

Table of Contents

I. PURPOSE AND NEED	I-1
A. Identification in the Master Plan.....	I-1
B. Project Location	I-2
C. Background.....	I-3
D. Land Use/Economic Development	I-4
E. Purpose of the Project	I-6
F. Need For the Project	I-6
a. Capacity.....	I-6
b. Safety	I-8
G. Traffic Data and Level of Service.....	I-8
a. Crash Data/Safety Conditions	I-11
H. Conclusion	I-12
II. ALTERNATES CONSIDERED.....	II-1
A. I-95 Master Plan Concepts.....	II-1
B. Consistency with the State Transportation Policy	II-4
C. Section 100.....	II-4
D. Development/Analysis of Preliminary Alternates	II-4
1. No-Build Alternate	II-5
2. General Purpose Lanes Alternate.....	II-6
3. Express Toll Lanes Alternate.....	II-9
E. Alternatives Recommended for Detailed Study	II-12
1. No-Build Alternate.....	II-12
2. General Purpose Lanes Alternate.....	II-12
3. Express Toll Lane Alternate	II-22
F. Comparison of Alternates	II-31
1. Ability to Meet Purpose and Need.....	II-31
2. Operational Efficiency	II-33
3. Park and Ride Facilities	II-35
4. Costs.....	II-40
III. EXISTING ENVIRONMENT AND IMPACT ANALYSIS.....	III-1
A. Socioeconomic Resources and Land Use	III-1
1. Population	III-2
2. Environmental Justice	III-2
3. Neighborhoods/Communities	III-8
4. Effects on Aesthetics and Visual Quality	III-25
5. Community Facility and Services.....	III-27
B. Economic Environment	III-36
1. Employment Characteristics	III-37
2. Effects on Local and Regional Employment Characteristics	III-38
C. Land Use	III-42
1. Existing and Future Land Uses.....	III-42
2. Effects on Land Use.....	III-45

D.	Cultural Resources	III-48
1.	Historic Structures	III-48
2.	Archeological Resources	III-50
E.	Natural Environment.....	III-50
1.	Soils.....	III-50
a.	Erosion and Sedimentation	III-51
b.	Prime Farmland Soils/Soils of Statewide Importance	III-51
c.	Topography and Geology.....	III-53
2.	Aquatic Resources	III-55
a.	Surface Water.....	III-55
b.	Waters of the United States (WUS) Including Wetlands.....	III-55
c.	Wild and Scenic Rivers	III-65
d.	Water Supply/Groundwater	III-65
e.	Floodplains.....	III-67
f.	Waterways/Wetlands Compensatory Mitigation.....	III-69
3.	Vegetation and Wildlife Habitat	III-70
a.	Forest/Woodland.....	III-70
b.	Forest Interior Dwelling Species (FIDS).....	III-72
c.	Large and Significant Trees	III-74
d.	Terrestrial Wildlife.....	III-78
4.	Rare, Threatened, and Endangered Species	III-79
5.	Unique and Sensitive Areas	III-79
6.	Air Quality	III-79
a.	CO Analysis	III-80
b.	PM _{2.5} Analysis	III-81
c.	Mobile Source Air Toxics (MSATs) Analysis.....	III-84
7.	Noise Analysis	III-91
8.	Hazardous Materials	III-130
9.	Indirect and Cumulative Effects Analysis	III-131
IV.	COORDINATION AND COMMENTS.....	IV-1
A.	Focus Group Meetings.....	IV-1
B.	Public Workshop and Citizen Correspondence	IV-3
C.	Interagency Meetings and Agency Correspondence.....	IV-4
D.	Project Website	IV-5
E.	Additional Public Education Materials.....	IV-6

