	7.9	A	0.17	7.9	A	0.0		0.18	8.0	A	0.19	8.0	A	0.0	
	SB	TR	0.38	9.1	A	0.37	9.1	A	0.0		0.52	10.2	B	0.56	10.7	B	0.5		0.42	9.5	A	0.46	9.9	A	0.4		0.62	11.0	B	0.69	11.9	B	0.9	
	Overall		**0.31**	**9.6**	**A**	**0.32**	**9.9**	**A**	**0.3**		**0.46**	**10.9**	**B**	**0.56**	**12.2**	**B**	**1.3**		**0.41**	**10.6**	**B**	**0.52**	**12.2**	**B**	**1.6**		**0.63**	**12.8**	**B**	**0.77**	**17.3**	**B**	**4.5**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.34	13.1	B	2.9		0.01	10.2	B	0.19	11.7	B	1.5		0.01	10.2	B	0.18	11.5	B	1.3		0.01	10.2	B	0.11	11.0	B	0.8	
	WB	L	0.44	14.8	B	1.21	132.2	F	117.4	yes	0.49	15.5	B	1.12	92.8	F	77.3	yes	0.43	14.7	B	1.02	63.1	E	48.4	yes	0.96	45.2	D	1.42	218.0	F	172.8	yes
		T	0.46	15.3	B	0.30	12.7	B	-2.6		0.51	16.0	B	0.11	10.9	B	-5.1		0.15	11.1	B	0.1	11.0	B	-4.1		0.34	13.4	B	0.12	11.1	B	-2.3	
	NB	L	0.01	10.3	B	0.01	10.3	B	0.0		0.00	10.2	B	0.00	10.2	B	0.0		0.01	10.3	B	0.01	10.3	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0	
		R	0.20	9.3	A	0.32	12.1	B	2.8		0.41	10.9	B	0.51	13.8	B	2.9		0.36	11.7	B	0.67	16.6	C	4.9		0.63	14.1	B	0.86	27.3	D	13.2	
	SB	LTR	0.13	10.9	B	0.18	11.2	B	0.3		0.16	11.1	B	0.22	11.5	B	0.4		0.16	11.1	B	0.21	11.4	B	0.3		0.21	11.4	B	0.29	12.0	B	0.6	
	Overall		*	**12.6**	**B**	*	**48.5**	**D**	**35.8**	yes	*	**13.1**	**B**	*	**42.0**	**D**	**28.9**		*	**12.7**	**B**	*	**28.9**	**C**	**16.2**		*	**26.6**	**C**	*	**88.2**	**F**	**61.5**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.59	20.4	C	4.3		0.58	20.3	C	0.74	25.2	C	4.9		0.78	28.2	C	0.97	51.6	D	23.4	yes	1.12	94.5	F	1.42	219.3	F	124.8	yes
		R	0.05	13.1	B	0.30	15.6	B	2.5		0.12	14.7	B	0.22	14.6	B	0.9		0.13	13.8	B	0.26	15.1	B	1.3		0.18	14.2	B	0.35	16.2	B	2.0	
	WB	LTR	0.11	13.6	B	0.18	14.3	B	0.7		0.09	13.4	B	0.13	13.8	B	0.4		0.14	13.9	B	0.18	14.3	B	0.4		0.17	14.1	B	0.22	14.6	B	0.5	
	NB	LTR	0.27	9.5	A	0.34	10.0	A	0.5		0.21	9.4	A	0.08	9.6	A	0.2		0.06	9.4	A	0.29	9.6	A	0.2		0.34	10.0	A	0.38	10.3	B	0.3	
	Overall		**0.30**	**11.3**	**B**	**0.45**	**13.6**	**B**	**2.3**		**0.31**	**13.3**	**B**	**0.27**	**13.6**	**B**	**0.3**		**0.18**	**16.8**	**B**	**0.58**	**26.1**	**C**	**9.4**		**0.67**	**43.1**	**D**	**0.82**	**94.4**	**F**	**51.3**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.19	17.9	B	0.57	23.9	C	6.0		0.33	20.4	C	0.65	25.6	C	5.2		0.38	20.3	C	0.62	25.3	C	5.0		0.56	23.6	C	0.86	38.4	D	14.8	
	NB	LT	0.41	8.5	A	0.41	8.5	A	0.0		0.32	7.7	A	0.32	7.7	A	0.0		0.52	9.5	A	0.52	9.5	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.54	9.6	A	0.58	10.2	B	0.6		0.35	7.9	A	0.37	8.0	A	0.1		0.50	9.3	A	0.52	9.5	A	0.2		0.41	8.3	A	0.44	8.6	A	0.3	
	Overall		**0.43**	**9.9**	**A**	**0.57**	**12.4**	**B**	**2.5**		**0.37**	**10.2**	**B**	**0.45**	**12.7**	**B**	**2.5**		**0.47**	**10.8**	**B**	**0.55**	**12.6**	**B**	**1.8**		**0.46**	**11.7**	**B**	**0.57**	**17.3**	**B**	**5.6**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.27	16.0	B	0.27	16.0	B	0.0		0.28	16.0	B	0.28	16.0	B	0.0		0.51	19.0	B	0.51	19.0	B	0.0		0.48	18.6	B	0.48	18.6	B	0.0	
	NB	LT	0.57	13.0	B	0.75	17.6	B	4.6		0.55	12.6	B	0.67	15.2	B	2.6		0.67	15.6	B	0.81	19.2	B	4.6		0.67	14.8	B	0.91	28.4	C	13.6	
	SB	TR	0.50	11.8	B	0.62	13.9	B	2.1		0.45	11.1	B	0.57	12.8	B	1.7		0.54	13.0	B	0.71	17.2	B	3.3		0.63	13.7	B	0.80	18.5	B	4.8	
	Overall		**0.45**	**12.9**	**B**	**0.56**	**15.8**	**B**	**2.9**		**0.44**	**12.5**	**B**	**0.52**	**14.2**	**B**	**1.7**		**0.51**	**15.2**	**B**	**0.67**	**18.3**	**B**	**3.1**		**0.59**	**15.0**	**B**	**0.74**	**22.4**	**C**	**7.4**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.02	22.7	C	0.0		0.06	23.1	C	0.06	23.1	C	0.0		0.02	22.7	C	0.02	22.7	C	0.0		0.12	23.7	C	0.12	23.7	C	0.0	
		R	0.34	27.7	C	0.97	79.6	E	51.9	yes	0.63	35.3	D	0.92	64.2	E	28.9	yes	0.57	33.1	C	0.86	54.5	D	21.4	yes	0.79	43.3	D	1.24	159.0	F	115.7	yes
	WB	LTR	0.69	21.4	C	0.75	22.5	C	1.1		0.71	21.7	C	0.72	21.7	C	0.0		0.88	25.0	C	0.89	25.7	C	0.7		0.94	28.7	C	0.95	29.6	C	0.9	
	NB	L	0.39	24.2	C	0.83	63.0	E	38.8	yes	0.44	23.7	C	0.79	47.9	D	24.2	yes	0.47	27.1	C	0.91	76.2	E	49.1	yes	0.64	36.4	D	1.20	158.2	F	121.8	yes
		T	0.39	17.2	B	0.39	17.2	B	0.0		0.32	16.3	B	0.32	16.3	B	0.0		0.37	16.7	B	0.37	16.7	B	0.0		0.40	17.2	B	0.40	17.2	B	0.0	
	SB	TR	0.99	36.5	D	0.99	36.5	D	0.0		0.62	20.3	C	0.62	20.3	C	0.0		0.87	31.4	C	0.87	31.4	C	0.0		0.69	21.4	C	0.69	21.4	C	0.0	
	Overall		**0.76**	**26.4**	**C**	**0.90**	**33.5**	**C**	**7.1**		**0.66**	**21.9**	**C**	**0.79**	**27.1**	**C**	**5.2**		**0.82**	**26.4**	**C**	**0.89**	**31.1**	**C**	**4.7**		**0.80**	**27.2**	**C**	**1.11**	**49.6**	**D**	**22.4**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0		0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.47	9.8	A	0.6		0.43	9.3	A	0.49	10.0	A	0.7		0.44	9.4	A	0.50	10.1	B	0.7		0.49	9.9	A	0.56	11.0	B	1.1	
	SB	L	0.61	11.9	B	0.83	19.5	B	7.6		0.47	10.4	B	0.52	11.5	B	1.1		0.66	13.1	B	0.74	15.7	B	2.6		0.71	15.6	B	0.82	21.3	C	5.7	
		TR	0.67	11.6	B	0.72	12.6	B	1.0		0.50	9.8	A	0.55	10.4	B	0.6		0.62	11.0	B	0.68	11.8	B	0.8		0.56	10.2	B	0.63	11.1	B	0.9	
	Overall		**0.50**	**11.3**	**B**	**0.60**	**13.8**	**B**	**2.5**		**0.37**	**10.0**	**A**	**0.40**	**10.7**	**B**	**0.7**		**0.48**	**11.2**	**B**	**0.53**	**12.3**	**B**	**1.1**		**0.54**	**11.8**	**B**	**0.61**	**13.7**	**B**	**1.9**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.09	14.8	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0		0.09	14.7	B	0.09	14.7	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	WB	L	0.36	18.2	B	0.36	18.2	B	0.0		0.58	22.4	C	0.58	22.4	C	0.0		0.55	21.8	C	0.55	21.8	C	0.0		0.57	22.1	C	0.57	22.1	C	0.0	
		T	0.02	14.1	B	0.02	14.1	B	0.0		0.04	14.2	B	0.04	14.2	B	0.0		0.04	14.2	B	0.04	14.2	B	0.0		0.02	14.1	B	0.02	14.1	B	0.0	
		R	0.21	16.1	B	0.21	16.1	B	0.0		0.22	16.2	B	0.22	16.2	B	0.0		0.22	16.1	B	0.22	16.1	B	0.0		0.20	15.9	B	0.20	15.9	B	0.0	
	NB	LTR	0.52	20.5	C	0.59	22.0	C	1.5		0.71	24.3	C	0.78	27.1	C	2.8		0.69	23.6	C	0.76	26.0	C	2.4		0.79	25.9	C	0.88	31.1	C	5.2	
	SB	LTR	1.08	64.8	E	1.21	120.0	F	55.2	yes	0.78	27.4	C	0.87	33.5	C	6.1		0.93	30.9	C	1.04	52.8	D	21.9	yes	0.86	30.6	C	1.00	49.6	D	19.0	yes
	Overall		**0.72**	**38.9**	**D**	**0.78**	**64.0**	**E**	**25.1**		**0.68**	**23.8**	**C**	**0.73**	**26.9**	**C**	**3.1**		**0.74**	**24.9**	**C**	**0.79**	**33.9**	**C**	**9.0**		**0.71**	**25.5**	**C**	**0.78**	**34.2**	**C**	**8.7**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.37	14.9	B	0.41	15.5	B	0.6		0.47	16.2	B	0.52	17.0	B	0.8		0.47	16.3	B	0.54	17.4	B	1.1	
	WB	LT	0.36	15.1	B	0.78	28.9	C	13.8		0.43	16.3	B	0.89	39.6	D	23.3		0.57	19.5	B	1.11	96.8	F	77.3	yes	0.65	22.8	C	1.34	188.4	F	165.6	yes
	NB	LR	0.60	26.1	C	0.87	41.0	D	14.9		0.56	25.1	C	0.75	32.2	C	7.1		0.66	27.9	C	0.96	53.7	D	25.8	yes	0.55	25.0	C	0.83	37.5	D	12.5	
	Overall		**0.47**	**18.8**	**B**	**0.82**	**29.5**	**C**	**10.7**		**0.49**	**18.7**	**B**	**0.83**	**29.8**	**C**	**11.1**		**0.61**	**21.0**	**C**	**1.04**	**56.7**	**E**	**35.7**		**0.61**	**20.7**	**C**	**1.11**	**86.4**	**F**	**65.7**	

~~Table 3-8 (continued)~~

~~Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Arthur Kill Access Road Alternative Traffic Conditions~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Sharrots Road / Arthur Kill Road	EB	LTR	0.07	13.9	B	0.09	16.6	C	2.7		0.23	15.5	C	0.26	17.5	C	2.0		0.29	20.7	C	0.34	25.4	D	4.7		0.54	24.5	C	0.65	34.9	D	10.4	yes
	WB	LTR	0.22	14.9	B	0.22	16.9	C	2.0		0.24	18.0	C	0.24	20.5	C	2.4		0.42	24.7	C	0.43	28.2	D	3.5		0.45	24.2	C	0.50	30.2	D	6.0	yes
	NB	LTR	0.03	8.0	A	0.03	8.3	A	0.3		0.03	8.1	A	0.04	8.1	A	0.1		0.03	8.0	A	0.03	8.2	A	0.2		0.01	8.0	A	0.01	8.2	A	0.2	
	SB	LTR	0.03	7.9	A	0.03	8.0	A	0.1		0.03	8.1	A	0.04	8.3	A	0.2		0.06	8.2	A	0.06	8.4	A	0.2		0.03	8.0	A	0.03	8.1	A	0.1	
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	0.76	40.7	E	29.9	yes	0.13	14.0	B	0.47	23.2	C	9.2		0.17	14.3	B	0.64	33.8	D	19.5	yes	0.40	19.1	C	0.55	27.7	D	8.6	
	SB	LT	0.02	8.0	A	0.11	8.5	A	0.5		0.02	8.2	A	0.03	8.4	A	0.2		0.01	8.1	A	0.04	8.5	A	0.4		0.01	8.0	A	0.03	8.3	A	0.3	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.19	11.2	B	0.4		0.19	10.3	B	0.20	10.6	B	0.3		0.29	11.5	B	0.30	11.9	B	0.4		0.27	11.7	B	0.28	12.2	B	0.5	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.14	9.3	A	1.3		0.10	9.1	A	0.39	15.0	C	5.9		0.12	8.7	A	0.39	14.4	B	5.7		0.22	9.6	A	0.72	29.5	D	19.9	
		TR	0.08	7.9	A	0.11	8.4	A	0.5		0.15	9.2	A	0.27	12.3	B	3.1		0.16	8.7	A	0.29	11.9	B	3.2		0.27	9.9	A	0.48	17.5	C	7.6	
	WB	LT	0.12	8.3	A	0.14	8.9	A	0.6		0.32	10.5	B	0.42	14.7	B	4.2		0.39	11.3	B	0.52	16.8	C	5.6		0.39	11.8	B	0.60	22.3	C	10.5	
		TR	0.06	7.7	A	0.13	8.2	A	0.5		0.10	9.2	A	0.31	11.6	B	3.4		0.14	8.5	A	0.35	12.4	B	3.9		0.20	9.3	A	0.60	21.0	C	11.7	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	8.7	A	0.22	12.3	B	3.6		0.09	8.5	A	0.15	11.5	B	3.0		0.10	9.4	A	0.33	16.0	C	6.6	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	7.7	A	0.09	9.9	A	2.1		0.11	8.2	A	0.17	10.7	B	2.5		0.14	8.8	A	0.23	13.1	B	4.3	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.34	13.3	B	-		-	-	-	0.35	13.9	B	-		-	-	-	0.61	23.4	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.28	11.8	B	-		-	-	-	0.29	12.3	B	-		-	-	-	0.51	18.5	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.13	8.4	A	0.13	8.6	A	0.2		0.13	8.8	A	0.13	9.0	A	0.2		0.23	8.9	A	0.24	9.1	A	0.3		0.20	9.0	A	0.20	9.0	A	0.0	
	WB	LT	0.30	9.5	A	0.41	10.7	B	1.2		0.34	9.9	A	0.48	12.6	B	2.7		0.46	11.1	B	0.57	13.7	B	2.7		0.64	16.0	C	0.64	16.0	C	0.0	
	SB	LT	0.07	8.2	A	0.09	8.5	A	0.3		0.12	9.5	A	0.13	8.9	A	0.4		0.11	8.8	A	0.12	9.2	A	0.4		0.14	9.4	A	0.14	9.4	A	0.0	
		TR	0.09	8.0	A	0.09	8.3	A	0.3		0.09	9.1	A	0.09	8.4	A	0.3		0.10	8.5	A	0.10	8.9	A	0.4		0.13	9.1	A	0.13	9.1	A	0.0	
Sharrots Road / Veterans Road East	EB	LT	0.11	8.4	A	0.11	8.6	A	0.1		0.14	8.7	A	0.14	9.0	A	0.2		0.23	9.5	A	0.24	9.9	A	0.3		0.19	9.6	A	0.19	9.6	A	0.0	
	WB	TR	0.24	8.8	A	0.34	9.8	A	0.9		0.30	9.5	A	0.44	11.2	B	1.7		0.36	10.6	B	0.51	13.0	B	2.4		0.60	14.8	B	0.60	14.8	B	0.0	
	NB	LT	0.12	8.4	A	0.13	8.6	A	0.3		0.11	8.5	A	0.12	8.8	A	0.3		0.16	9.1	A	0.17	9.5	A	0.4		0.17	9.6	A	0.17	9.6	A	0.0	
		TR	0.10	7.6	A	0.10	7.9	A	0.2		0.16	8.1	A	0.17	8.5	A	0.4		0.24	9.0	A	0.26	9.5	A	0.5		0.28	9.8	A	0.28	9.8	A	0.0	

Notes:

v/c = volume-to-capacity ratio; LOS = Level-of-Service

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound

L = Left-Turn; T = Through; R = Right-Turn;

LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn

Average Control Delay shown in units of seconds/vehicle

- = No volumes for this approach or movement.

