

# Final Report of the Advisory Group



AUGUST 2014

# Advisory Group Membership

In October 2013, the Wilmington Area Planning Coucil (WILMAPCO) established an Advisory Group to seek stakeholder input into the development of a vision for transit in the Wilmington region. This Final Report summarizes the Advisory Group's work.

### **Members**

City of Wilmington Mayor's Office	Cleon Cauley, Sr.	Main Street Wilmington	
City of Wilmington, Department of Planning	Lenny Sophrin	NCC Community Advisors Committee, DTC	
City of Wilmington, Department of Planning	Gwinn Kaminsky	NCC Community Advisors Committee, DTC	
City of Wilmington, Department of Public Works	Dave Blankenship	Neighborhood Planning Counci 2nd District	
City of Wilmington Police Department	Stephen Misetic	Neighborhood Planning Counci	
City of Wilmington Police Department	Christine Dunning	6th District	
(Retired)		Neighborhood Planning Coun 8th District	
Colonial Parking	Jed Hatfield		
Community Services Building	Jerry Bilton	New Castle County	
DelDOT, Public Relations	Bud Freel	Ninth Ward Civic Association	
DelDOT, Transportation Solutions	Ray Petrucci	Office of State Planning Coordii	
DelDOT, Transportation Solutions	Rich Palmer	RideShare Delaware	
DTC, Administration (Retired)	Ken Potts	Riverfront Development Corpo	
DTC, Administration	Albert Loyola	Sierra Club	
DTC, Planning	, Cathy Smith	The Buccini/Pollin Group	
DTC, Planning	/ David Dooley	WILMAPCO	
DTC, Operations	Charlie Moulds	Wilmington City Council	
		Wilmington Free Library	
DTC, Marketing	Julie Theyerl	Wilmington Initiatives	
EDTAC (Elderly and Disabled Transit Advisory Committee)	Darlene Cole	Wilmington Parking Authority	
EDTAC (Elderly and Disabled Transit	Kathy McCool	Wilmington Renaissance Corpo	
Advisory Committee)	1	Wilmington Resident	
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leighborhood Planning Council, Ith District	Harold Schneikert
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iverfront Development Corporation	Megan McGlinchey
ierra Club	Jay Cooperson
he Buccini/Pollin Group	Rob Buccini
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Vilmington City Council	John Rago
Vilmington Free Library	Larry Manuel
Vilmington Initiatives	Jim Eversman
Vilmington Parking Authority	Stan Soja
Vilmington Renaissance Corporation	Carrie Gray
Vilmington Resident	Barbara Washam



# Letter to the Agencies



The Honorable Dennis Williams, Mayor, City of Wilmington The Honorable Thomas Gordon, County Executive, New Castle County The Honorable Shailen Bhatt, Secretary, DelDOT Mr. John Sisson, Chief Executive Officer, DTC Ms. Tigist Zigeye, Executive Director, WILMAPCO

Dear Sirs and Madam:

The Advisory Group to the Wilmington Transit Moving Forward project is pleased to submit our Final Report. Early in our process we developed and unanimously approved a Mission Statement as follows:

"The mission of the Wilmington Transit Moving Forward Advisory Group is to prepare a Final Report that will advise and assist in setting a vision for the future of transit in Wilmington, identifying transit recommendations with priorities for implementation."

We believe this Final Report accomplishes our mission and lays out a collective vision for the future of transit in the Wilmington region. Our Advisory Group has diverse composition representing community groups, businesses, agencies and other stakeholders with an interest in transit, as can be seen from our membership listed on the inside cover of this report. Even with this diversity of stakeholders we have reached considerable consensus throughout our process and present our findings and recommendations for your consideration.

We have defined our vision by a series of nineteen Principles, Opportunities and Examples. The Principles are prioritized into four time frames for potential implementation: Short Term, Mid Term, Long Term and Future. To establish momentum, a number are recommended for the Short Term, which we have defined as 2015 and 2016. We leave the details of implementation to the expertise provided within your organizations, as many of our recommendations will require more detailed analysis. We trust that our work is a meaningful first step and will lead to positive changes in transit service and facilities, an optimal transit system, the enhancement of the quality of life for our citizens and an approach that treats land use and transit as a partnership.

As the implementers of positive change, it is critical that your organizations work together for our recommendations to be successful. We encourage you to determine the best means possible to facilitate this cooperation and teamwork, and look forward to the results.

We are pleased and proud to have been given the opportunity to serve on this Advisory Group and are committed to assisting in the future.

Members,

Advisory Group



# **Executive Summary**

The Final Report of the Advisory Group is the culmination of a nine-month effort to set forth a vision for the future of transit in the Wilmington region. This Report summarizes the activities of that effort. In the report, we present the recommendations and priorities first, then moving forward, followed by an overview of the process we used to achieve recommendations and priorities, public involvement which occurred, the use of current origin-destination information from existing Delaware Transit Corporation (DTC) riders and a description of previous studies.

Our recommendations are encompassed within a set of nineteen Principles and associated Opportunities and Examples. We have prioritized the implementation of these Principles into four time frames – Short Term (1-2 years), Mid Term (3-5 years), Long Term (6-10 years) and Future (10+ years). We encourage the Short Term recommendations to be implemented in the next two years – 2015 and 2016. The majority of this report provides detail on the nineteen Principles and a path to move forward with implementation. The precise wording of the Principles are contained within the report but are presented in a condensed version as follows:

- 1. Transit and land use should be planned and implemented together
- 2. An optimal transit network should be developed through service quality
- 3. Serve existing riders well and capture new riders
- 4. Transit must be cost-effective
- 5. Transferring between transit routes should be convenient
- 6. Explore internal transit loop patterns in Wilmington to enhance the transit route structure
- 7. The route system should be convenient for riders not entering the core downtown area
- 8. Transit must be safe and customer friendly
- 9. Locations must be made available to DTC for bus layover
- 10. Transit locations should consider impacts on street parking
- 11. Transit locations and corridors should consider traffic and pedestrians
- 12. DTC should continue the purchase of environmentally friendly buses
- 13. State-of-the-art technology should be used for providing customer information

- 14. Transit customer needs must be understood and marketing should be expanded
- 15. Emphasize transit service in selected corridors and provide supporting infrastructure
- 16. Identify a system of transit locations to meet customers needs
- 17. Introduce bus service to streets without existing service if warranted
- 18. Serve emerging and future growth areas with transit
- 19. Consider Circulator Bus routes to enhance the transit network

Page 14 of the Report contains a Table with all of the Principles and Opportunities and recommended time frames for implementation. It is this page of the Report that best summarizes the results of the efforts of the Advisory Group and is the one page we encourage any reader of this Report to focus upon, after first reviewing the details of the Recommendations, Principles and Opportunities on pages 4-13.

