

# Glen Ellyn Central Business District Traffic Study

February 29, 2012



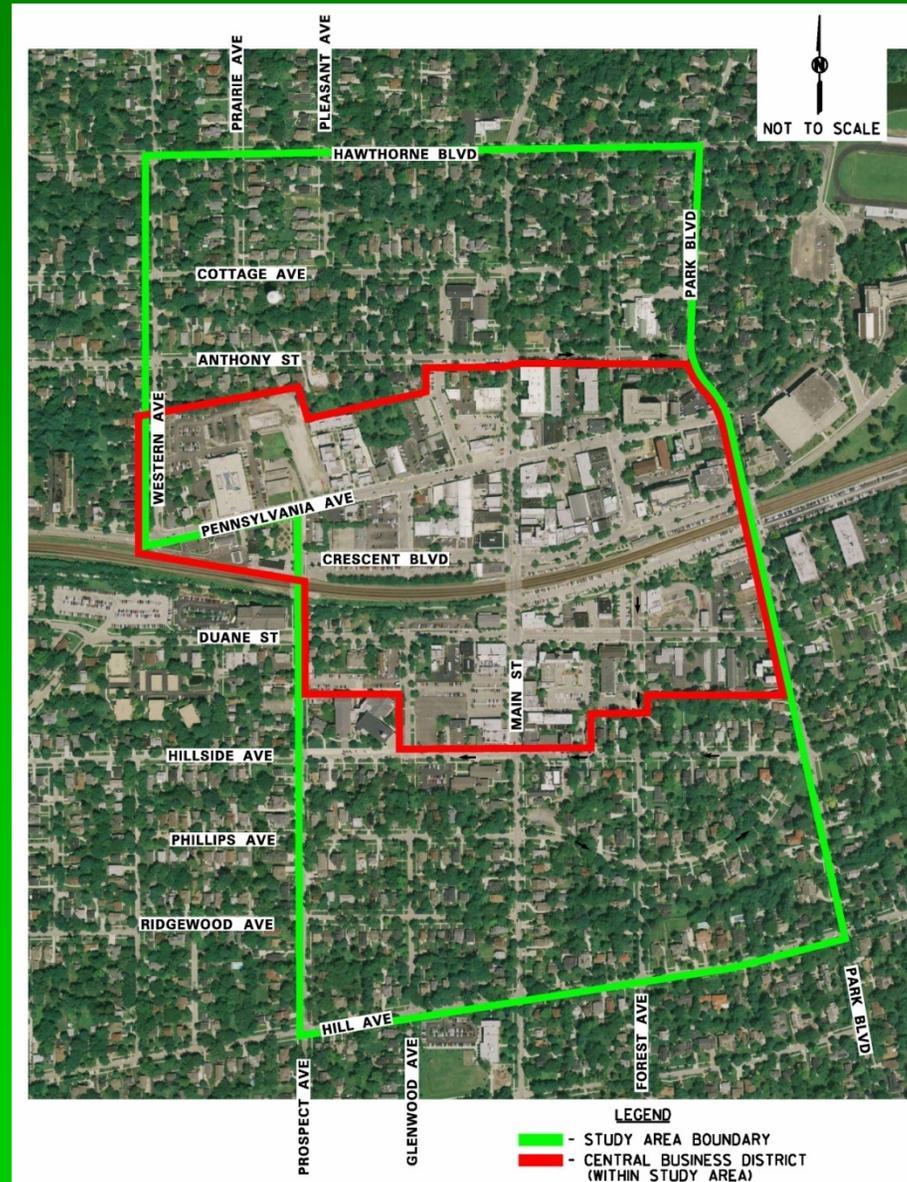
# Goals of the Study

- Examine the existing operation of the one-way roads
- Determine the feasibility of converting the one-way roads to two-way
- Develop a two-way system for the CBD commercial block
- Evaluate the impact on traffic flow, pedestrian circulation and parking supply
- Review all CBD roads to determine if striping modifications would yield additional on-street parking

# Data Collection Effort

- Performed extensive field surveys/observations
- Conducted and obtained vehicle/pedestrian counts
  - ❖ Daily vehicle counts at 12 locations
  - ❖ Peak period vehicles counts at 10 intersections
  - ❖ Peak period pedestrian counts at 4 intersections
- Obtained and performed limited CBD parking surveys
- Observed operations of the at-grade railroad crossings
- Inventoried the other modes of transportation serving the CBD

