



EXECUTIVE SUMMARY

The I-295/I-76/Route 42 interchange in Camden County, New Jersey experiences congestion and has an accident rate that is more than seven times the statewide average due to high volumes of traffic, complex lane configuration, and through-traffic weaving movements. The traffic problems of the interchange negatively affect the quality of life in the surrounding communities. The New Jersey Department of Transportation (NJDOT), in conjunction with the Federal Highway Administration (FHWA), proposes to alleviate these problems through the reconstruction of the I-295/I-76/Route 42 interchange.

An Environmental Impact Statement (EIS) has been prepared in order to identify and assess potential environmental impacts that could result from the proposed project. The EIS provides the public and federal, state, and local environmental resource and regulatory agencies with documentation that environmental concerns have been evaluated and addressed. In addition, a Section 4(f) Evaluation has been prepared as a chapter of the EIS in order to evaluate feasible and prudent alternatives that would avoid and/or have the least impact upon historic sites or publicly owned resources, such as public parks, recreational areas, and wildlife/waterfowl refuges. The EIS/Section 4(f) Evaluation is supported by Technical Environmental Studies (TES) that have been conducted for the project. These TES reports include: Noise; Air Quality; Socioeconomics, Land Use, and Environmental Justice; Natural Ecosystems; Phase I/II Archaeological Investigation; Historic Architectural Resources; and, Hazardous Waste Screening. A Traffic Report, Feasibility Assessment Report, and Letter of Interpretation/Jurisdictional Determination for wetlands have also been completed. Based upon the agency and public comments received in response to the circulation of the Draft EIS (DEIS) / Draft Section 4(f) Evaluation, this Final EIS (FEIS) / Final Section 4(f) Evaluation has been prepared. The FEIS addresses the concerns raised during the comment period and documents the selection of Alternative D as the Preferred Alternative for this project.

PROJECT DESCRIPTION

In 1985, during NJDOT’s design of widening improvements on Route 42, it became apparent that additional improvements, more specific to the I-295/I-76/Route 42 interchange, would be required. In 1999, a Transportation Investment Study (TIS) prepared by NJDOT, in conjunction with the Delaware Valley Regional Planning Commission (DVRPC), recommended that a project providing a full, grade-separated interchange be advanced. The project location (see **Figures ES-1** and **ES-2**) includes several residential, commercial, industrial, and public/recreational areas in Bellmawr, Mount Ephraim, and Gloucester City, Camden County.

Regulatory Framework/Streamlining

The EIS/Section 4(f) Evaluation has been prepared in accordance with the National Environmental Policy Act (NEPA), as implemented by the Council on Environmental Quality Regulations, and FHWA Procedures, and prepared pursuant to Section 4(f) of the Department of Transportation Act of 1966 and Section 106 of the National Historic Preservation Act of 1966. Impacts to wetlands and open waters were evaluated and will be permitted and mitigated according to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act, administered by the United States Army Corps of Engineers (USACE), and the Freshwater Wetlands Protection Act,

