

Partnering Session #2

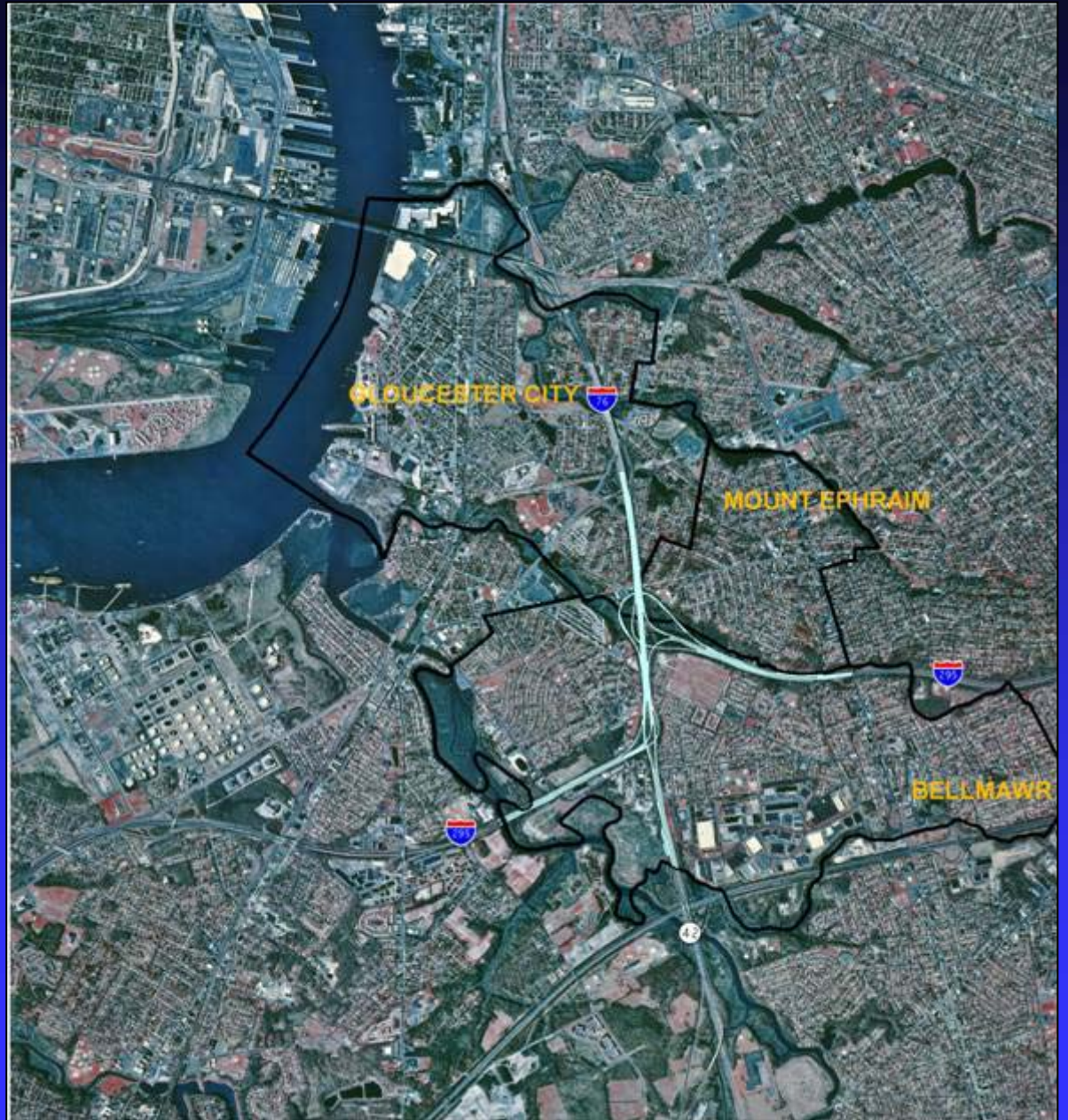
I-295/I-76/Route 42 Direct Connection



June 18, 2003

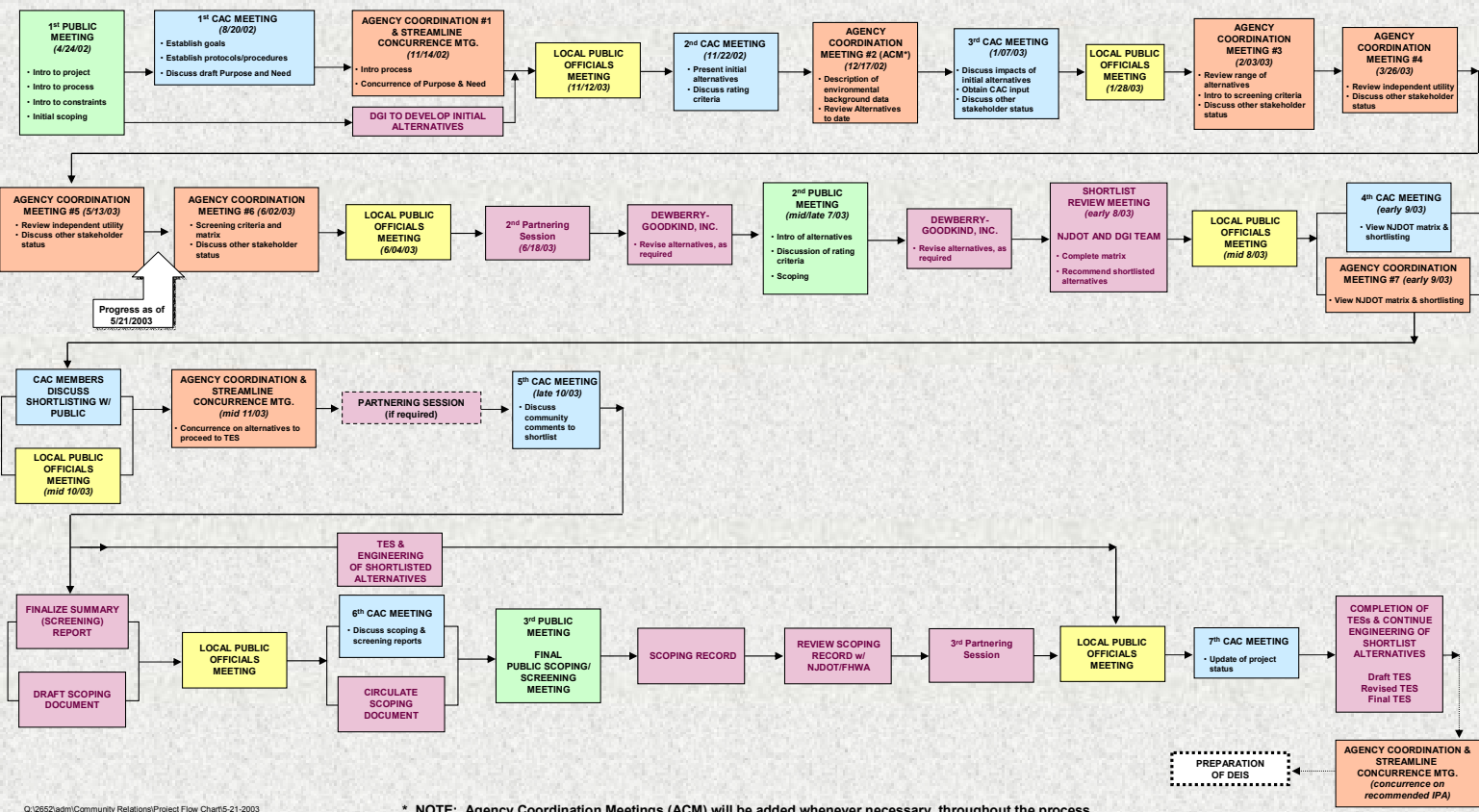
Presented by NJ Department of Transportation and **Dewberry**

SITE MAP



Project Flow Chart

I-295/I-76/NJ 42 Interchange Reconstruction Project Flow Chart 1st Public Meeting to Completion of TES's Revised 5/21/03



* NOTE: Agency Coordination Meetings (ACM) will be added whenever necessary, throughout the process.



Goals and Objectives

A set of project goals and objectives have been developed based on the project's purpose and need, findings from previous studies and goals developed during the partnering meetings on December 11-12, 2001. The goals and objectives are a compendium of statements made by the NJDOT, FHWA, agencies, local elected officials, residents and other stakeholders in the project. As such, the goals and objectives are wide ranging and represent different levels of priority for each stakeholder.



Goals and Objectives *(cont'd.)*

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 identified project goals and objectives are as follows:

- Improve roadway safety by constructing a facility that meets driver expectations for the Interstate Highway System by providing roadway geometric features that meet the required designed standards for the facility.



Goals and Objectives *(cont'd.)*

- Reduce local congestion on surrounding (local) arterials, such as Route 168 and US 322 and reduce commuter cut-through traffic on neighborhood streets, thereby improving local traffic mobility, pedestrian safety, noise levels, air quality, level of service on I-295 and traffic safety.
- Improve regional mobility to support greater economic development of the region and attract visitors to the region.



