



WILMINGTON DOWNTOWN CIRCULATION STUDY

**Advisory Committee
March 3, 2009**



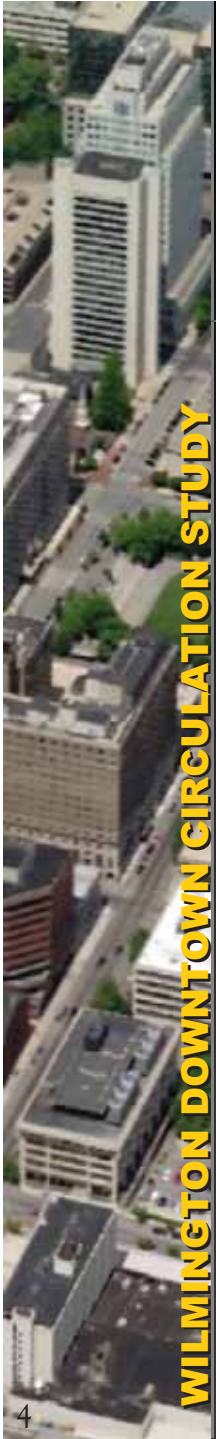
PURPOSE OF THIS MEETING

- Present existing and future transportation issues as identified by the project team
- Obtain your feedback regarding those issues in preparation for the March 19 public workshop



HOW WE IDENTIFIED TRANSPORTATION ISSUES

- Review of past downtown transportation studies
- Listening tour/field observations
- Transit operations interviews with DTC staff
- Traffic analyses: existing and future



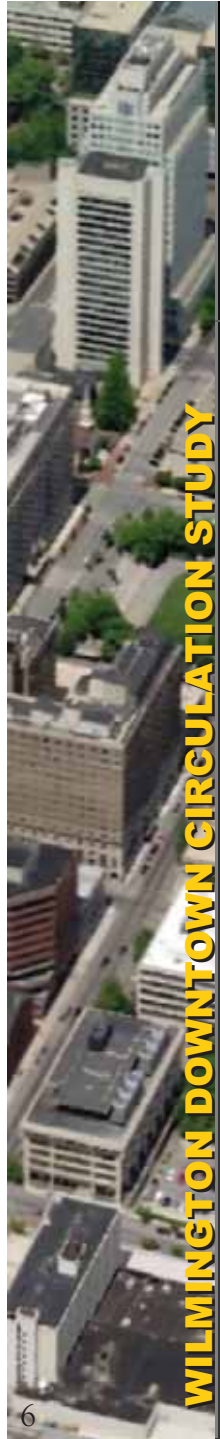
WILMINGTON DOWNTOWN CIRCULATION STUDY

REVIEW OF PAST DOWNTOWN TRANSPORTATION STUDIES



REVIEW OF PAST DOWNTOWN TRANSPORTATION STUDIES

- Over 40 reports reviewed
 - The majority of the Wilmington Initiatives reports from 1996 through 2008
- Over \$350 million has been invested in transportation improvements since 1996
- Some recommendations from previous studies may still be considered for implementation



WILMINGTON DOWNTOWN CIRCULATION STUDY

LISTENING TOUR

LISTENING TOUR

- Wilmington Area Planning Council
- City of Wilmington
 - Mayor's Office
 - City Council Public Works and Transportation Committee
 - Departments of Planning, Public Safety, Public Works, Law
- Delaware Department of Transportation
- Transportation Management Association of Delaware
- Wilmington Parking Authority
- Wilmington Renaissance Corporation
- Riverfront Development Corporation
- Downtown Visions
- Wilmington Main Street
- Greater Wilmington Convention and Visitors Bureau
- Delaware Historical Society
- Major businesses
- Developers

LISTENING TOUR RESULTS

- Over 300 comments were received
- Most were categorized into seven Common Themes to help guide the study



COMMON THEMES

1. Promote a vibrant, healthy Downtown, with a mix of 24-hour uses, through transportation improvements.
2. Ensure that Downtown streets balance all modes of travel (walking, bicycling, transit, and driving) and include buildings and streetscape that enhance street life.
3. Provide convenient, frequent transit service throughout the City, especially to the train station.
4. Reclaim Rodney Square as Downtown's premier public space.



COMMON THEMES

5. Make Downtown more walkable.
6. Improve the existing street system for all modes of travel by timing traffic signals, evaluating street direction changes, and managing on-street parking and loading.
7. Match parking supply with demand.