As we move from the guiding Principles contained in this Report to developing an optimal transit system, the working relationships that have been strengthened during this process are invaluable. The hard work begins now. The Project Management Team, led by WILMAPCO, should continue the collaborative process to plan and implement operational changes as well as design capital improvements. The participants in the Wilmington Transit Moving Forward effort, including the City of Wilmington and DTC, have developed a mutual appreciation of the responsibilities, values, limitations and goals related to maintaining and improving transit. While the first step in the path toward realizing an optimal transit system has been challenging and enlightening, we are now eager for the creation of a more vibrant, responsive and complete metropolitan transit network.

For more detailed information on the project, you may refer to the WILMAPCO website www.wilmapco.org/ wilmtransitmoveforward.





# Recommendations

### **Our Mission**

From the outset of the Wilmington Transit Moving Forward project, it has been the goal of the Advisory Group to develop meaningful recommendations to be delivered to the agencies responsible for transit and land use in the Wilmington region. This includes DTC as the operator and provider of transit service, as well as agencies which have a role in transit funding, land use and assisting with infrastructure in the Wilmington region: DelDOT, WILMAPCO, the City of Wilmington and New Castle County. Our mission statement, unanimously agreed upon by our membership is, "The mission of the Wilmington Transit Moving Forward Advisory Group is to prepare a Final Report that will advise and assist in setting a vision for the future of transit in Wilmington, identifying transit recommendations with priorities for implementation."

### **Our Process**

We held a series of seven Advisory Group meetings in 2013 and 2014 to systematically and methodically develop recommendations. We built upon the technical expertise of the Project Management Committee (PMC) agency staff, results gleaned from the DTC Origin- Destination Survey (O/D Survey), our own experiences with transit and input from the public at project Open Houses. Due to this process, we were able to achieve consensus on the recommendations contained within our Final Report.

### Our Approach – Principles, Opportunities and Examples

Our approach is based upon the premise that our recommendations will be the first step in an ongoing process. When your goal is to set a vision for transit, you do not start "in the weeds" with route level recommendations, specific bus stop locations or other details. You start by discussing a vision of what transit could be and should be for Wilmington. We determined that the best approach was to develop a set of Principles to help guide future transit development and its integration with land use, with the hope of moving toward an optimal transit system. These Principles, Opportunities and Examples are the backbone of our Final Report.

## **Priorities for Implementation**

To establish a vision for transit with only a set of Principles would not have completed our task or fulfilled our mission. We therefore prioritized how the Principles might be implemented. Our priorities are captured in the table on the page 14. We have recommended four time frames for implementation. How implementation could occur is further explained in the "Moving Forward" portion of our Report on page 15.



# **Transit System Principles**

# **PRINCIPLE #1:**

Transit locations and service should be consistent with the City of Wilmington's zoning, land use and City-Wide comprehensive plan. Transit should continue to strengthen Wilmington's position as the economic center of the region.

The Advisory Group notes the importance of making decisions on transit service and facilities consistent with and supportive of land use and zoning within the City of Wilmington, New Castle County and local municipalities. Transit should also be consistent with local comprehensive plans and should be a factor in the development and updating of such plans. The Advisory Group also envisions the City of Wilmington, and the greater downtown area in particular, as the economic center of the region in the future. As such, transit services and facilities should strengthen that focus. Particular attention should be paid to major activity centers that concentrate jobs, education, recreation, tourists and residents into areas with sufficient density to support transit.

#### **OPPORTUNITIES:**

- 1. Give special consideration to activity centers where employment, education, recreation, visitor or residential use is focused
- 2. The transit system should build upon emerging demographics that support urban communities

# **PRINCIPLE #2:**

Continue to grow transit ridership through DTC's focus on service quality and with movement towards an optimal transit network.

It is a benefit to the quality of life for our region to have excellent transit service that offers a mobility option for our citizens. We should strive to continually improve our transit service with a goal to move forward towards an optimal transit network. DTC should continually look towards revising service to meet customer needs and increase efficiency. The Opportunities shown offer some examples as to how to meet this Principle.

#### **OPPORTUNITIES:**

- 1. Combine routes to provide crosstown services
- 2. Shorten the length of downtown route alignments
- 3. Split service patterns where commuter routes use different downtown streets than core bus services
- 4. Create traffic patterns to develop an optimal transit system (City and DelDOT)

### **PRINCIPLE #3:**

Transit locations and service must be convenient for existing and emerging patterns of ridership, utilizing O/D data to inform decisions.

It is important that transit service meets the needs of existing riders and expands ridership through new and revised service. The recent O/D Survey is a useful source of information to understand existing riders and make changes beneficial to those riders. The Opportunities listed below include possibilities to increase ridership, but the Advisory Group understands that each of these need to be further analyzed to explore their potential and assess their costs and benefits.

#### **OPPORTUNITIES:**

- 1. Optimize direct transit service to downtown and to suburban activity centers
- 2. Operations should coincide with all hours of employment and minimize transfer wait times
- 3. Trolley service to be evaluated
- 4. Enhanced transit service to align with high schools and other activity centers
- 5. Regional light rail, steel-wheel trolley or streetcar alternatives to support the transportation and economic development framework
- 6. Small buses to support the transportation and economic development framework



### **PRINCIPLE #4:**

Cost-effective transit service delivery and revenue generation are essential for DTC.

It is recognized that DTC, the City of Wilmington and local municipalities all operate under constrained budgets and must emphasize cost efficiency in all they do. To deliver optimum transit service, the Advisory Group encourages DTC to consider partnerships with other public/private and public sector organizations to help control operating costs or pursue actions that can bring revenue to DTC. Examples are provided in the Opportunities below. The Opportunities can be partnerships in which non-DTC organizations contribute financially or by assisting with activities such as adopting a bus shelter for upkeep. Revenue streams should also be ambitiously pursued through means such as advertising on DTC vehicles and infrastructure.

