*Community Advisory Committee Meeting #3* 

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



Presented by - NJ Department of Transportation



# Agenda

Introduction/House Keeping Status of Environmental Coordination Progress Since the Last Meeting Additional Feedback Next Steps ♦ Partnering ♦ Public Information Center Review of DOT Short Listing

#### Flow Chart



# Progress Since Last Meeting

# Working Drawing of Revised Alignment of RT 42/I-76



#### Working Drawing of Tunnel Alternative



# ROW Impact

#### **ROW IMPACT**

ALT	# of Residential Impacted	# of Commercial Impact	# of Institutional Impacted			# of Recreational Impacted			
	See Note 1.		Н	М	L	Н	М	L	
А	25	4	1			3			
В	40	4	2		1	2			
С	28	4	1			2			
D	21	4	1	T	1	3			
Е	187	<sup>4</sup> nR	A						
F	26	3	1			1		1	
G	24	4	1			1		1	
Н	23	4	1			3			
Ι	23	4	1		1	2			
J	25	4	1			3			
K	23	4	1		1	3			

#### Wetland Impact

<u>Alternative</u>	<u>Freshwater Wetlands</u>	<u> Tidal Wetlands</u>	<u>Total Wetlands</u>			
	<u>within Alternative</u> <u>Footprint</u>	<u>within Alternative</u> <u>Footprint</u>	within Alternative Footprint			
	(acres)	(acres)	(acres)			
А	5.6	13.8	19.4			
В	6.3	17.9	24.2			
С	4.3	19.4	23.7			
D	3.2	4.7	7.9			
E	3.3 DR	1.1	4.4			
F	5.0	12.8	17.8			
G	3.5	3.4	6.9			
Н	3.4	5.1	8.5			
	1.6	1.0	2.6			

Note: The analysis consisted of a calculation of the approximate area of wetlands encompassed within each alternative footprint. The calculations were performed utilizing the project GIS database. The nine conceptual roadway alternatives were received from Dewberry-Goodkind, Inc, on December 13, 2002. According to Dewberry Goodkind Inc., the footprints extended fifty feet beyond the outer edge of roadway pavement. Wetlands mapping used for this analysis is from NJDEP Bureau of Geographic Information & Analysis, as modified by a site reconnaissance performed by Dresdner Robin. The categorization of wetlands as freshwater or tidal is taken from the NJDEP wetlands maps and Dresdner Robin field observations. The jurisdictional boundaries between tidal and freshwater wetlands may change following field delineation and review by regulatory agencies, i.e., NJDEP and USACE.

## NJ Turnpike & Garden State Parkway Interchange (Woodbridge, NJ)



# NJ RT 24 & I-78 Interchange (Summit, NJ)



#### <u>CONSTRUCTIBILITY</u>

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 length of construction duration. Evaluation of the alternatives for constructibility would be quantified as High Impact, Moderate Impact or Low Impact.

#### 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.

#### <u>COMPLIANCE WITH DESIGN CRITERIA</u>

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 rating will be the counted value.

#### COMPARISON OF ESTIMATED <u>CONSTRUCTION COST</u>

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 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. The effective lane length shown on the matrix is the sum of the actual lane length in feet plus two times the lane length of bridges.

#### <u>RIGHT-OF-WAY</u>

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.
- <u>Commercial Property Impacts</u> Impacts to commercial properties will be evaluated for the alternatives in the same manner as the residential properties.

#### <u>RIGHT-OF-WAY</u> (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.

#### 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.

#### NOISE

Each alternative will be evaluated for its probable noise impact without mitigation. Factors used 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.

#### <u> AIR</u>

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.

#### 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.

#### <u>ENVIRONMENTAL JUSTICE</u>

The breakdown of potential minority and low-income populations in the project area has been identified at a census tract level. Each alternative will be evaluated for its' impact to low-income households and minorities as High, Moderate or Low.

#### ARCHEOLOGICAL

Within the project study area there are current areas 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.

#### 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 10/31/02

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

#### **Initial Alternative Short List Screening Matrix**

	ALTERNATIVES										
IMPACTS	A	В	С	D	E	F	G	Н	I	J	К
Constructibility											
Maintainability											
Compliance with Design Criteria											
Comparison of Estimated Construction Cost											
Right-of-Way											
Residential											
Commercial											
<ul> <li>Institutional</li> </ul>	H- M- L-										
Recreational	H- M- L-										
Wetlands											
♦ Tidal											
<ul> <li>Freshwater</li> </ul>											
Noise											
Air											
Socioeconomics											
Environmental Justice											
Archeological Resources	H- M- L-										
Historic Resources	H- M- L-										
Hazardous Contamination											

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

# ALTERNATIVE A





#### ALTERNATIVE A

- Shifts 1-295 to the west side of PL424-76 toward Belmaw Park.
- Northbound and Bouthbound 1-295 are side-by-side.
- I-295 3rd LevelWaduct over Ramp C and Browning Road.
- H295 3rd Level Waduct over Ramp A and Ramp D
- Removes express/local lanes on 1-76 Westbound
- I-295 Posted Speed Limit 55 mph
- · Ramp Speed Limits: 40 mph



