## 2035 Transportation Plan

Technical Report
Fort Wayne-New Haven-Allen County
Metropolitan Planning Area

**June 2013** 



Northeastern Indiana Regional Coordinating Council

## **Table of Contents**

| Chapter 1 –Introduction  | 1  |
|--|----|
| Historical Background  | 1  |
| Transportation Planning Requirements                             | 7  |
| Goal, Objectives and Performance Measures                        | 18 |
| Study Process  | 38 |
| Report Organization  | 39 |
| Chapter 2 –Base and Planning Year Socioeconomic Data             | 41 |
| Base Year 2010 Estimates   | 45 |
| Population   | 45 |
| Households   | 46 |
| Automobile Ownership   | 46 |
| Employment   |    |
| Planning Year 2035 Projections                                   | 46 |
| Population   |    |
| Households   |    |
| Automobile Ownership   |    |
| Employment   |    |
| Summary  |    |
| Chapter 3 – Travel Forecast: 2035 Travel Demands                 | 55 |
| Travel Forecasting Process                                       | 55 |
| Analysis of Regional Activity Forecasts                          | 59 |
| Trip Generation  | 61 |
| Trip Distribution  | 63 |
| Evaluation of the Transportation System                          |    |
| Transit System   |    |
| Conclusion   |    |
| Chapter 4 –Evaluation of Alternative Transportation Sketch Plans | 73 |
| Alternative Network Testing                                      | 73 |
| Roadway Design Standards   | 74 |
| Highway Alternatives   | 74 |
| Transit Alternatives   | 77 |
| Chapter 5 –Selection of the Recommended Plan                     | 83 |
| Documentation of Public Participation                            |    |
| Environmental Justice  |    |

| Defining and Identifying Minority and Low-Income Populations .         | 87     |
|--|--------|
| Public Involvement Strategies for Engaging Minority and Low-           | Income |
| Populations  | 88     |
| Measures for Evaluating Benefits and Burdens of Transportation Plans a | nd     |
| Projects   | 95     |
| Factors Influencing Plan Selection                                     | 97     |
| Livable Communities  | 99     |
| Financial Analysis   | 101    |
| Chapter 6 – The Selected Plan  | 103    |
| Goal of the Transportation Plan  | 103    |
| The Recommended Plan   | 108    |
| Highway Improvements   | 108    |
| Widening Projects  | 108    |
| Congestion Management Strategy Implementation                          | 109    |
| Other Highway Improvements   | 111    |
| Highway Policies   | 112    |
| Transit Improvements   | 113    |
| Public Transit Policies  | 113    |
| Public Transit Improvement Projects                                    | 114    |
| Specific Improvements from Transit the Transit Development Plan        | 116    |
| Identified Transportation Strategies from Coordinated Transit Plan     | 116    |
| Bicycle, Pedestrian, and Enhancement Improvements                      | 116    |
| Financial Plan   | 117    |
| Highway  | 117    |
| Local Funding  | 118    |
| Summary of Financial Plan for Local Highway Projects                   | 119    |
| Transit  | 120    |
| Federal Funding.   | 120    |
| State Funding  | 120    |
| Local Funding  | 121    |
| Transit Operating Costs  | 121    |
| Cost of Additional Transit Service                                     | 124    |
| Summary of Transit Financial Plan                                      | 124    |
| Other Transportation Modes   | 124    |
| Bicycle and Pedestrian Plan  | 125    |
| Design Classification for Routes                                       | 128    |
| Transportation Alternatives Program (TAP)                              | 135    |