List of Figures

Figure I-1. Study Area Map	I-3
Figure I-2. PFA and URDL Boundaries	I-7
Figure II-1. No Build Alternate Typical Roadway Section	II-5
Figure II-2. General Purpose Lanes Alternate Typical Roadway Section	II-6
Figure II-3. Express Toll Lanes Typical Roadway Section	II-9
Figure II-4. MD 152 Option 1	II-16
Figure II-5. MD 152 Option 4	II-17
Figure II-6. MD 24 Option 2	II-18

Figure II-7. MD 543 Option 1	II-19
Figure II-8. MD 543 Option 7	II-20
Figure II-9. MD 22 Option 1	II-21
Figure II-10. MD 152 Option 1A	II-26
Figure II-11. MD 152 Option 4A	II-27
Figure II-12. MD 24 Option 2	II-28
Figure II-13. MD 543 Option 7	II-29
Figure II-14. MD 22 Option 1	II-30
Figure II-15. MD 152 Park and Ride Facility	II-38
Figure II-16. MD 24 Park and Ride Facility	II-39
Figure III-1. Communities and Neighborhoods	III-14
Figure III-2. Community Facilities	III-30
Figure III-3. Existing Land Use	III-46
Figure III-4. Future Land Use	III-47
Figure III-5. U.S. Annual VMT vs. Mobile Air Toxics Emissions, 2000-2002	III-85
Figure III-6. ICE Boundary	III-135

List of Tables

Table I-1. Traffic Volumes for 2005 and 2030	I-9
Table I-2. AM and PM Average Daily Traffic for 2005 and 2030	I-10
Table I-3. Level of Service for AM and PM Hours	I-10
Table I-4. Crash Data for Years 2002 to 2004	I-12
Table II-1. Project Weekday 2030 LOS Summary	II-32
Table II-2. Estimated Travel Speeds and Times for 2030	II-35
Table II-3. Projected Needs for Park and Ride Facilities	II-36
Table II-4. Estimated Costs for Each Interchange Option	II-40
Table III-1. Current Population Characteristics	III-2
Table III-2. Population Statistics	III-4
Table III-3. Community Areas	III-9
Table III-4. Communities Located within the Study Area	III-9
Table III-5. Summary of ROW Impacts and Displacements	III-15
Table III-6. Income Characteristics	III-37
Table III-7. Impacts to Prime Farmland Soils and Soils of Statewide Importance	III-52
Table III-8. Estimated Cut/Fill Amounts	III-54
Table III-9. GPL Alternate – Interchange Option Estimated Impacts to WUS	III-57
Table III-10. ETL Alternate - Interchange Option Estimated Impacts to WUS	III-59
Table III-11. GPL Alternate – Interchange Options Estimated Impacts to Wetlands	III-62
Table III-12. ETL Alternate – Interchange Options Estimated Impacts to Wetlands	III-64
Table III-13. Floodplains within the Study Area	III-67
Table III-14. Floodplains Impacts	III-69
Table III-15. Woodland Impacts	III-71
Table III-16. Impacts to FIDS Habitat	III-73
Table III-17. Alternate Impacts to Large and Significant Trees	III-75
Table III-18. AADT and Diesel Truck Traffic	III-83
Table III-19. 24-Hour Noise Measurement Summary	III-97

Table III-20. Short-term Noise Measure Summary	III-97
Table III-21. Noise Abatement Criteria	III-106
Table III-22. Predicted Noise Levels	III-107
Table III-23. Summary of noise Abatement for GPL Alternate	III-116
Table III-24. Summary of noise Abatement for ETL Alternate	III-117
Table III-25. Noise Barrier 'Cost Averaging' Calculation	III-119
Table III-26. ICE Resources and Effects	III-132
Table IV-1. Focus Group Member List	IV-1

Appendices

Appendix A – General Purpose Lanes Alternate Plates
Appendix B – Express Toll Lanes Alternate Plates
Appendix C – Agency Correspondence
Appendix D – Public Involvement Correspondence
Appendix E – Brochures
Appendix F – ARDS Interchange Options Impact Matrices
Appendix G – Aquatic Resource Descriptions and Impact Matrices