# Executive Summary

This report was prepared as an update to the *Newark/Elkton Intermodal Transportation Plan* that was completed in 1998. Specifically, this update addresses components of the plan relative to the City of Newark. The purpose of this update is to re-examine the City's transportation system, gather a renewed round of agency and public input, and develop a set of updated system-wide recommendations.

In recent years the City of Newark has continued to contend with the issues of growth and land use, as well as the transportation challenges that go hand in hand with such concerns. In recent years the area's traffic volumes have remained fairly constant within the City. This is directly related to the overall slow economic conditions and a changing employment landscape in and around the City. Specifically, the closure of the Newark Chrysler Plant, the Avon Distribution Center along with higher gas prices have helped keep traffic growth at a slow pace. However, despite the national economic downturn, the City is experiencing growth in housing and employment. The University of Delaware has several ongoing initiatives that will expand their presence in the City, DART's ridership has steadily increased, and areas of recurring traffic congestion have not seen notable improvement despite the recent economic downturn.

The goal of this updated *Newark Transportation Plan* is to provide a renewed direction for developing an intermodal transportation system that will provide effective and efficient movement of people and goods while preserving the character of Newark as a livable community. This study evaluated numerous alternatives for addressing these issues, and it recommends several different types of strategies and actions. The list of identified improvements include a wide range of initiatives including: signal optimization, capacity enhancements, access management, parking strategies, and mobility improvements that address walking, biking and transit accessibility. It should also be noted that this report has put added emphasis on developing economically feasible and sustainable improvements that can reasonably be approved, funded and implemented.

The finalized plan was developed in cooperation with various agencies and organizations. Participating agencies included WILMAPCO, DelDOT, Delaware Transit Corporation, City of Newark, and the University of Delaware. Additionally, three public meetings were held to gain input and comments from members of the public, along with public displays and committee presentations. In general the plan has identified several key issues which include congestion, safety, and mobility, bicycle and pedestrian travel, parking and transit.

The following table provides a brief summary of recommendations in each category:

## *TABLE I - Summary of Recommendations*

| **Congestion, Safety and Mobility Improvements – Short-term** | |
|---|---|
| **Recommendations** | **Summary** |
| ***Signal Coordination*** **-** Implement a Newark Corridor Optimization Program. Initially to include:<br>1.Elkton Rd. (10 signals )<br>2.Cleveland Ave. (6 Signals)<br>3.Library Ave (4 Signals)<br>4.S. College Ave. (10 Signals) | • All non-compliant/faulty equipment shall be repaired and new traffic volume data shall be collected for use in developing corridor-specific optimized signal timing plans. Faulty equipment can be reported to DelDOT as needed by calling 302/659-4600.<br>• Installation of a modernized traffic signal system for the S. College Ave and Route 4 Corridors. DelDOT is currently working with WILMAPCO and the University of Delaware to implement signal improvements along several Newark corridors. |
| ***Land Use and Travel Demand Management*** | • Combining planned, mixed use development and programs to encourage use of walking, bicycling, transit and ridesharing can reduce demand for driving and thus reduce the impacts of congestion. |
| ***Access Management and Traffic Flow*** | |
| **Ogletown Rd (Route 273) at Marrows Road** – Roadway alignment upgrade | • Includes improvement to the existing lane alignment between Marrows Rd. and Library Ave in the westbound direction. (Paint Only) |
| ***Safety, Complete Streets and Traffic Calming*** | |
| **W. Park Place traffic calming improvements from Elkton Rd to S. College Ave.** | • Implement a cost-effective traffic calming plan that keeps existing mid-block curb lines intact and restores the corridor to a more residential quality. Design concepts will include:<br>o A reduced road width at intersections with short sections of raised medians/pedestrian refuges on intersection approaches. Ends of medians may need to have mountable curbs to accommodate turning buses, trucks, and emergency vehicles.<br>o Use of "sharrow" bicycle markings to delineate area of shared roadway use.<br>o Re-evaluate signal warrants along the corridor. Conduct additional traffic counts to consider converting signals to 4-way stop control. Candidate intersections for signal removal include:<br>• W. Park and Apple Rd,<br>• W. Park and Orchard Rd.<br>o Pedestrian-scale lighting |