Goals and Objectives *(cont'd.)*

- Reduce air pollution levels, including carbon monoxide and criteria pollutants.
- Reduce financial burden on State Police expenditures and cost to municipalities by reducing the need for local emergency services and lowering the number of vehicle accidents.
- Reduce existing noise levels from highways and address resident concerns about potential increased noise levels through avoidance and mitigation measures, such as noise walls which incorporate context sensitive design principles.



Goals and Objectives *(cont'd.)*

- Avoid, minimize and mitigate all environmental impacts to the fullest extent practicable.
- Conduct a streamlined agency coordination process that results in a cost and time-effective EIS and permit process, but that does not overlook each agency's mission, authority and procedures.



Goals and Objectives (*cont'd.*)

- Create and maintain an on-going public outreach/participation process that fosters public trust.
- Minimize disturbances to the quality of life of communities, including minimizing relocation and acquisitions of private and public property.



ENVIRONMENTAL CONSTRAINTS



Little Timber Creek



Resurrection Cemetery



Winthrop Ave Playground



W. Harrison House



Wetlands Area



Fir Place



Ballfields on Essex Rd



Bellmawr Park School

WETLANDS



LEGEND

Project Screening Study Area Boundary

Tidal Wetlands

Tidal Marshes

Freshwater Wetlands

Mixed Forest

Scrub/Shrubland

Herbaceous

Wetlands Buffer

50 Foot Freshwater Wetlands Buffer

1000 0 1000 2000 3000 4000 Feet

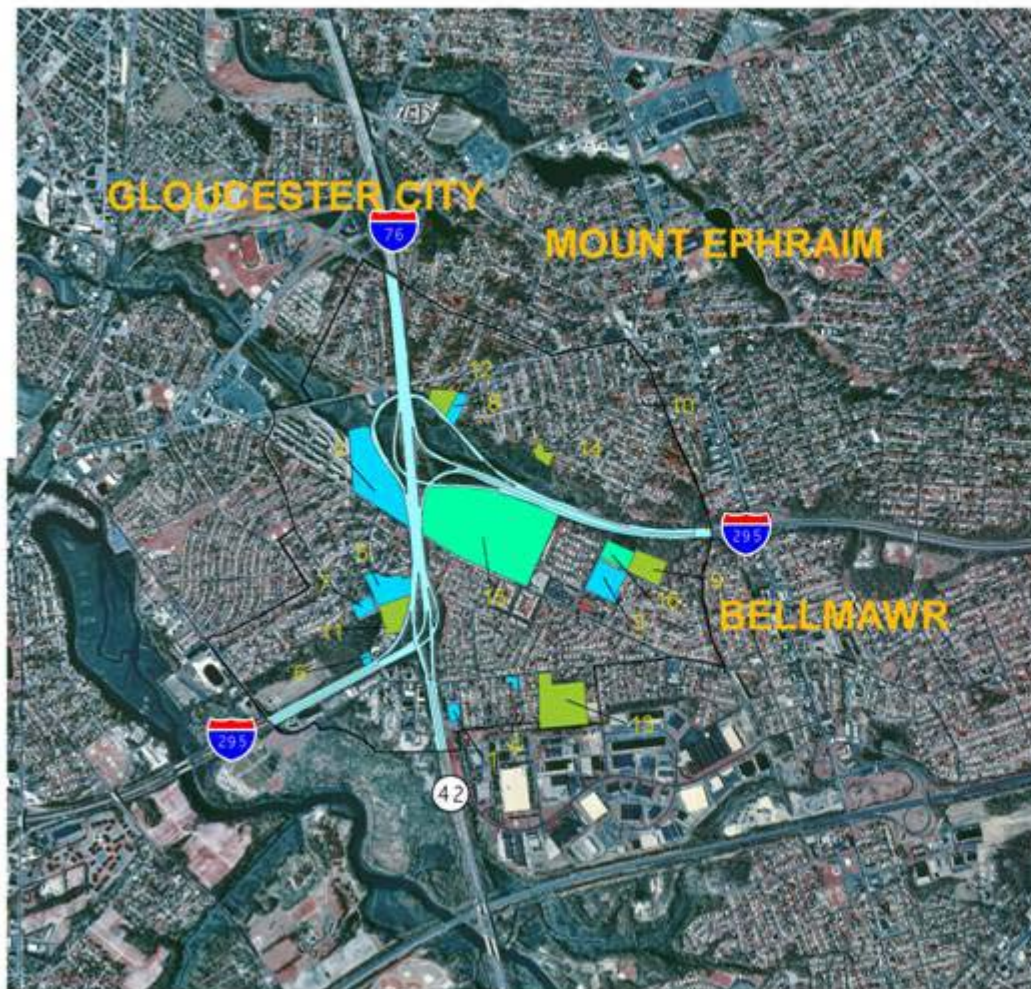


New Jersey Department of Transportation

I-295/I-76/RT. 42
INTERCHANGE
RECONSTRUCTION
SUMMARY REPORT
FIGURE 10

Source: NJDEP Bureau of Geographic Information & Analysis, 1995-1997
Dresdner Robin Site Reconnaissance

COMMUNITY FACILITIES



Community Facilities

LEGEND

Project Screening Study Area Boundary

- 1- State Police Complex
- 2- Annunciation Church and Elementary School
- 3- Bell Oaks School
- 4- Bellmawr Baptist Church
- 5- Bellmawr Park School
- 6- Bellmawr Veterans of Foreign Wars
- 7- Bellmawr Volunteer Fire Company
- 8- Mt. Ephraim Sewage Treatment Facility
- 9- Anderson Avenue Recreation Area
- 10- Memorial Park
- 11- Bellmawr Little League Ballfield
- 12- Mt. Ephraim Girls' Softball Fields
- 13- Scott E. Murella Playground
- 14- Winthrop Avenue Playground
- 15- New St. Mary's Cemetery
- 16- Resurrection of Christ Cemetery

1000 0 1000 2000 3000 4000 Feet



New Jersey Department of Transportation

I-295/I-76/RT. 42
INTERCHANGE
RECONSTRUCTION
SUMMARY REPORT
FIGURE 4



Source: NJDEP Bureau of Geographic Information & Analysis, 1995-1997
Dredner Robin Site Reconnaissance

SECTION 4(f) - RECREATION



Section 4(f) - Recreation

LEGEND

-  Project Screening Study Area Boundary
-  Publicly Owned Recreation Facility

1000 0 1000 2000 3000 4000 Feet



New Jersey Department of Transportation

I-295/I-76/RT. 42
INTERCHANGE
RECONSTRUCTION
SUMMARY REPORT
FIGURE 12






Source: NJDEP Bureau of Geographic Information & Analysis, 1995-1997
and Dresden Rabin Site Reconnaissance

MINORITY POPULATIONS




Minority Populations

LEGEND

-  Project Screening Study Area Boundary
-  6052 2000 Census Tracts
-  Block 3012 2000 Blocks
-  Less Than 10 %
-  10 to 30%

1000 0 1000 2000 3000 4000 Feet

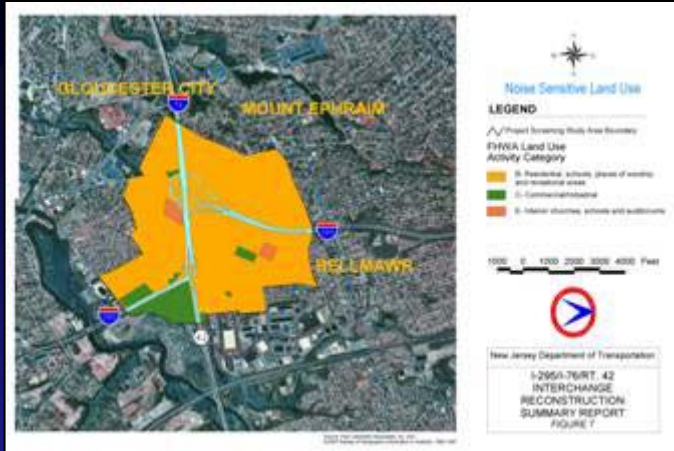



New Jersey Department of Transportation

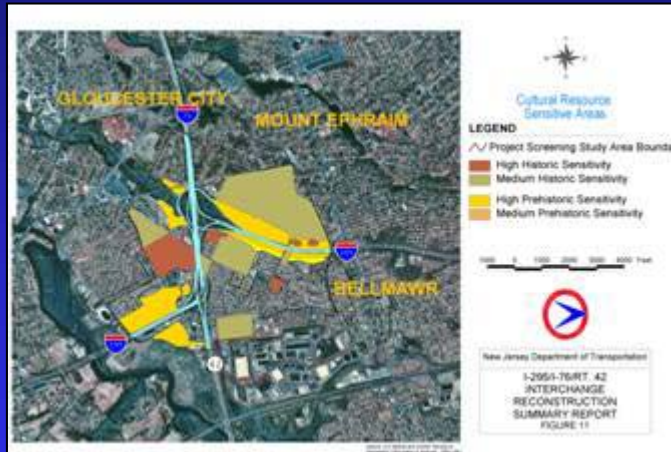
I-295/I-76/RT. 42
INTERCHANGE
RECONSTRUCTION
SUMMARY REPORT
FIGURE 5

Source: NJDEP Bureau of Geographic Information & Analysis, 1995-1997
and Chesler Robin Site Reconnaissance.
US Bureau of the Census, 2000