#### **OPPORTUNITIES:**

- 1. If off-street hubs are developed, explore opportunities to generate revenue for DTC by working with a developer
- 2. Public/private partnerships (e.g., ownership of transit hubs and shelters)
- 3. Provide secondary level student transportation

### **PRINCIPLE #5:**

Transit locations are necessary to accommodate convenient transfers needed throughout the system.

Transit locations in the context of this Principle relate to the locations where customers board and alight DTC service. These locations can be as simple as a bus stop, a bus stop with added infrastructure, or an on-street or off-street location where numerous bus routes meet. These locations are always important but particularly so when higher numbers of bus routes meet. Consistent with evolving bus service and routes, this Principle also speaks to the potential benefit of having multiple key locations for different bus routes to meet, thereby covering broader areas geographically as well as dispersing bus volumes to multiple locations.



#### **OPPORTUNITIES:**

- 1. A hierarchy of locations should be provided (adjacent transit stops, on-street hubs and off-street hubs)
- 2. Multiple transit locations, particularly Hierarchy 1 (refer to Principle 16), should be reasonably dispersed geographically
- 3. Intermodal connections should be served

### **PRINCIPLE #6:**

Explore the development of a group of internal transit loop patterns within Wilmington.

This Principle recommends the exploration of a somewhat different approach to bus service in the Wilmington region. The concept is to investigate connecting internal loop bus routes with other corridor bus routes to expedite travel. More transfers might occur, so the success of such a change would be based on the frequency of these new loop services and their convenience to the customer. The internal loops should also explore use of smaller buses and connections with other transportation services.

#### **OPPORTUNITIES:**

- 1. Downtown/Riverfront circulator bus routes
- 2. Coordination with private shuttles
- 3. Use of smaller buses
- 4. Additional east-west routes
- 5. Internal loops to enhance the overall transit network



# **PRINCIPLE #7:**

Peripheral transit locations should be developed from the supporting O/D data to improve transit opportunities between suburbs in the Wilmington region and reduce the number of unnecessary transfers in the City.

Although DTC bus service and ridership is focused in the downtown area, there is demand for bus service to and from major activity centers outside downtown. This Principle speaks to the importance of determining transit locations that could serve suburban to suburban demand as well as between areas in the City that are not located downtown. If route changes can be made and still provide quality transit service to riders, there is the possibility that some buses may not need to travel into the downtown area, potentially increasing transit efficiency and reducing the number of buses downtown.

#### **OPPORTUNITIES:**

- 1. Additional park and rides and use of existing underutilized parking areas
- 2. Coordination between DTC, the County and municipalities to plan for future growth areas in New Castle County

### **PRINCIPLE #8:**

Transit must be safe, secure, attractive, customer friendly, meet ADA accessibility standards and serve the needs of multi-modal users in order to serve existing riders and increase new riders to the system.

Transit riders must be provided a safe and secure environment at all points of their trip, either on board vehicles, at park and ride lots, or at bus stops and transit locations. This safety and security should be viewed as the responsibility of DTC, as well as supported by law enforcement of local governments. There should be coordination and communication between all agencies and organizations providing security. It is important that transit service is accessible to the entire community, including disabled riders. ADA standards must be met with regard to transit service and accessibility. Beyond the basic need for safety and security, using transit should be as attractive and pleasant an experience as can be reasonably provided.

#### **OPPORTUNITIES:**

- 1. Partnerships with other government agencies and nonprofit organizations, such as adopt-a-shelter and security patrols
- 2. ADA accessibility by eliminating barriers impeding pedestrian access to all transit locations, services and activity centers
- 3. Adequate crossing time for pedestrians at signalized intersections with audible and accessible crossing signals
- 4. During inclement weather all bus stops be considered high priority in order to provide safe access

### **PRINCIPLE #9:**

To efficiently operate service, DTC must have locations to layover buses.

For all DTC bus routes there are areas at either end of a bus route where the bus needs to stop and wait until it is time for the next trip to begin. It also can be a time for a bus operator to get a short break prior to beginning the next trip. It is essential that DTC have dedicated locations to "layover." These locations should be coordinated with local governments to assure compatibility with adjacent land use and provide DTC with continuity of location.

#### **OPPORTUNITIES:**

- 1. Layover locations should be compatible with adjacent land use and traffic
- 2. DTC and the City work together to determine appropriate locations
- 3. DTC has guaranteed space for layover with off-street hubs
- 4. DTC Operations Center may provide a location for a layover in the downtown area



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# **PRINCIPLE #10:**

Transit locations must weigh the impact to on-street parking and parking revenue.

Bus stops require curb space for boarding and alighting passengers and the prescribed space should balance transit needs with local parking needs for residences, businesses and other adjacent properties. The location of bus stops and other transit locations should be a shared decision with input from DTC and the local government.

#### **OPPORTUNITIES:**

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- 1. Mitigate loss of parking through public/private partnerships to create nearby new parking areas
- 2. Ensure "loading and unloading" locations do not conflict with transit locations
- 3. Incorporate elongated bulb-outs where feasible to improve the pedestrian/passenger experience while balancing impacts on parking spaces



# **PRINCIPLE #11:**

Transit locations and corridors must consider traffic congestion and potential conflicts between buses and other modes of travel, including pedestrians, bikes, cars and other types of vehicles.

By definition, transit locations and corridors become "activity areas" in that there will be a mixture of passengers waiting for transit, boarding and alighting, walking or riding a bicycle to the bus stop. There will also likely be other non-transit pedestrians, bicyclists and automobile traffic. Transit locations and corridors must consider the interaction of these movements when determining stop locations and travel lanes for buses.

#### **OPPORTUNITIES:**

- 1. Development of dedicated transit lanes
- 2. Sufficient curb side capacity at bus stops to board and discharge passengers
- 3. Linear corridors that minimize turning movements in congested areas
- 4. Traffic signal prioritization and preemption

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## **PRINCIPLE #12:**

DTC should continue the purchasing of environmentally friendly buses to decrease emissions and noise.

The specific language in this Principle addresses purchasing environmentally friendly buses, which DTC has already initiated. The Advisory Group supports the continuation of this trend. The Advisory Group also discussed that concern for the environment should be part of DTC's culture and thinking, as well as the City of Wilmington's, with regard to any infrastructure improvements implemented by the City for transit.