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LISTENING TOUR: SPECIFIC LOCATIONS OF CONCERN

- Martin Luther King, Jr. Boulevard area
- Rodney Square
- Delaware Avenue/I-95 area
- Market Street
- Fourth Street
- King Street
- Orange Street
- Walnut Street
- Several other locations

LISTENING TOUR: GENERAL ISSUES

- Not location-specific:
 - Transit circulation/taxis
 - Comprehensive pedestrian/streetscape improvements
 - Policy/marketing/enforcement (not capital projects)
 - Comprehensive bicycle improvements
 - Parking projects (other than policy)



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TRANSIT OPERATIONS



TRANSIT OPERATIONS

- 38 routes provide service to downtown Wilmington
- Most routes start or end downtown
- Express service on seven routes during weekday commute hours
- Standard 40-foot buses are used on most routes; notable exceptions are the Wilmington Trolley (32) and 301

TRANSIT OPERATIONS

- Two basic downtown loops:
 - Orange Street loop: 22 routes
 - Amtrak loop: 12 routes





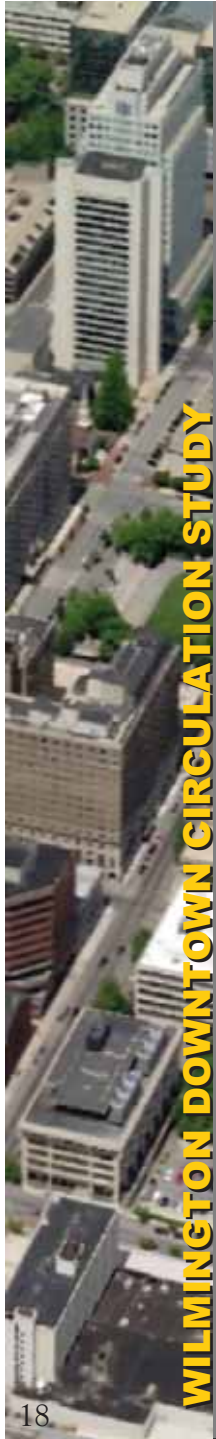
TRANSIT OPERATIONS

- Rodney Square is the starting or ending point for 20 routes
- Weekday bus trips at Rodney Square:
 - Market Street: 41 trips (all trolley)
 - 10th Street: 248 trips
 - 11th Street: 388 trips
 - King Street: 499 trips (356 lay over)

TRANSIT OPERATIONS

- Between 8 and 9 am, 50 trips start or end on the King Street side of Rodney Square
- Between 4:30 and 5:30 pm, 70 trips start or end on the King Street side of Rodney Square
- 5 or 6 buses can serve this side at one time





WILMINGTON DOWNTOWN CIRCULATION STUDY

TRAFFIC ANALYSES



TRAFFIC ANALYSES

- Existing conditions based on counts conducted by this study
 - Critical intersections were counted
 - Travel demand model will be used to interpolate traffic volumes
 - Modeling is PRELIMINARY and at this point is based only on level of service
- Future conditions assume ten percent growth in all traffic volumes

TRAFFIC ANALYSES

- “Level of Service,” or LOS, is a measure of how speed and convenience of travel are experienced.
- At a traffic signal, LOS is measured by the number of seconds of total delay experienced by the average motorist entering the intersection.

TRAFFIC ANALYSES

- LOS is measured by “grades” from A through F:
 - A: 0 to 10 seconds of delay
 - B: 10 to 20 seconds
 - C: 20 to 35 seconds
 - D: 35 to 55 seconds
 - E: 55 to 80 seconds
 - F: more than 80 seconds
- These are measured during the morning (7 to 9 am) and evening (4 to 6 pm) peak hours

TRAFFIC ANALYSES

- In Delaware, LOS D or better is generally considered acceptable in urban areas
- New research is developing models on how to consider pedestrians, bicycles, and transit as well as motor vehicles in calculating LOS for urban streets

TRAFFIC ANALYSES: AM PEAK

Intersection	AM peak hour level of service	
	Existing	Future
MLK/Maryland/Madison	F	F
2 nd /Walnut	F	F
4 th /Jackson	F	F
9 th /Adams	F	F
11 th /Adams	F	F
Delaware/11 th /Jefferson	F	F
Delaware/Washington	F	F
4 th /Walnut	E	F
Front/Walnut	E	TBD

All other intersections function at LOS D or better.