Table 3-8
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Arthur Kill Access Road Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action					2020 No-Action			2020 With-Action				
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?	v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS	Change in Delay	Impact?
SIGNALIZED INTERSECTIONS																																
Sharrots Road / Arthur Kill Road	EB	LTR	0.17	26.0	C	0.17	26.0	C	0.0		0.45	31.0	C	0.45	31.0	C	0.0		0.41	30.0	C	0.41	30.0	C	0.0		0.88	59.8	E	0.88	59.8	E	0.0	
	WB	LTR	0.22	18.9	B	0.18	18.5	B	-0.4		0.20	18.7	B	0.18	18.5	B	-0.2		0.27	19.4	B	0.24	19.1	B	-0.3		0.31	19.9	B	0.28	19.6	B	-0.3	
	NB	LTR	0.43	15.9	B	0.50	16.9	B	1.0		0.50	16.7	B	0.56	17.8	B	1.1		0.54	17.3	B	0.60	18.5	B	1.2		0.43	15.4	B	0.50	16.5	B	1.1	
	SB	LTR	0.41	15.5	B	0.49	16.6	B	1.1		0.50	16.9	B	0.57	18.2	B	1.3		0.61	19.2	B	0.70	21.8	C	2.6		0.51	16.7	B	0.60	18.4	B	1.7	
	Overall		**0.32**	**16.6**	**B**	**0.34**	**17.3**	**B**	**0.7**		**0.39**	**18.7**	**B**	**0.42**	**19.5**	**B**	**0.8**		**0.47**	**19.5**	**B**	**0.50**	**20.9**	**C**	**1.4**		**0.50**	**25.2**	**C**	**0.54**	**25.3**	**C**	**0.1**	
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	10.3	B	0.0		0.04	10.5	B	0.04	10.5	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0		0.02	10.4	B	0.02	10.4	B	0.0	
	WB	LT	0.67	20.5	C	0.67	20.5	C	0.0		0.64	19.2	B	0.64	19.2	B	0.0		0.86	31.7	C	0.86	31.7	C	0.0		0.85	28.9	C	0.85	28.9	C	0.0	
		R	0.61	18.7	B	0.49	16.0	B	-2.7		0.83	28.7	C	0.79	25.9	C	-2.8		0.63	19.1	B	0.65	19.8	B	0.7		0.78	24.3	C	0.82	26.8	C	2.5	
	NB	LTR	0.76	21.6	C	0.85	26.5	C	4.9		0.65	18.2	B	0.70	19.6	B	1.4		0.70	19.5	B	0.76	21.4	C	1.9		0.86	27.2	C	0.93	34.9	C	7.7	
	SB	LTR	0.63	21.4	C	1.01	70.0	E	48.6	yes	0.82	30.4	C	1.15	109.2	F	78.8	yes	1.22	133.7	F	1.61	301.9	F	168.2	yes	1.15	111.0	F	1.72	354.9	F	243.9	yes
	Overall		**0.72**	**20.6**	**C**	**0.84**	**32.4**	**C**	**11.8**		**0.83**	**23.9**	**C**	**0.97**	**45.9**	**D**	**22.0**		**1.04**	**55.1**	**E**	**1.23**	**112.3**	**F**	**57.2**		**1.00**	**45.4**	**D**	**1.29**	**115.7**	**F**	**70.3**	
North Bridge Street / Arthur Kill Road	WB	LR	0.30	15.9	B	0.30	15.9	B	0.0		0.58	19.7	B	0.58	19.7	B	0.0		0.83	23.0	C	0.83	23.0	C	0.0		0.79	22.7	C	0.79	22.7	C	0.0	
	NB	T	0.54	12.2	B	0.62	13.4	B	1.2		0.47	11.2	B	0.51	11.7	B	0.5		0.50	11.6	B	0.55	12.3	B	0.7		0.62	13.2	B	0.68	14.5	B	1.3	
	SB	T	0.49	11.3	B	0.55	12.1	B	0.8		0.57	11.9	B	0.61	12.5	B	0.6		0.73	13.6	B	0.78	14.5	B	0.9		0.66	12.4	B	0.71	13.2	B	0.8	
	Overall		**0.44**	**12.5**	**B**	**0.49**	**13.3**	**B**	**0.8**		**0.57**	**13.8**	**B**	**0.60**	**14.1**	**B**	**0.3**		**0.77**	**16.0**	**B**	**0.80**	**16.4**	**B**	**0.4**		**0.71**	**15.7**	**B**	**0.74**	**16.2**	**B**	**0.5**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.2	C	0.68	28.8	C	2.6		0.91	47.6	D	0.91	48.8	D	1.2		0.92	49.0	D	0.94	52.6	D	3.6		0.96	56.6	E	0.97	59.4	E	2.8	
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9		0.53	9.8	A	0.57	10.3	B	0.5		0.65	11.3	B	0.68	12.0	B	0.7		0.67	11.6	B	0.72	12.7	B	1.1	
	SB	LT	0.68	13.6	B	0.87	23.8	C	10.2		1.17	99.8	F	1.27	142.1	F	42.3	yes	1.46	220.9	F	1.58	275.3	F	54.4	yes	1.45	216.3	F	1.60	284.1	F	67.8	yes
	Overall		**0.66**	**14.8**	**B**	**0.81**	**19.3**	**B**	**4.5**		**1.09**	**57.8**	**E**	**1.16**	**76.9**	**E**	**19.1**		**1.29**	**118.9**	**F**	**1.38**	**145.8**	**F**	**26.9**		**1.29**	**112.8**	**F**	**1.40**	**144.0**	**F**	**31.2**	
Richmond Valley Road / Page Avenue	EB	LTR	0.34	23.3	C	0.38	23.9	C	0.6		0.83	38.9	D	0.83	39.1	D	0.2		0.71	30.6	C	0.72	30.7	C	0.1		0.74	31.3	C	0.74	31.5	C	0.2	
	WB	LTR	0.38	24.1	C	0.38	24.1	C	0.0		0.57	28.3	C	0.57	28.3	C	0.0		0.68	31.9	C	0.68	31.9	C	0.0		0.54	27.6	C	0.54	27.6	C	0.0	
	NB	L	0.18	11.0	B	0.25	11.8	B	0.8		0.36	13.9	B	0.38	14.4	B	0.5		0.35	14.3	B	0.39	15.2	B	0.9		0.65	20.6	C	0.71	23.6	C	3.0	
		TR	0.80	20.7	C	0.81	21.3	C	0.6		0.74	19.0	B	0.77	20.2	C	1.2		0.69	17.7	B	0.71	18.4	B	0.7		0.89	24.9	C	0.94	29.9	C	5.0	
	SB	LTR	0.55	15.6	B	0.57	16.1	B	0.5		0.79	23.5	C	0.86	27.9	C	4.4		0.89	29.8	C	0.95	38.0	D	8.2		0.81	23.6	C	0.91	32.1	C	8.5	
	Overall		**0.63**	**19.5**	**B**	**0.65**	**20.0**	**B**	**0.5**		**0.81**	**24.5**	**C**	**0.85**	**26.3**	**C**	**1.8**		**0.82**	**25.9**	**C**	**0.86**	**29.0**	**C**	**3.1**		**0.83**	**25.4**	**C**	**0.86**	**30.1**	**C**	**4.7**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.47	26.1	C	0.0		0.50	26.7	C	0.50	26.7	C	0.0		0.62	29.4	C	0.62	29.4	C	0.0		0.68	31.4	C	0.68	31.4	C	0.0	
		R	0.12	11.0	B	0.12	11.1	B	0.1		0.16	11.4	B	0.16	11.6	B	0.2		0.16	12.6	B	0.17	12.8	B	0.2		0.10	11.0	B	0.10	11.2	B	0.2	
	NB	T	0.40	11.8	B	0.40	11.8	B	0.0		0.40	11.9	B	0.42	12.1	B	0.2		0.38	11.7	B	0.40	11.8	B	0.1		0.45	12.2	B	0.47	12.5	B	0.3	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1		0.32	11.2	B	0.34	11.4	B	0.2		0.38	11.8	B	0.40	12.0	B	0.2		0.38	11.8	B	0.41	12.1	B	0.3	
	Overall		*****	**14.1**	**B**	*****	**14.1**	**B**	**0.0**		*****	**14.2**	**B**	*****	**14.2**	**B**	**0.1**		*****	**15.4**	**B**	*****	**15.4**	**B**	**0.0**		*****	**15.7**	**B**	*****	**15.8**	**B**	**0.1**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.32	26.3	C	0.29	25.1	C	-1.2		0.80	59.6	E	0.82	62.7	E	3.1		0.79	51.9	D	0.88	66.6	E	14.7	yes	1.23	186.6	F	1.31	217.7	F	31.1	yes
		TR	0.56	27.6	C	0.61	28.9	C	1.3		0.67	30.9	C	0.88	43.3	D	12.4		0.78	34.3	C	0.97	53.9	D	19.6	yes	0.85	38.3	D	1.09	87.7	F	49.4	yes
	WB	L	1.04	100.4	F	1.16	142.3	F	41.9	yes	1.37	228.0	F	2.78	859.8	F	631.8	yes	1.14	129.7	F	1.14	129.7	F	0.0		2.46	709.9	F	3.41	1,141.0	F	431.1	yes
		TR	0.59	27.1	C	0.54	26.3	C	-0.8		0.66	28.5	C	0.67	28.6	C	0.1		0.61	26.9	C	0.65	27.6	C	0.7		0.77	30.7	C	0.83	33.3	C	2.6	
	NB	LTR	0.43	28.1	C	0.51	29.4	C	1.3		0.62	31.6	C	0.82	38.5	D	6.9		0.46	28.5	C	0.65	32.0	C	3.5		0.79	36.9	D	1.07	83.7	F	46.8	yes
		U-TURN	0.00	11.2	B	0.33	14.3	B	3.1		0.26	13.8	B	0.27	14.3	B	0.5		0.90	50.1	F	0.95	59.5	F	9.4		0.45	19.8	C	0.47	21.2	C	1.4	
	SB	L	0.27	30.6	C	0.27	30.7	C	0.1		0.49	34.9	C	0.49	34.9	C	0.0		0.76	45.6	D	0.76	45.8	D	0.2		0.75	43.5	D	0.75	43.8	D	0.3	
		TR	0.22	30.1	C	0.24	30.4	C	0.3		0.31	31.4	C	0.37	32.4	C	1.0		0.32	31.5	C	0.38	32.6	C	1.1		0.68	40.5	D	0.75	44.4	D	3.9	
	Overall		*****	**34.3**	**C**	*****	**39.3**	**D**	**5.0**		*****	**49.6**	**D**	*****	**104.8**	**F**	**55.1**		*****	**41.3**	**D**	*****	**50.0**	**D**	**8.7**		*****	**103.3**	**F**	*****	**152.7**	**F**	**49.5**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.43	29.7	C	0.47	30.3	C	0.6		0.84	40.8	D	0.99	61.3	E	20.5	yes	0.84	41.0	D	0.98	58.9	E	17.9	yes	0.97	55.9	E	1.15	113.2	F	57.3	yes
	WB	LTR	0.77	37.1	D	0.70	34.8	C	-2.3		0.81	38.8	D	0.79	38.0	D	-0.8		0.96	53.4	D	0.98	56.9	E	3.5		1.12	100.2	F	1.16	116.1	F	15.9	yes
	NB	DefL	0.86	51.7	D	1.02	88.3	F	36.6	yes	1.75	390.4	F	3.62	1,234.0	F	843.6	yes	1.17	140.4	F	2.11	552.2	F	411.8	yes	2.55	749.7	F	3.95	1,382.0	F	632.3	yes
		TR	0.25	23.6	C	0.29	24.0	C	0.4		0.48	27.3	C	0.56	29.2	C	1.9		0.42	26.2	C	0.50	27.6	C	1.4		0.59	29.9	C	0.70	33.5	C	3.6	
	SB	LTR	0.32	24.0	C	0.41	25.2	C	1.2		0.74	33.1	C	1.01	63.6	E	30.5	yes	0.52	26.8	C	0.75	32.7	C	5.9		0.82	35.7	D	1.13	102.7	F	67.0	yes
	Overall		**0.70**	**35.0**	**C**	**0.75**	**40.2**	**D**	**5.2**		**1.18**	**79.5**	**E**	**1.94**	**184.9**	**F**	**105.4**		**1.00**	**52.2**	**D**	**1.42**	**100.1**	**F**	**47.9**		**1.62**	**132.9**	**F**	**2.23**	**223.0**	**F**	**90.1**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	52.0	D	1.05	55.6	E	3.6		0.95	38.9	D	0.95	33.9	C	-5.0		1.04	55.0	D	1.05	60.9	E	5.9	yes	1.01	33.8	C	1.01	45.3	D	11.5	yes
		TR	0.25	4.9	A	0.26	5.0	A	0.1		0.38	5.8	A	0.41	6.1	A	0.3		0.34	4.8	A	0.37	5.0	A	0.2		0.39	5.7	A	0.43	6.0	A	0.3	
	WB	LT	0.72	40.3	D	0.75	41.5	D	1.2		1.02	69.8	E	1.07	86.8	F	17.0	yes	0.68	31.1	C	0.70	31.9	C	0.8		1.10	83.9	F	1.20	126.1	F	42.2	yes
		R	0.76	43.8	D	0.99	76.4	E	32.6	yes	1.50	267.0	F	2.28	616.6	F	349.6	yes	1.25	154.0	F	1.84	413.7	F	259.7	yes	2.06	513.2	F	3.03	950.2	F	437.0	yes
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0		0.01	30.6	C	0.01	30.6	C	0.0		0.11	34.2	C	0.11	34.2	C	0.0		-	-	-	-	-	-	-	
	SB	L	0.55	43.2	D	0.62	46.1	D	2.9		0.42	38.5	D	0.55	42.9	D	4.4		0.75	58.9	E	0.79	62.5	E	3.6		0.38	34.5	C	0.45	35.7	D	1.2	
		LT	0.02	30.6	C	0.02	30.6	C	0.0		0.00	30.4	C	0.00	30.4	C	0.0		0.00	32.1	C	0.00	32.1	C	0.0		-	-	-	-	-	-	-	
		R	0.18	6.8	A	0.18	6.8	A	0.0		0.15	6.6	A	0.15	6.6	A	0.0		0.41	12.0	B	0.42	12.1	B	0.1		0.24	7.3	A	0.24	7.3	A	0.0	
	Overall		**0.98**	**38.1**	**D**	**1.02**	**45.3**	**D**	**7.2**		**1.02**	**90.4**	**F**	**1.28**	**216.0**	**F**	**125.6**		**1.03**	**61.0**	**E**	**1.27**	**146.4**	**F**	**85.4**		**1.18**	**160.0**	**F**	**1.47**	**343.8**	**F**	**-**	

