

# Origin-Destination Survey

## Overview

- The New Castle County Transit Origin-Destination (O-D) Study was conducted to understand the travel behavior of existing DART First State transit customers.
- Total Daily DART bus ridership (boardings) = 32,004
- Total Daily Riders = 16,002
- Target sample size for statistical validity = 1,784 (11.1%)

## Overview

- Target Surveys = 1,784
- Actual Surveys Distribution = 5,198
- Surveys Returned = 4,490 (27%)
  - Exceeded the required amount required for statistical validity

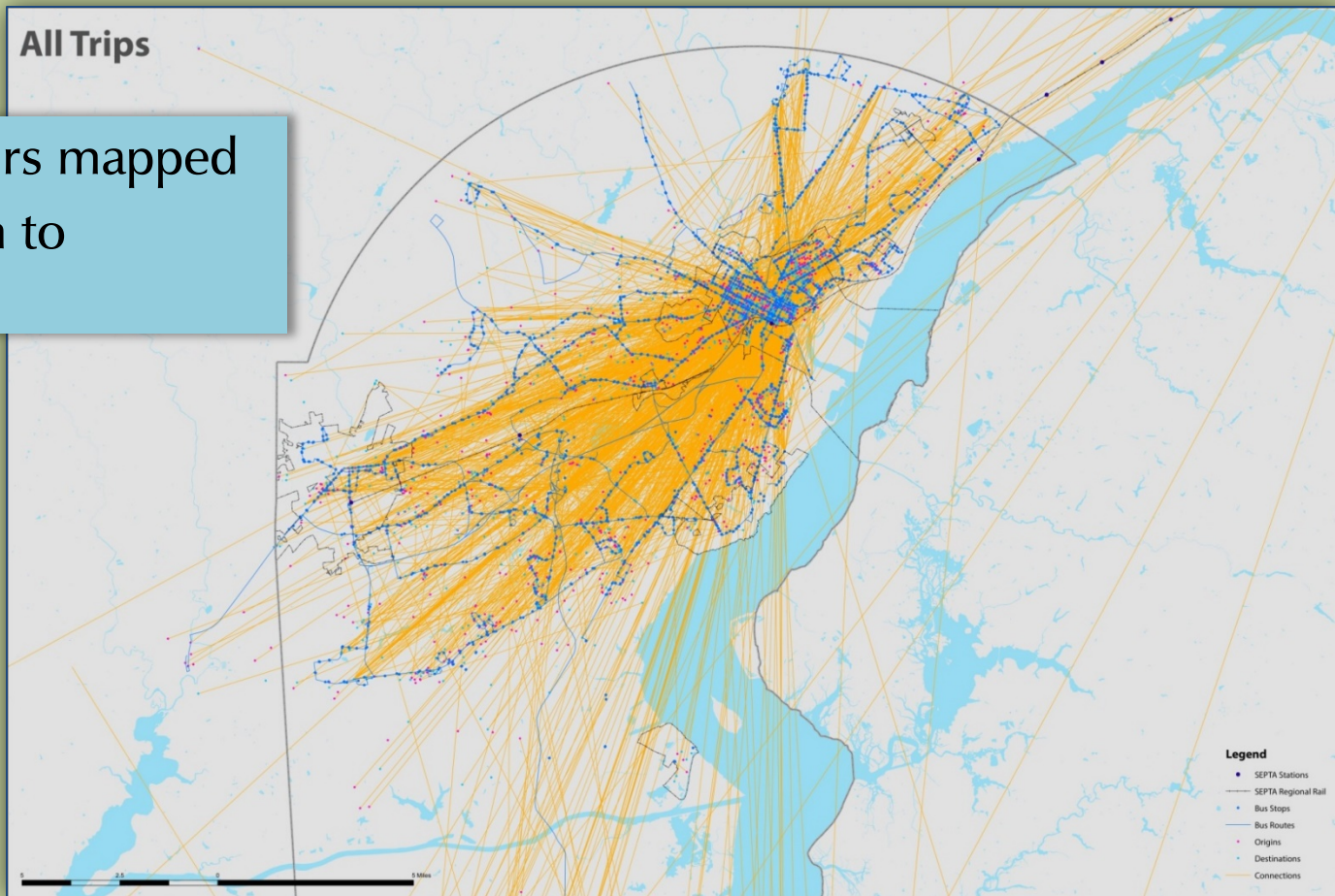
## *Origins / Destinations*

- Surveys Returned = 4,490
- Valid O-D Matches = 2,394
  - Valid responses exceeded the required sample size of 1,784

# Origins / Destinations

All Trips

- All 2,394 O-D pairs mapped
- Strong orientation to Wilmington core



## Transfers

- Surveys Returned = 4,490
- Surveys usable for Transfer Analysis = 4,392

Did Not Transfer	2,581	58.8%
Did Transfer	1,811	41.2%
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Total	4,392	100%

## Transfer Locations

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

## Transfers

- Of the returned surveys, 2,581 of the respondents did not transfer (58.8%).
- Of the returned surveys that did not transfer, 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.