| Intelligent Transportation System (ITS)                          | 139 |
|--|-----|
| ITS Completed and Planned Improvement Projects                   | 139 |
| Summary of Selected Plan   | 140 |
| Chapter 7 – Safety Management in Transportation Planning         | 141 |
| Introduction   | 141 |
| Source of Data   | 141 |
| Quality of Data  | 141 |
| Analysis of Data   | 142 |
| Uses of Data   | 143 |
| Project Selection and Prioritization                             | 148 |
| Existing Project Analysis  | 149 |
| Bicycle & Pedestrian Safety                                      | 149 |
| Transit Safety   | 149 |
| Conclusion   | 149 |
| Chapter 8 –Environmental Mitigation                              | 151 |
| Methodology  | 151 |
| Common Environmental Issues                                      | 152 |
| Threatened and Endangered Species                                | 163 |
| Section 4(F) Mitigation  | 166 |
| Cultural Resources   | 167 |
| Other Environmentally Sensitive Sites                            | 172 |
| Transportation Plan Analysis Summary                             | 177 |
| List of Consulting Agencies                                      | 180 |
| Environmental Document Data Citations                            |     |
| Input on the 2035 Transportation Plan by the Consulting Agencies | 201 |
| Chapter 9 – Freight  | 203 |
| Freight Movement in Allen County                                 |     |
| Rail   | 203 |
| Air  | 206 |
| Roadways   | 208 |
| Chapter 10 –Future Efforts and Implementation                    | 213 |
| Status of Previous Transportation Plans                          |     |
| Current 2030-II Transportation Plan                              |     |
| Future Efforts   |     |
| Congestion Management System                                     |     |
| Access Management  | 219 |
|  |     |

| Alternative Travel Methods   | 220 |
|--|-----|
| Corridor, Site Impact, Intersection Analysis, and Feasibility Studies .  | 220 |
| Security   | 220 |
| Passenger Rail   |     |
| Gateway Plan- City of Fort Wayne   | 224 |
| Implementation   |     |
|  |     |
| Figures  |     |
| Figure 1: Railroad System and Rivers in the Metropolitan Planning Area   | 4   |
| Figure 2: Fort Wayne/New Haven/Allen County Metropolitan Planning Area   | 6   |
| Figure 3: Employment Locations for 2000                                  | 42  |
| Figure 4: Employment Locations for 2010                                  |     |
| Figure 5: Traffic Analysis Zones   |     |
| Figure 6: Floodplains  |     |
| Figure 7: Industrial Parks and Sites                                     |     |
| Figure 8: Travel Forecasting Procedure                                   |     |
| Figure 9: Completed Projects from the current 2030-II Plan               |     |
| Figure 10: Existing Transit System                                       | 70  |
| Figure 11: Transit System Accessibility                                  |     |
| Figure 12: Network Deficiencies if no Projects were Completed            | 72  |
| Figure 13: Network Deficiencies after 2035 Funded Projects               | 78  |
| Figure 14: Network Deficiencies after 205 Funded & Illustrative Projects | 79  |
| Figure 15: Location of Citizen Participation Meetings                    | 85  |
| Figure 16: Minority Population Profile                                   | 89  |
| Figure 17: Hispanic Population Profile                                   | 90  |
| Figure 18: Low-Income Population Profile                                 | 91  |
| Figure 19: Combined Environmental Justice Population Profile             | 92  |
| Figure 20: Transit Routes ½ Mile Buffer                                  | 93  |
| Figure 21: Neighborhood Associations                                     | 0.4 |
| Figure 22: Implementation of Transportation Plans (1971- Present)        | 98  |
| Figure 23: Recommended 2035 Transportation Plan                          |     |
| Figure 24: Recommended 2035 Transit System                               | 105 |
| Figure 25: Recommended 2035 Bicycle and Trail Plan                       |     |
| Figure 26: Recommended 2035 Sidewalk Plan                                | 107 |
| Figure 27: Regional Bicycle and Pedestrian Plan for Northeast Indiana    |     |
| Figure 28: Bike and Trail Plan   | 132 |
| Figure 29: Trail Plan  | 133 |