#### **OPPORTUNITIES:**

- 1. Increase the percentage of hybrid or other alternative fuel buses in the fleet
- 2. Use of electric buses

### **PRINCIPLE #13:**

Transit service should consider upgrades in the use of technology to improve customer information.

The use of current technology to better inform transit riders should be implemented. Particularly with regard to the high number of people who possess smart phones, DTC should consider providing transit information through the use of smart phones. The provision of real-time information should be pursued at bus stops. Audible announcements on buses, where technology already exists, should be enforced. DTC should continue to utilize emerging technology as a means to provide customer information.

#### **OPPORTUNITIES:**

- 1. Audible announcements at bus stops and internally on the bus
- 2. Real-time bus arrival information at bus stops
- 3. Provision of GPS based phone applications to provide real-time trip planning and customer information
- 4. Pin location trip planning information (location/transfers/ modes) to complete trip



# **PRINCIPLE #14:**

Growing transit ridership requires knowledge of customer needs and programs to educate and market to the public on the benefits of using transit.

The Advisory Group recommends that DTC and the City of Wilmington consider every opportunity to market information regarding transit service to the public. In order to expand its marketing, DTC should consider expanding its database of information, such as learning more about potential new markets and customer needs. DTC and the City should also explore opportunities for partnering in marketing with employers, tourism advocates, students and young people.

#### **OPPORTUNITIES:**

- 1. New or expanded marketing/outreach strategies to attract new riders
- 2. Partnerships with employers to expand Rideshare program
- 3. Bus pass programs for students, municipal and private sector employees
- 4. Survey people who do not use transit
- 5. Youth Advisory Council that promotes transit to young people through outreach, education and marketing



# PRINCIPLE #15:

Identify streets in Wilmington where transit service and amenities could be emphasized. These could be streets that already include a significant amount of bus service or additional bus service could be added.

A vision for transit service in downtown Wilmington is to select appropriate streets to focus groups of transit routes. The selection of streets should be based on proximity to activity centers (employment, retail, residential), and connections to other transit and transportation services. The physical

#### **OPPORTUNITIES:**

- 1. 11th Street and 12th Street
  - Major east-west corridor for bus routes to and from Downtown Wilmington
  - 11th Street and 12th Street as major transit corridor between Jefferson Street and Walnut Street
  - 11th and 12th Streets either as one-way or as two-way streets
  - Enhanced transit amenities along 11th Street and 12th Street at Washington Street, Orange Street, Market Street, King Street and Walnut Street

#### Shared Use with Bus Only Lane(s)



Example from Minneapolis, MN

#### **Exclusive Bus Only Corridor**



characteristics must also be considered: geometric capacity of the street, parking needs, deliveries, pedestrian-friendly nature of the street corridor, traffic flow and congestion levels. The feasibility of strategic bus stop locations, consistency with the City of Wilmington Comprehensive Plan, and consistency with the overall DTC service provision in Wilmington are other important considerations. Once selected, infrastructure improvements should be placed in the street corridor, including shelters, transit information, equipment to enhance security and visual "branding" to identify as a transit corridor. The Advisory Group identified seven corridors that should be further analyzed as candidates and listed these as Opportunities.

- 2. Orange Street
  - Major northbound corridor for buses to Downtown Wilmington
  - Orange Street as major transit corridor between 4th Street and 10th Street to support existing high volume of transit service
  - Enhanced transit amenities along Orange Street at 4th Street, 5th Street, 8th Street and 9th Street
- 3. 4th Street
  - Major east-west corridor for buses with service along 4th Street from Southbridge to Greenhill Avenue
  - 4th Street as major transit corridor between Walnut Street and Union Street to support existing high volume of transit service
  - Enhanced transit amenities along 4th Street between Walnut Street and Union Street
- 4. Walnut Street
  - Major northbound corridor for buses with service from Front Street to 8th Street
  - Major transit corridor
  - Possible two-way linear transit corridor with bicycle and pedestrian amenities incorporated
  - Enhanced transit amenities along Walnut Street between Front Street and 8th Street
- 5. King Street
  - Major southbound corridor for buses with service from 12th Street to Front Street
  - King Street as major transit corridor
  - Enhanced transit amenities along King Street between 12th Street
    and Front Street
- 6. MLK, Jr. Boulevard/Front Street
  - Major east-west corridor for buses with service along MLK Boulevard from Jackson Street to Walnut Street
  - MLK Boulevard as major transit corridor
  - Enhanced transit amenities along MLK Boulevard from Jackson Street to Walnut Street
- 7. French Street
  - Major northbound corridor between 8th and 10th Streets.
  - Enhance transit amenities along French Street between 8th and 10th Streets



# **PRINCIPLE #16:**

Identify multiple transit locations within the City of Wilmington that build upon the existing O/D data.

The Advisory Group recommends three Hierarchies of transit locations. Examples are provided below for each of the three Hierarchies. For Hierarchy 1, the Advisory Group discussed both on-street and off-street transit hub locations. It was decided that more detailed analysis is needed to recommend either on-street

#### **OPPORTUNITIES:**

A hierarchy of transit locations:

- **Hierarchy 1** Location where numerous bus routes cross and continue in service, and some routes may also terminate and need to layover.
- **Hierarchy 2** Location where numerous bus routes cross and continue in service.
- **Hierarchy 3** Location where a few bus routes cross and continue in service.

#### **Examples – Hierarchy 1:**

- 1. 12th and Jefferson Streets
  - Good location to support the potential 11th and 12th Street transit corridors
  - Existing employment density and potential employment growth in area makes site and/or general area a viable location
- 2. 8th and Orange Streets
  - Good location and proximity to Downtown Wilmington
  - Orange Street is served by numerous DTC bus routes
  - 8th Street is served by a DTC bus route
- 3. 2nd and Front Streets/Front and Walnut Streets/ Modified Amtrak Station
  - MLK Boulevard/Front Street and Walnut Street should be the focus for enhancing and expanding transit locations
  - Supports intermodal connections to commuter and intercity rail and intercity bus

or off-street locations. However, the Advisory Group recommends that Hierarchy 1 locations at 12th and Jefferson, 8th and Orange, 9th and French, and MLK Boulevard/Front/ Modified Amtrak Station should still be considered. Specific sites for Hierarchy 1 should no longer be considered at 9th and Shipley, Christina Gateway – Walnut Street Sweep (2nd, Walnut and Front), Porter site (Front and Walnut), or 12th and Orange and Rodney Square.