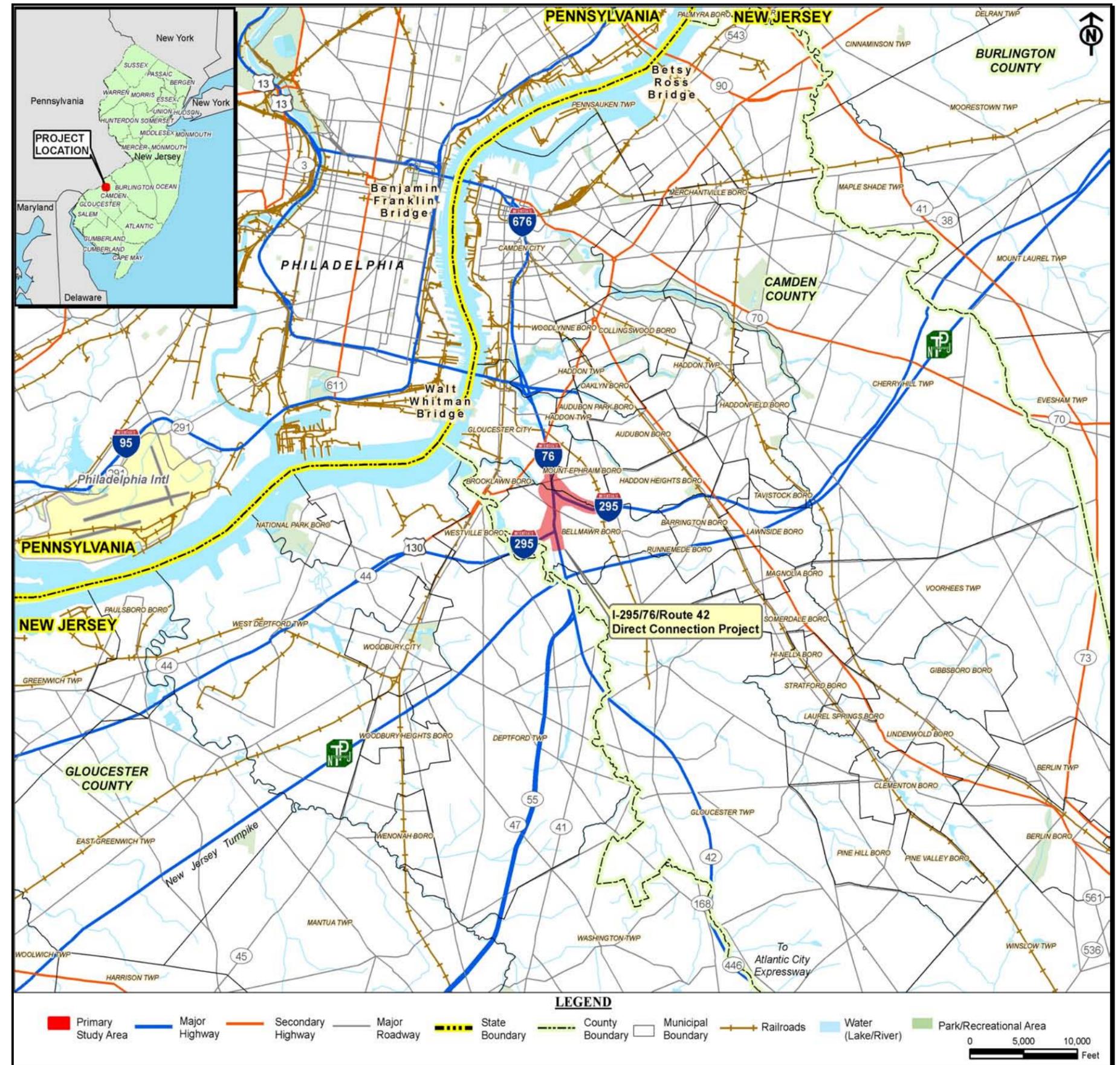


Figure ES-1: Regional Map

administered by the New Jersey Department of Environmental Protection (NJDEP).

In order to coordinate the NEPA process with the requirements of Section 404, a streamlining process was established to coordinate the permitting activities and processing requirements of not only NEPA and the USACE, but also the New Jersey Department of Environmental Protection (NJDEP), which also shares jurisdiction in the project area. The NEPA-Section 404 streamlining process coordinates project processing through the end of the EIS process, identifying and documenting impacts, and assessing ways to avoid, minimize or mitigate these impacts.

Stakeholder Groups

This process involved a significant local government and public participation component to build consensus among the stakeholders in the project area. Stakeholders were organized into committees that met regularly, and at important milestones, to foster working relationships with local leaders, and conduct the necessary public outreach to keep the affected communities apprised and involved in the project progress. Stakeholders included local and county officials, business owners, local residents, and representatives from participating public agencies, senior citizens associations, minority groups, school districts, business-development organizations, environmental groups, and religious and civic groups. The stakeholder group meetings included the Agency Coordination Meetings (ACM), project partnering sessions, Community Advisory Committee (CAC) meetings, Local Officials Briefings (LOB), and Public Information Centers (PIC).

PURPOSE AND NEED

The purpose of this project is to improve traffic safety, reduce traffic congestion (see **Photograph ES-1**) and meet driver expectations by providing the direct connection of the I-295 mainline to improve the interchange of I-295/I-76/Route 42.

The project goals and objectives are a compendium of statements made by NJDOT, FHWA, agencies, local elected officials, residents, and other stakeholders in the project. While the project may not be able to satisfy all goals and objectives listed herein, the Preferred Alternative seeks to address as many as possible. The project’s goals and objectives are as follows:

- Improve safety by constructing a roadway system that meets interstate standards for geometric design.
- Provide a direct connection for through-traffic on I-295 with a design speed consistent with that of the interchange’s approach roadways.
- Reduce congestion on local arterials such as Route 168 and US 130 and decrease commuter traffic on neighborhood streets, thereby improving local traffic mobility, pedestrian safety, and the level of service on I-295. In addition, noise levels would decrease and air quality would improve.
- Enhance regional economic development by increasing overall mobility. In addition, the improved roadway network conforms to state and local development plans.
- Reduce the financial burden on state and local police and emergency services by decreasing the number of vehicle accidents.



Figure ES-2: Project Location Map

- Avoid, minimize, or mitigate environmental impacts.
- Preserve the quality of life of communities by minimizing relocations and acquisitions of private and public property.
- Enhance opportunities for other modes of transportation, including bicycle and pedestrian, within the project area.
- Provide opportunities for intermodal use within the project area.

ALTERNATIVES

NJDOT evaluated 26 possible alternatives in an extensive screening process that included representatives from the NJDOT as well as stakeholder groups. All 26 conceptual alternatives were constructible and viable concepts that met the purpose and need of the project; however, not all 26

were deemed practicable. The 26 conceptual alternatives were subjected to a screening process with the objective of identifying feasible alternatives that satisfy the project need with minimal impact to the natural and built environment. After extensive community involvement and input from regulatory agencies, five build alternatives (D, D1, G2, H1 and K) and a No Build Alternative were chosen to advance for further study as part of the DEIS process.

These five build alternatives were generally found to be the most feasible with the least impacts. Based upon comments received during the alternatives screening process, the five alternatives were refined and minor alignment adjustments were incorporated into their conceptual design in order to minimize environmental impacts and to improve traffic operations. The 21 alternatives that were dismissed were generally found to result in higher environmental impacts, such as residential, wetlands, noise, and visual impacts.

All five build alternatives follow a similar alignment across the northwestern corner of New St. Mary’s Cemetery. Alternative D provides a direct connection for I-295 that crosses over I-76/Route 42, eliminating Al Jo’s Curve entirely. Alternative D1 is similar to Alternative D except it attempts to retain Al Jo’s Curve for use as the ramp from I-295 southbound to Route 42 southbound. Alternative G2 utilizes a double-decker highway with I-295 southbound atop I-295 northbound. Alternative H1 is similar to Alternative G2 except it attempts to retain Al Jo’s Curve for use as the ramp from I-295 southbound to Route 42 southbound. Alternative K provides a direct connection for I-295 that crosses under I-76/Route 42, eliminating Al Jo’s Curve entirely.