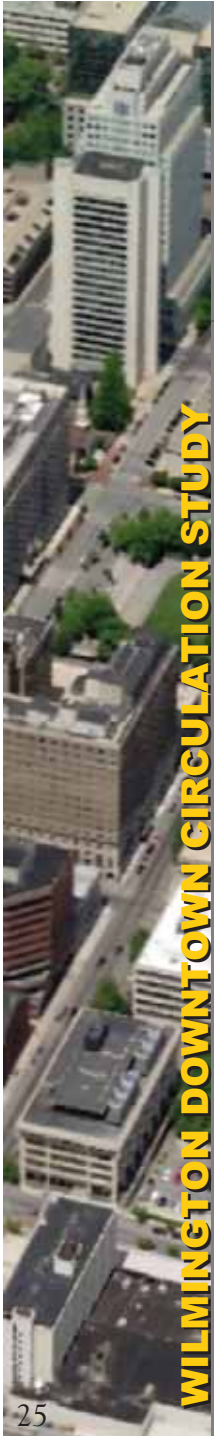
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TRAFFIC ANALYSES: PM PEAK

Intersection	PM peak hour level of service	
	Existing	Future
MLK/Washington/Justison	F	F
MLK/ Market	F	F
4 th /King	F	F
9 th /Adams	F	F
4 th /Jackson	D	E
12 th /Jefferson	D	E
Delaware/Adams	D	E

All other intersections function at LOS D or better.

DRAFT



WILMINGTON DOWNTOWN CIRCULATION STUDY

SUMMARY OF ISSUES BY AREA/CORRIDOR



SUMMARY OF ISSUES: M.L. KING, JR. BOULEVARD AREA

- Pedestrian access issues
 - MLK Jr. Blvd. itself
 - Amtrak bridges: lighting and cleanliness
- Traffic congestion at four intersections
 - MLK Jr. Blvd. /Maryland/Madison
 - MLK Jr. Blvd. /Washington/Justison
 - MLK Jr. Blvd. /Market
 - Front/Walnut
- Public desire to remove the “sweeps”
- Unclear signing
- Maryland/Monroe safety and congestion issues
- Proposed bike route in the Wilmington Bicycle Plan
- Wilmington Transportation/Transit Center project
- Water Street project, Shipley to West
- Water Street walkway project, West to Madison

SUMMARY OF ISSUES: RODNEY SQUARE

- Conflicts between pedestrian use of the square and its current function as a transit center
 - Safety for all modes of travel
 - Security
 - Aesthetics
 - Noise/air pollution



WILMINGTON DOWNTOWN CIRCULATION STUDY

SUMMARY OF ISSUES: DELAWARE AVENUE/I-95 AREA

- Pedestrian access issues
- Traffic congestion at six intersections
 - 9th/Adams
 - 11th/Adams
 - 12th/Jefferson
 - Delaware/Adams
 - Delaware/11th/Jefferson
 - Delaware/Washington
- Unclear signing
- Speeding
- Left turn prohibition from WB 10th to SB Washington
- Delaware, 11th, and 12th are proposed bike routes in the Wilmington Bicycle Plan
- Second phase of Delaware Avenue Gateway project

SUMMARY OF ISSUES: MARKET STREET

- Pedestrian access issues
- Signal timing
- Conflicts with parked cars, school buses, emergency vehicles, trolley
- Proposed bicycle boulevard in the Wilmington Bicycle Plan
- Market Street Phase IV project, 11th to 16th

SUMMARY OF ISSUES: FOURTH STREET

- Pedestrian access and safety issues
 - 6 pedestrian crashes at King, 2000-2006
 - 5 pedestrian crashes at Madison, 2000-2006
- I-95 gateway/streetscape
- Traffic congestion at three intersections
 - 4th/Jackson
 - 4th/King
 - 4th/Walnut
- No left turn lane from EB 4th to NB Adams
- Downtown 4th Street project, I-95 to King

SUMMARY OF ISSUES: KING STREET

- Excessive width south of 8th Street
 - Pedestrian access issues
 - Speeding
- Traffic queues
 - Too many buses
 - Some congestion due to MLK Jr. Blvd./Market signal
- Proposed bike route in the Wilmington Bicycle Plan
- King Street transit corridor project, MLK Jr. Blvd. to 13th

SUMMARY OF ISSUES: ORANGE STREET

- Spot issues
 - Pedestrian crossings at 10th Street
 - Lane shift at 9th Street
- Orange Street transit corridor project, MLK Jr. Blvd. to 13th

SUMMARY OF ISSUES: WALNUT STREET

- Speeding
- Pedestrian access issues
- Lanes are not aligned across some intersections
- Traffic congestion at three intersections
 - Front/Walnut
 - 2nd/Walnut
 - 4th/Walnut
- Walnut Street corridor improvements project, Front to 16th
- Wilmington Transportation/Transit Center project
- Leo J. Dugan Bridge improvements project

SUMMARY OF ISSUES: OTHER LOCATIONS

- Old 9th Street “mall” creates issues for emergency vehicles and parking
- Exiting City Center garage on 12th Street
- Inadequate post office parking
- 12th Street connector
- Signal timing at 2nd/Shipley
- Other bike routes proposed by the Wilmington Bicycle Plan
- Riverfront access: I-95 ramps, new Christina River bridge