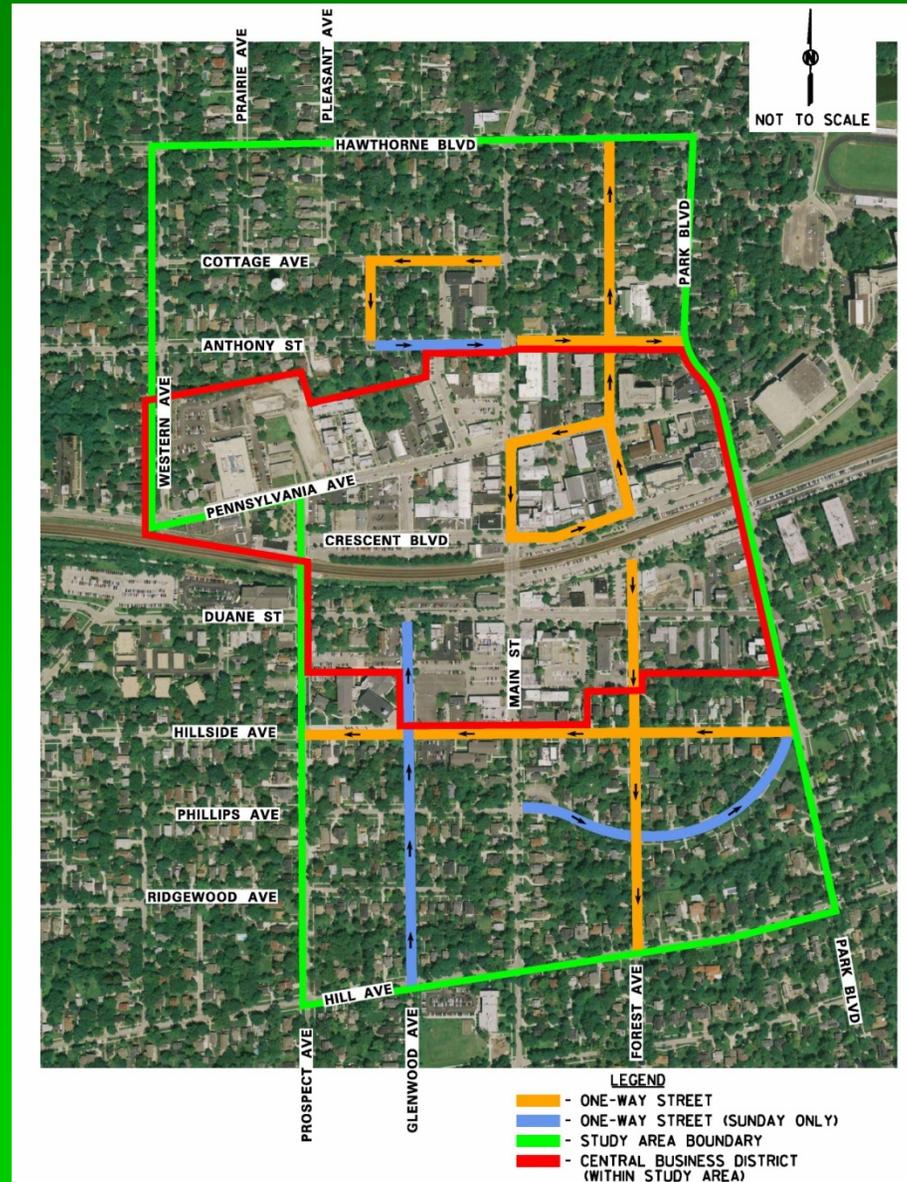
# Study Area



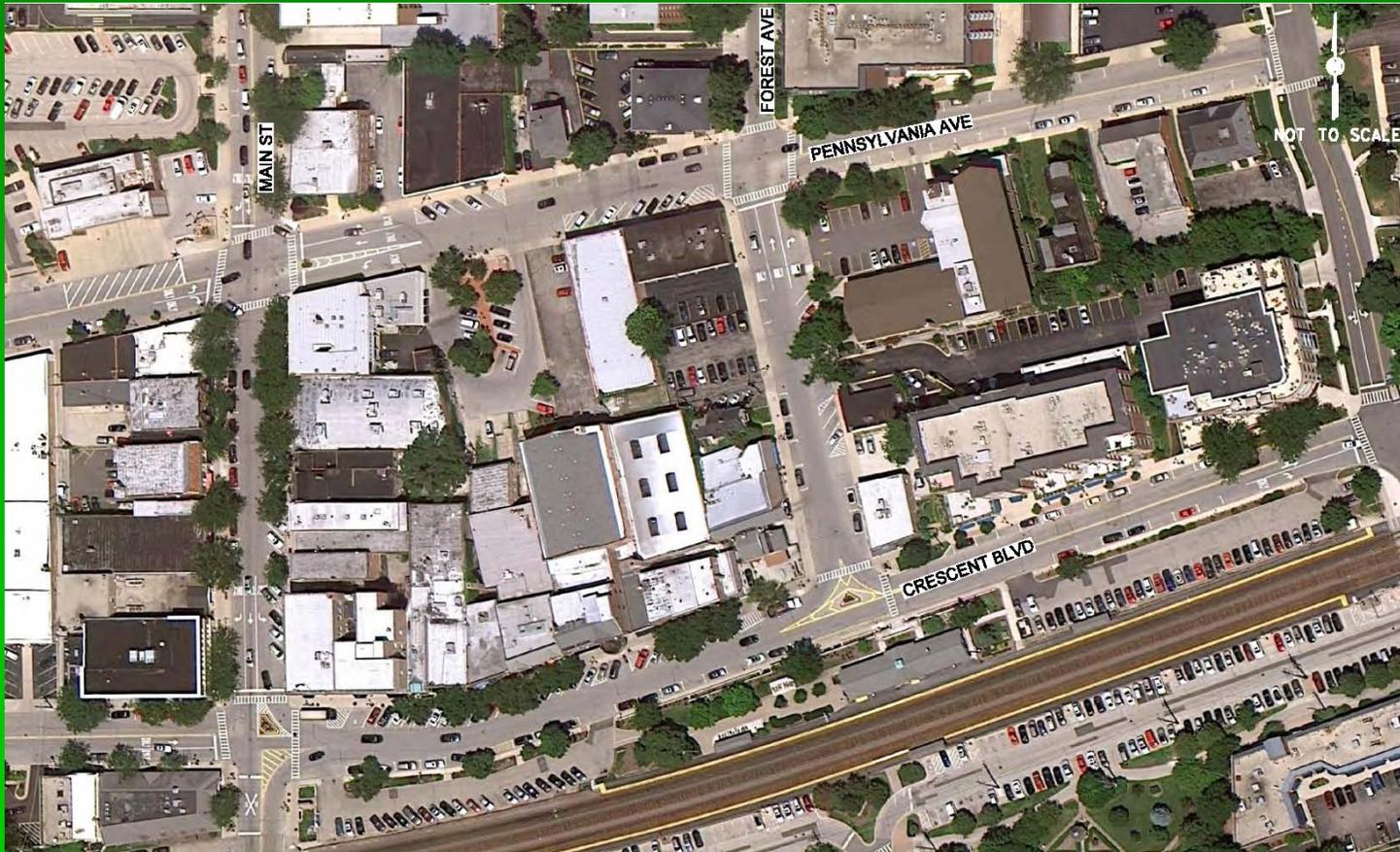
# Study Area

- Bounded by Hawthorne Street, Park Boulevard, Hill Avenue and Prospect Avenue/Western Avenue
- Study area separated into three sections/sub-sections
  - ❖ CBD Commercial Block
    - ✓ Pennsylvania Avenue
    - ✓ Forest Avenue
    - ✓ Crescent Boulevard
    - ✓ Main Street
  - ❖ Other CBD One-Way Roads
  - ❖ Residential Areas