POTENTIAL ENVIRONMENTAL IMPACTS

The TES reports and engineering studies included three major tasks: inventory/data collection, field reconnaissance, and assessment of potential impacts to the built and natural environment for the No Build Alternative and each of the five build alternatives. Detailed reports were prepared for each of the subject areas discussed below.

Traffic and Transportation

The traffic analysis indicates that overall traffic flow conditions under any of the five build alternatives will be relatively similar. Against the No Build Alternative, any of the build alternatives will deliver better overall traffic operations because they will separate through-traffic on I-295 from those on I-76/Route 42. Average speeds will be higher and average delay per vehicle will be lower on the I-295 mainline and the I-76/Route 42 mainline for all build alternatives compared to the No Build Alternative.

Where I-76 northbound (or Route 42 northbound) intersects with I-295 southbound (Ramp B) will continue to be a bottleneck; however, the expected average speeds will double from 10 miles per hour (mph) for the No Build to 20 mph for the build alternatives. No capacity improvement to I-295 is assumed under this project. The vast majority of travel time savings occur during regular weekday, peak commuting periods, with much of the savings being realized on local roads within the towns of Mount Ephraim and Bellmawr, along with the adjacent towns such as Brooklawn and Runnemede.

Considerable reductions in traffic volumes on the local arterial system within the project area can also be anticipated because drivers will stay on the highway.



Photograph ES-1: Congested Traffic Along I-295

Traffic studies indicate that all of the build alternatives will reduce the number of annual crashes that result in injuries and fatalities by 70% at the interchange. Most of these crash reductions will be realized because all build alternatives will physically separate the major traffic flows on I-295 from those on I-76/Route 42, as well as from the construction of highway facilities that meet current design standards.

Noise

Under the No Build Alternative, a total of 269 residential units, including the Mount Ephraim Senior Housing building, are predicted to possess noise levels that approach or exceed the applicable Noise Abatement Criteria (NAC). Alternatives D and D1 would result in impacts to 155 to 156 residences; Alternatives G2 and H2 would result in impacts to 215 to 216 residences; and Alternative K would result in impacts to 145 residences. Under the build alternatives, eight building acquisitions would be necessary under Alternatives D, D1 and K and three would be necessary under Alternatives G2 and H1. In addition, several segments of existing noise walls would require removal to accommodate the designs. These building acquisitions and noise wall removals were taken into account as part of the noise modeling.

Similar to the existing conditions, one cemetery, two recreational facilities, two schools, and two church buildings would possess noise levels that approach or exceed the NAC for the No Build Alternative. Under each build alternative, two cemeteries, three recreational areas, three schools, and two church buildings are predicted to possess noise levels that approach or exceed the applicable NAC. Under Alternatives D1 and H1, two additional recreational areas would be impacted.

Noise walls are effective means of mitigating exterior noise impacts adjacent to roadways (see **Photograph ES-2**). When feasible, new and replacement noise walls are proposed in areas impacted by noise under each build alternative. Construction of new and replacement noise walls for each build alternative will reduce the number of impacts, when compared to the No Build Alternative. In areas where noise walls would be displaced, “in-kind” replacement walls are proposed that will provide noise levels for the build alternatives that are comparable to noise levels under existing conditions.

Although proposed new and replacement noise walls under each build alternative eliminate a significant number of impacts, several residential noise impacts remain. Under Alternatives D, D1 and K, the remaining residential impacts are mainly along the local roadways where noise mitigation is not possible due to driveways and intersections. Under Alternatives G2 and H1, the remaining residential impacts are along local roadways as well as areas adjacent to the I-295 double-decker roadways where cost-effective mitigation is not feasible.

Sound proofing a public-use building is an effective means of mitigating an interior noise impact. Under all build alternatives, air conditioning is recommended at the Annunciation Regional School and the Bellmawr Park Elementary School. Air conditioning is also recommended at the Bell Oaks School under Alternatives G2 and H1 only, since proposed noise walls within this area provide the required interior protection under Alternatives D, D1 and K.

Air Quality

Based on both quantitative and qualitative assessments, there is no expected carbon monoxide (CO), inhalable particulate matter smaller than 2.5 micrometers (PM_{2.5}) or mobile source air toxics (MSAT) impacts related to the proposed project and therefore no mitigation is necessary. Microscale CO modeling was performed for all alternatives, including the No Build

Alternative. Predicted CO concentrations at each receptor are all expected to be below the National Ambient Air Quality Standards set forth for CO.



Photograph ES-2: View of Existing Noise Wall Adjacent to Project Corridor

Socioeconomics, Land Use, and Environmental Justice

The TES for this discipline evaluated potential impacts to the visual/aesthetic quality of the primary study area, as well as the costs and benefits resulting from improved safety and travel time. None of the build alternatives would result in adverse impacts related to socioeconomics, land use, zoning or environmental justice. Socioeconomic benefits for all of the build alternatives would include improved regional accessibility, reduced travel time through the interchange with annual cost savings of approximately \$39 million and reduced frequency of accidents with annual cost savings of approximately \$11 million.

All of the build alternatives would result in residential displacement. Alternatives D, D1 and K would result in relocation of 13 residences and Alternatives G2 and H1 would result in relocation of five residences. Five community facilities would be impacted for all of the build alternatives, but they would continue to function in their present locations. One business relocation would be required for Alternatives D, D1 and K. Alternatives G2 and H1 would not require any business relocations. All residential relocations and project-related relocation payments and services are provided pursuant to the Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs Act of 1970, as amended in the Federal Uniform Act Amendment, effective March 2, 1989 (Chapter 50, New Jersey Public Law of 1989).