Table 3-8 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Arthur Kill Access Road Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.53	18.0	B	0.57	18.9	B	0.9		0.71	23.0	C	0.81	28.1	C	5.1		0.67	21.3	C	0.76	24.8	C	3.5		0.83	29.7	C	0.96	46.8	D	17.1	yes
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.09	11.9	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0		0.06	11.7	B	0.06	11.7	B	0.0	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.10	17.8	B	0.10	17.8	B	-		0.14	18.3	B	0.14	18.3	B	0.0		0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	0.58	25.5	C	0.76	32.4	C	-		1.06	78.5	E	1.63	315.9	F	237.4	yes	1.09	89.9	F	1.63	316.4	F	226.5	yes	1.41	218.0	F	2.12	534.2	F	316.2	yes
	Overall		**0.55**	**19.4**	**B**	**0.65**	**22.9**	**C**	**3.5**		**0.86**	**46.3**	**D**	**1.17**	**180.4**	**F**	**134.1**		**0.85**	**53.9**	**D**	**1.14**	**188.7**	**F**	**134.8**		**1.08**	**123.0**	**F**	**1.47**	**326.7**	**F**	**203.7**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.7	B	0.56	21.1	C	3.4		0.41	18.2	B	0.60	22.0	C	3.8		0.64	22.3	C	0.89	36.6	D	14.3	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0		0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.07	7.4	A	0.07	7.4	A	0.0		0.15	7.8	A	0.16	7.9	A	0.1		0.18	8.0	A	0.18	8.0	A	0.0		0.20	8.1	A	0.24	8.4	A	0.3	
	SB	TR	0.51	10.3	B	0.54	10.5	B	0.2		0.66	11.9	B	0.79	14.3	B	2.4		0.58	11.0	B	0.70	12.7	B	1.7		0.80	13.7	B	0.98	24.8	C	11.1	
	Overall		**0.39**	**10.4**	**B**	**0.43**	**10.9**	**B**	**0.5**		**0.55**	**12.0**	**B**	**0.70**	**14.4**	**B**	**2.4**		**0.51**	**11.4**	**B**	**0.66**	**13.5**	**B**	**2.1**		**0.74**	**14.2**	**B**	**0.95**	**24.8**	**C**	**10.6**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.34	13.1	B	2.9		0.01	10.2	B	0.19	11.7	B	1.5		0.01	10.2	B	0.18	11.5	B	1.3		0.01	10.2	B	0.11	11.0	B	0.8	
	WB	L	0.44	14.8	B	1.20	130.4	F	115.6	yes	0.48	15.5	B	1.11	90.8	F	75.3	yes	0.43	14.6	B	1.02	61.5	E	46.9	yes	0.96	44.5	D	1.42	215.7	F	171.2	yes
		T	0.46	15.2	B	0.30	12.7	B	-2.5		0.50	15.9	B	0.11	10.9	B	-5.0		0.45	15.1	B	0.11	11.0	B	-4.1		0.34	13.4	B	0.12	11.1	B	-2.3	
	NB	L	0.01	10.4	B	0.02	10.5	B	0.1		0.00	10.2	B	0.01	10.3	B	0.1		0.02	10.4	B	0.03	10.7	B	0.3		0.03	10.6	B	0.05	11.2	B	0.6	
		R	0.21	9.3	A	0.32	11.7	B	2.4		0.43	11.1	B	0.56	13.1	B	2.0		0.51	11.9	B	0.66	15.8	C	3.9		0.65	14.6	B	0.84	24.8	C	10.2	
	SB	LTR	0.26	11.8	B	0.39	12.8	B	1.0		0.30	12.1	B	0.45	13.2	B	1.1		0.32	12.2	B	0.45	13.3	B	1.1		0.39	12.8	B	0.57	14.6	B	1.8	
	Overall		*****	**12.6**	**B**	*****	**40.5**	**D**	**27.9**		*****	**13.1**	**B**	*****	**35.5**	**D**	**22.4**		*****	**12.8**	**B**	*****	**25.1**	**C**	**12.3**		*****	**24.4**	**C**	*****	**72.4**	**E**	**47.9**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.60	20.6	C	4.5		0.61	20.9	C	0.76	26.4	C	5.5		0.81	29.9	C	1.00	57.8	E	27.9	yes	1.16	108.7	F	1.46	235.3	F	126.6	yes
		R	0.05	13.1	B	0.30	15.6	B	2.5		0.12	13.7	B	0.22	14.6	B	0.9		0.13	13.8	B	0.26	15.1	B	1.3		0.18	14.2	B	0.35	16.2	B	2.0	
	WB	LTR	0.11	13.6	B	0.18	14.3	B	0.7		0.09	13.4	B	0.12	13.7	B	0.3		0.14	13.9	B	0.18	14.3	B	0.4		0.17	14.1	B	0.22	14.6	B	0.5	
	NB	LTR	0.27	9.5	A	0.34	10.0	A	0.5		0.25	9.4	A	0.28	9.6	A	0.2		0.25	9.4	A	0.29	9.6	A	0.2		0.34	10.0	A	0.38	10.3	B	0.3	
	Overall		**0.30**	**11.3**	**B**	**0.45**	**13.7**	**B**	**2.4**		**0.40**	**13.6**	**B**	**0.48**	**16.1**	**B**	**2.5**		**0.49**	**17.7**	**B**	**0.59**	**29.0**	**C**	**11.3**		**0.68**	**49.9**	**D**	**0.83**	**103.0**	**F**	**53.1**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.20	18.0	B	0.58	24.1	C	6.1		0.43	21.1	C	0.67	26.9	C	5.8		0.42	20.9	C	0.65	26.5	C	5.6		0.62	25.0	C	0.91	44.8	D	19.8	
	NB	LT	0.41	8.4	A	0.41	8.5	A	0.1		0.32	7.7	A	0.32	7.7	A	0.0		0.51	9.5	A	0.51	9.5	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.53	9.6	A	0.57	10.1	B	0.5		0.35	7.8	A	0.37	8.0	A	0.2		0.50	9.2	A	0.52	9.5	A	0.3		0.41	8.3	A	0.44	8.6	A	0.3	
	Overall		**0.43**	**9.9**	**A**	**0.57**	**12.5**	**B**	**2.6**		**0.38**	**10.5**	**B**	**0.47**	**13.3**	**B**	**2.8**		**0.48**	**11.0**	**B**	**0.56**	**13.0**	**B**	**2.0**		**0.48**	**12.2**	**B**	**0.59**	**19.6**	**B**	**7.4**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.30	16.3	B	0.30	16.3	B	0.0		0.28	16.0	B	0.28	16.0	B	0.0		0.50	18.9	B	0.50	18.9	B	0.0		0.48	18.5	B	0.48	18.5	B	0.0	
	NB	LT	0.63	14.2	B	0.81	20.3	C	6.1		0.57	13.0	B	0.69	15.7	B	2.7		0.69	15.1	B	0.83	20.2	C	5.1		0.71	15.9	B	0.96	35.8	D	19.9	
	SB	TR	0.56	12.7	B	0.69	15.4	B	2.7		0.48	11.4	B	0.59	13.1	B	1.7		0.66	14.3	B	0.78	18.0	B	3.7		0.66	14.3	B	0.83	20.1	C	5.8	
	Overall		**0.50**	**13.8**	**B**	**0.61**	**17.7**	**B**	**3.9**		**0.45**	**12.7**	**B**	**0.53**	**14.6**	**B**	**1.9**		**0.62**	**15.5**	**B**	**0.70**	**19.0**	**B**	**3.5**		**0.62**	**15.7**	**B**	**0.77**	**26.2**	**C**	**10.5**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.02	22.7	C	0.0		0.06	23.1	C	0.06	23.1	C	0.0		0.02	22.7	C	0.02	22.7	C	0.0		0.12	23.7	C	0.12	23.7	C	0.0	
		R	0.34	27.7	C	0.97	79.6	E	51.9	yes	0.62	34.9	C	0.91	62.5	E	27.6	yes	0.56	33.0	C	0.85	53.9	D	20.9	yes	0.78	43.0	D	1.24	157.2	F	114.2	yes
	WB	LTR	0.69	21.3	C	0.75	22.5	C	1.2		0.71	21.6	C	0.71	21.7	C	0.1		0.87	24.7	C	0.89	25.4	C	0.7		0.93	28.4	C	0.94	29.3	C	0.9	
	NB	L	0.39	24.2	C	0.83	63.0	E	38.8	yes	0.44	23.3	C	0.78	46.4	D	23.1	yes	0.47	27.1	C	0.91	76.2	E	49.1	yes	0.63	35.3	D	1.19	152.2	F	116.9	yes
		T	0.38	17.1	B	0.38	17.1	B	0.0		0.32	16.3	B	0.32	16.3	B	0.0		0.36	16.7	B	0.36	16.7	B	0.0		0.40	17.1	B	0.40	17.1	B	0.0	
	SB	TR	0.98	34.6	C	0.98	34.6	C	0.0		0.62	20.2	C	0.62	20.2	C	0.0		0.87	31.2	C	0.87	31.2	C	0.0		0.69	21.4	C	0.69	21.4	C	0.0	
	Overall		**0.76**	**25.7**	**C**	**0.89**	**32.9**	**C**	**7.2**		**0.65**	**21.8**	**C**	**0.78**	**26.8**	**C**	**5.0**		**0.81**	**26.2**	**C**	**0.89**	**30.9**	**C**	**4.7**		**0.80**	**27.0**	**C**	**1.10**	**48.8**	**D**	**21.8**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0		0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.47	9.8	A	0.6		0.43	9.3	A	0.49	10.0	A	0.7		0.44	9.4	A	0.49	10.0	B	0.6		0.49	9.9	A	0.56	10.9	B	1.0	
	SB	L	0.60	11.7	B	0.83	19.3	B	7.6		0.46	10.4	B	0.51	11.3	B	0.9		0.65	13.0	B	0.73	15.5	B	2.5		0.71	15.4	B	0.81	20.7	C	5.3	
		TR	0.67	11.6	B	0.72	12.5	B	0.9		0.50	9.8	A	0.55	10.4	B	0.6		0.62	10.9	B	0.67	11.7	B	0.8		0.56	10.2	B	0.62	11.1	B	0.9	
	Overall		**0.50**	**11.3**	**B**	**0.60**	**13.7**	**B**	**2.4**		**0.36**	**10.0**	**A**	**0.40**	**10.6**	**B**	**0.6**		**0.47**	**11.2**	**B**	**0.52**	**12.3**	**B**	**1.1**		**0.53**	**11.7**	**B**	**0.60**	**13.5**	**B**	**1.8**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.09	14.8	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0		0.09	14.7	B	0.09	14.7	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	WB	L	0.36	18.2	B	0.36	18.2	B	0.0		0.58	22.3	C	0.58	22.3	C	0.0		0.55	21.8	C	0.55	21.8	C	0.0		0.56	22.0	C	0.56	22.0	C	0.0	
		T	0.02	14.1	B	0.02	14.1	B	0.0		0.04	14.2	B	0.04	14.2	B	0.0		0.04	14.2	B	0.04	14.2	B	0.0		0.02	14.1	B	0.02	14.1	B	0.0	
		R	0.21	16.1	B	0.21	16.1	B	0.0		0.22	16.2	B	0.22	16.2	B	0.0		0.21	16.1	B	0.21	16.1	B	0.0		0.19	15.8	B	0.19	15.8	B	0.0	
	NB	LTR	0.52	20.4	C	0.59	21.9	C	1.5		0.70	24.2	C	0.78	26.8	C	2.6		0.69	23.5	C	0.76	25.8	C	2.3		0.79	25.8	C	0.88	30.9	C	5.1	
	SB	LTR	1.07	61.0	E	1.20	115.6	F	54.6	yes	0.77	27.1	C	0.86	32.7	C	5.6		0.92	30.2	C	1.03	49.7	D	19.5	yes	0.86	30.5	C	0.99	48.8	D	18.3	yes
	Overall		**0.71**	**37.2**	**D**	**0.78**	**62.0**	**E**	**24.8**		**0.67**	**23.6**	**C**	**0.72**	**26.5**	**C**	**2.9**		**0.74**	**24.6**	**C**	**0.79**	**32.7**	**C**	**8.1**		**0.71**	**25.4**	**C**	**0.78**	**33.8**	**C**	**8.4**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.38	15.0	B	0.42	15.6	B	0.6		0.47	16.3	B	0.52	17.2	B	0.9		0.48	16.4	B	0.55	17.5	B	1.1	
	WB	LT	0.41	15.8	B	0.82	31.9	C	16.1		0.52	18.2	B	0.96	53.6	D	35.4	yes	0.67	23.2	C	1.20	129.7	F	106.5	yes	0.80	31.3	C	1.48	250.3	F	219.0	yes
	NB	LR	0.61	26.5	C	0.77	33.2	C	6.7		0.59	26.0	C	0.78	33.7	C	7.7		0.70	29.7	C	0.97	56.3	E	26.6	yes	0.59	26.2	C	0.86	40.5	D	14.3	
	Overall		**0.50**	**19.2**	**B**	**0.80**	**27.5**	**C**	**8.3**		**0.55**	**19.7**	**B**	**0.88**	**35.8**	**D**	**16.1**		**0.69**	**22.8**	**C**	**1.10**	**69.7**	**E**	**46.9**		**0.71**	**24.0**	**C**	**1.21**	**112.9**	**F**	**88.9**	

Table 3-8 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Arthur Kill Access Road Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?	2020 No-Action			2020 With-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	0.61	25.1	D	14.3		0.13	14.2	B	0.47	23.0	C	8.8		0.18	14.5	B	0.62	31.6	D	17.1	yes	0.07	12.0	B	0.55	27.4	D	15.4	
	SB	LT	0.02	8.0	A	0.05	8.3	A	0.3		0.02	8.2	A	0.02	8.4	A	0.2		0.01	8.1	A	0.02	8.4	A	0.3		0.01	8.0	A	0.02	8.3	A	0.3	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.19	11.3	B	0.5		0.20	10.4	B	0.20	10.7	B	0.3		0.29	11.6	B	0.30	12.0	B	0.4		0.27	11.8	B	0.29	12.4	B	0.6	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.08	8.7	A	0.7		0.10	9.1	A	0.19	11.9	B	2.8		0.12	8.7	A	0.21	11.6	B	2.9		0.22	9.6	A	0.40	16.1	C	6.5	
		TR	0.08	7.9	A	0.11	8.5	A	0.6		0.15	9.2	A	0.28	12.5	B	3.3		0.16	8.7	A	0.29	12.1	B	3.4		0.27	9.9	A	0.48	17.6	C	7.7	
	WB	LT	0.12	8.3	A	0.15	8.8	A	0.5		0.31	10.5	B	0.42	14.3	B	3.8		0.38	11.2	B	0.51	16.4	C	5.2		0.39	11.7	B	0.55	19.9	C	8.2	
		TR	0.06	7.7	A	0.18	8.3	A	0.6		0.10	8.2	A	0.45	13.5	B	5.3		0.14	8.5	A	0.49	14.4	B	5.9		0.20	9.3	A	0.77	29.8	D	20.5	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	8.6	A	0.22	12.1	B	3.5		0.03	8.5	A	0.15	11.4	B	2.9		0.10	9.4	A	0.32	15.5	C	6.2	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	7.7	A	0.09	9.8	A	2.1		0.11	8.2	A	0.16	10.6	B	2.4		0.14	8.7	A	0.23	12.7	B	4.0	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.33	13.2	B	-		-	-	-	0.35	13.7	B	-		-	-	-	0.6	22.3	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.27	11.7	B	-		-	-	-	0.29	12.1	B	-		-	-	-	0.50	17.8	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.14	8.5	A	0.14	8.7	A	0.2		0.13	8.4	A	0.13	8.6	A	0.2		0.23	8.9	A	0.24	9.2	A	0.3		0.20	9.1	A	0.20	9.1	A	0.0	
	WB	LT	0.33	9.8	A	0.44	11.1	B	1.3		0.37	10.3	B	0.52	12.5	B	2.2		0.46	11.5	B	0.60	14.6	B	3.1		0.69	17.7	C	0.69	17.7	C	0.0	
	SB	LT	0.08	8.3	A	0.09	8.6	A	0.3		0.12	8.6	A	0.13	9.0	A	0.4		0.11	8.9	A	0.12	9.3	A	0.4		0.14	9.5	A	0.14	9.5	A	0.0	
		TR	0.09	8.0	A	0.09	8.4	A	0.4		0.09	8.1	A	0.09	8.5	A	0.4		0.10	8.5	A	0.10	8.9	A	0.4		0.13	9.2	A	0.13	9.2	A	0.0	
Sharrots Road / Veterans Road East	EB	LT	0.12	8.6	A	0.13	8.7	A	0.1		0.14	8.8	A	0.14	9.0	A	0.2		0.23	9.6	A	0.24	9.9	A	0.3		0.19	9.7	A	0.19	9.7	A	0.0	
	WB	TR	0.27	9.1	A	0.37	10.2	B	1.1		0.33	9.8	A	0.48	11.7	B	1.9		0.39	11.0	B	0.55	13.7	B	2.7		0.65	16.3	C	0.65	16.3	C	0.0	
	NB	LT	0.13	8.5	A	0.13	8.7	A	0.2		0.11	8.5	A	0.12	8.9	A	0.4		0.17	9.2	A	0.17	9.6	A	0.4		0.17	9.7	A	0.17	9.7	A	0.0	
		TR	0.11	7.8	A	0.11	8.0	A	0.2		0.16	8.2	A	0.17	8.6	A	0.4		0.25	9.1	A	0.26	9.6	A	0.5		0.28	9.9	A	0.28	9.9	A	0.0	

Notes:

v/c = volume-to-capacity ratio; LOS = Level-of-Service

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound

L = Left-Turn; T = Through; R = Right-Turn;

LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn

Average Control Delay shown in units of seconds/vehicle

- = No volumes for this approach or movement.