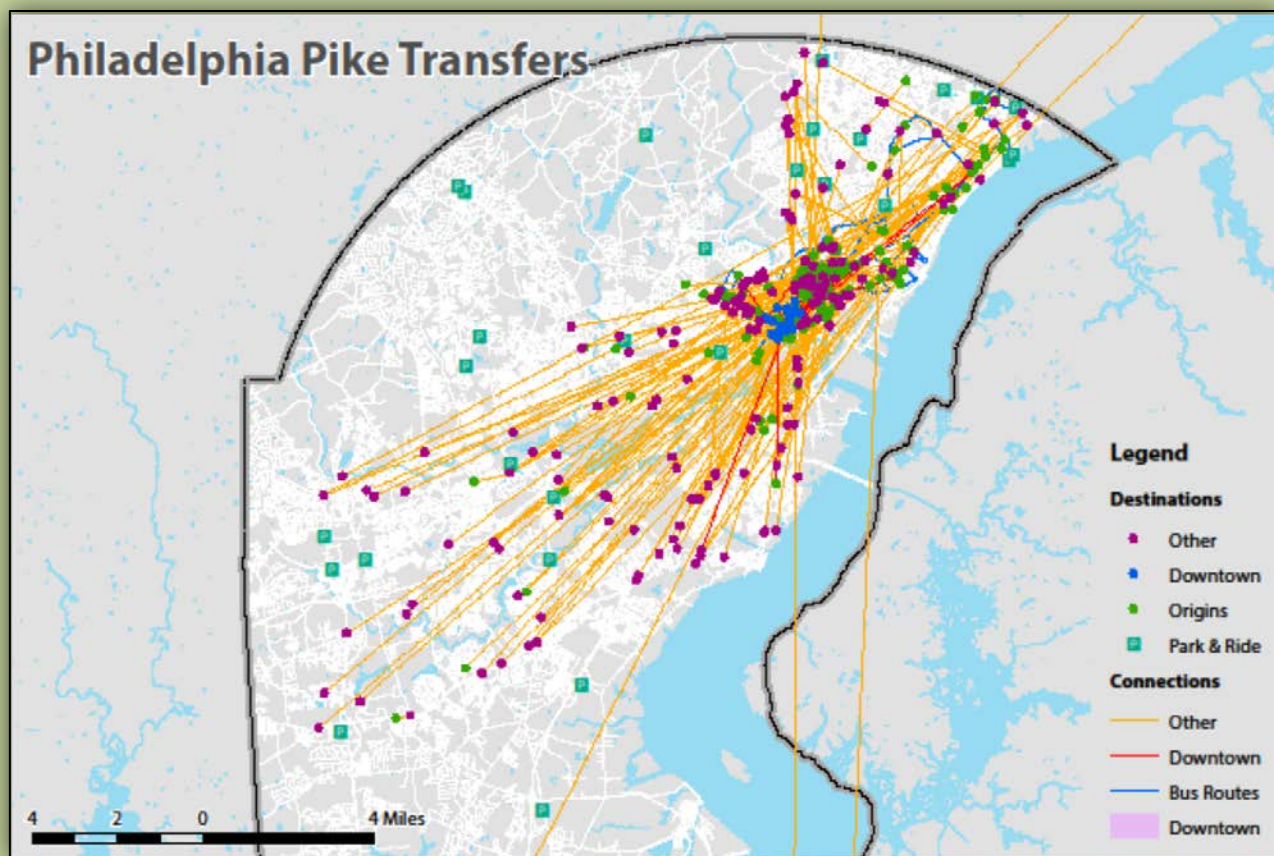


## Corridor Transfer Rates

Corridor	# Surveys	Did not Transfer	Transfer within the Corridor	Transfer to Another Corridor	
				Number	Percent
Philadelphia Pike	909	494	67	348	38.3%
Concord Pike	269	175	13	81	30.1%
Penn Ave & Lancaster Pike	407	251	10	146	35.9%
Kirkwood Highway	415	268	14	133	32.0%
Maryland Ave	386	208	14	164	42.5%
Market, DuPont, New Castle	954	548	85	321	33.6%
Christiana Mall	532	341	42	149	28.0%
Bear / Glasgow	325	163	13	149	45.8%
Downstate	162	119	7	36	22.2%
<b>Total</b>	<b>4,392</b>	<b>2,581</b>	<b>269</b>	<b>1,542</b>	<b>35.1%</b>

## Example of O-D Survey Output

- This map illustrates the transfer trips that started on routes 1, 3, 11, 12, 24, and 38.
  - It shows some trips to the Concord Pike and New Castle Corridors that might be made without a transfer, if thru routes were established.
- The O-D study includes similar maps for each corridor.
- These maps and other O-D data can be used as input for more detailed analysis by DTC in the next phase of work.



## Key Findings – Trip Purpose

Purpose	# of Surveys	Percentage
Home to Work	2,151	47.9%
Home to Other	813	18.1%
Home to School	382	8.5%
Home to Home	296	6.6%
Workplace to Other	265	5.9%
Workplace to Workplace	243	5.4%
Other to Other	184	4.1%
Workplace to School	90	2.0%
School to School	58	1.3%
School to Other	8	0.2%
<b>Total</b>	<b>4,490</b>	<b>100.0%</b>

## Summary and Conclusions

- O/D Survey provided usable results and statistically valid sample size to represent DTC bus service
- O/D Survey results were an important tool in the development of Principles and Opportunities by the Project Management Committee
- O/D Survey has detailed information that will be a valuable tool in the development of more detailed, and route specific, changes to DTC bus service in the next phase of work after the Wilmington Transit Moving Forward Study