#### Examples – Hierarchy 2:

- 1. Rodney Square
  - Maintain as a bus stop location with enhanced transit
    amenities
- 2. 9th and French Streets
  - Enhanced transit amenities along French Street to support high transit volumes
  - 9th Street is served by a DTC bus route
- 3. 8th Street and 9th Street
  - Investigate transfer locations along 8th and 9th Streets where major north-south bus routes cross
  - Enhanced transit amenities on 8th and 9th Streets between Walnut Street and Orange Street to support transfer connections with north-south bus routes
  - 8th Street and 9th Street are served by a DTC bus route

#### Examples – Hierarchy 3:

- 1. Union Street/Lincoln Street/Pennsylvania Avenue
  - Western transfer location to support existing DTC routes
- 2. Union Street and 4th Street
  - Transit location at western edge of the City near the Little Italy and the Bancroft Pkwy neighborhoods
  - Enhanced transit amenities to support transfer connections with DTC Routes along the western edge of the 4th Street transit corridor
- 3. 2nd Street/Lancaster Avenue/Jackson Street
  - Enhanced transit amenities to support transfer connections with DTC Routes along Lancaster Avenue and 2nd Street in the area of Jackson Street



#### **Hierarchy Photos from Other Cities**

**Hierarchy 1** 



Dayton, OH

#### **Hierarchy 2**



Portland, OR

#### **Hierarchy 3**



Tampa, FL

### **PRINCIPLE #17:**

Consider introduction of bus service onto streets with no existing bus service to better serve neighborhoods and activity centers.

Although DTC has broad coverage on many streets within Wilmington, the Advisory Group identified several corridors where bus service does not currently exist which may be candidates for service, based on nearby land use and densities. These streets are listed as Opportunities below.

#### **OPPORTUNITIES:**

- 1. Concord Avenue
  - Introduction of service along Concord Avenue between Broom Street and Market Street to address missing link in transit service
  - Transit amenities at Broom Street, Monroe Street, Washington Street and Market Street for transfer connections to DTC Routes
- 2. Washington Street
  - Introduction of service along Washington Street between 10th Street and 2nd Street
  - Transit amenities at 10th Street and 2nd Street for transfer connections to DTC Routes
- 3. Adams Street
  - Introduction of service along Adams Street between 4th Street and Delaware Avenue
  - Transit amenities at Delaware Avenue and 4th Street for transfer connections to DTC Routes
- 4. Jackson Street
  - Introduction of service along Jackson Street between Pennsylvania Avenue and 4th Street
  - Transit amenities at Pennsylvania Avenue and 4th Street for transfer connections to DTC Routes

## **PRINCIPLE #18:**

#### Serve emerging and future growth areas in Wilmington.

DTC, the City of Wilmington, New Castle County and other local municipalities should coordinate land use plans and growth with the provision of transit service. These agencies should all work together in a proactive fashion. Decisions that are relative to both service and infrastructure improvements should be considered. For example, new developments should incorporate the inclusion of bus stops into their site plans, when deemed appropriate by the local municipality and DTC.

#### **OPPORTUNITIES:**

- 1. Riverfront
  - The new Christina River Bridge will provide greater access to the Riverfront and increase the economic vitality of the area. This will provide opportunities for realignment and access of transit service within the south Wilmington/Amtrak Station/Riverfront area.
  - Transit locations near major activity centers
- 2. Maryland Avenue/Monroe Street
  - Potential for connections of future development
    and transit

# **PRINCIPLE #19:**

Consider circulator bus routes that would connect with DTC bus service at transit locations and activity centers.

This Principle is similar to Principle 6 and further emphasizes the need to connect Hierarchy 1, 2 and 3 transit locations with each other and with major activity centers.

#### **OPPORTUNITIES:**

- 1. Connections with Hierarchy 1, 2, and 3 transit locations as described in Principle 16
- 2. Connections with major activity centers
- 3. Connections at emerging and future growth areas





#### **TRANSIT SYSTEM PRIORITIES TABLE**

Short Term 1-2 Years	Mid Term 3-5 Years	Long Term 6-10 Years	Future 10+ Years	
(2015-2016)	(2017-2019)	(2020-2024)	(2025+)	
Principle 1	Principle 1	Principle 1	Principle 1	
o Opportunity1	o Opportunity1	o Opportunity1	o Opportunity1	
o Opportunity2	o Opportunity2	o Opportunity2	o Opportunity2	
Principle 2 o Opportunity 2	Principle 2 o Opportunity 1	Principle 2 o Opportunity1		
o Opportunity3	o Opportunity2	o Opportunity4		
	o Opportunity3 o Opportunity4			
Principle 3	Principle 3	Principle 3	Principle 3	
o Opportunity1	o Opportunity1	o Opportunity1	o Opportunity1	
o Opportunity2	o Opportunity2 o Opportunity3	o Opportunity2 o Opportunity4	o Opportunity2 o Opportunity5	
	o Opportunity4			
	o Opportunity6			
	Principle 4	Principle 4	Principle 4	
	o Opportunity2	o Opportunity1 o Opportunity2	o Opportunity1 o Opportunity2	
		o Opportunity3		
Principle 5	Principle 5	Principle 5	Principle 5	
o Opportunity3	o Opportunity1	o Opportunity1	o Opportunity3	
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# FINAL REPORT OF THE ADVISORY GROUP

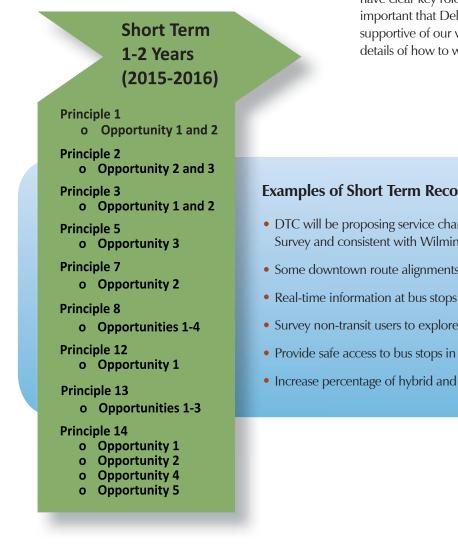
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# Moving Forward **The Short Term**

### The Advisory Group believes it is critically important that implementation of the recommended Principles begin immediately. We have proposed a program with four time

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frames for implementation but believe the Short Term, which we have identified as the first two years, 2015 and 2016, is perhaps most important because implementation will establish momentum from the outset. Success in implementing Short Term recommendations will foster implementation of the succeeding priorities. The Short Term priorities are shown in the graphic below and selected highlights are shown in text. To expedite moving these recommendations forward, an Open House Public Meeting is planned for September, 2014. These recommendations, as well as the Mid Term, Long Term and Future recommendations, will be presented at the Open House Public Meeting.