~~Table 3-9~~

~~Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Arthur Kill Access Road Alternative Traffic Conditions~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																		
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	10.3	B	0.0		0.04	10.5	B	0.04	10.5	B	0.0	
	WB	LT	0.43	14.7	B	0.43	14.7	B	0.0		0.54	16.8	B	0.54	16.8	B	0.0	
		R	0.61	18.7	B	0.49	16.0	B	-2.7		0.82	27.6	C	0.78	25.1	C	-2.5	
	NB	LTR	0.75	21.3	C	0.84	26.1	C	4.8		0.63	17.7	B	0.68	18.9	B	1.2	
	SB	LTR	0.60	20.1	C	-	-	-	-		0.78	26.7	C	-	-	-	-	
		L	-	-	-	0.74	40.7	D	-		-	-	-	0.86	43.5	D	-	
		TR	-	-	-	0.30	12.8	B	-		-	-	-	0.36	13.4	B	-	
	Overall		**0.68**	**19.2**	**B**	**0.67**	**21.7**	**C**	**2.5**		**0.80**	**22.3**	**C**	**0.82**	**22.5**	**C**	**0.2**	
North Bridge Street / Arthur Kill Road	WB	LR	0.49	18.4	B	0.49	18.4	B	0.0		0.64	21.1	C	0.64	21.1	C	0.0	
	NB	T	0.54	12.1	B	0.61	13.4	B	1.3		0.45	11.0	B	0.49	11.5	B	0.5	
	SB	T	0.35	9.9	A	0.42	10.5	B	0.6		0.52	11.3	B	0.56	11.8	B	0.5	
	Overall		**0.52**	**13.2**	**B**	**0.56**	**13.7**	**B**	**0.5**		**0.56**	**14.2**	**B**	**0.59**	**14.4**	**B**	**0.2**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.1	C	0.67	28.6	C	2.5		0.89	45.0	D	0.90	46.4	D	1.4	
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9		0.53	9.7	A	0.57	10.3	B	0.6	
	SB	LT	0.68	13.5	B	-	-	-	-		1.14	87.9	F	-	-	-	-	
		L	-	-	-	0.52	13.9	B	-		-	-	-	0.65	13.8	B	-	
		T	-	-	-	0.45	8.9	A	-		-	-	-	0.58	9.7	A	-	
	Overall		**0.66**	**14.7**	**B**	**0.70**	**14.4**	**B**	**-0.3**		**1.06**	**51.8**	**D**	**0.68**	**12.9**	**B**	**-33.9**	
Richmond Valley Road / Page Avenue	EB	LTR	0.35	23.4	C	0.38	23.9	C	0.5		0.81	37.2	D	0.81	37.2	D	0.0	
	WB	LTR	0.38	24.1	C	0.38	24.1	C	0.0		0.55	27.9	C	0.55	27.9	C	0.0	
	NB	L	0.18	11.0	B	0.24	11.7	B	0.7		0.33	13.4	B	0.35	13.9	B	0.5	
		TR	0.80	20.8	C	0.82	21.5	C	0.7		0.74	19.1	B	0.78	20.4	C	1.3	
	SB	LTR	0.55	15.5	B	0.57	15.9	B	0.4		0.78	22.5	C	0.84	26.3	C	3.8	
	Overall		**0.64**	**19.6**	**B**	**0.65**	**20.0**	**B**	**0.4**		**0.79**	**23.9**	**C**	**0.83**	**25.4**	**C**	**1.5**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.47	26.1	C	0.0		0.50	26.7	C	0.50	26.7	C	0.0	
		R	0.40	11.8	B	0.12	11.1	B	-0.7		0.16	11.5	B	0.16	11.5	B	0.2	
	NB	T	0.12	11.0	B	0.40	11.8	B	0.8		0.40	11.8	B	0.42	12.0	B	0.2	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1		0.31	11.4	B	0.33	11.4	B	0.0	
	Overall		*****	**13.7**	**B**	*****	**14.1**	**B**	**0.4**		*****	**14.1**	**B**	*****	**14.2**	**B**	**0.1**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.24	23.5	C	0.19	21.2	C	-2.3		0.60	36.3	D	0.55	33.6	C	-2.7	
		TR	0.53	26.9	C	0.54	25.8	C	-1.1		0.52	27.0	C	0.73	33.1	C	6.1	
	WB	L	0.97	80.0	F	0.96	76.8	E	-3.2		0.90	62.9	E	1.36	262.1	F	199.3	yes
		TR	0.44	24.7	C	0.36	22.2	C	-2.5		0.55	26.2	C	0.42	25.7	C	-0.5	
	NB	LTR	0.54	30.0	C	0.69	33.4	C	3.4		0.75	35.5	D	0.91	46.8	D	11.3	yes
		U-TURN	0.53	17.9	C	0.54	18.2	C	0.3		0.35	14.7	B	0.37	15.4	C	0.7	
	SB	L	0.27	30.6	C	0.30	32.8	C	2.2		0.49	34.9	C	0.61	42.9	D	8.0	
		TR	0.23	30.1	C	0.27	32.6	C	2.5		0.31	31.4	C	0.46	38.2	D	6.8	
	Overall		*****	**31.7**	**C**	*****	**31.9**	**C**	**0.2**		*****	**32.5**	**C**	*****	**53.2**	**D**	**20.7**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.35	17.3	B	-	-	-	-		0.57	20.3	C	-	-	-	-	
		L	-	-	-	0.16	15.7	B	-		-	-	-	0.27	27.4	C	-	
		TR	-	-	-	0.27	16.2	B	-		-	-	-	0.86	40.8	D	-	
	WB	LTR	0.40	17.9	B	0.34	17.1	B	-0.8		-	-	-	-	-	-	-	
		DefL	-	-	-	-	-	-	-		0.58	27.5	C	0.54	40.1	D	12.6	
		TR	-	-	-	-	-	-	-		0.40	18.2	B	0.40	22.8	C	4.6	
	NB	DefL	0.60	24.4	C	0.67	27.6	C	3.2		1.01	78.8	E	0.69	37.2	D	-41.6	
		TR	0.18	15.6	B	0.21	15.9	B	0.3		0.35	17.6	B	0.53	26.8	C	9.2	
	SB	LTR	0.23	15.9	B	-	-	-	-		0.54	20.1	C	-	-	-	-	
		L	-	-	-	0.03	14.2	B	-		-	-	-	0.08	21.0	C	-	
		TR	-	-	-	0.27	16.3	B	-		-	-	-	0.89	40.7	D	-	
	Overall		**0.50**	**18.4**	**B**	**0.51**	**18.5**	**B**	**0.1**		**0.79**	**27.5**	**C**	**1.10**	**36.3**	**D**	**8.8**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	53.5	D	1.05	57.2	E	3.7		0.96	39.4	D	0.96	39.9	D	0.5	
		TR	0.25	4.9	A	0.26	4.9	A	0.0		0.37	5.8	A	0.40	5.6	A	-0.2	
	WB	LT	0.72	40.3	D	0.75	41.5	D	1.2		1.00	66.4	E	1.01	67.3	E	0.9	
		R	0.72	41.6	D	0.96	68.1	E	26.5	yes	1.11	103.1	F	1.81	403.6	F	300.5	yes
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0		0.01	30.6	C	0.01	31.4	C	0.8	
	SB	L	0.54	42.8	D	0.61	45.6	D	2.8		0.40	37.8	D	0.56	44.5	D	6.7	
		LT	0.02	30.6	C	0.02	30.6	C	0.0		0.00	30.4	C	0.00	31.3	C	0.9	
		R	0.18	6.8	A	0.18	6.8	A	0.0		0.15	6.6	A	0.15	7.0	A	0.4	
	Overall		**0.99**	**38.4**	**D**	**1.03**	**44.4**	**D**	**6.0**		**0.90**	**48.3**	**D**	**0.98**	**37.5**	**D**	**-10.8**	

Intersection	Approach	Movement	Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																		
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.4	B	0.02	11.6	B	1.2		0.02	10.4	B	0.03	12.2	B	1.8	
	WB	LT	0.68	20.8	C	0.74	25.2	C	4.4		0.70	20.5	C	0.79	27.7	C	7.2	
		R	0.61	18.7	B	0.69	23.0	C	4.3		0.76	23.3	C	0.91	39.9	D	16.6	
	NB	LTR	0.68	18.9	B	0.68	17.3	B	-1.6		0.83	24.9	C	0.81	20.7	C	-4.2	
	SB	LTR	1.16	113.5	F	-	-	-	-		1.07	81.6	F	-	-	-	-	
		L	-	-	-	1.08	91.6	F	-		-	-	-	1.10	101.3	F	-	
		TR	-	-	-	0.43	13.1	B	-		-	-	-	0.35	11.3	B	-	
	Overall		**0.92**	**47.8**	**D**	**0.92**	**30.8**	**C**	**-17.0**		**0.91**	**36.6**	**D**	**1.02**	**35.4**	**D**	**-1.2**	
North Bridge Street / Arthur Kill Road	WB	LR	0.95	31.3	C	0.95	31.3	C	0.0		0.89	27.9	C	0.89	27.9	C	0.0	
	NB	T	0.49	11.5	B	0.54	12.1	B	0.6		0.59	12.9	B	0.66	14.0	B	1.1	
	SB	T	0.64	12.2	B	0.69	12.8	B	0.6		0.58	11.5	B	0.63	12.1	B	0.6	
	Overall		**0.76**	**18.9**	**B**	**0.79**	**19.0**	**B**	**0.1**		**0.71**	**17.4**	**B**	**0.75**	**17.7**	**B**	**0.3**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.91	46.6	D	0.93	49.9	D	3.3		0.93	51.2	D	0.94	53.1	D	1.9	
	NB	TR	0.64	11.2	B	0.68	11.9	B	0.7		0.67	11.5	B	0.72	12.6	B	1.1	
	SB	LT	1.42	202.6	F	-	-	-	-		1.38	184.7	F	-	-	-	-	
		L	-	-	-	0.63	10.1	B	-		-	-	-	0.69	13.4	B	-	
		T	-	-	-	0.92	14.3	B	-		-	-	-	0.83	12.9	B	-	
	Overall		**1.26**	**109.**	**F**	**0.93**	**19.2**	**B**	**-90.5**		**1.23**	**97.2**	**F**	**0.86**	**19.7**	**B**	**-77.5**	
Richmond Valley Road / Page Avenue	EB	LTR	0.69	29.1	C	0.72	30.1	C	0.2		0.70	29.9	C	0.70	30.1	C	0.2	
	WB	LTR	0.63	31.1	C	0.66	31.1	C	0.0		0.50	26.6	C	0.50	26.6	C	0.0	
	NB	L	0.31	13.5	B	0.35	14.4	B	0.9		0.60	18.8	B	0.65	21.1	C	2.3	
		TR	0.69	17.8	B	0.72	18.8	B	1.0		0.89	25.2	C	0.94	30.4	C	5.2	
	SB	LTR	0.88	28.8	C	0.94	37.6	D	8.8		0.77	21.3	C	0.86	27.3	C	6.0	
	Overall		**0.8**	**25.3**	**C**	**0.9**	**28.7**	**C**	**3.4**		**0.82**	**24.4**	**C**	**0.85**	**28.4**	**C**	**4.0**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.64	29.4	C	0.67	29.4	C	0.0		0.68	31.5	C	0.68	31.5	C	0.0	
		R	0.11	12.1	B	0.11	12.4	B	0.3		0.10	10.9	B	0.10	11.1	B	0.2	
	NB	T	0.31	11.6	B	0.33	11.8	B	0.2		0.44	12.2	B	0.47	12.4	B	0.2	
	SB	T	0.41	11.8	B	0.43	12.0	B	0.2		0.38	11.8	B	0.40	12.0	B	0.2	
	Overall		*****	**15.4**	**B**	*****	**15.4**	**B**	**0.0**		*****	**15.8**	**B**	*****	**15.8**	**B**	**0.0**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.52	29.7	C	0.52	29.6	C	-0.1		0.66	39.5	D	0.66	39.8	D	0.3	
		TR	0.63	29.0	C	0.82	36.1	D	7.1		0.65	29.4	C	0.89	41.8	D	12.4	
	WB	L	1.15	132.7	F	1.15	132.7	F	0.0		1.35	210.9	F	2.93	921.8	F	710.9	yes
		TR	0.41	23.9	C	0.43	23.9	C	0.0		0.58	25.0	C	0.58	26.1	C	1.1	
	NB	LTR	0.91	34.3	C	1.01	62.2	E	27.9	yes	0.97	54.0	D	1.45	242.8	F	188.8	yes
		U-TURN	1.0	84.1	F	1.10	100.2	F	15.7		0.59	24.4	C	0.63	27.0	D	2.6	
	SB	L	0.76	45.6	D	0.80	50.1	D	4.5		0.75	43.5	D	0.75	43.8	D	0.3	
		TR	0.32	31.5	C	0.40	33.8	C	2.3		0.68	40.6	D	0.76	44.6	D	4.0	
	Overall		*****	**42.9**	**D**	*****	**61.3**	**E**	**18.5**		*****	**55.2**	**E**	*****	**182.6**	**F**	**127.4**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.58	20.5	C	-	-	-	-		0.64	21.8	C	-	-	-	-	
		L	-	-		0.24	27.1	C	-		-	-	-	0.46	33.2	C	-	
		TR	-	-		0.89	43.2	D	-		-	-	-	0.92	45.6	D	-	
	WB	LTR	-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		DefL	0.61	28.9	C	0.54	40.2	D	11.3		0.88	53.8	D	0.70	45.7	D	-8.1	
		TR	0.45	19.0	B	0.51	24.7	C	5.7		0.61	21.9	C	0.66	27.5	C	5.6	
	NB	DefL	0.72	31.9	C	0.59	32.8	C	0.9		1.26	168.5	F	0.77	44.0	D	-124.5	
		TR	0.31	17.1	B	0.46	25.5	C	8.4		0.43	18.8	B	0.73	35.5	D	16.7	
	SB	LTR	0.38	17.5	B	-	-	-	-		0.60	20.9	C	-	-	-	-	
		L	-	-	-	0.06	20.7	C	-		-	-	-	0.08	19.8	B	-	
		TR	-	-	-	0.66	29.0	C	-		-	-	-	0.94	43.2	D	-	
	Overall		**0.66**	**21.2**	**C**	**1.03**	**33.1**	**C**	**11.9**		**1.07**	**39.1**	**D**	**1.34**	**40.5**	**D**	**1.4**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.03	53.5	D	1.07	66.5	E	13.0	yes	1.01	35.7	D	1.01	34.6	C	-1.1	
		TR	0.33	4.7	A	0.36	4.9	A	0.2		0.38	5.6	A	0.41	5.1	A	-0.5	
	WB	LT	0.66	30.8	C	0.72	32.6	C	1.8		1.08	76.2	E	1.08	74.4	E	-1.8	
		R	1.13	107.4	F	1.72	362.5	F	255.1	yes	1.55	286.0	F	1.29	157.2	F	-128.8	
	NB	LTR	0.11	34.2	C	0.11	34.2	C	0.0		-	-	-	-	-	-	-	
	SB	L	0.72	55.8	E	0.89	77.3	E	21.5	yes	0.36	34.3	C	0.50	38.4	D	4.1	
		LT	0.00	32.1	C	0.00	32.1	C	0.0		-	-	-	-	-	-	-	
		R	0.41	12.0	B	0.42	12.1	B	0.1		0.24	7.3	A	0.25	8.3	A	1.0	
	Overall		**1.02**	**48.8**	**D**	**1.25**	**129.0**	**F**	**80.2**		**1.03**	**88.3**	**F**	**1.16**	**70.6**	**E**	**-**	

DEIS Table

(Superseded by FEIS Table)