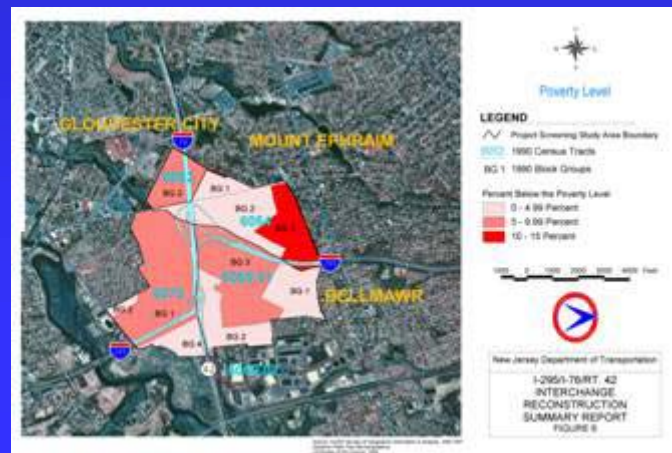




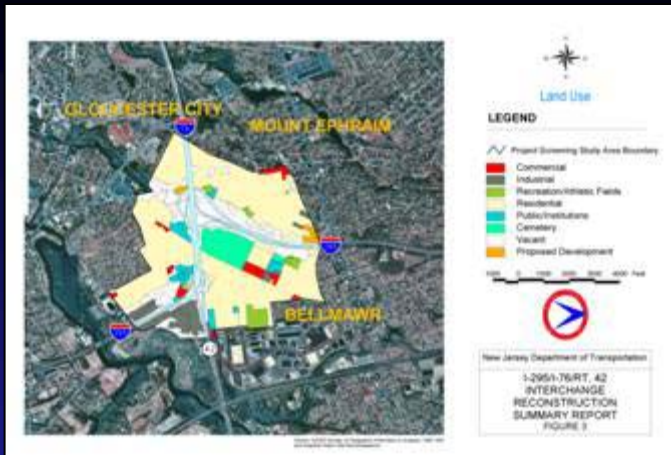
NOISE SENSITIVE LAND USE



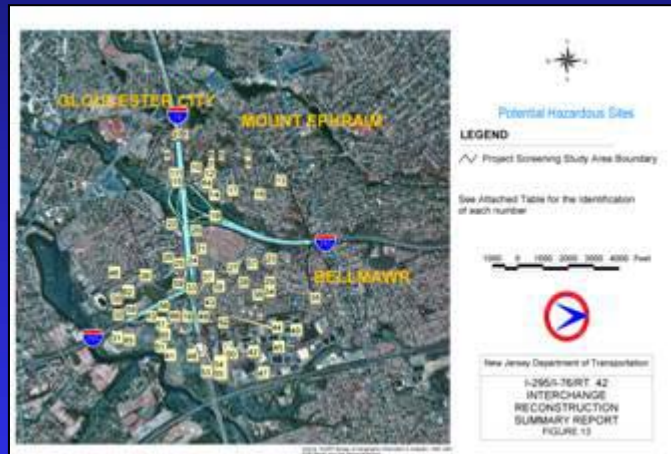
CULTURAL RESOURCES



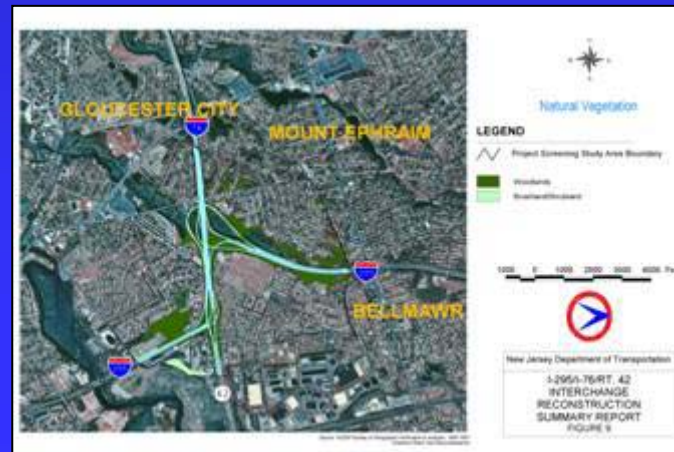
POVERTY LEVEL



LAND USE

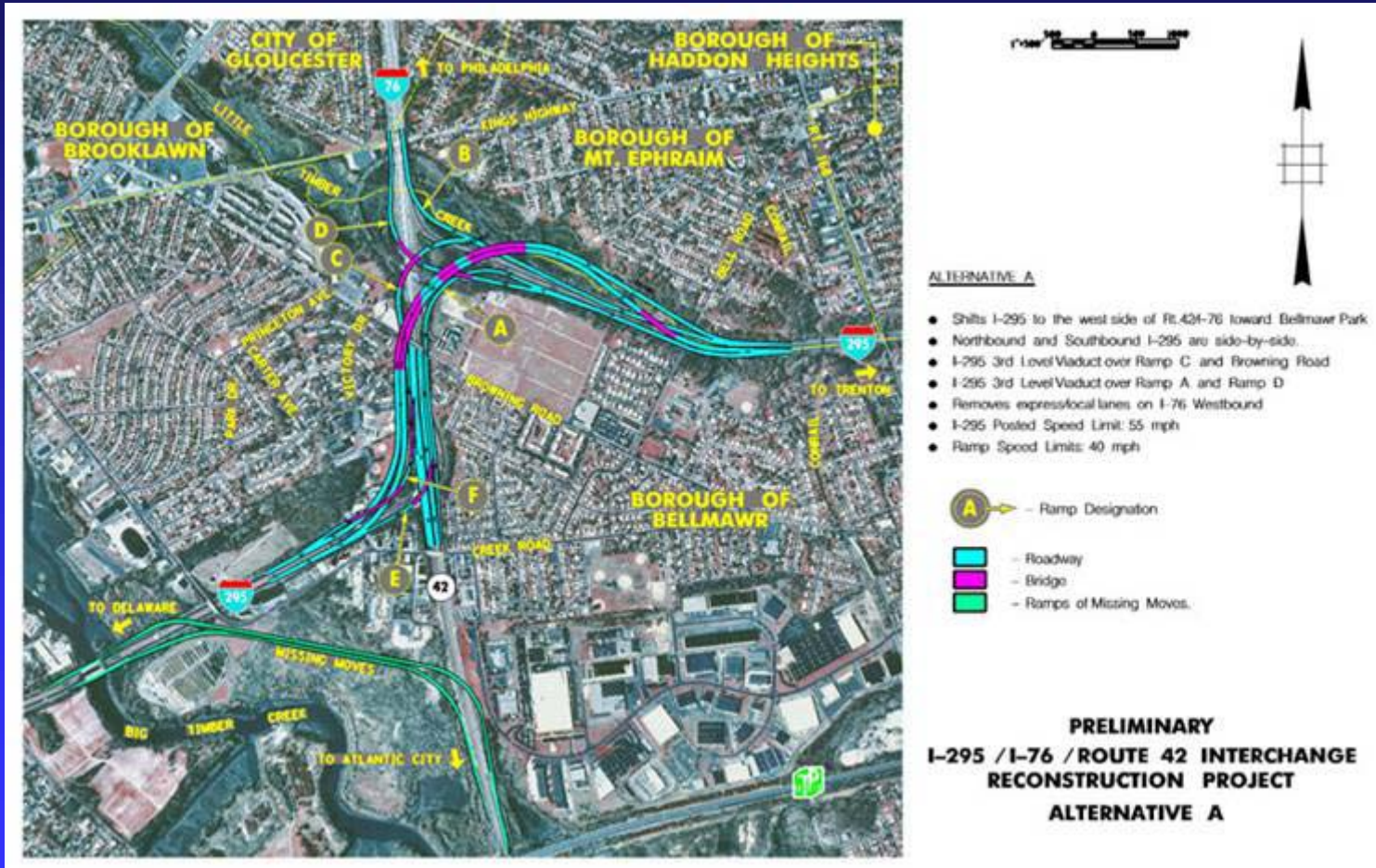


POTENTIAL HAZARDOUS SITES

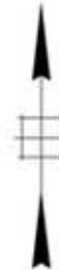


NATURAL VEGETATION

ALTERNATIVE A



ALTERNATIVE A1



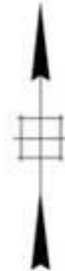
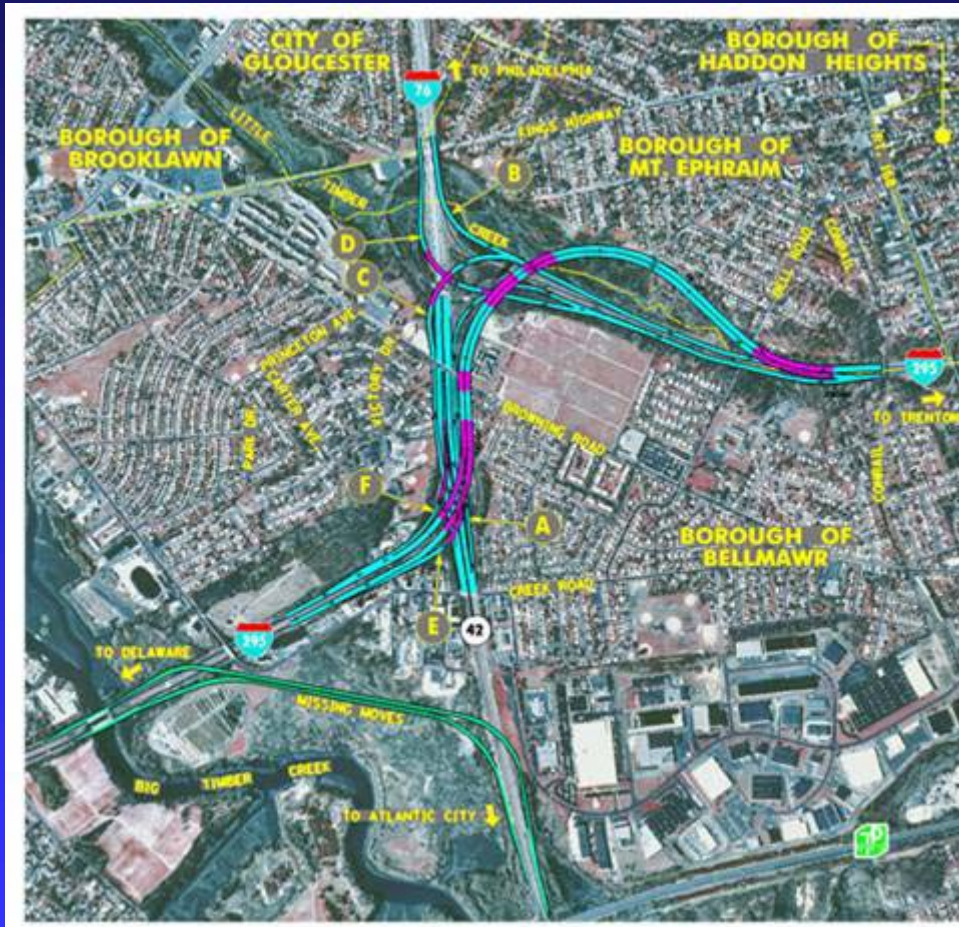
ALTERNATIVE A1 (Revised Ramp C)

- Shifts I-295 to the west side of Rt.42/76 toward Bellmawr Park
- Northbound and Southbound I-295 are side-by-side.
- I-295 3rd Level Viaduct over Ramp C and Browning Road
- I-295 3rd Level Viaduct over Ramp A and Ramp D
- Removes express/lane lanes on I-76 Westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

- A** - Ramp Designation
- Roadway
- Bridge
- Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE A1

ALTERNATIVE B



ALTERNATIVE B

- Shifts I-295 to the east side of Rt.421-76.
- Shifts I-295 North toward Mt. Ephraim.
- Northbound and Southbound I-295 are side-by-side.
- I-295 3rd Level Viaduct over Ramp A and Ramp D.
- Removes express/local lanes on I-76 Westbound.
- I-295 Posted Speed Limit: 55 mph.
- Ramp Speed Limits: 40 mph.

A — Ramp Designation

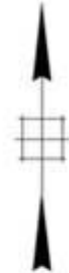
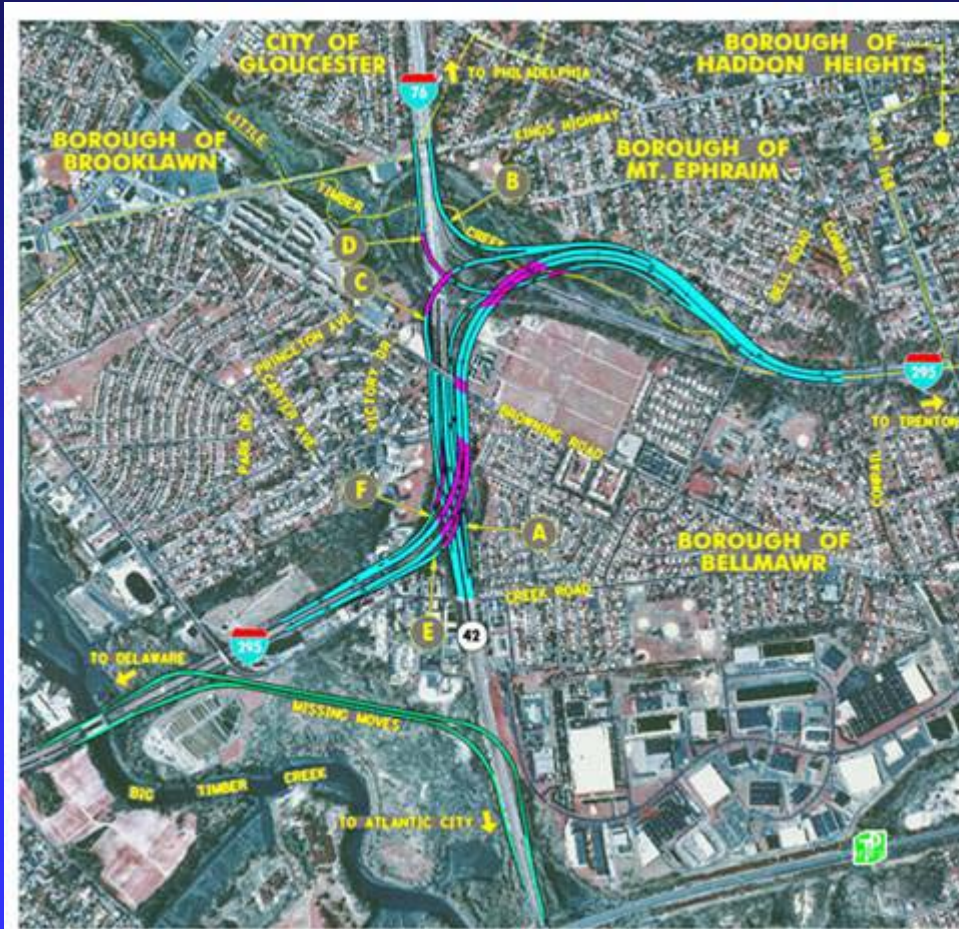
Cyan — Roadway

Magenta — Bridge

Green — Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE B

ALTERNATIVE B2



ALTERNATIVE B2

- Shifts I-295 to the east side of Rt.421-76.
- Shifts I-295 North toward Mt. Ephraim
- Northbound and Southbound I-295 are side-by-side.
- I-295 3rd Level Viaduct over Ramp A and Ramp D
- Removes express/local lanes on I-76 Westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