PRELIMINARY 1-295 / 1-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE A

# ALTERNATIVE A1





ALTERNATIVE AT (Revised Plamp C)

- · Shifts 1-295 to the west side of Pt-421-76 toward Belmaw Park
- Northbound and Southbound I-295 are side-by-side.
- E395 3rd Level Waduct over Ramp C and Browning Road
- I-395 3rd Level Vacluct over Ramp A and Ramp D
- Removes expressionalianes on 1-76 Westbound
- I-295 Posted Speed Limit 55 mph
- · Ramp Speed Limits 40 mph



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

# ALTERNATIVE B





#### ALTERNATIVE B

- Shifts 1-296 to the sast side of Rt.424-76.
- Shits 1-295 North toward Mt. Ephraim
- . Northbound and Southbound 1-255 are side-by-side.
- 1-295 3kt Lovel Viaduct over Ramp A and Ramp D
- Removes orpress/ocalianes on 1-76 Westbound ٠
- 1-295 Posted Speed Limit: 55 mph
- · Ramp Speed Limits: 40 mph



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

## ALTERNATIVE B1





ALTERNATIVE BI (Revised Ramp C)

- Shifts 1-295 to the east side of FR.426-76.
- Shifts I-295 North Ioward Mt Ephraim
- Northbound and Southbound 1-295 are side-by-side.
- I-296 3rd Level Vaduct over Ramp A and Ramp D.
- Removes express/local lanes on 1-76 Westbound
- I-295 Posted Speed Limit 55 mph
- · Pamp Speed Limits: 40 mph



PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE B1

# ALTERNATIVE C





#### ALTERNATIVE C

- · Northbound and Southbound 1-295 are side-by-eate.
- 1-295 placed above RL424-76.
- · 1-295 3rd Lovel Viaduct over Ramp C and Browning Road
- I-296 and Level Viaduct over Ramp A and Ramp D
- 1-295 shifts north toward Mt. Ephraim
- Removes express/local lanes on I-76 Westbound
- I-295 Posted Speed Limit 55 mph
- · Flamp Speed Limits: 40 mph



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

## ALTERNATIVE C1





ALTERNATIVE CI (Revised Ramp C)

- Northbound and Southbound 1-295 are side-by-side.
- 1-255 placed above FE421-76.
- 1-296 3rd Level Vaduct over Ramp C and Browning Road.
- I-295 and Level Vaduct over Ramp A and Ramp D.
- · i-295 shifts north toward Mt Ephraim
- Removes express/local lanes on 1–76 Westbound
- I-255 Posted Speed Limit 55 mph
- Ramp Speed Limits: 40 mph



PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE C1

# ALTERNATIVE D





#### ALTERNATIVE D

- Northbound and Southbound 1-295 are sale-by-eide
- · Shifts i-296 over parts of both the ballpork and the cometery
- 1-296 crosses RL431-76 on a skew
- · I-285 3rd Level Viaduct over Ramp C and Browning Road
- Ramp D 3rd Level Viaduct over I-76F8, 42 and Pamp D.
- Removes express/scallance on I-76 weathoard
- 1-295 Posted Speed Limit: 55 mph
- · Ramp Speed Limits 40 mph



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

# ALTERNATIVE D1





ALTERNATIVE D1 (Revised Ramp C)

- Northbound and Boultibound 1-295 are side-by-side
- Shifts 1-295 over parts of both the ballpark and the comotory
- I-295 process RL42/I-76 on a skew
- I-295 3rd Level Vaduct over Ramp C and Browning Road.
- · Ramp D 3rd Level Watkat over I-75/R. 42 and Ramp C
- Removes express/ocalianes on 1-76 septbound.
- 1-295 Posted Speed Limit 55 mph
- Ramp Speed Limits: 40 mph.



PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE D1

# ALTERNATIVE E





ALTERNATIVE E.

- · Northbound and southbound 1-295 are side-by-side.
- 1-295 3rd Level Viaduct over 1-76/Rt. 42 and Ramp E
- I-295 follows the most direct path
- · Removes express/ocalitates on 1-76 westbound
- · 1-295 Posted Speed Limit: 65 mph
- · Ramp Speed Limita: 40 mph



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

# ALTERNATIVE E1





ALTERNATIVE Et (Revised Ramp C)

- Northbound and southbound 1-296 are side-by-side.
- I-295 3rd Level Violuct over I-7649, 42 and Ramp E.
- I-255 follows the most direct path
- Removes express/local lanes on 1-76 weetboard
- I-296 Posted Speed Limit 65 mph
- Ramp Speed Limits: 40 mph.



PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE E1

# ALTERNATIVE F





#### ALTERNATIVE. F.

- Northbound and Southbound 1-295 follow separate alignments.
- Northbound 1-295 shifted to east side of HL42/1-76.
- Southbound 4-295 shifted to west side of FL-624-76.
- I-295 Northbound 3rd Level VacLut over Ramp A and Browning Road
- 1-295 Southbound 3rd Lovel Vaduct over Ramp A and Ramp D
- Removes express/ocal lanes on i-76 westbound
- I-295 Posted Speed Limit 55 mph
- · Parrp Speed Linits: 40 mph





# ALTERNATIVE F1





#### ALTERINATIVE F1 (Revised Flamp C)

- Northboard and Southboard 1-295 follow separate alignments.
- Northbound 1-295 shilled to east side of RL431-76.
- Southbound 1-296 shifted to west side of Rt.421-76.
- I-395 Northbound Bid Level Vaduct over Ramp A and Browning Road
- I-296 Southbound 3rd Level Vaduct over Ramp A and Ramp D
- Removes express/ocalianes on 1-76 westbound
- 1-295 Posted Speed Limit 55 mph
- Ramp Speed Limits: 40 mph



PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE F1

# ALTERNATIVE G





#### ALTERNATIVE G

- Northbound 1-295 placed above Southbound 1-295 using a Double-Decker Configuration
- I-296 4th Level Waduct over Ramp A and Browning Road
- I-295 4th Level Vaduct over Ramp C and Ramp F
- I-295 3rd Level Viacluct over Plemp AG
- I-295 3rd Lovel Viachast over Parrip BC
- I-295 3rd Lovel Viachust over I-76RL 42
- · Ramp C has a left hand cell
- Removes expressional lanes on 3-76 westbound
- I-295 Posted Speed Limit 55 mph
- Ramp Speed Limits 40 mph



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

# ALTERNATIVE G1





#### ALTERNATIVE Gt (Revised Ramp C)

- Northbound 1-295 placed above Southbound 1-295.
- using a Double-Decker Configuration
- 1-295 4th Lavel Vaduct over Ramp A and Browning Road
- 1-295 4th Level Viaduct over Ramp C and Ramp F
- 1-295 3rd Level Waduct over Ramp AO
- I-295 3rd Level Vaduct over Ramp B/C
- I-285 3rd Level Vaduct over I-76/8, 42
- Ramp C has a left hard oxit
- Removes express/ocalianes on I-76 westbound
- 1-295 Posted Speed Limit 55 mph
- · Ramp Speed Limits 40 mph



PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE G1

# ALTERNATIVE H





#### ALTERNATIVE H

- Nothbound I-295 placed above Southbound I-295 using a Double-Decker Configuration
- I-295 4th Lovel Viaduct over Ramp A and Browning Road.
- I-295 4th Level Viaduct over Ramp C and Ramp F
- I-295 and Level Viaduct over Ramp AD
- I-296 and Level Viaduct over Ramp BC.
- I-295 3rd LevelViaduct over I-76Ri. 42
- Ramp C and LevelVaductover1-76Rt 42 and Ramp D
- Plemoves express/local lanes on 1-76 weathound
- I-255 Posted Speed Limit 55 mph
- Ramp Speed Limits: 40 mph



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

# ALTERNATIVE H1





ALTERNATIVE HI (Revised Barry C)

- Northbound 1-295 placed above Southbound 1-295 using a Double-Decker Configuration
- I-285 4th LovelVastud over Ramp A and Browning Read
- 1-295 4th Lovel Visibuct over Bamp C and Bamp F
- 1:295 3rd Level Waduct over Ramp AD
- I-295 3rd: Level Waduct over Ramp. IBC.
- 1-295 3rd Level Visduct over 1-76/E\_42
- Ramp C and Lavel Vaduct over I-78Pt. 42 and Ramp D
- Removes express/ocalianes on 1-76 westbound
- I-285 Posted Speed Limit 55 mph
- Ramp Speed Limits 40 mph



PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE H1

# ALTERNATIVE I





#### ALTERNATIVE J.

- Northbound and Southbound I-295 are side-by-side.
- I-295 crosses the centerry
- Renoves oppress/ocalitates on I-75 weatbound
- I-295 Posted Speed Limit: 55 mph
- · Ramp Speed Limits: 40 mph



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

# ALTERNATIVE 11





PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE 11

# ALTERNATIVE J





I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE J

# ALTERNATIVE J1





PRELIMINARY I-295 / I-76 / ROUTE 42 INTERCHANGE RECONSTRUCTION PROJECT ALTERNATIVE J 1

# ALTERNATIVE K





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

# ALTERNATIVE L





#### ALTERNATIVE L.

- Basist on Alternative A alignment
- Northbound and southbound 1-295 are side-by-eide
- Mainline 1-295 is a tunnel underneath 1-76 /RL 42
- Removes express /local lanes on 1-76 westbound.
- I-296 Posted Speed Limit 55 mph
- Ramp Speed Limits: 40 mph



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

# ANY QUESTIONS?