~~**Table 3-9 (continued)**~~

~~**Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Arthur Kill Access Road Alternative Traffic Conditions**~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.52	17.8	B	0.56	18.7	B	0.9		0.68	22.2	C	0.68	22.8	C	0.6		0.65	20.7	C	0.66	21.6	C	0.9		0.80	27.6	C	0.81	28.5	C	0.9	
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.14	22.6	C	10.7		0.05	11.6	B	0.07	21.3	C	9.7		0.06	11.7	B	0.10	23.7	C	12.0	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.10	17.8	B	0.10	17.8	B	-		0.15	18.3	B	0.15	18.3	B	0.0		0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	0.55	24.8	C	0.74	31.0	C	-		0.95	50.8	D	1.02	53.2	D	2.4		0.99	59.7	E	1.05	61.3	E	1.6		1.26	156.3	F	1.28	150.7	F	-5.6	
	Overall		**0.53**	**19.0**	**B**	**0.64**	**22.2**	**C**	**3.2**		**0.80**	**32.8**	**C**	**1.01**	**38.2**	**D**	**5.4**		**0.80**	**38.1**	**D**	**1.03**	**43.1**	**D**	**5.0**		**1.00**	**88.2**	**F**	**0.19**	**97.1**	**F**	**8.9**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.8	B	0.56	21.1	C	3.3		0.41	18.3	B	0.60	22.1	C	3.8		0.64	22.4	C	0.90	37.0	D	14.6	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0		0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.07	7.3	A	0.07	7.3	A	0.0		0.14	7.7	A	0.15	7.8	A	0.1		0.17	7.9	A	0.17	7.9	A	0.0		0.18	8.0	A	0.19	8.0	A	0.0	
	SB	TR	0.38	9.1	A	0.37	9.1	A	0.0		0.52	10.2	B	0.56	10.7	B	0.5		0.42	9.5	A	0.46	9.9	A	0.4		0.62	11.0	B	0.69	11.9	B	0.9	
	Overall		**0.31**	**9.6**	**A**	**0.32**	**9.9**	**A**	**0.3**		**0.46**	**10.9**	**B**	**0.56**	**12.2**	**B**	**1.3**		**0.41**	**10.6**	**B**	**0.52**	**12.2**	**B**	**1.6**		**0.63**	**12.8**	**B**	**0.77**	**17.3**	**B**	**4.5**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.29	9.5	A	-0.7		0.01	10.2	B	0.17	9.1	A	-1.1		0.01	10.2	B	0.17	10.2	B	0.0		0.01	10.2	B	0.15	15.2	B	5.0	
	WB	L	0.44	14.8	B	0.93	39.2	D	24.4		0.49	15.5	B	0.94	37.9	D	22.4		0.43	14.7	B	0.94	40.0	D	25.3		0.96	45.2	D	1.01	49.3	D	4.1	
		T	0.46	15.3	B	0.25	9.2	A	-6.1		0.51	16.0	B	0.09	8.6	A	-7.4		0.45	15.1	B	0.10	9.7	A	-5.4		0.34	13.4	B	0.10	7.6	A	-5.8	
	NB	L	0.01	10.3	B	0.01	13.5	B	3.2		0.00	10.2	B	0.0	12.7	B	2.5		0.01	10.3	B	0.02	11.6	B	1.3		0.02	10.4	B	0.03	14.4	B	4.0	
		R	0.20	9.3	A	0.32	12.1	B	2.8		0.41	10.9	B	0.57	13.8	B	2.9		0.49	12.7	B	0.67	16.6	C	4.9		0.63	14.1	B	0.86	27.3	D	13.2	
	SB	LTR	0.13	10.9	B	0.22	14.7	B	3.8		0.16	11.1	B	0.26	15.5	B	4.4		0.16	11.1	B	0.23	12.8	B	1.7		0.21	11.4	B	0.38	16.6	B	5.2	
	Overall		*****	**12.6**	**B**	*****	**20.0**	**C**	**7.4**		*****	**13.1**	**B**	*****	**22.3**	**C**	**9.2**		*****	**12.1**	**B**	*****	**22.1**	**C**	**9.4**		*****	**26.6**	**C**	*****	**31.0**	**C**	**4.4**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.59	20.4	C	4.3		0.58	20.3	C	0.74	25.2	C	4.9		0.78	28.2	C	0.93	41.7	D	13.5		1.12	94.5	F	1.12	89.9	F	-4.6	
		R	0.05	13.1	B	0.30	15.6	B	2.5		0.12	13.7	B	0.22	14.6	B	0.9		0.13	13.8	B	0.25	14.2	B	0.4		0.18	14.2	B	0.28	12.0	B	-2.2	
	WB	LTR	0.11	13.6	B	0.18	14.3	B	0.7		0.09	13.4	B	0.12	13.7	B	0.3		0.14	13.9	B	0.17	13.5	B	-0.4		0.17	14.1	B	0.18	11.0	B	-3.1	
	NB	LTR	0.27	9.5	A	0.34	10.0	A	0.5		0.26	9.4	A	0.28	9.6	A	0.2		0.26	9.4	A	0.30	10.3	B	0.9		0.34	10.0	A	0.46	14.0	B	4.0	
	Overall		**0.30**	**11.3**	**B**	**0.45**	**13.6**	**B**	**2.3**		**0.39**	**13.3**	**B**	**0.47**	**15.6**	**B**	**2.3**		**0.48**	**16.8**	**B**	**0.58**	**22.7**	**C**	**5.9**		**0.67**	**43.1**	**D**	**0.80**	**43.8**	**D**	**0.7**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.19	17.9	B	0.57	23.9	C	6.0		0.39	20.4	C	0.63	25.6	C	5.2		0.49	20.3	C	0.62	25.9	C	5.0		0.56	23.6	C	0.86	38.4	D	14.8	
	NB	LT	0.41	8.5	A	0.41	8.5	A	0.0		0.32	7.7	A	0.32	7.7	A	0.0		0.32	7.7	A	0.52	9.1	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.54	9.6	A	0.58	10.2	B	0.6		0.35	8.9	A	0.37	8.9	A	0.1		0.36	8.9	A	0.52	9.3	A	0.2		0.41	8.3	A	0.44	8.6	A	0.3	
	Overall		**0.43**	**9.9**	**A**	**0.57**	**12.4**	**B**	**2.5**		**0.37**	**10.3**	**B**	**0.45**	**12.7**	**B**	**2.5**		**0.47**	**10.8**	**B**	**0.55**	**12.6**	**B**	**1.8**		**0.46**	**11.7**	**B**	**0.57**	**17.3**	**B**	**5.6**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.27	16.0	B	0.27	16.0	B	0.0		0.28	16.0	B	0.28	16.0	B	0.0		0.51	19.0	B	0.51	19.0	B	0.0		0.48	18.6	B	0.48	18.6	B	0.0	
	NB	LT	0.57	13.0	B	0.75	17.6	B	4.6		0.55	12.6	B	0.67	15.2	B	2.6		0.67	14.6	B	0.81	19.2	B	4.6		0.67	14.8	B	0.91	28.4	C	13.6	
	SB	TR	0.50	11.8	B	0.62	13.9	B	2.1		0.45	11.1	B	0.57	12.8	B	1.7		0.64	13.4	B	0.76	17.2	B	3.3		0.63	13.7	B	0.80	18.5	B	4.8	
	Overall		**0.45**	**12.9**	**B**	**0.56**	**15.8**	**B**	**2.9**		**0.44**	**12.5**	**B**	**0.52**	**14.2**	**B**	**1.7**		**0.61**	**15.1**	**B**	**0.69**	**18.3**	**B**	**3.1**		**0.59**	**15.0**	**B**	**0.74**	**22.4**	**C**	**7.4**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.01	21.0	C	-1.7		0.06	23.1	C	0.05	21.3	C	-1.8		0.02	22.7	C	0.01	21.8	C	-0.9		0.12	23.7	C	0.08	19.9	B	-3.8	
		R	0.34	27.7	C	0.39	17.4	B	-10.3		0.63	35.3	D	0.74	37.5	D	2.2		0.76	33.0	C	0.76	31.5	D	8.4		0.79	43.3	D	0.83	38.6	D	-4.7	
	WB	LTR	0.69	21.4	C	0.85	27.5	C	6.1		0.71	21.7	C	0.81	25.7	C	4.0		0.88	25.0	C	0.95	31.1	C	6.1		0.94	28.7	C	1.01	41.2	D	12.5	
	NB	L	0.39	24.2	C	0.25	20.7	C	-3.5		0.44	23.7	C	0.44	20.2	C	-3.5		0.47	27.1	C	0.50	23.2	C	-3.9		0.64	36.4	D	0.76	39.6	D	3.2	
		T	0.39	17.2	B	0.39	17.2	B	0.0		0.32	16.3	B	0.32	16.3	B	0.0		0.37	16.7	B	0.37	16.7	B	0.0		0.40	17.2	B	0.47	20.5	C	3.3	
	SB	TR	0.99	36.5	D	0.98	38.1	D	1.6		0.62	20.3	C	0.37	15.9	B	-4.4		0.87	31.4	C	0.51	17.5	B	-13.9		0.69	21.4	C	0.48	19.1	B	-2.3	
	Overall		**0.76**	**26.4**	**C**	**0.69**	**28.3**	**C**	**1.9**		**0.66**	**21.9**	**C**	**0.63**	**23.4**	**C**	**1.5**		**0.82**	**26.4**	**C**	**0.72**	**26.7**	**C**	**0.3**		**0.80**	**27.2**	**C**	**0.86**	**34.1**	**C**	**6.9**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0		0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.47	9.8	A	0.6		0.43	9.3	A	0.49	10.0	A	0.7		0.44	9.4	A	0.50	10.1	B	0.7		0.49	9.9	A	0.56	11.0	B	1.1	
	SB	L	0.61	11.9	B	0.83	19.5	B	7.6		0.47	10.4	B	0.52	11.5	B	1.1		0.66	13.1	B	0.74	15.7	B	2.6		0.71	15.6	B	0.82	21.3	C	5.7	
		TR	0.67	11.6	B	0.72	12.6	B	1.0		0.50	9.8	A	0.55	10.4	B	0.6		0.62	11.0	B	0.68	11.8	B	0.8		0.56	10.2	B	0.63	11.1	B	0.9	
	Overall		**0.50**	**11.3**	**B**	**0.60**	**13.8**	**B**	**2.5**		**0.37**	**10.0**	**A**	**0.40**	**10.7**	**B**	**0.7**		**0.48**	**11.2**	**B**	**0.53**	**12.3**	**B**	**1.1**		**0.54**	**11.8**	**B**	**0.61**	**13.7**	**B**	**1.9**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.10	16.6	B	1.8		0.06	14.5	B	0.06	14.5	B	0.0		0.09	14.7	B	0.09	15.3	B	0.6		0.06	14.5	B	0.07	15.1	B	0.6	
	WB	L	0.36	18.2	B	0.39	20.7	C	2.5		0.58	22.4	C	0.58	22.4	C	0.0		0.55	21.8	C	0.56	22.9	C	1.1		0.57	22.1	C	0.58	23.2	C	1.1	
		T	0.02	14.1	B	0.03	15.8	B	1.7		0.04	14.2	B	0.04	14.2	B	0.0		0.04	14.2	B	0.04	14.8	B	0.6		0.02	14.1	B	0.03	14.7	B	0.6	
		R	0.21	16.1	B	0.22	18.1	B	2.0		0.22	16.2	B	0.22	16.2	B	0.0		0.22	16.1	B	0.22	16.8	B	0.7		0.20	15.9	B	0.20	16.5	B	0.6	
	NB	LTR	0.52	20.5	C	0.55	19.1	B	-1.4		0.71	24.3	C	0.78	27.1	C	2.8		0.69	23.6	C	0.74	24.5	C	0.9		0.79	25.9	C	0.86	28.8	C	2.9	
	SB	LTR	1.08	64.8	E	1.09	67.9	E	3.1		0.78	27.4	C	0.87	33.5	C	6.1		0.93	30.9	C	1.00	41.1	D	10.2		0.86	30.6	C	0.96	40.3	D	9.7	
	Overall		**0.72**	**38.9**	**D**	**0.77**	**40.7**	**D**	**1.8**		**0.68**	**23.8**	**C**	**0.73**	**26.9**	**C**	**3.1**		**0.74**	**24.9**	**C**	**0.79**	**29.4**	**C**	**4.5**		**0.71**	**25.5**	**C**	**0.77**	**30.4**	**C**	**4.9**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.37	14.9	B	0.41	15.5	B	0.6		0.47	16.2	B	0.68	28.4	C	12.2		0.47	16.3	B	0.81	37.0	D	20.7	
	WB	LT	0.36	15.1	B	-	-	-	-		0.43	16.3	B	-	-	-	-		0.57	19.5	B	-	-	-	-		0.65	22.8	C	-	-	-	-	
		L	-	-	-	0.51	20.0	C	-		-	-	-	0.60	23.4	C	-		-	-	-	0.75	44.8	D	-		-	-	-	0.78	44.7	D	-	
		T	-	-	-	0.30	14.1	B	-		-	-	-	0.31	14.4	B	-		-	-	-	0.34	16.4	B	-		-	-	-	0.30	14.1	B	-	
	NB	LR	0.60	26.1	C	0.87	41.0	D	-		0.56	25.1	C	0.75	32.2	-	-		0.66	27.9	C	0.88	39.4	-	-		0.55	25.0	C	0.83	37.5	D	-	
	Overall		**0.47**	**18.8**	**B**	**0.67**	**25.3**	**C**	**6.5**		**0.49**	**18.7**	**B**	**0.67**	**22.2**	**C**	**3.5**		**0.61**	**21.0**	**C**	**0.88**	**32.8**	**C**	**11.8**		**0.61**	**20.7**	**C**	**0.86**	**34.9**	**C**	**14.2**	

~~**Table 3-9 (continued)**~~

~~**Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Arthur Kill Access Road Alternative Traffic Conditions**~~

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Sharrots Road / Arthur Kill Road	EB	LTR	0.07	13.9	B	0.09	16.6	C	2.7		0.23	15.5	C	0.26	17.5	C	2.0		0.29	20.7	C	0.34	25.4	D	4.7		0.54	24.5	C	0.65	34.9	D	10.4	yes
	WB	LTR	0.22	14.9	B	0.22	16.9	C	2.0		0.24	18.1	C	0.24	19.5	C	1.4		0.42	24.7	C	0.43	28.2	D	3.5		0.45	24.2	C	0.50	30.2	D	6.0	yes
	NB	LTR	0.03	8.0	A	0.03	8.3	A	0.3		0.03	8.0	A	0.04	8.1	A	0.1		0.03	8.0	A	0.03	8.2	A	0.2		0.01	8.0	A	0.01	8.2	A	0.2	
	SB	LTR	0.03	7.9	A	0.03	8.0	A	0.1		0.03	8.1	A	0.03	8.3	A	0.2		0.06	8.2	A	0.06	8.4	A	0.2		0.03	8.0	A	0.03	8.1	A	0.1	
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	-	-	-	-		0.13	14.0	B	-	-	-	-		0.17	16.3	B	-	-	-	-		0.40	19.1	C	-	-	-	-	
		L	-	-	-	0.63	33.9	D	-		-	-	-	0.55	23.2	C	-		-	-	-	0.57	32.8	D	-		-	-	-	0.50	27.7	D	-	
		R	-	-	-	0.08	10.3	B	-		-	-	-	0.03	10.6	B	-		-	-	-	0.07	11.3	B	-		-	-	-	0.04	10.6	B	-	
	SB	LT	0.02	8.0	A	0.11	8.5	A	0.5		0.02	8.2	A	0.03	8.4	A	0.2		0.01	8.1	A	0.04	8.5	A	0.4		0.01	8.0	A	0.03	8.3	A	0.3	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.19	11.2	B	0.4		0.19	10.3	B	0.20	10.6	B	0.3		0.29	11.5	B	0.30	11.9	B	0.4		0.27	11.7	B	0.28	12.2	B	0.5	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.14	9.3	A	1.3		0.10	9.1	A	0.39	15.0	C	5.9		0.22	8.7	A	0.39	14.4	B	5.7		0.22	9.6	A	0.72	29.5	D	19.9	
		TR	0.08	7.9	A	0.11	8.4	A	0.5		0.15	9.2	A	0.27	12.3	B	3.1		0.23	9.7	A	0.29	11.9	B	3.2		0.27	9.9	A	0.48	17.5	C	7.6	
	WB	LT	0.12	8.3	A	0.14	8.9	A	0.6		0.32	10.5	B	0.42	13.7	B	3.2		0.42	11.3	B	0.52	16.8	C	5.6		0.39	11.8	B	0.60	22.3	C	10.5	
		TR	0.06	7.7	A	0.13	8.2	A	0.5		0.10	8.2	A	0.31	11.6	B	3.4		0.16	8.5	A	0.25	12.1	B	3.9		0.20	9.3	A	0.60	21.0	C	11.7	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	8.7	A	0.22	12.3	B	3.6		0.03	8.5	A	0.13	11.5	B	3.0		0.10	9.4	A	0.33	16.0	C	6.6	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	7.7	A	0.09	9.9	A	2.1		0.11	8.2	A	0.17	10.7	B	2.5		0.14	8.8	A	0.23	13.1	B	4.3	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.34	13.3	B	-		-	-	-	0.35	13.9	B	-		-	-	-	0.61	23.4	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.28	11.5	B	-		-	-	-	0.29	12.3	B	-		-	-	-	0.51	18.5	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.13	8.4	A	0.13	8.6	A	0.2		0.13	8.4	A	0.13	8.6	A	0.2		0.23	9.0	A	0.24	9.1	A	0.3		0.20	9.0	A	0.20	9.0	A	0.0	
	WB	LT	0.30	9.5	A	0.41	10.7	B	1.2		0.34	9.9	A	0.54	11.9	B	2.0		0.43	11.0	B	0.57	13.7	B	2.7		0.64	16.0	C	0.64	16.0	C	0.0	
	SB	LT	0.07	8.2	A	0.09	8.5	A	0.3		0.12	8.5	A	0.13	8.9	A	0.4		0.12	8.8	A	0.12	9.2	A	0.4		0.14	9.4	A	0.14	9.4	A	0.0	
		TR	0.09	8.0	A	0.09	8.3	A	0.3		0.09	8.1	A	0.09	8.4	A	0.4		0.10	8.5	A	0.11	8.9	A	0.4		0.13	9.1	A	0.13	9.1	A	0.0	
Sharrots Road / Veterans Road East	EB	LT	0.11	8.4	A	0.11	8.6	A	0.1		0.14	8.7	A	0.14	9.0	A	0.2		0.23	9.5	A	0.24	9.9	A	0.3		0.19	9.6	A	0.19	9.6	A	0.0	
	WB	TR	0.24	8.8	A	0.34	9.8	A	0.9		0.30	9.5	A	0.44	11.2	B	1.7		0.36	10.6	B	0.51	13.0	B	2.4		0.60	14.8	B	0.60	14.8	B	0.0	
	NB	LT	0.12	8.4	A	0.13	8.6	A	0.3		0.11	8.5	A	0.12	8.8	A	0.3		0.16	9.1	A	0.17	9.5	A	0.4		0.17	9.6	A	0.17	9.6	A	0.0	
		TR	0.10	7.6	A	0.10	7.9	A	0.2		0.16	8.1	A	0.17	8.5	A	0.4		0.24	9.0	A	0.26	9.5	A	0.5		0.28	9.8	A	0.28	9.8	A	0.0	

Notes:
v/c = volume-to-capacity ratio; LOS = Level-of-Service
NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound
L = Left-Turn; T = Through; R = Right-Turn;
LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn
Average Control Delay shown in units of seconds/vehicle
- = No volumes for this approach or movement.