A ← Ramp Designation

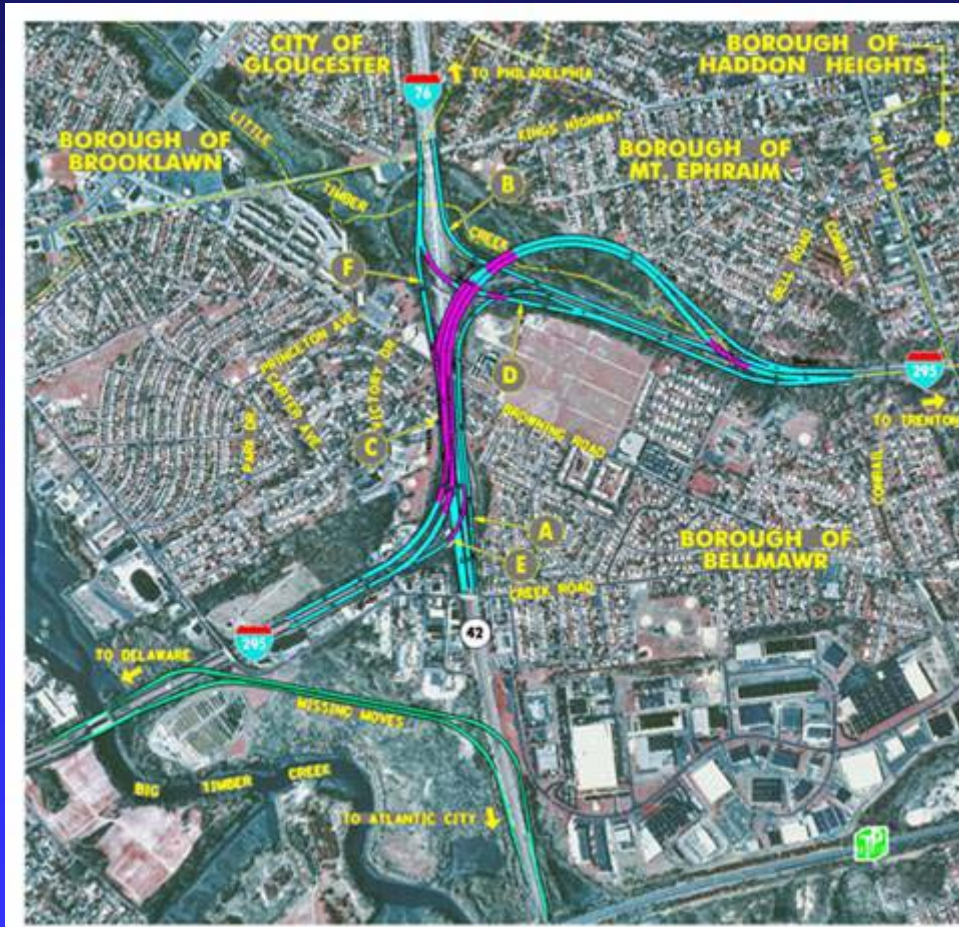
 - Roadway

 - Bridge

 - Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE B2

ALTERNATIVE C



ALTERNATIVE C

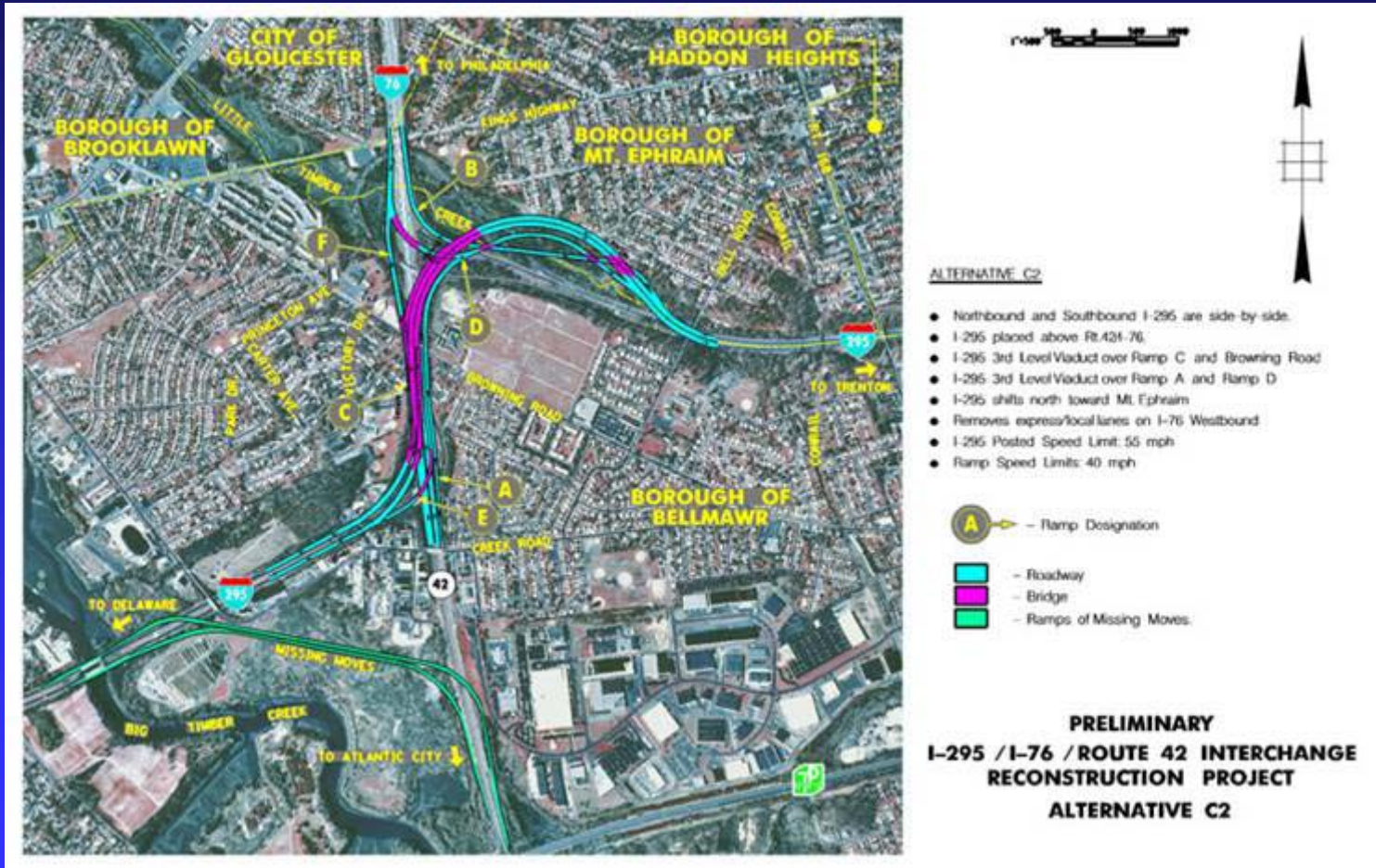
- Northbound and Southbound I-295 are side-by-side.
- I-295 placed above Rt.42/76.
- I-295 3rd Level Viaduct over Ramp C and Browning Road
- I-295 3rd Level Viaduct over Ramp A and Ramp D
- I-295 shifts north toward Mt. Ephraim
- Removes express/local lanes on I-76 Westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

A ← Ramp Designation

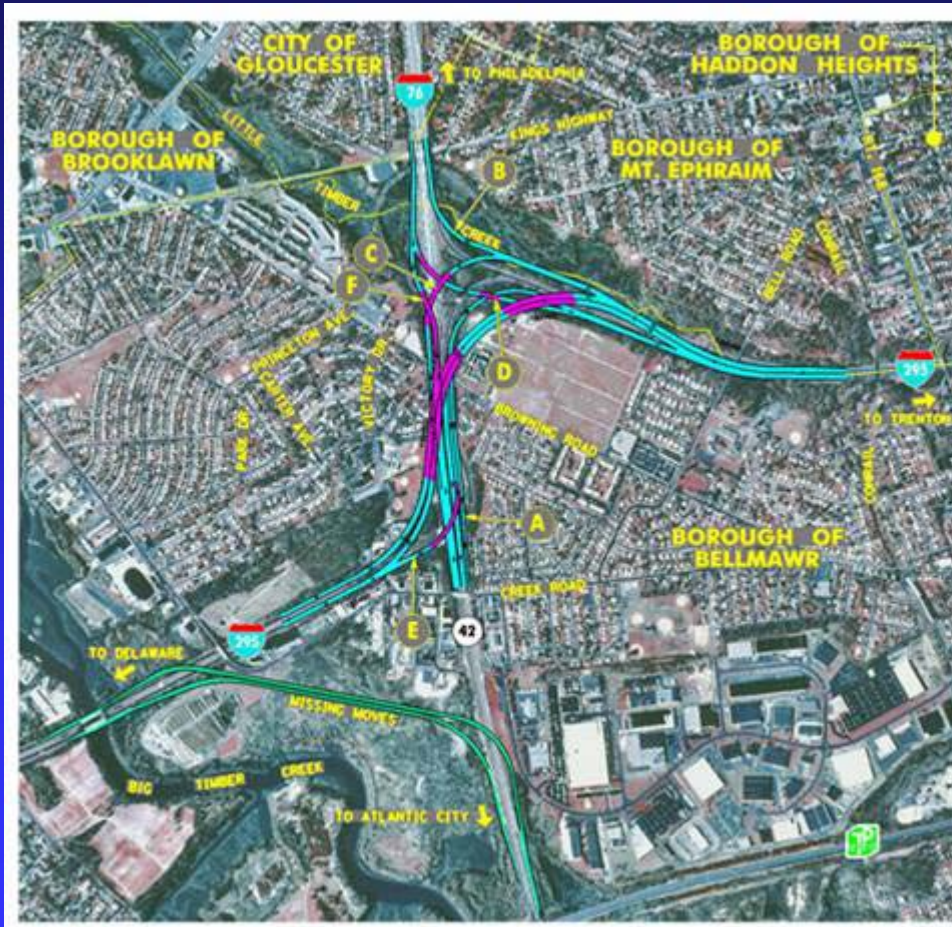
- █ - Roadway
- █ - Bridge
- █ - Ramps of Missing Moves

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE C

ALTERNATIVE C2



ALTERNATIVE D



ALTERNATIVE D

- Northbound and Southbound I-295 are side-by-side
- Shifts I-295 over parts of both the ballpark and the cemetery
- I-295 crosses Rt.42/I-76 on a skew
- I-295 3rd Level Viaduct over Ramp C and Browning Road
- Ramp D 3rd Level Viaduct over I-76Rt. 42 and Ramp C
- Removes express/local lanes on I-76 westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

- A — Ramp Designation
- — Roadway
- — Bridge
- — Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE D