# **The Mid Term**

Though it is important to begin implementation of the Short Term recommendations, attention should also be paid to the other timeframes as well, particularly the Mid Term. Mid Term recommendations will typically require additional analysis, planning, design, and in some cases additional funding, in order to implement. The Advisory Group suggests that there should be a continuum of improvements occurring in order to move towards an optimal transit system.

# Agency Responsibilities

For successful implementation of the recommended Principles, it is clear that there must be a partnership between key government agencies. If we are to reach our collective vision for the future of transit in Wilmington, DTC and the City of Wilmington must have clear key roles in working together to lead the way. It is also important that DelDOT, New Castle County and WILMAPCO be supportive of our vision for transit. The Advisory Group leaves the details of how to work together effectively to the agencies.

#### **Examples of Short Term Recommendations**

- DTC will be proposing service changes for January, 2015 based on O/D Survey and consistent with Wilmington Transit Moving Forward Principles
- Some downtown route alignments may be shortened
- Survey non-transit users to explore transit improvements
- Provide safe access to bus stops in inclement weather
- Increase percentage of hybrid and alternative fuel buses in DTC's fleet

# Advisory Group

### Role

The Advisory Group is comprised of 42 stakeholders representing businesses/developers, residents, neighborhood community/civic groups, transit riders, transit advocates and agencies interested in the future of transit in downtown Wilmington. The role of the Advisory Group is to provide input into the needs for shaping the future vision for transit in Wilmington and to review materials and presentations prepared by the Project Management Committee. Over the course of the nine-month project, the Advisory Group met seven times to formulate this vision and provide recommendations for implementing transit improvements to ultimately achieve this vision.

### **Summary**

*November 18, 2013* – This was the first of seven Advisory Group meetings; it was an introduction to the role and expectations of the Advisory Group and the path forward for the project. DTC presented an overview of their proposed 2013 Transit Redesign Plan and the O/D Survey. Over 55 transit topics were identified through the stakeholder interviews and public outreach efforts. These topics were presented for further consideration to the Advisory Group.

December 11, 2013 – The transit topics from the previous meeting were discussed. An overview presentation of transit topics 1-13, relating to transit hubs and corridors, was provided. Following the presentation there was an open discussion with the Advisory Group on the merits of each of these transit topics. At the recommendation of an Advisory Group member, a Mission Statement for the group was developed.

January 22, 2014 – A draft Advisory Group member Mission Statement was presented for consideration. The Group reviewed a presentation on the definition of transit hubs and corridors with characteristics and examples of each from other cities. The Advisory Group began developing recommendations to address the issues identified in transit topics 1-8.

*February 26, 2014* – DTC provided an update on the preliminary results of the O/D Survey highlighting several key findings from

the survey. The Advisory Group continued their discussion on the transit topics working towards draft recommendations for transit topics 9-13. The Advisory Group recommended the next meeting follow the completion of O/D data analysis in order to better identify Wilmington's transit needs.

*April 23, 2014* – A summary of the key conclusions from the O/D Survey was presented. Draft Transit Principles and Opportunities 1-14, which represented the previously discussed transit topics, were introduced. The Transit Principles and Opportunities when complete would form the basis of the recommendations of the Advisory Group for the future vision of transit in the City of Wilmington.

*May 21, 2014* - The discussion of the draft Transit Principles and Opportunities continued and Principles and Opportunities 15-19 were introduced. These new Principles were dedicated to recommendations for transit locations and corridors. The draft Transit Principals and Opportunities 1-19 were approved by the Advisory Group members and recommended for public review. The members of the Advisory Group assisted the project team in getting the word out for the May 28, 2014 Open House Public Meeting.

June 11, 2014 – A summary of the May 28, 2014 Open House Public Meeting was provided. A draft implementation plan for Transit Principles and Opportunities 1-19 was presented. The Advisory Group approved the implementation of improvements for the Short Term, Mid Term, Long Term and Future. An overview of the Final Report outline was discussed.

### What We Learned

There are many challenges to operating a transit system and making changes is not a simple task. However, positive changes and improvements can be made. It will require a collaborative effort among agencies and public support in order to achieve the future vision of transit in Wilmington. We also learned that making improvements to transit service and infrastructure will likely require additional funding which is not presently programmed. Therefore, securing additional funds will be critically important in achieving our transit vision.



# **Project Management Committee**

The Project Management Committee (PMC) is comprised of senior staff from WILMAPCO, the City of Wilmington, DTC and the RK&K consultant team. The PMC is responsible for technical and management guidance for the Wilmington Transit Moving Forward project. The PMC provides hands-on analysis and is responsible for the development of information presented to the Advisory Group.

Representatives who attended PMC meetings and work sessions are as follows:

WILMAPCO - Tigist Zegeye, Dave Gula

**City of Wilmington** – Len Sophrin, Cleon Cauley Sr., John Rago, Dave Blankenship, and Gwinn Kaminsky

**Delaware Transit Corporation** – John Sisson, Ken Potts, Rich Paprcka, Albert Loyola, and Cathy Smith

**RK&K Team** – Ken Goon, Steve McCarthy, Andrew Bing, Carolann Wicks, and Kim Troiani

## **Summary of Activities**

The PMC met nine times from February, 2014 through June, 2014. It is anticipated that the PMC will continue to meet through September, 2014. At that point the agencies will determine the most effective method to continue to work together to analyze and implement the recommendations of the Advisory Group.