SUMMARY OF ISSUES: GENERAL TOPICS

- Transit circulation/taxis
- Comprehensive pedestrian/streetscape improvements
- Policy/marketing/enforcement (not capital projects)
- Comprehensive bicycle improvements
- Parking projects (other than policy)

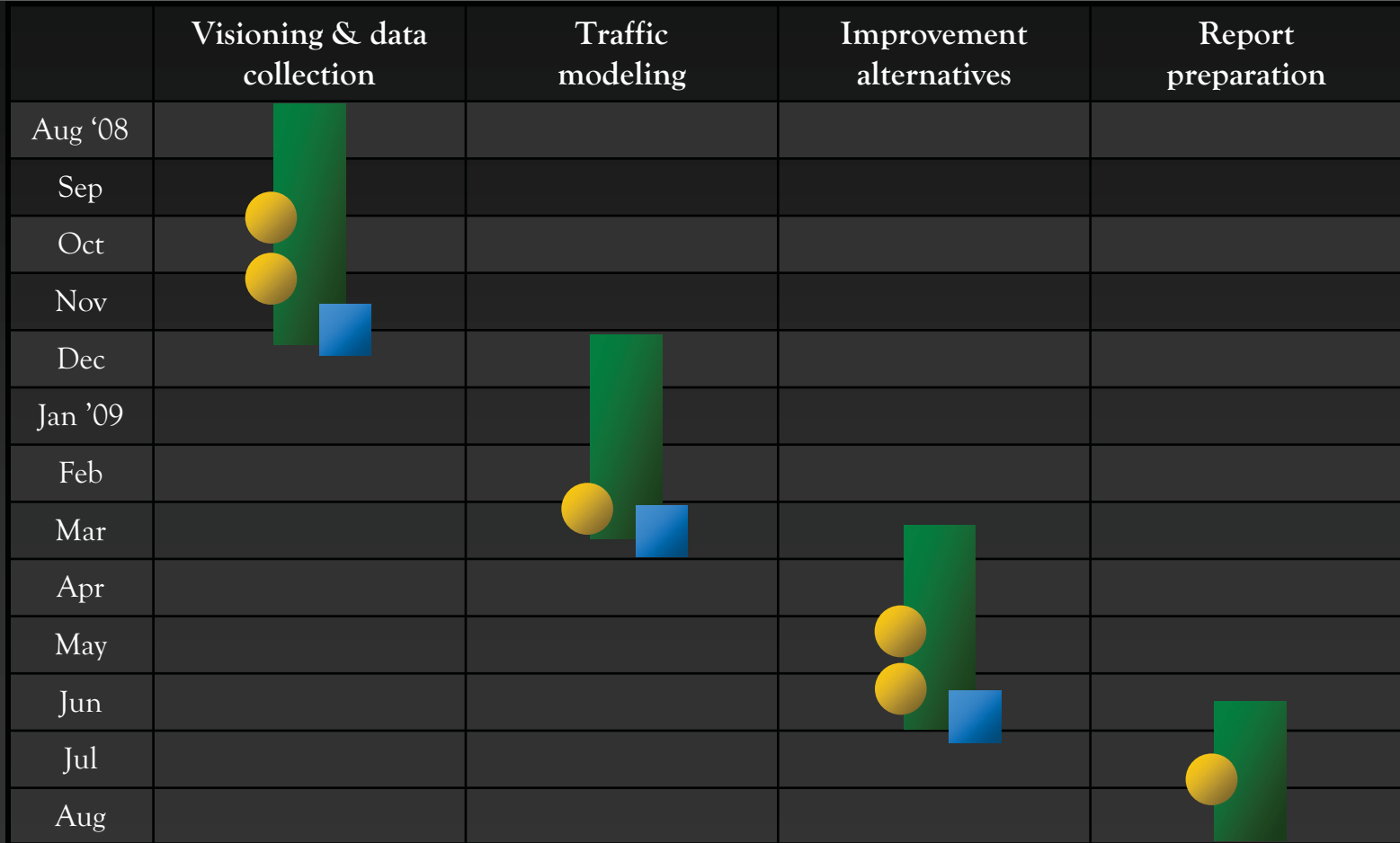




UPCOMING ACTIVITIES

- Development of improvement alternatives
 - March – July 2009
- Report preparation
 - July – September 2009

ANTICIPATED SCHEDULE

WILMINGTON DOWNTOWN CIRCULATION STUDY



-  Advisory Committee meeting
-  Public workshop

CONTACT INFORMATION

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