The visual quality of the area would be changed by all of the build alternatives. Alternatives D, D1 and K would require the construction of a new one-level structure throughout the interchange. Alternatives G2 and H1 would require the construction of a new two-level structure throughout the interchange. Additionally, new and replacement noise walls would be

constructed on top of these structures to abate noise impacts. Alternatives D, D1 and K would require combined heights of both structures and noise walls up to approximately 55 feet. Alternatives G2 and H1 would require combined heights of both structures and noise walls up to approximately 78 feet. Due to the heights of the structures and noise walls, all of the build alternatives would create a visual impact that cannot be mitigated. However, the proposed noise walls can be considered a positive impact in that they will block the view of the high-volume roadway. Context sensitive designs, including public participation to determine architectural techniques, would be developed during the Final Design phase of the project to the greatest extent possible to preserve the aesthetic, historic, community, and natural environment. Landscaping may also be used to partially screen these structures from view. Such mitigation measures would also be incorporated during the Final Design phase of the project.

Natural Ecosystems

With all of the build alternatives, the use of retaining walls and steepened side slopes along Little Timber Creek would minimize impacts to floodplains and wetlands/open waters. This would also minimize mitigation requirements in the design phase of the proposed project. The surface water quality of the surrounding water bodies would be improved with the new stormwater treatment systems. From an ecological perspective, Alternatives D, G2 and K are preferable because all or most of the wetland mitigation could be achieved on-site. The on-site mitigation, made possible by the removal of Al Jo's Curve, would benefit the natural environment by providing a larger, more contiguous riparian corridor. The community would also benefit from the opportunities for passive recreation provided by waterfront access to the stream corridor. A monitoring and maintenance plan will be written during Final Design in order to provide for the mitigation area's establishment and success into the future.

Alternative D includes reduced impacts to wetlands, open waters, and the floodplain. In addition, the opportunity for on-site mitigation is 100% with the removal of Al Jo's Curve. Alternative D will impact 2.28 acres of floodplain and 1.97 acres of wetlands/open waters. It would create the lowest acreage of total impervious coverage at 61 acres, compared to the other build alternatives.

Despite the use of retaining walls and steepening of side slopes, Alternative D1 would cause the greatest impact to the floodplain and wetlands/open waters at 4.45 acres and 3.73 acres, respectively. Since this alternative calls for Ramp C in the vicinity of Al Jo's Curve, it would not provide waterfront access to the public. In addition, it would have the smallest opportunity for on-site wetlands mitigation at only 10% of the total required and would result in the second highest total impervious coverage of 65 acres.

Alternative G2 represents the lowest permanent impacts to the floodplain and wetlands/open waters, with a 0.90-acre and a 0.95-acre impact, respectively. This alternative would also provide for waterfront access to the public and 100% on-site wetland mitigation opportunities with the removal of Al Jo's Curve. Total impervious coverage would be 64 acres.

Alternative H1 would cause the second highest impacts to the floodplain and wetlands/open waters of 4.26 acres and 3.15 acres, respectively. This is due in large part to approximately 250 feet of the channel of Little Timber

Creek being relocated. In addition, there would be no opportunity for waterfront access and only 12% of the required wetland mitigation would be possible on-site. This alternative, along with Alternative K, would result in the highest total impervious coverage of 67 acres.

Impacts to the floodplain and wetlands/open waters for Alternative K would be 3.04 acres and 2.90 acres, respectively. As mentioned above, Alternative K as well as Alternative H1 would result in the highest total impervious coverage of 67 acres. Most of the wetland mitigation for this alternative would be possible on-site (93%), but some off-site wetland mitigation would be necessary.

Archaeological Resources

Since the project area has historically been disturbed by agricultural land use, roadway construction activities and commercial/residential development, the sites evaluated as part of the Phase I/II Archaeological Investigation were found to be ineligible for inclusion in the National Register of Historic Places, and therefore, no impact to archaeological resources would result from the proposed project.



Photograph ES-3: Bellmawr Park Mutual Housing Office

Historic Architectural Resources

Based on the findings of the *Historic Architectural Resources TES*, one historic resource is located within the Area of Potential Effect for the proposed project—the Bellmawr Park Mutual Housing Historic District. In an August 16, 2006 letter, the New Jersey Historic Preservation Office (NJHPO) concluded that the proposed project will have an adverse effect to the Bellmawr Park Mutual Housing Historic District (see **Photograph ES-3**) under all build alternatives (see Appendix A) due to the permanent acquisition of land, demolition of contributing structures, and roadway construction within the boundaries of the historic district. NJHPO determined that Alternative K would have the least overall adverse effect to historic resources.

The introduction of a modern highway and associated highway features within or immediately adjacent to the district would result in adverse visual effects, diminishing the historic district's integrity of feeling. Noise walls have been deemed feasible, and adverse visual impacts would increase if noise walls were used for these alternatives. The visual impacts of Alternatives D and D1 on the district, with or without noise walls, would be lesser than the visual impacts of Alternatives G2 and H1, but greater than the visual impacts of Alternative K.

Under Alternatives D and D1, five contributing buildings (12 dwelling units) would be demolished, 2.11 acres (8.87% of the district's total acreage) would be acquired for right-of-way, and 32 contributing buildings would approach or exceed FHWA's NAC. Under Alternatives G2 and H1, one contributing building (four dwelling units) would be demolished, 1.05 acres (4.40% of the district's total acreage) would be acquired for right-of-way, and 38 contributing buildings would approach or exceed the NAC. Under Alternative K, five contributing buildings (12 dwelling units) would be demolished, 2.20 acres (9.27% of the district's total acreage) would be acquired for right-of-way, and 26 contributing buildings would approach or exceed the NAC. Under the No Build Alternative, 24 contributing buildings would approach or exceed FHWA's NAC by the year 2030.