| Congestion, Safety and Mobility Improvements – Long-range | |
|---|---|
| **Recommendations** | **Summary** |
| ***Access Management and Traffic Flow*** | |
| **Wyoming Rd and Marrows Road Corridor Access Management** | • As a means to accommodate growth and maintain acceptable levels of service along these corridors, land use decisions and access management strategies should be focused on the possibility of long term dualization (2 lanes in each direction) on these roadways. |
| **Delaware Ave Extension to Marrows Rd.** | • As means to address future growth and reduce traffic along Library Ave., any redevelopment of the College Square shopping area should include extending Delaware Ave. to Marrows Rd.<br>• This added link would introduce a small grid system to the area, which would reduce trip lengths, distribute traffic more evenly throughout the area and provide improved driving, bicycle and walking access to this underused commercial area. |
| **N. Chapel St. underpass and Cleveland Ave** - northbound right-turn lane extension and improvement of substandard design. | • No operational traffic benefits are gained by extending the NB right turn lane within currently available space. Traffic level of service and vehicular queues would be unchanged.<br>• Future improvements to the CSX overpass should provide for a standard right-turn lane and clearance. |
| **Cleveland Ave. at N. College Ave.** – Addition of a northbound right-turn lane | • Includes widening the northbound approach to include a 5' bike lanes, 11' through lane and an 11' right turn lane.Right turn lane will add capacity to the intersection without increasing the length of the heavy utilized north to south crosswalks.<br>• Turn lane will require significant acquisition of property.<br>• Signal and pedestrian improvements are currently being designed by DelDOT for this intersection. |
| ***Safety, Complete Streets and Traffic Calming*** | |
| **S. College Ave Gateway/Mobility Improvements** from Main St. to the bridge over Amtrak. | • Modified roadway cross-section that focuses on improved mobility along the corridor for all modes.<br>• Includes continuous full width bike lanes throughout the corridor.<br>• Improves connection from the City's core to the Train Station area. |
| **Cleveland Avenue** from Capital Trail (Kirkwood Hwy) to N. Chapel St. /Pomeroy Trail. | • A "road diet," or modified roadway cross-section that provides two through lanes with a two-way center left turn lane, was considered as part of the Plan. This recommendation is not included in the Plan due to |

| Congestion, Safety and Mobility Improvements – Long-range | |
|---|---|
| **Recommendations** | **Summary** |
| | concerns from adjacent property owners.<br>• Sidewalk improvements in corridor should include removal of sidewalk obstructions, ADA improvements and addition of pedestrian signals and crosswalks at Winner Boulevard and Kirkwood Highway.<br>• Work with adjacent property owners to develop on off-road bicycle and pedestrian connection parallel with White Clay Creek within an easement and city parkland. |

| Bicycle and Pedestrian Improvements – Short-term | |
|---|---|
| **Recommendations** | **Summary** |
| ***Bicycle Improvements*** | |
| **Stripe bike lanes** – When road width allows, restripe pavement markings to include travel lanes and ride-able bike lane/shoulders (5' preferred Min 4 ') | • W. Main St, west of Hillside<br>• Cleveland Avenue, College to Paper Mill - bike lane WB, Sharrows in the EB direction.<br>• Hillside Rd –bike lanes<br>• S. Chapel St, Academy St, and N. College Ave – restripe where existing width allows. |
| **Mark shared pavement markings (Sharrows)** - Where sufficient width does not exist for bike lanes, provide "sharrows" in areas where vehicular and bike traffic share the road. | • East Main Street: Pomeroy Trail to Elkton Rd.<br>• New London Rd – Main to Cleveland<br>• North Chapel St.<br>• Cleveland Ave – West of College Ave.<br>• Casho Mill Rd – SB through underpass<br>• Apple Rd.- Park Pl. to Elkton<br>• County Club, Windsor, Delrem |
| **Maintain existing facilities** | • Establish schedule and funding for sweeping and maintenance of existing on-road pavement markings.<br>• Establish schedule for maintenance of off road facilities. |
| ***Pedestrian Improvements*** | |
| Implement City-wide initiatives for walkability | • Rejuvenate maintenance operations that focus on providing well-defined crosswalks with uniform markings and signage throughout the City.<br>• Develop a program to convert all pedestrian signal indications to include countdown timers.<br>• For new and re-construction projects, develop strategies that minimize crossing distances. Policies should aim to keep roadway improvements focused on more traditional urban design. Items shall include:<br>  ○ Controlling the number and width of travel lanes<br>  ○ Using the smallest curb radius practicable to better manage pedestrian conflicts with turning vehicles.<br>  ○ Placing crosswalks in a way that reduces or eliminates any degree of skew.<br>  ○ Utilize curb extensions (bulb outs)<br>  ○ Where medians of 4 feet or wider are present design the median as a pedestrian refuge, with two shorter and separate crossings on each side of the median.<br>• Continue to design all crosswalk locations to accommodate disabled pedestrians (ADA compliant)<br>• Retrofit signage that is not compliant with the Manual on Uniform Traffic Control Devices (MUTCD). |