During the nine meetings in 2014 the PMC accomplished the following:

- Provided management guidance on the scope and budget of the Wilmington Transit Moving Forward project
- Managed the project schedule
- Prepared in advance for all Advisory Group and Open House Public Meetings, including preparing agendas and developing presentation materials
- Debriefed and discussed follow-up items after all Advisory Group and Open House Public Meetings

- Ensured that all Advisory Group questions and comments were addressed
- Prepared meeting notes and summaries for all Advisory Group and Open House Public Meetings
- Developed Draft Principles and Opportunities for discussion at Advisory Group meetings
- Coordinated all communication with the Advisory Group
- Received briefings on the O/D Survey performed by DTC and the application of the results to the Wilmington Transit Moving Forward project
- Brainstormed the vision for the future of transit in the Wilmington region
- Received input on existing bus service in Wilmington and the issues and challenges faced by DTC
- Discussed transit locations from previous studies and integrated into Principles
- Managed the project webpage on the WILMAPCO website
- Developed Draft Final Report for the Advisory Group



# Public Involvement

A goal of the Wilmington Transit Moving Forward project has been to create a forum for local stakeholders, transit customers and the general public to provide input and feedback on developing a vision for the future of transit in Wilmington. In addition to the Advisory Group meetings, three Open House Public Meetings were scheduled for the project. To maintain communication throughout the length of the study, a project webpage was created and continuously updated with project information. The webpage also provided a mechanism for public feedback.

# **Open House Public Meetings**

#### October 16, 2013

The first Open House was a kick-off meeting for the project to present an overview of the project purpose and a review of previous studies and existing transit services. The Open House was held from 4:00 PM to 7:00 PM at the Doubletree Hilton in Downtown Wilmington. A series of display boards were presented and Open House attendees had the opportunity to discuss the project with the Project Team and provide comments. During the Open House, three identical presentations were given summarizing the information on the display boards. Following each presentation, a question and answer session was held, providing an additional opportunity for comments. The Open House attendees were optimistic that improvements to transit services would be made and looked forward to next steps in the project.

#### May 28, 2014

The second Open House updated the public on the status of the project and presented the Advisory Group's vision for the future of transit in Wilmington. This vision was illustrated through a series of 19 Transit System Principles and Opportunities. The Open House was held from 4:00 PM to 7:00 PM at the Wilmington Free Library, in close proximity to many major transit locations in order to encourage transit customers and the public to attend. Display boards highlighting each of the Transit System Principles and Opportunities were presented. In addition to the display boards, three identical presentations were given, followed by a question and answer session. Open House attendees had an opportunity to provide written comments at the Open House or complete an online comment form. The Project Team and Advisory Group members were available to respond to questions. Many Open House attendees felt the displays and presentation were very informative and expressed their support for the implementation of the Transit System Principles.

#### September, 2014

The final Open House is planned for September 2014, during which the Project Team will present the Advisory Group's recommendations for prioritizing and implementing the Transit System Principles. This Open House will also serve as an informational session for DTC to present and receive feedback on initial service change recommendations that could go into effect January 2015. These proposed service changes are based on the Transit System Principles and the results of the O/D Survey.

## **Project Webpage**

WILMAPCO hosts a project webpage for the Wilmington Transit Moving Forward project on their agency website. This informational page provides an overview of the project including background materials, recent studies and Advisory Group meeting summaries. The webpage also allows the public to provide feedback and keep informed about the project. The webpage includes meeting materials from Public Workshops and Advisory Group meetings and the Final Report of the Advisory Group. Please visit www.wilmapco.org/wilmtransitmoveforward to view the Wilmington Transit Moving Forward project webpage.

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APCO region. Wilmington is a major job center, and effi	
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# **Origin-Destination Survey**

Origin-Destination (O/D) Surveys are a useful tool for transit agencies to gain a better understanding of transit customers' travel behavior. A recommendation of the 2013 State Smart Transportation Initiative Study was that DTC should perform an O/D Survey to better understand the travel patterns of existing DTC transit customers to assist in the evaluation and planning of enhanced transit services. In October 2013, an O/D Survey was initiated to collect information on DTC's transit customers.

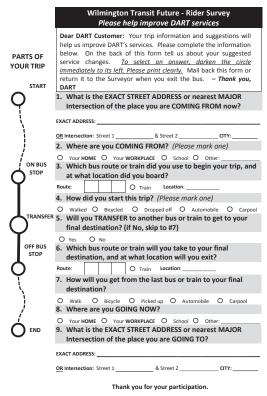
# Methodology

The O/D Survey began on October 15, 2013 and continued through November 22, 2013. To collect a statistically significant number of surveys, a sampling plan was developed with a minimum target survey goal of 1,784 riders. The target sample size was based on DTC's average daily weekday ridership for New Castle County of 32,004 trips. In addition to an overall survey goal, specific goals were established for each of the individual bus routes to ensure a sufficient number of surveys were collected on each route.

Surveys were prepared in English and Spanish and were distributed onboard by survey collection staff. Transit customers were encouraged to complete the surveys onboard. Transit customers also had the option of returning the survey via mail or completing it online. Survey collection staff were onboard buses from approximately 5:00 AM to 7:00 PM each weekday until all bus routes were surveyed. The survey questionnaire was short, with questions focusing on travel patterns to encourage transit customers to complete the survey before departing from the bus. The survey is shown on this page of the report.

### **Survey Results**

A total of 5,198 surveys were distributed and 4,259 surveys were returned to survey staff onboard buses. An additional 231 surveys were returned by mail or completed online for a total of 4,490 completed surveys, a return rate of 86 percent which is an exceptionally high return for surveys. Of the 4,490 surveys returned, 2,394 were able to be geocoded as a valid O/D pair. A valid O/D match is when the origin and destination response is provided that has enough information to geocode a specific location linking the travel pattern of the survey respondent. The geocoded O/D pairs indicated a strong orientation of trips to the City of Wilmington core. The O/D Survey provided usable results and a statistically valid sample size to represent DTC service to



O/D Survey Form

permit service evaluation at four levels of analysis including:

- 1. System Trip purpose and transfer analysis
- 2. Corridor Bus routes grouped by geographic corridors
- 3. **Subarea** Travel market share is estimated per each New Castle County planning district
- 4. Route Each bus route

#### **Trip Purpose**

- 61.2% of all transit trips are work related
  - 47.9% Home to work
  - 5.9% Workplace to other
  - 5.4% Workplace to workplace
  - 2.0% Workplace to school

#### **Mode of Access**

• 87.6% walk to and from their bus stop



### Transfers

- 4,392 surveys usable for transfer analysis
  - 2,581 Did not transfer (58.8%)
  - 1,811 Did transfer to another bus (41.2%)
  - 1,418 had a valid O/D match. Of these returned surveys:
  - 1,017 had an origin or destination in Downtown Wilmington;
  - 166 had an origin or destination in Wilmington, but outside the Downtown; and
  - 235 had an origin and destination outside of Wilmington.
- Many transit customers transfer to routes in the Market Street and New Castle Avenue corridors

The table to the right identifies the locations where transit riders most frequently transfer.