Table 3-9
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Arthur Kill Access Road Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Sharrots Road / Arthur Kill Road	EB	LTR	0.17	26.0	C	0.17	26.0	C	0.0		0.45	31.0	C	0.45	31.0	C	0.0		0.41	30.0	C	0.41	30.0	C	0.0		0.88	59.8	E	0.88	59.8	E	0.0	
	WB	LTR	0.22	18.9	B	0.18	18.5	B	-0.4		0.20	18.7	B	0.18	18.5	B	-0.2		0.27	19.4	B	0.24	19.1	B	-0.3		0.31	19.9	B	0.28	19.6	B	-0.3	
	NB	LTR	0.43	15.9	B	0.50	16.9	B	1.0		0.50	16.7	B	0.56	17.8	B	1.1		0.54	17.3	B	0.60	18.5	B	1.2		0.43	15.4	B	0.50	16.5	B	1.1	
	SB	LTR	0.41	15.5	B	0.49	16.6	B	1.1		0.50	16.9	B	0.57	18.2	B	1.3		0.61	19.2	B	0.70	21.8	C	2.6		0.51	16.7	B	0.60	18.4	B	1.7	
	Overall		**0.32**	**16.6**	**B**	**0.34**	**17.3**	**B**	**0.7**		**0.39**	**18.7**	**B**	**0.42**	**19.5**	**B**	**0.8**		**0.47**	**19.5**	**B**	**0.50**	**20.9**	**C**	**1.4**		**0.50**	**25.2**	**C**	**0.54**	**25.3**	**C**	**0.1**	
Allentown Lane-Veterans Rd West / Arthur Kill Road	EB	LTR	0.02	10.3	B	0.02	10.3	B	0.0		0.04	10.5	B	0.04	11.1	B	0.6		0.02	10.4	B	0.02	11.6	B	1.2		0.02	10.4	B	0.02	11.6	B	1.2	
	WB	LT	0.67	20.5	C	0.67	20.5	C	0.0		0.64	19.2	B	0.67	20.9	C	1.7		0.86	31.7	C	0.94	44.6	D	12.9		0.85	28.9	C	0.92	39.5	D	10.6	
		R	0.61	18.7	B	0.49	16.0	B	-2.7		0.83	28.7	C	0.83	29.1	C	0.4		0.63	19.1	B	0.71	23.6	C	4.5		0.78	24.3	C	0.89	35.7	D	11.4	
	NB	LTR	0.76	21.6	C	0.85	26.5	C	4.9		0.65	18.2	B	0.67	18.0	B	-0.2		0.70	19.5	B	0.70	17.8	B	-1.7		0.86	27.2	C	0.86	25.2	C	-2.0	
	SB	LTR	0.63	21.4	C	-	-	-	-		0.82	30.4	C	-	-	-	-		1.22	133.7	F	-	-	-	-		1.15	111.0	F	-	-	-	-	
		L	-	-	-	0.77	45.0	D	-		-	-	-	0.86	41.9	D	-		-	-	-	1.13	111.0	F	-		-	-	-	1.28	170.3	F	-	
		TR	-	-	-	0.30	12.8	B	-		-	-	-	0.34	12.6	B	-		-	-	-	0.43	13.0	B	-		-	-	-	0.36	12.1	B	-	
	Overall		**0.72**	**20.6**	**C**	**0.76**	**23.0**	**C**	**2.4**		**0.83**	**23.9**	**C**	**0.84**	**23.6**	**C**	**-0.3**		**1.04**	**55.1**	**E**	**1.04**	**38.3**	**D**	**-16.8**		**1.00**	**45.4**	**D**	**1.11**	**47.7**	**D**	**2.3**	
North Bridge Street / Arthur Kill Road	WB	LR	0.30	15.9	B	0.30	15.9	B	0.0		0.58	19.7	B	0.58	19.7	B	0.0		0.83	23.0	C	0.83	23.0	C	0.0		0.79	22.7	C	0.79	22.7	C	0.0	
	NB	T	0.54	12.2	B	0.62	13.4	B	1.2		0.47	11.2	B	0.51	11.7	B	0.5		0.50	11.6	B	0.55	12.3	B	0.7		0.62	13.2	B	0.68	14.5	B	1.3	
	SB	T	0.49	11.3	B	0.55	12.1	B	0.8		0.57	11.9	B	0.61	12.5	B	0.6		0.73	13.6	B	0.78	14.5	B	0.9		0.66	12.4	B	0.71	13.2	B	0.8	
	Overall		**0.44**	**12.5**	**B**	**0.49**	**13.3**	**B**	**0.8**		**0.57**	**13.8**	**B**	**0.60**	**14.1**	**B**	**0.3**		**0.77**	**16.0**	**B**	**0.80**	**16.4**	**B**	**0.4**		**0.71**	**15.7**	**B**	**0.74**	**16.2**	**B**	**0.5**	
Richmond Valley Road / Arthur Kill Road	WB	LR	0.61	26.2	C	0.68	28.8	C	2.6		0.91	47.6	D	0.91	48.8	D	1.2		0.92	49.0	D	0.94	52.6	D	3.6		0.96	56.6	E	0.97	59.4	E	2.8	
	NB	TR	0.67	11.7	B	0.71	12.6	B	0.9		0.53	9.8	A	0.57	10.3	B	0.5		0.65	11.3	B	0.68	12.0	B	0.7		0.67	11.6	B	0.72	12.7	B	1.1	
	SB	LT	0.68	13.6	B	-	-	-	-		1.17	99.8	F	-	-	-	-		1.46	220.9	F	-	-	-	-		1.45	216.3	F	-	-	-	-	
		L	-	-	-	0.52	14.0	B	-		-	-	-	0.68	14.7	B	-		-	-	-	0.65	10.4	B	-		-	-	-	0.73	14.6	B	-	
		T	-	-	-	0.45	9.0	A	-		-	-	-	0.59	9.8	A	-		-	-	-	0.93	14.4	B	-		-	-	-	0.84	13.2	B	-	
	Overall		**0.66**	**14.8**	**B**	**0.70**	**14.5**	**B**	**-0.3**		**1.09**	**57.8**	**E**	**0.75**	**18.6**	**B**	**-39.2**		**1.29**	**118.9**	**F**	**0.93**	**19.8**	**B**	**-99.1**		**1.29**	**112.8**	**F**	**0.88**	**21.1**	**C**	**-91.7**	
Richmond Valley Road / Page Avenue	EB	LTR	0.34	23.3	C	0.38	23.9	C	0.6		0.83	38.9	D	0.83	39.1	D	0.2		0.71	30.6	C	0.72	30.7	C	0.1		0.74	31.3	C	0.74	31.5	C	0.2	
	WB	LTR	0.38	24.1	C	0.38	24.1	C	0.0		0.57	28.3	C	0.57	28.3	C	0.0		0.68	31.9	C	0.68	31.9	C	0.0		0.54	27.6	C	0.54	27.6	C	0.0	
	NB	L	0.18	11.0	B	0.25	11.8	B	0.8		0.36	13.9	B	0.38	14.4	B	0.5		0.35	14.3	B	0.39	15.2	B	0.9		0.65	20.6	C	0.71	23.6	C	3.0	
		TR	0.80	20.7	C	0.81	21.3	C	0.6		0.74	19.0	B	0.77	20.2	C	1.2		0.69	17.7	B	0.71	18.4	B	0.7		0.89	24.9	C	0.94	29.9	C	5.0	
	SB	LTR	0.55	15.6	B	0.57	16.1	B	0.5		0.79	23.5	C	0.86	27.9	C	4.4		0.89	29.8	C	0.95	38.0	D	8.2		0.81	23.6	C	0.91	32.1	C	8.5	
	Overall		**0.63**	**19.5**	**B**	**0.65**	**20.0**	**B**	**0.5**		**0.81**	**24.5**	**C**	**0.85**	**26.3**	**C**	**1.8**		**0.82**	**25.9**	**C**	**0.86**	**29.0**	**C**	**3.1**		**0.83**	**25.4**	**C**	**0.86**	**30.1**	**C**	**4.7**	
South Bridge Street / Page Avenue-Boscombe Avenue	EB	L	0.47	26.1	C	0.47	26.1	C	0.0		0.50	26.7	C	0.50	26.7	C	0.0		0.62	29.4	C	0.62	29.4	C	0.0		0.68	31.4	C	0.68	31.4	C	0.0	
		R	0.12	11.0	B	0.12	11.1	B	0.1		0.16	11.4	B	0.16	11.6	B	0.2		0.16	12.6	B	0.17	12.8	B	0.2		0.10	11.0	B	0.10	11.2	B	0.2	
	NB	T	0.40	11.8	B	0.40	11.8	B	0.0		0.40	11.9	B	0.42	12.1	B	0.2		0.38	11.7	B	0.40	11.8	B	0.1		0.45	12.2	B	0.47	12.5	B	0.3	
	SB	T	0.24	10.5	B	0.25	10.6	B	0.1		0.32	11.2	B	0.34	11.4	B	0.2		0.38	11.8	B	0.40	12.0	B	0.2		0.38	11.8	B	0.41	12.1	B	0.3	
	Overall		*	**14.1**	**B**	*	**14.1**	**B**	**0.0**		*	**14.2**	**B**	*	**14.2**	**B**	**0.1**		*	**15.4**	**B**	*	**15.4**	**B**	**0.0**		*	**15.7**	**B**	*	**15.8**	**B**	**0.1**	
Veterans Road West / Bricktown Way-KWVP WB off-ramp	EB	L	0.32	26.3	C	0.29	25.1	C	-1.2		0.80	59.6	E	0.60	33.9	C	-25.7		0.79	51.9	D	0.77	48.0	D	-3.9		1.23	186.6	F	0.36	35.3	D	-151.3	
		T	-	-	-	0.33	23.6	C	-4.0		-	-	-	0.53	23.5	C	-7.4		-	-	-	0.58	26.2	C	-8.1		-	-	-	0.82	38.1	D	-0.2	
		R	-	-	-	0.30	23.5	C	-4.1		-	-	-	0.25	19.5	B	-11.4		-	-	-	0.35	22.7	C	-11.6		-	-	-	0.43	27.4	C	-10.9	
		TR	0.56	27.6	C	-	-	-	-		0.67	30.9	C	-	-	-	-		0.78	34.3	C	-	-	-	-		0.85	38.3	D	-	-	-	-	
	WB	L	1.04	100.4	F	0.75	41.6	D	-58.8		1.37	228.0	F	0.97	75.4	E	-152.6		1.14	129.7	F	1.07	104.6	F	-25.1		2.46	709.9	F	0.94	71.8	E	-638.1	
		TR	0.59	27.1	C	0.54	26.3	C	-0.8		0.66	28.5	C	0.57	23.3	C	-5.2		0.61	26.9	C	0.61	25.4	C	-1.5		0.77	30.7	C	0.92	42.9	D	12.2	
	NB	LTR	0.43	28.1	C	-	-	-	-		0.62	31.6	C	-	-	-	-		0.46	28.5	C	-	-	-	-		0.79	36.9	D	-	-	-	-	
		DefL	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	0.64	33.1	C	-3.8	
		T	-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-	-	0.83	39.9	D	3.0	
		LT	-	-	-	0.41	27.9	C	-0.2		-	-	-	0.56	30.9	C	-0.7		-	-	-	0.53	31.1	C	2.6		-	-	-	-	-	-		
		R	-	-	-	0.21	26.1	C	-2.0		-	-	-	0.62	36.4	D	4.8		-	-	-	0.36	30.1	C	1.6		-	-	-	0.36	17.5	B	-19.4	
		U-TURN	0.00	11.2	B	0.33	14.3	B	-13.8		0.26	13.8	B	0.27	14.3	B	0.5		0.90	50.1	F	0.95	59.5	F	9.4		0.45	19.8	C	0.47	21.2	C	1.4	
	SB	L	0.27	30.6	C	0.27	30.7	C	0.1		0.49	34.9	C	0.61	42.9	D	8.0		0.76	45.6	D	0.76	45.8	D	0.2		0.75	43.5	D	0.74	41.8	D	-1.7	
		TR	0.22	30.1	C	0.24	30.4	C	0.3		0.31	31.4	C	0.46	38.2	D	6.8		0.32	31.5	C	0.38	32.6	C	1.1		0.68	40.5	D	0.60	33.2	C	-7.3	
	Overall		*	**34.3**	**C**	*	**26.9**	**C**	**-7.5**		*	**49.6**	**D**	*	**31.7**	**C**	**-17.9**		*	**41.3**	**D**	*	**40.8**	**D**	**-0.6**		*	**103.3**	**F**	*	**38.7**	**D**	**-64.5**	
Veterans Road West / Tyrellan Avenue	EB	LTR	0.43	29.7	C	-	-	-	-		0.84	40.8	D	-	-	-	-		0.84	41.0	D	-	-	-	-		0.97	55.9	E	-	-	-	-	
		L	-	-	-	0.18	12.0	B	-		-	-	-	0.38	31.9	C	-		-	-	-	0.34	29.7	C	-		-	-	-	0.69	49.3	D	-	
		TR	-	-	-	0.19	11.2	B	-		-	-	-	0.87	42.2	D	-		-	-	-	0.81	36.5	D	-		-	-	-	0.86	37.6	D	-	
	WB	LTR	0.77	37.1	D	0.45	13.9	B	-23.2		0.81	38.8	D	-	-	-	-		0.96	53.4	D	-	-	-	-		1.12	100.2	F	-	-	-	-	
		DefL	-	-	-	-	-	-	-		-	-	-	0.58	34.1	C	-		-	-	-	0.56	29.5	C	-		-	-	-	1.00	84.7	F	-	
		TR	-	-	-	-	-	-	-		-	-	-	0.55	20.8	C	-		-	-	-	0.61	18.3	B	-		-	-	-	0.96	48.4	D	-	
	NB	DefL	0.86	51.7	D	0.89	54.1	D	2.4		1.75	390.4	F	0.97	76.5	E	-313.9		1.17	140.4	F	0.93	69.5	E	-70.9		2.55	749.7	F	0.96	73.3	E	-676.4	
		TR	0.25	23.6	C	0.26	21.6	C	-2.0		0.48	27.3	C	0.41	18.5	B	-8.8		0.42	26.2	C	0.42	22.6	C	-3.6		0.59	29.9	C	0.47	17.7	B	-12.2	
	SB	LTR	0.32	24.0	C	-	-	-	-		0.74	33.1	C	-	-	-	-		0.52	26.8	C	-	-	-	-		0.82	35.7	D	-	-	-	-	
		L	-	-	-	0.04	19.1	B	-		-	-	-	0.10	22.2	C	-		-	-	-	0.09	25.6	C	-		-	-	-	0.10	20.1	C	-	
		TR	-	-	-	0.34	22.1	C	-		-	-	-	0.92	44.9	D	-		-	-	-	0.83	40.2	D	-		-	-	-	0.93	42.8	D	-	
	Overall		**0.70**	**35.0**	**C**	**0.62**	**22.6**	**C**	**-12.4**		**1.18**	**79.5**	**E**	**1.25**	**40.0**	**D**	**-39.5**		**1.00**	**52.2**	**D**	**1.26**	**35.0**	**D**	**-17.2**		**1.62**	**132.9**	**F**	**1.60**	**46.1**	**D**	**-86.8**	
Boscombe Avenue / Outerbridge Crossing ramps	EB	L	1.04	52.0	D	1.05	55.6	E	3.6		0.95	38.9	D	0.98	43.6	D	4.7		1.04	55.0	D	1.02	51.5	D	-3.5		1.01	33.8	C	0.99	39.3	D	5.5	
		TR	0.25	4.9	A	0.26	5.0	A	0.1		0.38	5.8	A	0.44	6.1	A	0.3		0.34	4.8	A	0.37	5.0	A	0.2		0.39	5.7	A	0.41	4.8	A	-0.9	
	WB	LT	0.72	40.3	D	0.75	41.5	D	1.2		1.02	69.8	E	1.03	71.4	E	1.6		0.68	31.1	C	0.86	44.3	D	13.2		1.10	83.9	F	1.10	82.3	F	-1.6	
		R	0.76	43.8	D	0.24	0.3	A	-43.5		1.50	267.0	F	0.56	0.8	A	-266.2		1.25	154.0	F	0.57	1.0	A	-153.0		2.06	513.2	F	0.74	0.6	A	-512.6	
	NB	LTR	0.20	32.8	C	0.20	32.8	C	0.0		0.01	30.6	C	0.01	30.6	C	0.0		0.11	34.2	C	0.11	34.2	C	0.0		-	-	-	-	-	-	-	
	SB	L	0.55	43.2	D	0.62	46.1	D	2.9		0.42	38.5	D	0.55	42.9	D	4.4		0.75	58.9	E	0.79	62.5	E	3.6		0.38	34.5	C	0.56	40.6	D	6.1	
		LT	0.02	30.6	C	0.02	30.6	C	0.0		0.00	30.4	C	0.00	30.4	C	0.0		0.00	32.1	C	0.75	32.1	C	0.0		-	-	-	-	-	-	-	
		R	0.18	6.8	A	0.18	6.8	A	0.0		0.15	6.6	A	0.15	7.0	A	0.4		0.41	12.0	B	0.38	9.1	A	-2.9		0.24	7.3	A	0.25	8.3	A	1.0	
	Overall		**0.98**	**38.1**	**D**	**1.02**	**32.6**	**C**	**-5.5**		**1.02**	**90.4**	**F**	**0.91**	**27.1**	**C**	**-63.3**		**1.03**	**61.0**	**E**	**1.02**	**24.9**	**C**	**-36.1**		**1.18**	**160.0**	**F**	**0.96**	**26.5**	**C**	**-**	