ALTERNATIVE E



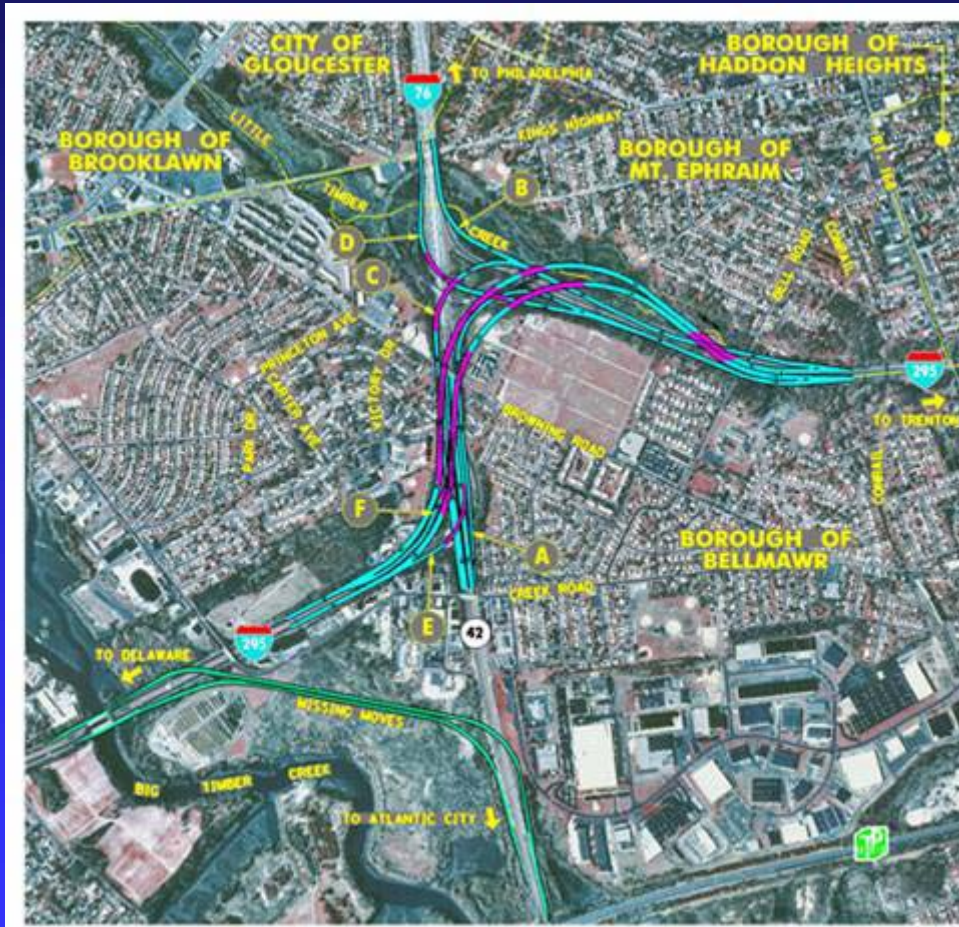
ALTERNATIVE E

- Northbound and southbound I-295 are side-by-side.
- I-295 3rd Level Viaduct over I-76/RL 42 and Ramp E.
- I-295 follows the most direct path.
- Removes express/local lanes on I-76 westbound.
- I-295 Posted Speed Limit: 65 mph
- Ramp Speed Limits: 40 mph

-  - Ramp Designation
-  - Roadway
-  - Bridge
-  - Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE E

ALTERNATIVE F



ALTERNATIVE F

- Northbound and Southbound I-295 follow separate alignments.
- Northbound I-295 shifted to east side of Rt.42/I-76.
- Southbound I-295 shifted to west side of Rt.42/I-76.
- I-295 Northbound 3rd Level Viaduct over Ramp A and Browning Road
- I-295 Southbound 3rd Level Viaduct over Ramp A and Ramp D
- Removes express/local lanes on I-76 westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

A – Ramp Designation

– Roadway

– Bridge

– Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE F

ALTERNATIVE F2



ALTERNATIVE F2

- Northbound and Southbound I-295 follow separate alignments.
- Northbound I-295 shifted to east side of Rt.421-76.
- Southbound I-295 shifted to west side of Rt.421-76.
- I-295 Northbound 3rd Level Viaduct over Ramp A and Browning Road
- I-295 Southbound 3rd Level Viaduct over Ramp A and Ramp D
- Removes express/local lanes on I-76 westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

- Ramp Designation
- Roadway
- Bridge
- Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE F2



ALTERNATIVE G



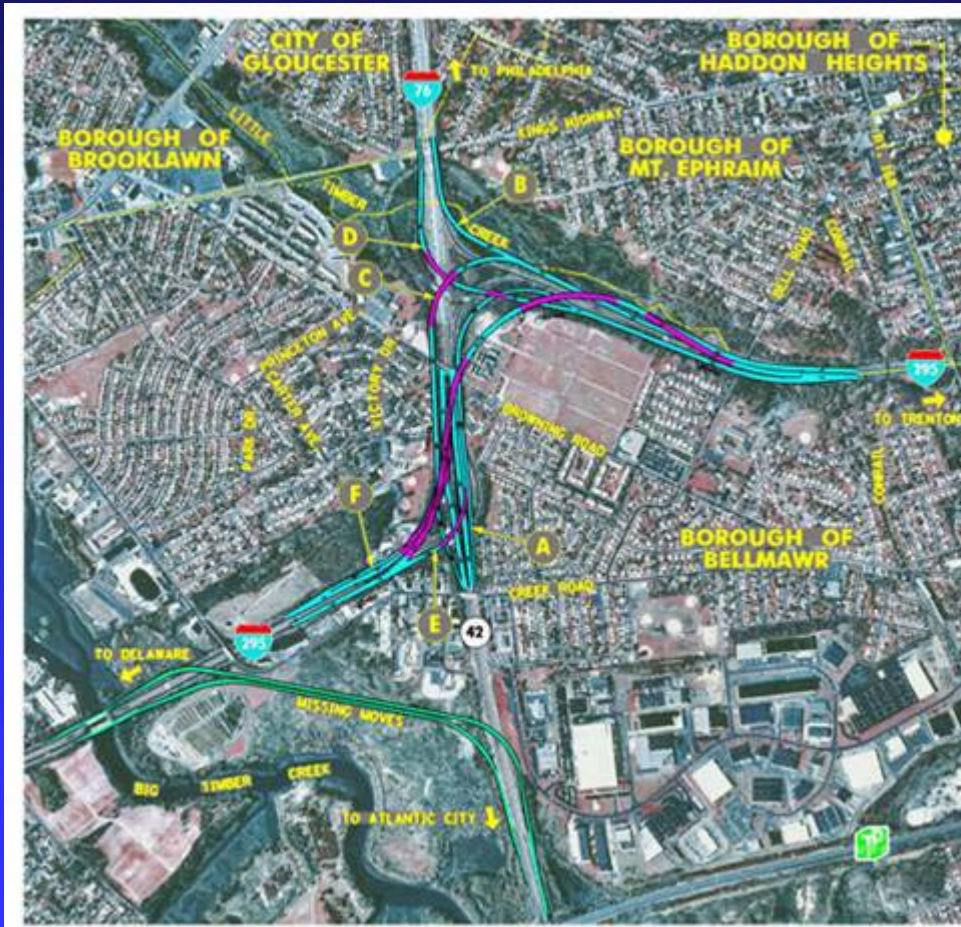
ALTERNATIVE G

- Northbound I-295 placed above Southbound I-295 using a Double-Decker Configuration
- I-295 4th Level Viaduct over Ramp A and Browning Road
- I-295 4th Level Viaduct over Ramp C and Ramp F
- I-295 3rd Level Viaduct over Ramp AD
- I-295 3rd Level Viaduct over Ramp BC
- I-295 3rd Level Viaduct over I-76 Rt. 42
- Ramp C has a left hand exit
- Removes express/local lanes on I-76 westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

-  - Ramp Designation
-  - Roadway
-  - Bridge
-  - Ramps of Missing Moves.

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE G

ALTERNATIVE H



ALTERNATIVE H

- Northbound I-295 placed above Southbound I-295 using a Double-Decker Configuration
- I-295 4th Level Viaduct over Ramp A and Brwering Road
- I-295 4th Level Viaduct over Ramp C and Ramp F
- I-295 3rd Level Viaduct over Ramp A /D
- I-295 3rd Level Viaduct over Ramp B /C
- I-295 3rd Level Viaduct over I-76 /Rt. 42
- Ramp C 3rd Level Viaduct over I-76 /Rt. 42 and Ramp D
- Removes express /local lanes on I-76 westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