| Bicycle and Pedestrian Improvements – Long-range | |
|---|---|
| **Recommendations** | **Summary** |
| ***Bicycle Improvements*** | |
| **Delaware Ave East/West Bicycle Linkage** - Includes providing a separated cycle track between Orchard Rd and Tyre Ave. | • Delaware Avenue signals would be modified to accommodate westbound bike traffic.<br>• The westbound bike lane would terminate at Orchard Rd. Cyclists would then be directed left onto Orchard Rd. to Amstel Ave.<br>• Marked "Bike Boxes" are proposed at eastbound signalized locations. |
| **Bicycle signal detection improvements** | • Standard loop detectors are effective but the sensitivity must be adjusted so that bicyclists are detected, and the loops must be placed in a location where a bicyclist's movements can be registered.<br>• Implement newer technologies. Continue the increased use of above ground video detection as a replacement for traditional inductive loop detectors. |
| ***Pedestrian Improvements*** | |
| **Use measures to enhance visibility and drivers yield rates at mid-block/unsignalized crossing locations** –Possible measures include **High Intensity Activated Crosswalks** (HAWK), Rectangular Rapid Flashing Beacons, and in-street signs, "State Law–Yield to Pedestrians in Crosswalk." | • Evaluate possible locations including:<br>o Delaware Ave between Academy St and College Ave.<br>o S. College Ave. between Ritter Lane and the railroad overpass.<br>o Elkton Rd. – mid-block crossing locations<br>o Academy St Corridor – south of Delaware Ave. |
| **Library Avenue** – Jaywalking mitigation efforts. | • The proposed concept is to provide a center median to serve as a pedestrian refuge area with individually marked crosswalks for the eastbound and westbound travel lanes.<br>• Slight relocation to existing bus stops facilities would also be made to enhance visibility of pedestrians. |
| **Main Street** – Bump-out/crosswalk improvements between Chapel St and College Ave. | • Provide additional intersection and crosswalk bump-outs along the corridor. To reduce crosswalk widths and discourage illegal corner parking.<br>• Bump-outs can accommodate benches, bike racks, and trash receptacles and to better define off-street parking access points. |

| Parking Improvements – Short-term | |
|---|---|
| **Recommendations** | **Summary** |
| **Expand supply of downtown parking** | • Implement "Morepark" modular parking to provide added capacity to meet short-term economic development needs downtown. |
| **Consolidate parking lots and entrances** | • Add new Center Street entrance and/or exit to Lot #3 and reduce access points along Main Street to minimize possible pedestrian conflicts. Also continue to work with property owners to merge private parking into larger municipal lots. |
| **Maximize space in existing lots** | • Consolidate dumpsters with trash compactors to reduce space requirements and improve lot aesthetics. |
| **Improve wayfinding to parking entrances** | • Use of banners and more visible signs at and in advance of parking lots is recommended. |
| **Expand car-sharing program.** Coordinate with the University of Delaware to monitor and expand the Zipcar Program. | • This newly implemented program should be monitored for its effectiveness. If successful, the program should be expanded in the future beyond the four initial vehicles |
| **Add bicycle parking downtown** | • Install additional bicycle racks throughout Main Street. |
| **Parking Improvements – Long-range** | |
| **Recommendations** | **Summary** |
| **Continue Parking Management Initiatives** | • Construct parking garage on Lot #1 (behind Galleria) with ground level commercial or liner building to maximize use of prime location and accommodate parking needed for future economic development. |

| Transit Improvements – Short-term | |
|---|---|
| **Recommendations** | **Summary** |
| **Transit Hub Re-establishment Efforts** | • Currently, this transit facility is oriented primarily to DART bus routes while the potential connections with other bus routes are not well established. To respond to this situation, the adjacent bus stops on Main and Delaware would have special treatments that indicate the proximity of the Transit Hub. This would include features such as bus stops signs, passenger waiting shelters, real-time schedule information (e.g., Next Bus) and concrete pavers or other materials to denote the extension of the Transit Hub to the nearby cross streets. |
| **City-wide Amenities** | • The current system is lacking in terms of features that identify the transit system. This would include bus stops signs at all locations which indicates the service, route and phone and web page to obtain transit information. With the exception of City Hall, there are few bus stop signs along the UniCity bus routes. Other elements of this recommendation would be passenger waiting shelters or benches at the more heavily utilized bus stops. Another feature that can increase transit visibility and ridership is to install ride guides which list schedule times for that bus stop. |
| **Improved Marketing Efforts** | • Provide a single source of information on the transit services provided by each agency. A single transit map should be prepared for Newark which would show all routes, schedule times, fare information and contact phone numbers and web addresses to contact each agency. Information might also include other "Car-free in Newark" travel choices. |
| **Service Modifications** | • Consider consolidation of the three existing UniCity routes into one or two bus routes. Due to uniform coverage area the DART Route 31 could also be eliminated as part of this consolidation.<br>• In addition or as an alternative, additional trips could be added to DART's best performing Newark routes (6, 33, 34, and 55). |
| **Transit Improvements – Long-range** | |
| **Recommendations** | **Summary** |
| **Service Modifications** | • Continue to add trips to support better performing routes. |