Table 3-9 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Arthur Kill Access Road Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
SIGNALIZED INTERSECTIONS																																
Boscombe Avenue / Tyrellan Avenue	EB	DefL	0.53	18.0	B	0.57	18.9	B	0.9		0.71	23.0	C	0.70	23.5	C	0.5		0.67	21.3	C	0.68	22.2	C	0.9		0.83	29.7	C	0.84	31.1	C	1.4	
		TR	0.03	11.5	B	0.03	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.04	11.5	B	0.04	11.5	B	0.0		0.05	11.6	B	0.05	11.6	B	0.0	
	WB	LTR	0.10	12.0	B	0.10	12.0	B	0.0		0.09	11.9	B	0.13	21.1	C	9.2		0.05	11.6	B	0.07	19.9	B	8.3		0.06	11.7	B	0.09	20.8	C	9.1	
	NB	LTR	0.07	17.4	B	0.07	17.4	B	0.0		-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		0.00	16.8	B	0.00	16.8	B	0.0	
		DefL	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
		TR	-	-	-	-	-	-	-		0.01	16.9	B	0.01	16.9	B	0.0		-	-	-	-	-	-	-		-	-	-	-	-	-	-	
	SB	LT	0.10	17.8	B	0.10	17.8	B	-		0.14	18.3	B	0.14	18.3	B	0.0		0.12	18.1	B	0.12	18.1	B	0.0		0.17	18.5	B	0.17	18.5	B	0.0	
		R	0.58	25.5	C	0.76	32.4	C	-		1.06	78.5	E	1.09	76.9	E	-1.6		1.09	89.9	F	1.12	86.3	F	-3.6		1.41	218.0	F	1.42	215.3	F	-2.7	
	Overall		**0.55**	**19.4**	**B**	**0.65**	**22.9**	**C**	**3.5**		**0.86**	**46.3**	**D**	**1.06**	**51.4**	**D**	**5.1**		**0.85**	**53.9**	**D**	**1.07**	**58.0**	**E**	**4.1**		**1.08**	**123.0**	**F**	**1.28**	**136.8**	**F**	**13.8**	
Bricktown Way / Veterans Road West	EB	L	0.19	15.7	B	0.25	16.4	B	0.7		0.37	17.7	B	0.56	21.1	C	3.4		0.41	18.2	B	0.60	22.0	C	3.8		0.64	22.3	C	0.89	36.6	D	14.3	
		R	0.00	14.0	B	0.00	14.0	B	0.0		0.05	14.4	B	0.05	14.4	B	0.0		0.04	14.4	B	0.04	14.4	B	0.0		0.06	14.5	B	0.06	14.5	B	0.0	
	NB	LT	0.07	7.4	A	0.07	7.4	A	0.0		0.15	7.8	A	0.16	7.9	A	0.1		0.18	8.0	A	0.18	8.0	A	0.0		0.20	8.1	A	0.24	8.4	A	0.3	
	SB	TR	0.51	10.3	B	0.54	10.5	B	0.2		0.66	11.9	B	0.79	14.3	B	2.4		0.58	11.0	B	0.70	12.7	B	1.7		0.80	13.7	B	0.98	24.8	C	11.1	
	Overall		**0.39**	**10.4**	**B**	**0.43**	**10.9**	**B**	**0.5**		**0.55**	**12.0**	**B**	**0.70**	**14.4**	**B**	**2.4**		**0.51**	**11.4**	**B**	**0.66**	**13.5**	**B**	**2.1**		**0.74**	**14.2**	**B**	**0.95**	**24.8**	**C**	**10.6**	
Englewood Avenue / Veterans Road West	EB	TR	0.01	10.2	B	0.29	9.5	A	-0.7		0.01	10.2	B	0.17	9.1	A	-1.1		0.01	10.2	B	0.17	10.2	B	0.0		0.01	10.2	B	0.12	11.6	B	1.4	
	WB	L	0.44	14.8	B	0.93	38.6	D	23.8		0.48	15.5	B	0.93	37.1	D	21.6		0.43	14.6	B	0.93	39.2	D	24.6		0.96	44.5	D	0.91	27.4	C	-17.1	
		T	0.46	15.2	B	0.25	9.2	A	-6.0		0.50	15.9	B	0.09	8.6	A	-7.3		0.45	15.1	B	0.10	9.7	A	-5.4		0.34	13.4	B	0.09	5.6	A	-7.8	
	NB	L	0.01	10.4	B	0.03	13.8	B	3.4		0.00	10.2	B	0.01	12.8	B	2.6		0.02	10.4	B	0.03	12.0	B	1.6		0.03	10.6	B	0.05	17.8	B	7.2	
		R	0.21	9.3	A	0.34	11.7	B	2.4		0.43	11.1	B	0.56	13.1	B	2.0		0.51	11.9	B	0.66	15.8	C	3.9		0.65	14.6	B	0.84	24.8	C	10.2	
	SB	LTR	0.26	11.8	B	0.49	17.0	B	5.2		0.30	12.1	B	0.53	16.8	B	4.7		0.32	12.2	B	0.49	15.0	B	2.8		0.39	12.8	B	0.95	38.9	D	26.1	
	Overall		*****	**12.6**	**B**	*****	**19.6**	**B**	**6.9**		*****	**13.1**	**B**	*****	**21.2**	**C**	**8.1**		*****	**12.8**	**B**	*****	**20.5**	**C**	**7.7**		*****	**24.4**	**C**	*****	**30.0**	**C**	**5.6**	
Englewood Avenue / Veterans Road East	EB	LT	0.34	16.1	B	0.60	20.6	C	4.5		0.61	20.9	C	0.76	26.4	C	5.5		0.81	29.9	C	0.92	38.1	D	8.2		1.16	108.7	F	1.16	102.6	F	-6.1	
		R	0.05	13.1	B	0.30	15.6	B	2.5		0.12	13.7	B	0.22	14.6	B	0.9		0.13	13.8	B	0.24	13.5	B	-0.3		0.18	14.2	B	0.28	12.0	B	-2.2	
	WB	LTR	0.11	13.6	B	0.18	14.3	B	0.7		0.09	13.4	B	0.12	13.7	B	0.3		0.14	13.9	B	0.16	12.8	B	-1.1		0.17	14.1	B	0.18	11.0	B	-3.1	
	NB	LTR	0.27	9.5	A	0.34	10.0	A	0.5		0.25	9.4	A	0.28	9.6	A	0.2		0.25	9.4	A	0.31	10.9	B	1.5		0.34	10.0	A	0.46	14.0	B	4.0	
	Overall		**0.30**	**11.3**	**B**	**0.45**	**13.7**	**B**	**2.4**		**0.40**	**13.6**	**B**	**0.48**	**16.1**	**B**	**2.5**		**0.49**	**17.7**	**B**	**0.59**	**21.7**	**C**	**4.0**		**0.68**	**49.9**	**D**	**0.82**	**49.8**	**D**	**-0.1**	
Englewood Avenue / Bloomingdale Road	EB	LR	0.20	18.0	B	0.58	24.1	C	6.1		0.43	21.1	C	0.67	26.9	C	5.8		0.42	20.9	C	0.65	26.5	C	5.6		0.62	25.0	C	0.91	44.8	D	19.8	
	NB	LT	0.41	8.4	A	0.41	8.5	A	0.1		0.32	7.7	A	0.32	7.7	A	0.0		0.51	9.5	A	0.51	9.5	A	0.0		0.41	8.4	A	0.41	8.4	A	0.0	
	SB	TR	0.53	9.6	A	0.57	10.1	B	0.5		0.35	7.8	A	0.37	8.0	A	0.2		0.50	9.2	A	0.52	9.5	A	0.3		0.41	8.3	A	0.44	8.6	A	0.3	
	Overall		**0.43**	**9.9**	**A**	**0.57**	**12.5**	**B**	**2.6**		**0.38**	**10.5**	**B**	**0.47**	**13.3**	**B**	**2.8**		**0.48**	**11.0**	**B**	**0.56**	**13.0**	**B**	**2.0**		**0.48**	**12.2**	**B**	**0.59**	**19.6**	**B**	**7.4**	
Sharrotts Road / Bloomingdale Road	EB	LR	0.30	16.3	B	0.30	16.3	B	0.0		0.28	16.0	B	0.28	16.0	B	0.0		0.50	18.9	B	0.50	18.9	B	0.0		0.48	18.5	B	0.48	18.5	B	0.0	
	NB	LT	0.63	14.2	B	0.81	20.3	C	6.1		0.57	13.0	B	0.69	15.7	B	2.7		0.69	15.1	B	0.83	20.2	C	5.1		0.71	15.9	B	0.96	35.8	D	19.9	
	SB	TR	0.56	12.7	B	0.69	15.4	B	2.7		0.48	11.4	B	0.59	13.1	B	1.7		0.66	14.3	B	0.78	18.0	B	3.7		0.66	14.3	B	0.83	20.1	C	5.8	
	Overall		**0.50**	**13.8**	**B**	**0.61**	**17.7**	**B**	**3.9**		**0.45**	**12.7**	**B**	**0.53**	**14.6**	**B**	**1.9**		**0.62**	**15.5**	**B**	**0.70**	**19.0**	**B**	**3.5**		**0.62**	**15.7**	**B**	**0.77**	**26.2**	**C**	**10.5**	
Veterans Road East-Drumgoole Road West / Bloomingdale Road	EB	L	0.02	22.7	C	0.01	21.0	C	-1.7		0.06	23.1	C	0.05	21.3	C	-1.8		0.02	22.7	C	0.02	21.8	C	-0.9		0.12	23.7	C	0.08	19.9	B	-3.8	
		R	0.34	27.7	C	0.78	43.0	D	15.3		0.62	34.9	C	0.73	37.0	D	2.1		0.56	33.0	C	0.76	41.2	D	8.2		0.78	43.0	D	0.82	38.3	D	-4.7	
	WB	LTR	0.69	21.3	C	0.85	27.3	C	6.0		0.71	21.6	C	0.81	25.6	C	4.0		0.87	24.7	C	0.94	30.3	C	5.6		0.93	28.4	C	1.00	40.2	D	11.8	
	NB	L	0.39	24.2	C	0.53	26.0	C	1.8		0.44	23.3	C	0.44	20.1	C	-3.2		0.47	27.1	C	0.50	23.1	C	-4.0		0.63	35.3	D	0.75	38.8	D	3.5	
		T	0.38	17.1	B	0.38	17.1	B	0.0		0.32	16.3	B	0.32	16.3	B	0.0		0.36	16.7	B	0.36	16.7	B	0.0		0.40	17.1	B	0.47	20.5	C	3.4	
	SB	TR	0.98	34.6	C	0.59	17.3	B	-17.3		0.62	20.2	C	0.37	16.0	B	-4.2		0.87	31.2	C	0.52	17.6	B	-13.6		0.69	21.4	C	0.49	19.2	B	-2.2	
	Overall		**0.76**	**25.7**	**C**	**0.72**	**24.7**	**C**	**-1.0**		**0.65**	**21.8**	**C**	**0.63**	**23.3**	**C**	**1.5**		**0.81**	**26.2**	**C**	**0.72**	**26.2**	**C**	**0.0**		**0.80**	**27.0**	**C**	**0.86**	**33.5**	**C**	**6.5**	
South Service Road-Drumgoole Road East / Bloomingdale Road	EB	LTR	0.16	16.9	B	0.16	16.9	B	0.0		0.10	16.3	B	0.10	16.3	B	0.0		0.13	16.5	B	0.13	16.5	B	0.0		0.20	17.3	B	0.20	17.3	B	0.0	
	NB	LTR	0.41	9.2	A	0.47	9.8	A	0.6		0.43	9.3	A	0.49	10.0	A	0.7		0.44	9.4	A	0.49	10.0	A	0.6		0.49	9.9	A	0.56	10.9	B	1.0	
	SB	L	0.60	11.7	B	0.83	19.3	B	7.6		0.46	10.4	B	0.51	11.3	B	0.9		0.65	13.0	B	0.73	15.5	B	2.5		0.71	15.4	B	0.81	20.7	C	5.3	
		TR	0.67	11.6	B	0.72	12.5	B	0.9		0.50	9.8	A	0.55	10.4	B	0.6		0.62	10.9	B	0.67	11.7	B	0.8		0.56	10.2	B	0.62	11.1	B	0.9	
	Overall		**0.50**	**11.3**	**B**	**0.60**	**13.7**	**B**	**2.4**		**0.36**	**10.0**	**A**	**0.40**	**10.6**	**B**	**0.6**		**0.47**	**11.2**	**B**	**0.52**	**12.3**	**B**	**1.1**		**0.53**	**11.7**	**B**	**0.60**	**13.5**	**B**	**1.8**	
Pleasant Plains Avenue-Amboy Road / Bloomingdale Road	EB	LTR	0.09	14.8	B	0.10	17.3	B	2.5		0.06	14.5	B	0.06	14.5	B	0.0		0.09	14.7	B	0.09	15.3	B	0.6		0.06	14.5	B	0.07	15.1	B	0.6	
	WB	L	0.36	18.2	B	0.40	21.6	C	3.4		0.58	22.3	C	0.58	22.3	C	0.0		0.55	21.8	C	0.56	22.9	C	1.1		0.56	22.0	C	0.58	23.1	C	1.1	
		T	0.02	14.1	B	0.03	16.4	B	2.3		0.04	14.2	B	0.04	14.2	B	0.0		0.04	14.2	B	0.04	14.8	B	0.6		0.02	14.1	B	0.03	14.7	B	0.6	
		R	0.21	16.1	B	0.23	18.8	B	2.7		0.22	16.2	B	0.22	16.2	B	0.0		0.21	16.1	B	0.22	16.8	B	0.7		0.19	15.8	B	0.20	16.5	B	0.7	
	NB	LTR	0.52	20.4	C	0.54	18.2	B	-2.2		0.70	24.2	C	0.78	26.8	C	2.6		0.69	23.5	C	0.74	24.5	C	1.0		0.79	25.8	C	0.86	28.6	C	2.8	
	SB	LTR	1.07	61.0	E	1.05	50.6	D	-10.4		0.77	27.1	C	0.86	32.7	C	5.6		0.92	30.2	C	0.99	39.2	D	9.0		0.86	30.5	C	0.95	39.8	D	9.3	
	Overall		**0.71**	**37.2**	**D**	**0.76**	**33.0**	**C**	**-4.2**		**0.67**	**23.6**	**C**	**0.72**	**26.5**	**C**	**2.9**		**0.74**	**24.6**	**C**	**0.78**	**28.6**	**C**	**4.0**		**0.71**	**25.4**	**C**	**0.77**	**30.1**	**C**	**4.7**	
Arthur Kill Road / Bloomingdale Road	EB	TR	0.35	14.6	B	0.39	15.1	B	0.5		0.38	15.0	B	0.42	15.6	B	0.6		0.47	16.3	B	0.71	30.2	C	13.9		0.48	16.4	B	0.85	41.1	D	24.7	
	WB	LT	0.41	15.8	B	-	-	-	-		0.52	18.2	B	-	-	-	-		0.67	23.2	C	-	-	-	-		0.80	31.3	C	-	-	-	-	
		L	-	-	-	0.57	22.1		-		-	-	-	0.69	28.4	C	-		-	-	-	0.83	53.6	D	-		-	-	-	0.87	53.6	D	-	
		T	-	-	-	0.31	14.3		-		-	-	-	0.34	14.7	B	-		-	-	-	0.36	16.7	B	-		-	-	-	0.32	14.4	B	-	
	NB	LR	0.61	26.5	C	0.77	33.2	C	6.7		0.59	26.0	C	0.78	33.7	C	7.7		0.70	29.7	C	0.89	40.7	D	11.0		0.59	26.2	C	0.86	40.5	D	14.3	
	Overall		**0.50**	**19.2**	**B**	**0.66**	**22.3**	**C**	**3.1**		**0.55**	**19.7**	**B**	**0.73**	**23.7**	**C**	**4.0**		**0.69**	**22.8**	**C**	**0.91**	**35.4**	**D**	**12.6**		**0.71**	**24.0**	**C**	**0.92**	**39.1**	**D**	**15.1**	