A ← Ramp Designation

 - Roadway

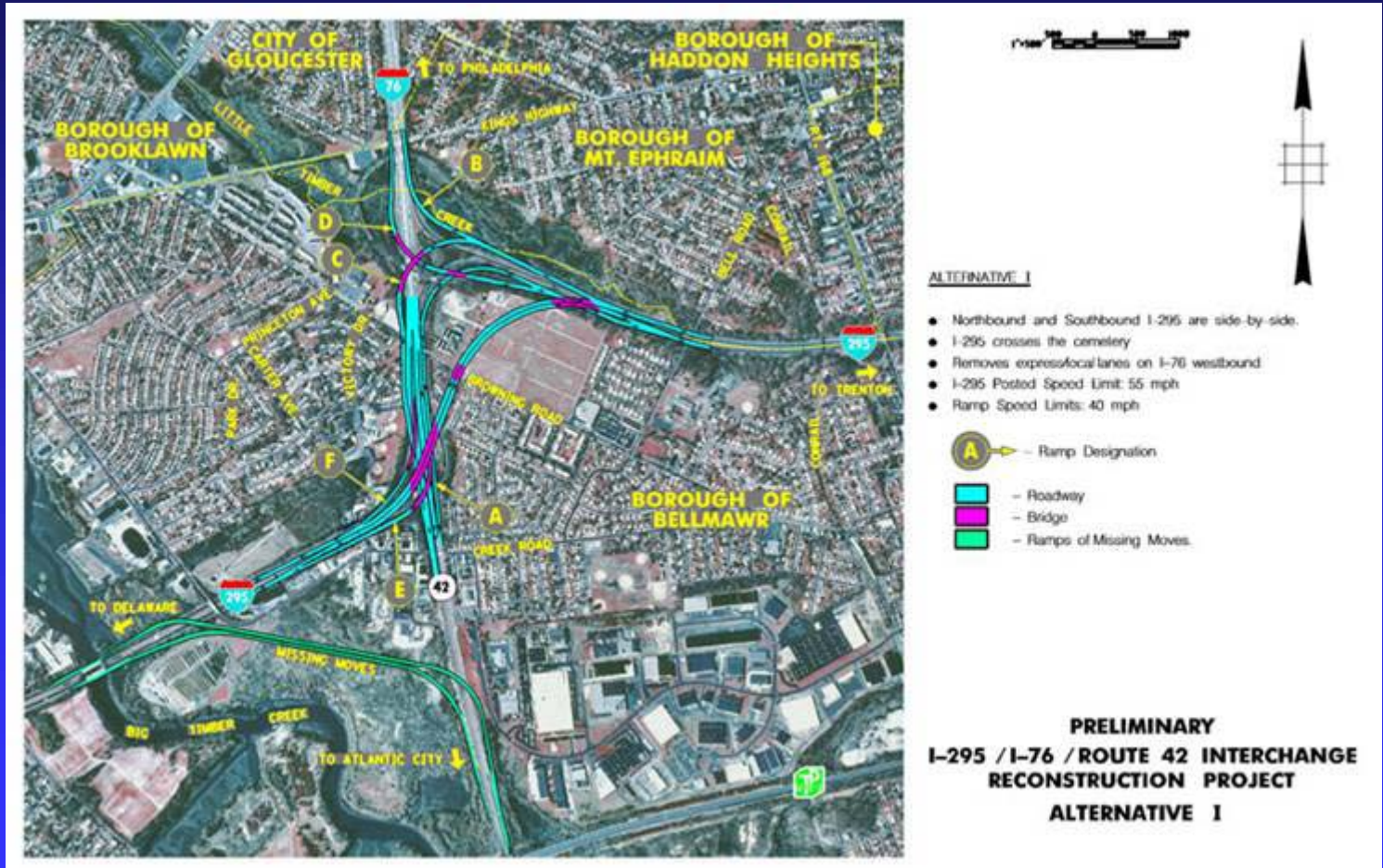
 - Bridge

 - Ramps of Missing Moves.

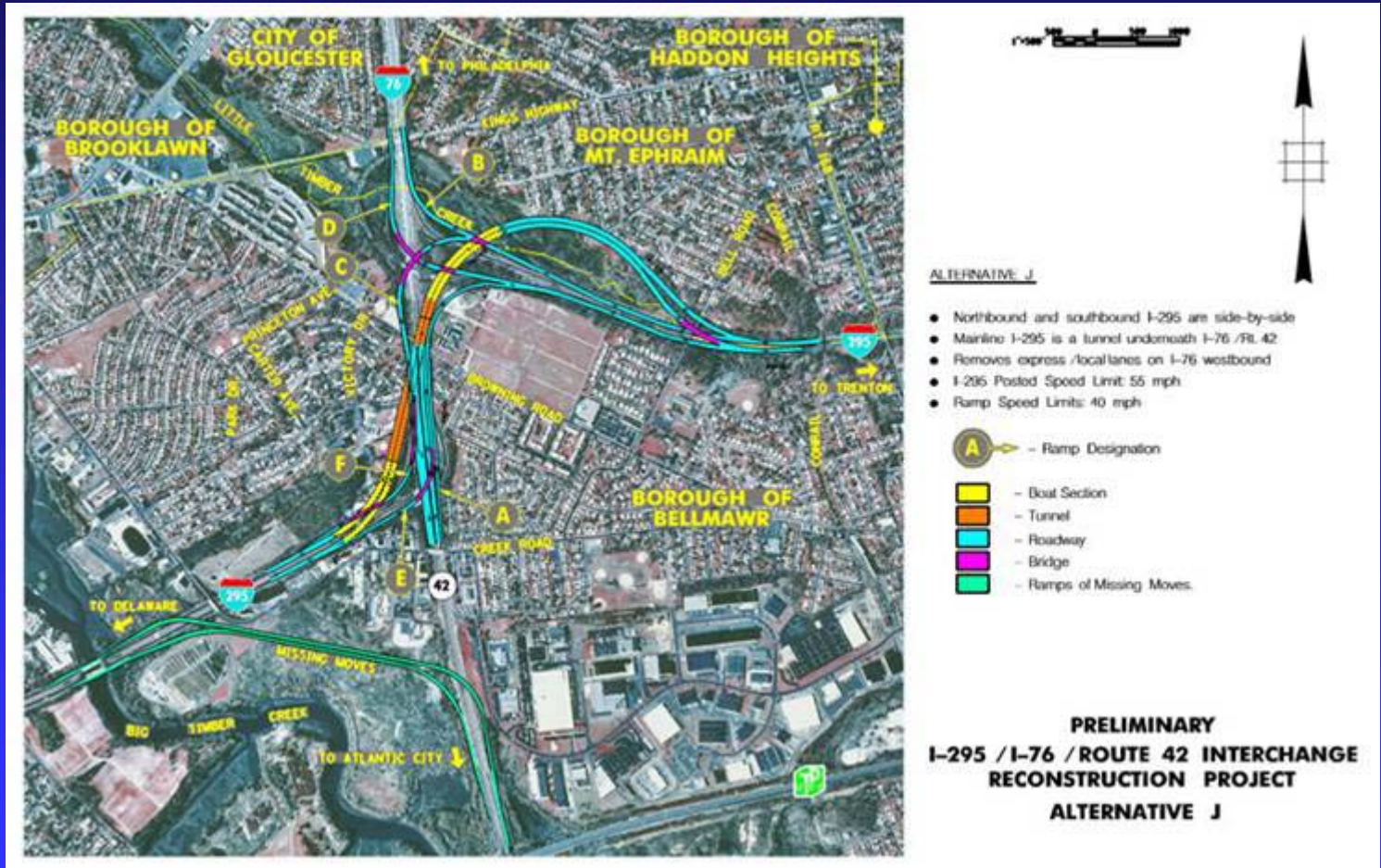
PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE H



ALTERNATIVE I



ALTERNATIVE J



ALTERNATIVE K



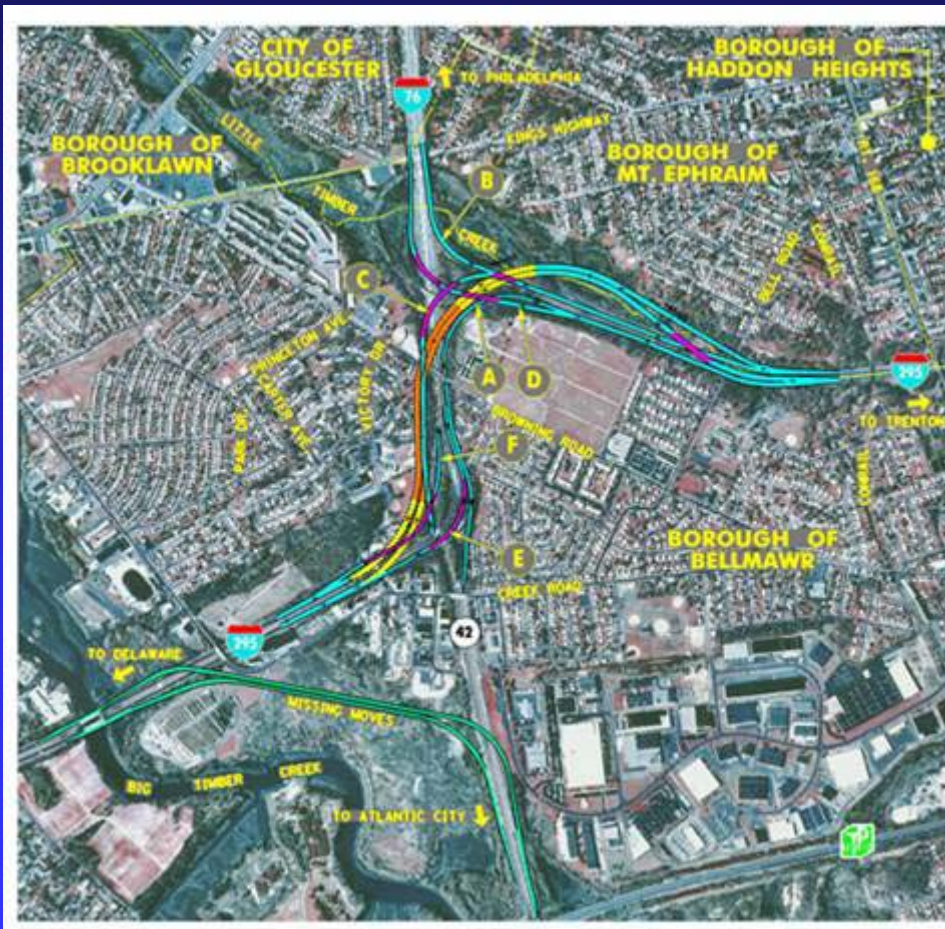
ALTERNATIVE K

- Based on Alternative D alignment
- Northbound and southbound I-295 are side-by-side
- Mainline I-295 is a tunnel underneath I-76 /Rt. 42
- Removes express /local lanes on I-76 westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