| Figure 30: Sidewalk Plan   | 134        |
|--|------------|
| Figure 31: Water Features  |            |
| Figure 32: Potential Wetlands  | 154<br>155 |
| Figure 33: Water Features and Impaired Streams                                 | 156        |
| Figure 34: Watersheds  | 157        |
| Figure 35: Flood Control Projects  | 158        |
| Figure 36: Parks and Significant Protected Natural Areas                       | 168        |
| Figure 37: Historic Features   | 169        |
| Figure 38: Kessler Plan – Park and Boulevard System                            |            |
| Figure 39: Cultural and Infrastructure concerns                                | 171        |
| Figure 40: Cleanup Sites   |            |
| Figure 41: Waste Sites   | <br>174    |
| Figure 42: Environmentally Sensitive Sites and Infrastructure                  | <br>175    |
| Figure 43: Underground Storage Tanks   | <br>176    |
| Figure 44: Transportation Infrastructure                                       | 204        |
| Figure 45: Major Modal Activity Centers  | 205        |
| Figure 46: Railroad Destinations   | 207        |
| Figure 47: Regional Hub  | 209        |
| Figure 48: Truck Route System  | 210        |
| Figure 49: Truck Volumes   | 212        |
| Figure 50: Implementation of Transportation Plans (1971-Present)               | 214        |
| Figure 51: Allen County NHS and Hospitals                                      | 222        |
| Figure 52: Allen County NHS and Fire Stations                                  |            |
| Figure 53: Gateway Plan Corridors and Interchanges                             |            |
|  |            |
| Tables   | 60         |
| Table 1: Summary of Regional Socioeconomic Variables                           | 60         |
| Table 2:Summary of Regional Socioeconomic Variables-Air Quality Analysis Years | 60         |
| Table 3: Travel Demand Forecast Regional Summary                               | 62         |
| Table 4: Lane Capacities   | 64         |
| Table 5: ICAP – Initial Vehicles per Lane per Hour Assumption                  | 67         |
| Table 6: VMT and VHT Comparison  | 76         |
| Table 7: VMT Per-Capita  | 76         |
| Table 8: Urban Transportation Advisory Board Meetings                          |            |
| Table 9: Citizen Participation Meetings  | 84         |
| Table 10: Poverty Thresholds by Family Size                                    | 87         |
| Table 11: Project Cost Estimates and Available Revenue Summary                 | 120        |

| Table 12: CitiLink Operating Revenue - 2013                                     | _ 122 |
|---|-------|
| Table 13: CitiLink Annual Capital Revenue Estimates                             |       |
| Table 14: CitiLink Annual Costs & Revenue Forecast                              |       |
| Table 15: CitiLink Operationg Revenue & Expenditure Estimates                   | _ 123 |
| Table 16: CitiLink Capital Revenue & Expenditure Estimates                      | _123  |
| Table 17: Bicycle – Pedestrian Projects   | _136  |
| Table 18: 2010 Impaired Waters in Allen County                                  | _ 159 |
| Table 19: 2012 Impaired Waters in Allen County                                  | _ 161 |
| Table 20: Endangered, Threatened, or Rare Species within Allen County           | _ 164 |
| Table 21: Summary of # of Projects within Environmental Points of Interest      | _ 178 |
| A 1°  |       |
| Appendixes  |       |
| Appendix A: Congestion Management Process                                       |       |
| Appendix B: Air Quality Transportation Conformity Analysis/Determination        |       |
| Appendix C: 2010 Socioeconomic Data   |       |
| Appendix D: 2035 Socioeconomic Data   |       |
| Appendix E: Roadway Design Standards  |       |
| Appendix F: Local Project Cost  |       |
| Appendix G: Coordinated Public Transit-Human Services Transportation Plan for A | llen  |
| County  |       |
| Appendix H: Public Participation – Comments and Responses                       |       |
| Appendix I: Pedestrian component of the Transportation Plan\Bicycle Parking     |       |
| Recommendation Policy   |       |
| Appendix J: Access Standards Manual 2011  |       |