As the proposed project would have an adverse effect on the Bellmawr Park Mutual Housing Historic District under all build alternatives, mitigation of adverse effects would be necessary. Potential mitigation measures may include documentation of buildings prior to demolition as well as the preparation of a National Register nomination form for the district. In addition, in an effort to assist the Bellmawr Park Mutual Housing Corporation in developing strategies to help ensure the community's cohesiveness and stability, a Conservation Plan will be developed for the archival storage of historic documentation (blueprints, maps, plans, etc.) that they have on file.

Hazardous Materials

As the proposed project would require property acquisitions and soil and groundwater management during construction, it was necessary to determine the potential for any of the properties within the study area to contain hazardous materials. The potential for soil and groundwater contamination exists at three Areas of Concern (AOCs) in Bellmawr with respect to the build alternatives. An area within the NJDOT right-of-way in the vicinity of the existing Ramp C at I-295, MP 27, was identified as an AOC due to a past diesel fuel spill. This area would be impacted under all build alternatives. New St. Mary's Cemetery was identified as an AOC due to the presence of an underground storage tank, an aboveground storage tank, maintenance equipment, and outdoor maintenance and storage space. This site would be impacted under all build alternatives. Bill Seas Towing was identified as an AOC due to the nature of operations that includes outdoor maintenance and storage space. This property would be impacted under Alternatives D, D1 and K.

These contaminated sites would not be disturbed under the No Build Alternative. However, contamination at the Area of Ramp C at I-295, MP 27 would remain. The potential for asbestos-containing building materials and lead-based paint exists on all roadway bridges to be replaced and all

commercial and residential buildings to be demolished for the build alternatives.

SECONDARY AND CUMULATIVE IMPACTS

Based on the analyses conducted as part of the TES reports, as well as meetings held with local officials and DVRPC, no secondary impacts are anticipated for this project.

In addition to the proposed project, the Missing Moves project, which includes a highway connection between I-295 and Route 42 south of the study area, has also been proposed; however, the Missing Moves project is currently on hold as discussions continue with local officials. The design may be modified in response to recent changes in local development plans.

The Port Authority Transit Corporation (PATCO) has proposed five Southern New Jersey alternatives for extending rail service through Camden County. While the choice of alignment for PATCO transit expansion has not yet been finalized, three of the five PATCO alternatives presently under consideration run along the I-76/Route 42 corridor and include a potential station at or near the southern edge of the I-295/I-76/Route 42 Direct Connection project area in Bellmawr at Leaf Avenue and Route 42. These alternatives have the potential to impact many of the same resources as the I-295/I-76/Route 42 Direct Connection project. The other two PATCO alternatives are located west of Bellmawr outside the I-295/I-76/Route 42 Direct Connection project area. The I-295/I-76/Route 42 Direct Connection Project and the PATCO transit expansion projects are complementary in their overall transportation improvements in this region. While the Direct Connection Project addresses safety, congestion and mobility issues, the transit expansion project provides a modal option and potentially increases the commuting capacity for the area. The cumulative benefits to the transportation system of both projects are greater than either project taken individually. The construction of the I-295/I-76/Route 42 Direct Connection project would not preclude the future construction of the PATCO rail extension through the I-295/I-76/Route 42 interchange.

TEMPORARY CONSTRUCTION IMPACTS

Construction of the proposed project is not expected to significantly impact traffic conditions in the project area, since the same number of traveled lanes as existing will be maintained during peak hours.

Throughout construction of the I-295/76/42 Direct Connection project, lanes will be maintained during peak hours. Diversions to the local arterial system will be located and timed in such a manner as to minimize the chance of overwhelming any specific location. It is expected that traffic would slow through the construction zone for each of the alternatives. However, any delays are not expected to divert a significant amount of traffic off the freeway onto the local roads (less than 25 vehicles per hour). The exception would be when a temporary weaving condition on I-76 eastbound would exist after the closure of existing Ramp G and prior to the closure of existing Ramp C. It is anticipated that this condition can be reduced or eliminated during the final design phase through the use of temporary pavement/bridges.

The temporary diversion of Browning Road would impact 30 parking spaces of the Annunciation B.V.M. Church, shown in **Photograph ES-4**.

Circulation within the church parking lot would also be affected since the driveway closest to I-76 would be closed during the period when the temporary diversion road is in place. Methods of accelerating construction would be investigated during the final design phase of the Preferred Alternative. In addition, measures would be taken to assist the motorist with traveling through the construction zone.

Noise levels will increase during construction. On-site construction noise mitigation options such as mufflers, vibration dampers, and portable noise walls, can be specified to minimize construction noise impacts. Whenever possible, it is recommended that the proposed noise walls be constructed as early as feasible within the construction schedule of the project to buffer construction noise.



Photograph ES-4: Annunciation B.V.M. Church

Temporary increases in MSAT emissions, equipment exhausts, and dust may result from the proposed project. It is anticipated that the contractor will implement mitigation measures in order to minimize adverse impacts of the construction activities on residents proximate to the primary study area.

For all of the alternatives, temporary easements are required. Additional employment opportunities will be available and, with the influx of workers in the area, local retail services may see an increase in business.

Water quality impacts due to soil erosion and sedimentation during construction would be minimized through implementation of a soil erosion and sediment control plan in accordance with NJDOT standards. Erosion and sediment transport would be prevented using silt fencing, seeding, and/or topsoil stabilization matting of exposed soil slope surfaces. Turbidity of the water column would be prevented by the use of temporary floating turbidity barriers.

ALTERNATIVES ANALYSIS

The Alternatives Analysis process examined the ability of each alternative to meet the purpose and need of the proposed project while still taking practicable measures to avoid, minimize, and mitigate potential impacts to the built and natural environment. This process involved the development and evaluation of specific impact criteria that were essential to the decision-making process and the identification of the Preferred Alternative. A summary of impacts for Alternative D is shown in **Figure ES-3**.