- A** — Ramp Designation
- Boat Section
- Full Tunnel Depth
- Roadway
- Bridge
- Ramps of Missing Moves

PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE K

ALTERNATIVE L



ALTERNATIVE L

- Based on Alternative A alignment
- Northbound and southbound I-295 are side-by-side
- Mainline I-295 is a tunnel underneath I-76 /Rt. 42
- Removes express /local lanes on I-76 westbound
- I-295 Posted Speed Limit: 55 mph
- Ramp Speed Limits: 40 mph

- Ramp Designation
- Boat Section
- Full Tunnel Depth
- Roadway
- Bridge
- Ramps of Missing Moves

**PRELIMINARY
I-295 / I-76 / ROUTE 42 INTERCHANGE
RECONSTRUCTION PROJECT
ALTERNATIVE L**



Shortlisting

- Screening of initial alternatives and completion of shortlisting matrix
- Objective is to select a reduced number of alternatives that will be evaluated in detail in the EIS process



Matrix Criteria

■ CONSTRUCTIBILITY

For this criterion, the alternatives will be reviewed to determine probable construction or constructability issues. Evaluation factors include impacts to the local residents and motoring public during construction with an emphasis on traffic delays, impact of detours/diversions and duration of construction duration. Evaluation of the alternatives for constructability would be quantified as High Impact, Moderate Impact, or Low Impact.



Matrix Criteria

■ MAINTAINABILITY

Evaluation factors for this criterion include anticipated ease of routine maintenance or the need for expensive or labor intensive maintenance for the alternatives under development to ensure that the project does not have extensive hidden high life cycle costs or flaws. This evaluation will consider whether the proposed facility can be properly maintained utilizing standard equipment/methods with acceptable labor demands. Examples of elements requiring high future maintenance could include: tunnels or multi-level structures. Impacts of numerous structures and single lane ramps with their inherent maintenance issues of salt usage and snow removal problems during the winter will also be considered.

Each alternative will be rated for maintainability as Highly Difficult, Moderately Difficult, or Low Difficulty.



Matrix Criteria

■ COMPLIANCE WITH DESIGN CRITERIA

Each alternative would be evaluated for compliance with applicable design standards (NJDOT-Design Manuals or AASHTO 2001 – A Policy on Geometric Design of Highways and Streets). The number of undesirable design features not requiring design exceptions, such as left exits or entrances, will be counted. The number of conflict points present in each of the alternatives will also be identified. This criteria will show the number of undesirable design features, as well as the number of proposed conflict points.



Matrix Criteria

■ COMPARISON OF ESTIMATED CONSTRUCTION COST

The relative relationship of Construction Costs for each alternative will be developed utilizing a comparison of roadway and bridge lengths for each alternatives. The length of new bridge or tunnel lane construction required will be multiplied by a factor of 2 and added to the length of new roadway lanes to determine the relative cost required to construct each alternative. In a similar fashion, the length of new tunnel lane construction will be multiplied by a factor of x. The effective lane length shown on the matrix is the sum of the actual lane length of roadway in feet plus the equivalent lane length of bridges, plus the equivalent lane length of tunnel.



Matrix Criteria

■ RIGHT-OF-WAY

For ROW, each of the following impacts will be considered to quantify the relocation and/or proximity impacts due to the individual alternative.

- ◆ Residential Property Impacts - Impacts to residents will be evaluated for each of the alternatives by counting the number of discrete residential structures that could require taking, and are therefore, considered as a relocation. Residential structures that are located within 50' of the alignment will be less likely to incur relocation but will have proximity impacts, and will, therefore, also be counted. For the Bellmawr Park area and other multi-family structures, each individual residential unit will be counted separately.
- ◆ Commercial Property Impacts - Impacts to commercial properties will be evaluated for the alternatives in the same manner as the residential properties.



Matrix Criteria

■ RIGHT-OF-WAY (cont'd.)

- ◆ Institutional Properties - There are several institutional properties, such as churches, schools, cemeteries, etc. that may potentially be impacted. The impacts to these facilities will be shown the same as residential above except that the categories will be the number of facilities impacted severely, moderately, or only slightly.
- ◆ Recreational Properties - There are several recreational properties that may potentially be impacted. The evaluation of the impacts will be performed in the same manner as the institutional properties. A probable relocation, and therefore a severe impact, would be where the impacts are extensive enough to make the facility nonfunctional. An example of a moderate property impact might be rearrangement of the layout of some ball fields. No differentiation will be made for recreational properties having or lacking protected 4(f) status.



Matrix Criteria

■ WETLANDS

Wetlands can be broken into 2 categories - tidal and non-tidal. For this evaluation each type of wetland will be evaluated separately. The total wetlands impacted in acres for each alternative will be determined from existing published wetland mapping and confirmed by limited field observations.

The wetlands have been identified through the use of Department of Environmental Protection and Army Corps of Engineer maps. Each alternative will be evaluated on the basis of total wetland acreage impacted for each category.



Matrix Criteria

■ NOISE

Each alternative will be evaluated for its probable noise impact without mitigation. Factors considered will be proximity to and type of receptors and the height of the new facility over the existing ground. The increase in noise will be rated as High, Moderate, or Low.

■ AIR

Each alternative will be evaluated for its probable impact to air quality. The effects to air quality will also be rated as High, Moderate or Low.



Matrix Criteria

■ SOCIOECONOMICS

The study area consists of residential, industrial, commercial, recreational and public/quasi-public land uses. The only vacant land in the project area consists of wetlands and floodplains. Community facilities located in the project area also have been identified. Each alternative will be assessed for its' impact to the quality of life of the community, including impacts to public and community facilities. The subjective evaluation will include impacts to community cohesion, (i.e. division of existing neighborhoods), access impacts to residential or recreational uses, impacts to developed areas of cemeteries, possible diversion of traffic to local streets, etc. The impacts will be identified as High, Moderate and Low.



Matrix Criteria

■ ENVIRONMENTAL JUSTICE

Preliminary data regarding the minority and low-income populations has been gathered through Census data and outreach to social service organizations in the study area. Outreach to these populations included discussions with community action committees, schools and churches. This data gathering allows detection of the presence or absence of environmental justice populations. The presence or absence of an environmental justice population will be noted and we will use that information to screen each alternative.



Matrix Criteria

■ ARCHEOLOGICAL

Within the project study area there are areas of potential archeological resources. The level of sensitivity of the sites has been determined and mapped as: low, medium or high. Criteria used to determine the level of sensitivity of the impact is: the level of current disturbance, the degree of the slope of the land, the site's proximity to water, the soil type, the level to which the sites are disturbed under current conditions and artifacts found during excavations. This level of sensitivity is used to determine the probability level of the existence of an archeological site. The archeological evaluation of these sites will be based on the total acreage impacted for either Low, Moderate, or High sensitivity sites.



Matrix Criteria

■ HISTORIC RESOURCES

Within the project study area there are areas or sites of varying Historic significance. The number or sites impacted for each degree of impact – High, Moderate or Low will be identified.

■ HAZARDOUS/CONTAMINATED SITES

Several sites have been identified as potentially hazardous / contaminated sites in the project area. The alternatives will be rated with regard to the number of potentially hazardous sites impacted by each alternative.



Alternatives Short List Screening Matrix

DRAFT 6/02/03

I-295/I-76/Route 42 Interchange Reconstruction

Initial Alternative Short List Screening Matrix

IMPACTS	ALTERNATIVES																										
	A	A1	A2	B	B1	B2	C	C1	C2	D	D1	E	E2	F	F1	F2	G	G1	G2	H	H1	I	I1	J	K	L	
Constructibility																											
Maintainability																											
Compliance with Design Criteria																											
Comparison of Estimated Construction Cost																											
♦ Undesirable design features																											
♦ Number of conflict points																											
Right-of-Way																											
♦ Residential																											
♦ Commercial																											
♦ Institutional																											
♦ Recreational																											
Wetlands																											
♦ Tidal																											
♦ Freshwater																											
Noise																											
Air																											
Socioeconomics																											
Environmental Justice																											
Archeological Resources																											
Historic Resources																											
Hazardous Contamination																											

H- High Sensitivity M- Moderate Sensitivity L- Low Sensitivity



ANY QUESTIONS?