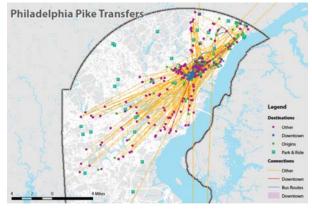
### Corridor

• A series of corridors were developed for evaluation of the transfer activity among the DTC bus routes that are related to Downtown Wilmington bus routes

The table below lists the results of the transfer activity that occurs in and outside of each of the transit corridors that were developed for the O/D study analysis.

Corridor	Routes	Transfer in the Corridor	Transfer outside of the Corridor
Philadelphia Pike	1, 3, 11, 12, 24, 38, 61	7.4%	38.3%
Concord Pike	2, 21, 28, 35	4.8%	30.1%
Penn Ave & Lancaster Pike	4, 10, 20	2.5%	35.9%
Kirkwood Highway	6, 19, 30, 36	3.4%	32%
Maryland Ave	5, 7, 9	3.7%	42.5%
Market, DuPont, New Castle	8, 15, 17, 22, 25, 32	8.9%	33.6%
Christiana Mall	6, 23, 33, 34, 55, 59, 65	7.96%	28%
Bear/Glasgow	40, 41, 42, 54, 64	4.0%	45.8%
Downstate	45, 301, 305	4.3%	22.2%

The O/D Survey results were an important tool in the development of Principles and Opportunities by the Advisory Group. The O/D Survey has detailed information that will be a valuable tool in the development of route specific changes to DTC bus service in the January 2015 Service Change proposal and for the next phase of work needed to implement the recommendations of the Wilmington Transit Moving Forward project. The image to the right is an example of the output of the O/D Survey. It can be used for more detailed analysis.



Map shows transfer trips that started in the Philadelphia Pike Corridor

Estimated Transfers by Location Type		
Location	Percentage	
Rodney Square	60%	
Other Downtown	9%	
Christiania Mall	10%	
Other Suburban	21%	

# **Previous Studies**

### State Smart Transportation Initiative (SSTI) Study – 2013



The SSTI Study was an independent review of the analysis and conclusions from previous studies of transit services in Wilmington. These studies included recommendations on transit service improvements and the need for a new transit hub to serve Wilmington. The SSTI Study provided a broad review of the existing transit system and developed Short and Long

Term goals that would maintain the success of the existing system, enhance the transit experience and attract new riders. Short and Long Term recommendations were developed as follows:

- Short Term Recommendations
  - Develop programs and policies to improve bus operations and service
  - Conduct O/D Survey (Implemented October 2013)
  - Enhance outreach efforts to increase ridership
- Long Term Recommendations
  - Develop strategies to improve the convenience and accessibility of the system
  - Develop a collaborative, long-range planning effort with DTC, City of Wilmington, DelDOT, New Castle County and WILMAPCO
  - Identify preferred alternatives for transit hubs/locations such as:
    - 9th and French Streets
    - 9th and Shipley Streets
    - 2nd and Front Streets (Christina Gateway-Walnut Street Sweep)
    - Front and Walnut Streets
- A transit corridor possibly a linear transit "hub/corridor" should be considered

### Wilmington Downtown Circulation Study – 2011

The Wilmington Downtown Circulation Study (WDCS) is an update to the 1997 Downtown Transportation Study and evaluated all modes (pedestrian, bicycle, auto, truck, transit) in the City of Wilmington with the goal of making each mode more efficient for the user. Throughout the study, recommendations were developed to meet the existing and future transportation needs in the City.



The WDCS identified numerous traffic, pedestrian and bicycling improvements to enhance downtown circulation. The WDCS also developed transit recommendations that included Short and Long Term recommendations for transit enhancements:

- Short Term
  - Redistribution of bus stops along King Street (Implemented 2012)
  - Realignment of Orange Street Loop bus routes to serve new bus layover locations
- Long Term
- Identify and implement potential new transit hub location(s).
  Potential sites included:
  - 9th and Orange Streets
  - 9th and Shipley Streets
  - 8th and Orange Streets
  - 12th and Jefferson Streets
  - 12th and Orange Streets
- The 9th and Shipley Street site was identified as the preferred alternative

The previous study reports can be viewed on the project webpage at: www.wilmapco.org/wilmtransitmoveforward.





# Path Forward

As we move from the guiding Principles contained in this Report to developing an optimal transit system, the working relationships that have been strengthened during this process are invaluable. The hard work begins now. The Project Management Team, led by WILMAPCO, should continue the collaborative process to plan and implement operational changes as well as design capital improvements and address funding needs. The participants in the Wilmington Transit Moving Forward effort, including the City of Wilmington and DTC, have developed a mutual appreciation of the responsibilities, values, limitations and goals related to maintaining and improving transit. While the first step in the path toward realizing an optimal transit system has been challenging and enlightening, we are now eager for the creation of a more vibrant, responsive and complete metropolitan transit network.

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### Acknowledgements

The Wilmington Transit Moving Forward project originated at the request of the City of Wilmington and DTC, through a WILMAPCO Unified Planning Work Program application for funding, to develop an optimal transit system.

We would like to recognize the contribution to the Wilmington Transit Moving Forward project from the following:

WILMAPCO – Tigist Zegeye, Dave Gula, Tamika Graham, Randi Novakoff

**City of Wilmington** – Len Sophrin, Cleon Cauley Sr., John Rago, Dave Blankenship, Gwinn Kaminsky

Delaware Transit Corporation – John Sisson, Ken Potts, Rich Paprcka, Albert Loyola, Cathy Smith

**RK&K Team** – Ken Goon, Steve McCarthy, Andrew Bing, Carolann Wicks, Kim Troiani, Linda Moreland, Danielle Lloyd, Pauline Rubin

WR&A – Jeff Riegner, Jim Ritchey (O/D Survey)

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