No Build Alternative

The No Build Alternative serves as the benchmark to measure the costs and benefits of each build alternative evaluated. Since there are no changes to the interchange under this alternative, there are very few impacts, other than those that are a result of the perpetuation of existing conditions.

The No Build Alternative has no initial cost; however, there will be costs associated with scheduled pavement resurfacing, bridge redecking, and roadside maintenance. There will also be costs to the traveling public for longer commuting time, increased traffic congestion, decreased air quality, and unsafe conditions.

The existing roadway drainage along I-295/Route 42 and exterior drainage on I-76 is an umbrella type drainage system with runoff flowing into ditches that drain to culverts which flow to Little Timber Creek (see **Photograph ES-5**) and the unnamed tributary to Big Timber Creek. A limited measure of water quality and groundwater recharge is achieved for those existing areas flowing through ditches prior to discharge into closed storm sewer systems and culverts. The remaining portions of the existing ramps and I-76 interior drainage are conveyed directly into storm sewer systems, and directly to Little Timber Creek and Big Timber Creek, with no measurable groundwater recharge or water quality improvement measures.

The No Build Alternative would not meet the purpose and need of the proposed project. The deficient highway geometry and substandard stormwater drainage system would remain.



Photograph ES-5: Little Timber Creek Culvert at Bell Road

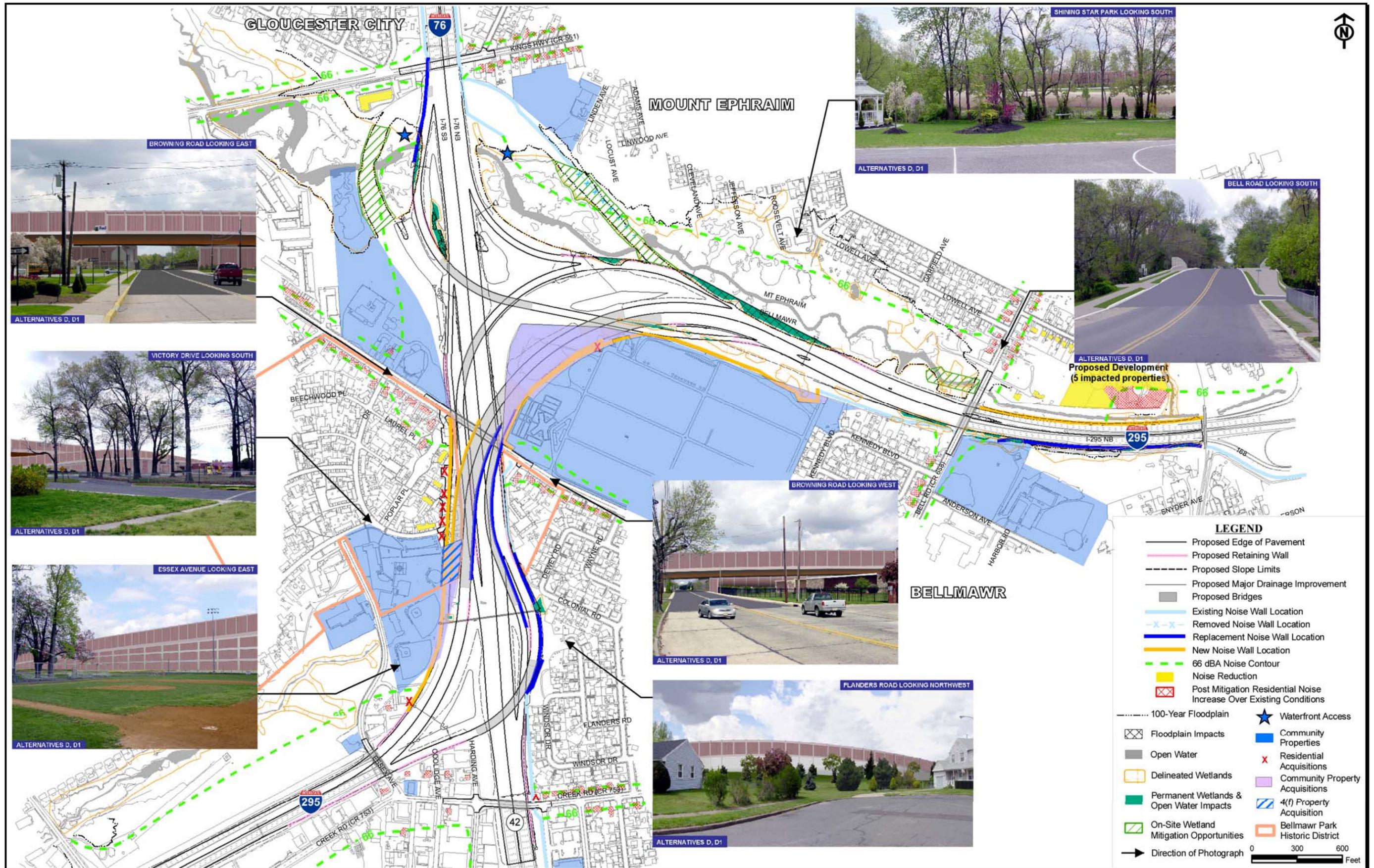


Figure ES-3: Alternatives Analysis Environmental Impact Plans (Alternative D)

Alternative G2

The construction duration for this alternative is expected to last 70 months and the temporary construction impacts would cause an inconvenience to neighboring properties for several years. These temporary impacts include the diversion of some traffic off the main highway. The length of the southbound viaduct, combined with the complex nature with which the viaduct is aligned, would result in security vulnerabilities and the possibility of multiple extreme failures of facilities with an extended duration for repair. In addition, this magnitude of viaduct would require significant maintenance. The cost to build Alternative G2 would be approximately \$833 million.