Table 3-9 (continued)
Peak Hour Level-of-Service Analysis Results, Year 2020 Comparison of Future No-Action and Mitigated Arthur Kill Access Road Alternative Traffic Conditions

Intersection	Approach	Movement	Weekday AM Peak Hour (8:00 to 9:00 AM)								Weekday Midday Peak Hour (12:00 to 1:00 PM)								Weekday PM Peak Hour (5:00 to 6:00 PM)								Saturday Midday Peak Hour (12:45 to 1:45 PM)							
			2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?	2020 No-Action			2020 Mitigated-Action			Change in Delay	Impact?
			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS			v/c	Average Control Delay	LOS	v/c	Average Control Delay	LOS		
UNSIGNALIZED INTERSECTIONS																																
Englewood Avenue / Arthur Kill Road	WB	LR	0.05	10.8	B	-	-	-	-		0.13	14.2	B	-	-	-	-		0.18	14.5	B	-	-	-	-		0.07	12.0	B	-	-	-	-	
		L	-	-	-	0.54	23.8	C	-		-	-	-	0.44	23.0	C	-		-	-	-	0.55	30.6	D	-		-	-	-	0.50	27.4	D	-	
		R	-	-	-	0.08	10.3	B	-		-	-	-	0.03	10.6	B	-		-	-	-	0.07	11.3	B	-		-	-	-	0.04	10.7	B	-	
	SB	LT	0.02	8.0	A	0.05	8.3	A	0.3		0.02	8.2	A	0.02	8.4	A	0.2		0.01	8.1	A	0.02	8.4	A	0.3		0.01	8.0	A	0.02	8.3	A	0.3	
South Bridge Street / Arthur Kill Road	SB	LT	0.18	10.8	B	0.19	11.3	B	0.5		0.20	10.4	B	0.20	10.7	B	0.3		0.29	11.6	B	0.30	12.0	B	0.4		0.27	11.8	B	0.29	12.4	B	0.6	
Bricktown Way / Tyrellan Avenue	EB	LT	0.05	8.0	A	0.08	8.7	A	0.7		0.10	9.1	A	0.19	11.9	B	2.8		0.12	8.7	A	0.21	11.6	B	2.9		0.22	9.6	A	0.40	16.1	C	6.5	
		TR	0.08	7.9	A	0.11	8.5	A	0.6		0.15	9.2	A	0.28	12.5	B	3.3		0.16	8.7	A	0.29	12.1	B	3.4		0.27	9.9	A	0.48	17.6	C	7.7	
	WB	LT	0.12	8.3	A	0.15	8.8	A	0.5		0.31	10.5	B	0.42	14.3	B	3.8		0.38	11.2	B	0.51	16.4	C	5.2		0.39	11.7	B	0.55	19.9	C	8.2	
		TR	0.06	7.7	A	0.18	8.3	A	0.6		0.10	8.2	A	0.45	13.5	B	5.3		0.14	8.5	A	0.49	14.4	B	5.9		0.20	9.3	A	0.77	29.8	D	20.5	
	NB	LT	0.02	7.8	A	0.05	8.8	A	1.0		0.07	8.6	A	0.22	12.1	B	3.5		0.03	8.5	A	0.15	11.4	B	2.9		0.10	9.4	A	0.32	15.5	C	6.2	
		R	0.03	7.0	A	0.03	7.7	A	0.7		0.06	7.7	A	0.09	9.8	A	2.1		0.11	8.2	A	0.16	10.6	B	2.4		0.14	8.7	A	0.23	12.7	B	4.0	
	SB	LT	-	-	-	0.07	8.8	A	-		-	-	-	0.33	13.2	B	-		-	-	-	0.35	13.7	B	-		-	-	-	0.60	22.3	C	-	
		TR	-	-	-	0.06	8.2	A	-		-	-	-	0.27	11.7	B	-		-	-	-	0.29	12.1	B	-		-	-	-	0.50	17.8	C	-	
Sharrots Road / Veterans Road West	EB	TR	0.14	8.5	A	0.14	8.7	A	0.2		0.13	8.4	A	0.13	8.6	A	0.2		0.23	8.9	A	0.24	9.2	A	0.3		0.19	8.8	A	0.20	9.1	A	0.3	
	WB	LT	0.33	9.8	A	0.44	11.1	B	1.3		0.37	10.3	B	0.52	12.5	B	2.2		0.46	11.5	B	0.60	14.6	B	3.1		0.50	12.4	B	0.69	17.7	C	5.3	
	SB	LT	0.08	8.3	A	0.09	8.6	A	0.3		0.12	8.6	A	0.13	9.0	A	0.4		0.11	8.9	A	0.12	9.3	A	0.4		0.12	8.9	A	0.14	9.5	A	0.6	
		TR	0.09	8.0	A	0.09	8.4	A	0.4		0.09	8.1	A	0.09	8.5	A	0.4		0.10	8.5	A	0.10	8.9	A	0.4		0.13	8.7	A	0.13	9.2	A	0.5	
Sharrots Road / Veterans Road East	EB	LT	0.12	8.6	A	0.13	8.7	A	0.1		0.14	8.8	A	0.14	9.0	A	0.2		0.23	9.6	A	0.24	9.9	A	0.3		0.18	9.3	A	0.19	9.7	A	0.4	
	WB	TR	0.27	9.1	A	0.37	10.2	B	1.1		0.33	9.8	A	0.48	11.7	B	1.9		0.39	11.0	B	0.55	13.7	B	2.7		0.45	11.7	B	0.65	16.3	C	4.6	
	NB	LT	0.13	8.5	A	0.13	8.7	A	0.2		0.11	8.5	A	0.12	8.9	A	0.4		0.17	9.2	A	0.17	9.6	A	0.4		0.16	9.2	A	0.17	9.7	A	0.5	
		TR	0.11	7.8	A	0.11	8.0	A	0.2		0.16	8.2	A	0.17	8.6	A	0.4		0.25	9.1	A	0.26	9.6	A	0.5		0.26	9.2	A	0.28	9.9	A	0.7	

Notes:

v/c = volume-to-capacity ratio; LOS = Level-of-Service

NB = Northbound; SB = Southbound; EB = Eastbound; WB = Westbound; SEB = Southeastbound

L = Left-Turn; T = Through; R = Right-Turn;

LT = Left-Turn/Through; TR = Through/Right-Turn; LR = Left-Turn/Right-Turn; LTR = Left-Turn/Through/Right-Turn

Average Control Delay shown in units of seconds/vehicle

- = No volumes for this approach or movement.

3.6 NO UNMITIGATED IMPACT ALTERNATIVE

This alternative describes how various elements of the Proposed Project would have to be reduced or changed in order to eliminate the unmitigated impacts of the Proposed Project as identified in **Chapter 4: Mitigation** and **Chapter 7: Unavoidable Adverse Impacts**. As noted in those chapters, the Proposed Project would result in unmitigated adverse impacts in traffic operations and potentially unmitigated adverse impacts on natural resources and on historic and cultural resources.

Land Use, Zoning and Public Policy

Under this alternative, the proposed types of land uses within the Development Area would be the same as under the Proposed Project, and the zoning changes and their effects would likely be the same under this alternative as they would be under the Proposed Project. However, many of Proposed Project's uses would no longer be viable under this alternative, including Retail Sites "A" and Retail Site "B", the school, and senior housing site, which would have to be substantially reduced to avoid unmitigated traffic impacts and potential unmitigated impacts to natural and cultural resources. In addition, this alternative would not meet many of the goals and objectives supported by the Proposed Project, as discussed in **Chapter 2.1,** especially the PlaNYC 2030 and Working West Shore 2030 Study goals of supporting the development of new housing, commercial, community facility and open space resources.

Socioeconomic Conditions

This alternative would not generate the same socioeconomic benefits that the Proposed Project would provide, as discussed in **Chapter 2.2**. Some of the development components would not be viable due to the substantial reduction in size. Therefore, while this alternative would not result in any significant adverse impacts to socioeconomic conditions, it would forgo the potential for positive benefits in this area, such as the full creation of approximately 816 new jobs expected under the Proposed Project (see **Chapters 2.2** and **2.4**) and the economic activity and projected tax revenue from full development of the retail sites.

Community Facilities and Services

The findings of the community facility and services analysis for the Proposed Project provided in **Chapter 2.3** would be different under this alternative, as the proposed school would likely not be viable. To fully avoid several impacts, including natural resources, the school site would need to be reduced in size such that a reduction in school seats would be required. For example, to fully avoid the boneset habitat on the school site, a 55 percent reduction in size would be required that would leave approximately 2.63 acres to develop. This is insufficient space accommodate the school program of a building for approximately 750 students, a 60-space parking lot and a tot lot/playground area. Therefore, while this alternative would not result in any significant adverse impacts to community facilities or services, it would not achieve the stated goals and objectives of providing a new public school for the Charleston Area and local community.

Open Space

Under this alternative, the demands for public open space would be reduced due to the substantial reduction in the proposed commercial, residential and educational uses. This alternative would not result in any significant adverse impacts to open space.

Shadows

The Proposed Project would not result in any significant adverse shadow impacts, and none are also expected under this alternative, which would include smaller buildings with reduced heights. Thus, while

shadows cast from buildings under this alternative would be different than those cast under the Proposed Project, this alternative would not result in any significant adverse shadow impacts.

Historic and Cultural Resources

Under this No Unmitigated Impact Alternative, there would be no impacts to any historic or cultural resources, as this alternative assumes that development would be reduced in massing and layout to avoid placing buildings or other structures over sensitive resources.

However, the reduction in parcel size or buildable area to fully mitigate these impacts for Retail Site "A," Retail Site "B" and the eastern portion of Englewood Avenue would render portions of the Proposed Project infeasible. Englewood Avenue is a critical component for the Proposed Project's 2020 development sites. Additionally, in connecting Arthur Kill Road and Veterans Road West, Englewood Avenue would improve traffic networks serving the surrounding community, one of the stated goals of the Proposed Project. Retail Sites "A" and "B" achieve the Proposed Project's goals of providing new commercial facilities and expanding local employment options. Without these sites, these goals would not be realized.

Urban Design and Visual Resources

The Proposed Project would not result in any significant adverse urban design or visual resource impacts, and none are also expected under this alternative, which would include smaller buildings with reduced heights. The extent to which the findings of the urban design and visual resource analysis for the Proposed Project provided in **Chapter 2.7** would change under this alternative would depend on the eventual size, massing and site design of the reduced retail, housing and school sites and the design of Englewood Avenue.

Natural Resources

Under this alternative, the potential significant adverse impacts to natural resources that would result from the Proposed Project, as identified in **Chapter 2.8**, would be eliminated, particularly with regard to (1) the reduction in open field habitat suitable for boneset plants, and (2) impacts on regulated wetlands due to the construction of Englewood Avenue in the section between CPPSPP and the Conservation Area. The complete reduction of impacts to natural resources under this alternative, however, would require significant reductions in the massing, layouts, sizes and capacities of numerous parcels of the Proposed Project.

The extent to which the natural succession from open field to wooded habitat would reduce open field habitat by 2020 within the Development Area would determine the extent of the Proposed Project's impact on boneset habitat. Under worst-case assumptions the Proposed Project would result in a 78 percent reduction in open field habitat. To preserve this habitat, substantial reductions in the size, heights, capacity, etc. of the senior housing, school, and Retail Site "B" parcels would be required.

Revisions or re-designs of these 2020 development sites would require substantial reductions in development acreage that would not achieve the Proposed Project's goals and objectives and would reduce projected employment figures and tax revenues resulting from the development of the retail sites. Additionally, development of one or more of these sites would not be possible under a re-design scenario:

- To fully avoid the boneset habitat on the school site, a 55 percent reduction in size would be required that would leave approximately 2.63 acres to develop. This is insufficient space accommodate the school program.
- To fully avoid the colony of Torrey's mountain mint on Retail Site "A" would require a major redesign that would greatly reduce the utility of the site. The portion of the site to be set aside would necessitate a reduction in parking and size of the structure which could be fit on the site. Furthermore it would complicate already significant grading transition issues.

- If the senior housing site were decreased in size to avoid elimination of the open field-type habitat that presently covers over half of that parcel, it would be reduced by 54 percent and would result in an approximately 4-acre site that could not accommodate the proposed senior housing program or number of units. This substantial reduction in units that would not meet the goals and objectives of providing affordable housing to seniors in the Charleston area of Staten Island.
- To fully avoid the boneset habitat on Retail Site "B," an almost 50 percent reduction in size would be required and would result in a narrow configuration which might reduce frontage on Arthur Kill Road which would render the site impossible to market successfully.
- The only way to fully eliminate the impact to the approximately 0.07 acres of NYSDEC-regulated wetlands and USACE jurisdictional wetlands in the proposed Englewood Avenue Corridor from Kent Street to Veterans Road West is to not construct Englewood Avenue. This is also the only means of completely eliminating any bifurcation of the Conservation Area and CPPSPP. Englewood Avenue, however, is a critical component for access to the Proposed Project's 2020 development sites. Additionally, under the Proposed Project which connects Arthur Kill Road and Veterans Road West, Englewood Avenue would improve traffic networks serving the surrounding community. The 40-Foot Wide Englewood Avenue Alternative would reduce the majority of the impacts to the wetlands, but is sited entirely on State-owned own property and there is no current acquisition deal in place for this land.

Hazardous Materials

The findings of the hazardous materials analysis for the Proposed Project as provided in **Chapter 2.9** would not change under this alternative, although some of the required remedial actions would likely be different under the No Unmitigated Impact Alternative due to the substantial reduction in construction activity on virtually every site within the Development Area. It is expected that some of the required measures, such as a vapor barrier underneath proposed buildings, would still be required, but as development would be substantially reduced under this alternative, the required vapor barrier and other measures would also be reduced in size.

Water and Sewer Infrastructure

The findings of the water and sewer infrastructure analysis for the Proposed Project provided in **Chapter 2.10** would not be significantly changed under this alternative, although the eventual volume of sanitary and stormwater sewage generated by full development under this alternative would be considerably less than under the Proposed Project due to the substantial reduction in development.

Solid Waste and Sanitation Services

The findings for solid waste and sanitation services from the analysis for the Proposed Project provided in **Chapter 2.11** would not change under this alternative, although the volume of solid waste generated would be considerably less due to the substantial reduction in development under this alternative.

Energy

Under this No Unmitigated Impact Alternative, there would be no impacts to energy, as none are expected under the Proposed Project. The individual findings for energy from the analysis for the Proposed Project provided in **Chapter 2.12** would change under this alternative given the substantial reduction in construction activity, and smaller development once buildings are occupied and operational. This alternative would not result in any significant adverse energy impacts.

Transportation

No significant transportation impacts would occur under this alternative. As discussed in **Chapter 4.0**, all transportation impacts would be fully mitigated under either the Proposed Project or under this alternative. However, if NYCDOT of NYSDOT rejects the highway network related improvements, only partial mitigation measures could be achieved solely by modifications to NYCDOT facilities, and the Proposed

Project could result in potentially unmitigated traffic impacts in one or more peak traffic period at the Boscombe Avenue/Outerbridge Crossing ramps intersection in 2015 and 2020, and at the Veterans Road West/Bricktown Way/Korean War Veterans Parkway ramps intersection in 2020.

Air Quality

No significant stationary or mobile source air quality impacts would occur under either the Proposed Project as discussed in **Chapter 2.14** or under this alternative.

Greenhouse Gas Emissions

Under this No Unmitigated Impact Alternative, there would be no impacts to GHG emissions. The individual findings for greenhouse gas emissions from the analysis for the Proposed Project provided in **Chapter 2.15** would not be significantly changed under this alternative, although the amount of such emissions under this alternative would be substantially less than under the Proposed Project due to the reduction in the level of development on the proposed retail, school and senior housing sites.

Noise

The noise analysis findings for this alternative would not differ from those of the noise analysis under the Proposed Project as provided in **Chapter 2.16**, although the projected change in noise levels under this alternative would be substantially less than under the Proposed Project due to the reduction in the level of development.

Public Health

The findings for public health from the analysis for the Proposed Project provided in **Chapter 2.17** would not change under this alternative. The Proposed Project and this alternative would not result in unmitigated significant adverse impacts in technical areas such as air quality, hazardous materials, or noise, nor would either introduce any unusual circumstances that have potential public health consequences related to other issues. Therefore, significant adverse impacts to public health are not expected to occur.

Neighborhood Character

This alternative would alter the findings for neighborhood character from the analysis for the Proposed Project provided in **Chapter 2.18**. Neighborhood character is considered to be an amalgam of the various elements that give a neighborhood its distinct personality. Relative to the benefits of the Proposed Project, this alternative would result in the likely loss of the proposed public school, a substantial reduction in the provision of senior housing units and a reduction in the economic activity and employment associated with the two retail sites within the Development Area. The preservation of some of the existing natural areas and elimination of impacts to natural resources within the Development Area under this alternative would offset some of this loss.

Construction

This alternative would not alter the findings for construction from the analysis for the Proposed Project provided in **Chapter 2.19,** although the level of construction activity would be substantially less under this alternative.