Alternative G2 represents the lowest permanent impacts to the floodplain and wetlands/open waters, with 0.90-acre and 0.95-acre impacts, respectively. The highway design included the use of retaining walls and steepening of side slopes in order to avoid and/or minimize impacts to aquatic resources. This alternative would also provide for waterfront access to the public and 100% on-site wetland mitigation opportunities with the removal of Al Jo’s Curve. However, there would be an increase of post mitigation residential noise; the viewshed of the Bellmawr Park Mutual Housing Historic District would be dominated by intrusive infrastructure at a relatively close distance; and the field of view of the local community in general would also be dominated by massive (78-foot high) intrusive highway overpass structures.

Although this alternative has the lowest impact to floodplains and wetlands/open waters, the 70-month construction duration, high cost to build, increases to post mitigation noise and visual impacts to the Bellmawr Park Mutual Housing Historic District, as well as homeland security issues, makes other alternatives more desirable.

Alternative H1

The engineering aspects of Alternative H1 concerning maintenance, temporary construction impacts, and security are similar to Alternative G2. Alternative H1 represents the highest cost to build of all alternatives at approximately \$893 million and the second longest construction duration at 73 months.

Although the highway design incorporated the use of retaining walls and steepening of side slopes, this alternative would cause the second highest impacts to the floodplain and wetlands/open waters of 4.26 acres and 3.15 acres, respectively. This is due in large part to approximately 250 feet of the channel of Little Timber Creek being relocated. In addition, there would be no opportunity for waterfront access and only 12% of the required wetlands mitigation would be possible on-site. The field of view of the Bellmawr Park Mutual Housing Historic District and local community in general would be dominated by massive (78-foot high) intrusive highway overpass structures.

The high impacts to the aquatic environment, floodplain, and viewshed, high cost to build, long construction duration, coupled with the concerns over temporary construction impacts, maintenance, and homeland security issues make other alternatives more desirable.

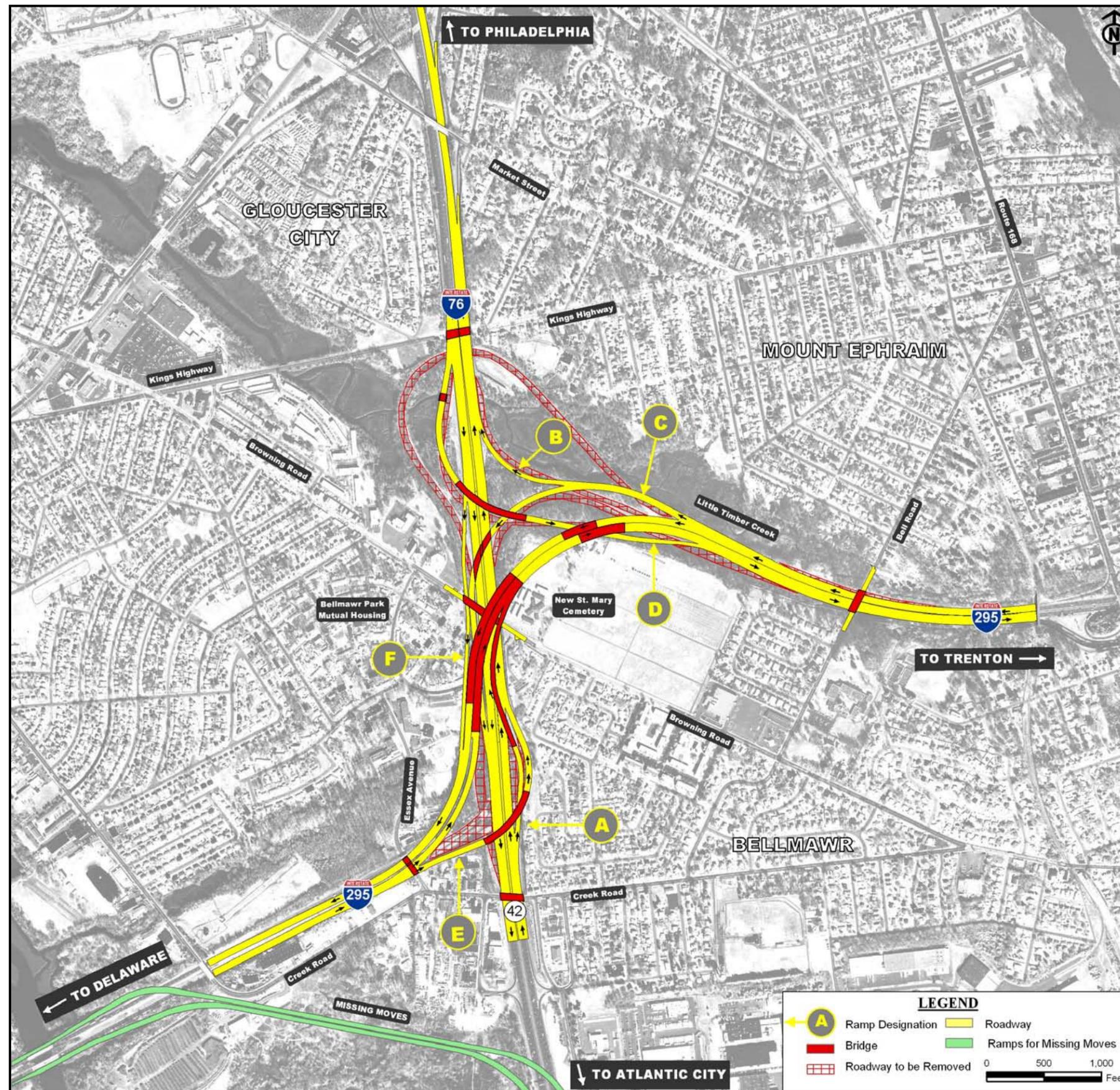


Figure ES-4: Alternative D

Alternative D1

While Alternative D1 would require the shortest duration of construction at 63 months, there would be a significant need for future maintenance of the increased highway structures. The cost to build Alternative D1 is approximately \$642 million.

Despite the use of retaining walls and steepening of side slopes, Alternative D1 would cause the greatest impact to the floodplain and wetlands/open waters at 4.45 acres and 3.73 acres, respectively. Since this alternative calls for the reuse of Al Jo's Curve, it does not provide waterfront access to the public. In addition, it would have the smallest opportunity for on-site wetlands mitigation at only 10% of the total required. The high floodplain and wetlands/open waters impacts, lack of on-site wetlands mitigation opportunities and waterfront access, high requirements for the maintenance and protection of traffic during construction, and facility maintenance following construction make other alternatives more desirable.

Alternative K

Alternative K would make I-295 a continuous direct-through alignment in the form of a tunnel beneath I-76/Route 42. This tunnel design not only presents logistical problems for local police, fire, and rescue crews during emergencies, but also creates significant vulnerabilities in the security of the interchange. There would be a need for significant maintenance in the future with a tunnel. The cost to build Alternative K is approximately \$822 million.

The impacts to the floodplain and wetlands/open waters for this alternative would be 3.04 acres and 2.90 acres, respectively. The highway design incorporates the use of retaining walls and steepening of side slopes in order to avoid and/or minimize impacts to aquatic resources. The highest reduction of residential noise impacts and lowest visual impacts would result from this alternative. However, during the long construction duration (88 months), the cut-and-cover operations of tunnel construction would cause a temporary disruption to the community.

The concept of a tunnel had initially received some support from the public due to a large portion of the interchange being relocated underground. However, the high cost, temporary construction impacts and disruption to commuters caused by the 88-month long construction of this alternative made this alternative less attractive. In addition, the existence of a tunnel in the area would present security vulnerabilities and logistical problems for local emergency personnel and result in high maintenance and operations needs.

Alternative D (Preferred Alternative)

As with all of the other proposed alternatives, Alternative D would cause inconveniences to neighboring properties in the form of noise, dust, and/or visual impacts. Some traffic would be diverted off the mainline for Alternative D and construction duration is expected to last 64 months. However, compared to Alternative K, the tunnel alternative, construction time and costs are decreased and potential breaches in security are not considered to be as significant. The maintenance needs for this alternative are the lowest for all build alternatives. Since Alternative D does not use a stacked infrastructure design, permanent visual intrusion on the community

will be less of an issue as well. The cost to build Alternative D is approximately \$608 million, which is more than 35% less than the cost for Alternative K. A plan view of Alternative D is provided in **Figure ES-4**.

This alternative would cause the second lowest impacts to the floodplain and wetlands/open waters at 2.28 and 1.97 acres, respectively. The opportunity for on-site wetlands mitigation is 100% with the removal of Al Jo's Curve. This alternative would result in the lowest acreage of total impervious coverage at 61 acres compared to the other build alternatives.

Alternative D meets the purpose and need of the proposed project. It will improve traffic safety, reduce traffic congestion, and utilizes design speeds consistent with that of the interchange's approach roadways. Based on the Alternative Analysis, Alternative D was recommended as the Preferred Alternative and is preferred by the local community, government officials, environmental agencies, NJDOT and FHWA.

SECTION 4(F) EVALUATION

A Draft Section 4(f) Evaluation was prepared as a chapter of the DEIS. This evaluation was prepared pursuant to the finding that the proposed project will have an adverse effect on the Bellmawr Park Mutual Housing Historic District.

As all build alternatives use Section 4(f) resources, such that there are no feasible and prudent alternatives that avoid Section 4(f) resources, the impacts to both Section 4(f) and non Section 4(f) resources were evaluated in order to select the prudent and least overall harm alternative. Although Alternative D has slightly higher Section 4(f) impacts than Alternative K, there are additional important environmental impacts associated with Alternative K that Alternative D does not have. Therefore, it is more prudent to choose Alternative D.

CONSULTATION AND COORDINATION

As part of the proposed project, extensive public consultation and coordination took place. The proposed project involved significant local, state, and federal government coordination in collaboration with public participation in order to build consensus among stakeholders in the project area. Public involvement occurred during the project scoping, development, and conceptual design process.

The public hearing for the DEIS was held on January 30, 2008. Comments received in writing during the DEIS comment period and at the January 30, 2008 public hearing were considered both individually and collectively. There were no modifications to alternatives, including the proposed action. Substantive comments have been incorporated into the FEIS.

Since the circulation of the DEIS and receipt of comments, additional analysis has been performed on the selected alternative in order to prepare a more detailed cost estimate. The cost estimates used as the basis for the Alternative Analysis were based on 2006 data with escalation capped at 20%. A Cost Estimate Review (CER) workshop was conducted by FHWA in October 2008 to verify the accuracy and reasonableness of the total cost estimate and to develop a probability range for the cost estimate that represents the project's current stage of design. Based on the results of the CER workshop, the 2008 construction cost estimate for Alternative D is

\$902 million in year of expenditure dollars, which reflects an 80% confidence level that the cost estimate will not be exceeded. In addition, the 2008 construction cost estimate includes costs for breaking the project into four construction contracts, adding incentives to promote accelerated construction, traffic mitigation during construction to help minimize impacts on motorists, and reflected cost increases for materials, labor and Right of Way.