# One-Way Roads



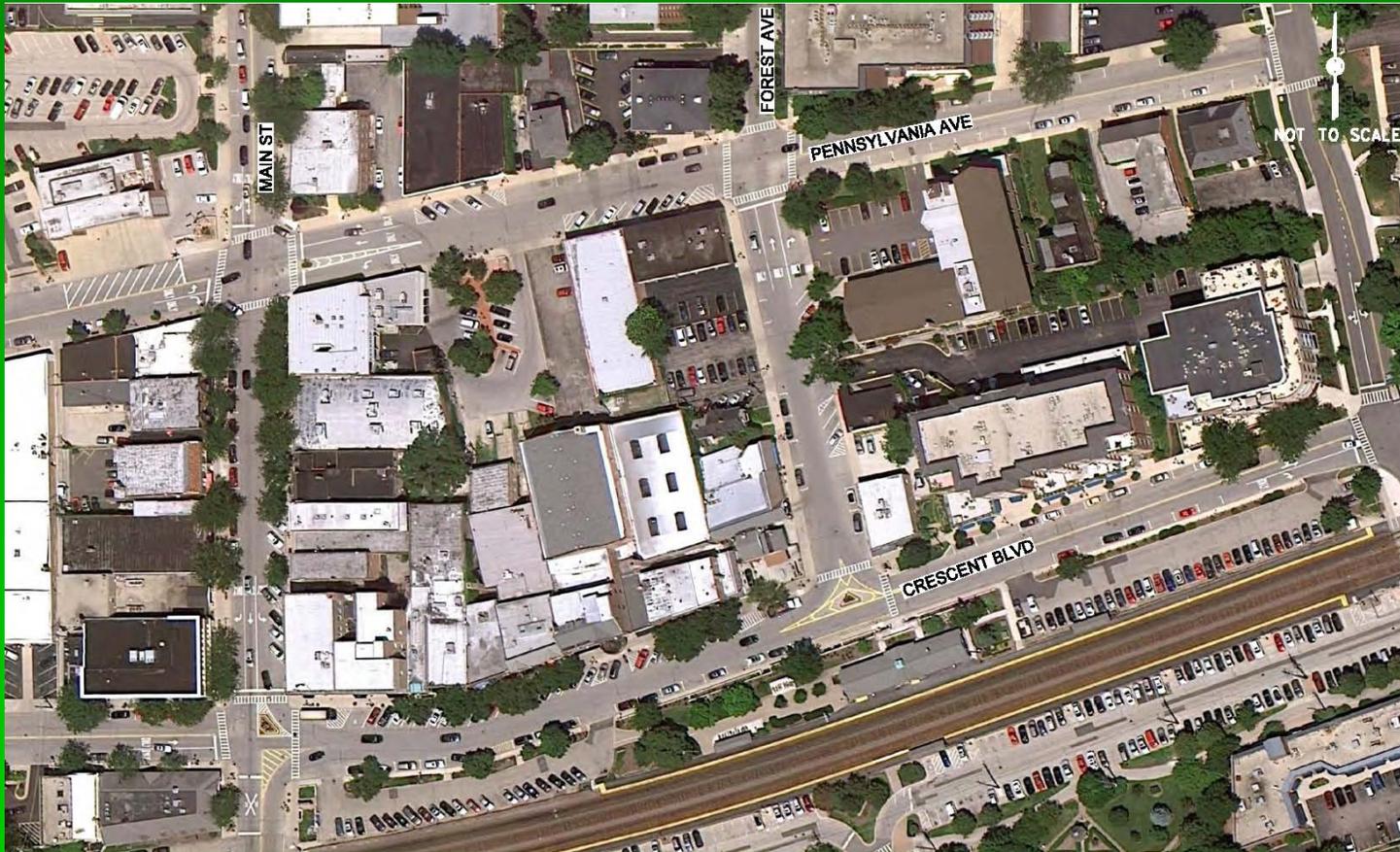
# Existing Operation Commercial Block



# Existing Operation of Commercial Block

- Block bordered by Pennsylvania Avenue, Forest Avenue, Crescent Boulevard and Main Street
- All four roads bordering the block provided one-way traffic flow
- Counterclockwise circulation around the block
- Parking provided on both sides of the roads
- Medians are provided in three of the four intersections

# Existing Operation Commercial Block





# Two-Way System Commercial Block

- Roadway Design Features
  - ❖ Two-way traffic flow (one lane in each direction)
  - ❖ Parking provided on both sides of the roads
- Intersection Design Features
  - ❖ Removal of medians at all of the intersections
  - ❖ Exclusive turn lanes provided along many intersection approaches
- Intersection Traffic Control
  - ❖ Main/Pennsylvania – all-way stop sign control
  - ❖ Forest/Pennsylvania – all-way stop sign control
  - ❖ Forest/Crescent – all-way stop sign control
  - ❖ Main/Crescent – Crescent and SB Main under stop sign control



# Duane Street Plan



# Evaluation of One-Way and Two-Way Systems

- Vehicle Operations
- Roadway Traffic Volumes (Visibility)
- Pedestrian Operations
- Parking Supply

# Vehicle Operations

- Both systems will operate well (minimal delay/queuing)
- Limited congestion due to at-grade railroad crossings, pedestrian activity and on-street parking
- Benefits of one-way system (improved traffic flow)
  - ❖ Maximizes the capacity of the roadway system
  - ❖ Minimizes number of intersection vehicle movements
- Benefits of two-way system (improved access/circulation)
  - ❖ Maximizes access to the CBD, businesses and parking facilities
  - ❖ Maximizes circulation through the CBD and to/from businesses and parking facilities
  - ❖ Maximizes flexibility to avoid railroad delay

# Roadway Traffic Volumes (Visibility)

- Main Street
  - ❖ One-Way System – lower traffic volumes
  - ❖ Two-Way System – higher traffic volumes
- Pennsylvania Avenue, Forest Avenue & Crescent Boulevard
  - ❖ One-Way System – higher traffic volumes
  - ❖ Two-Way System – lower traffic volumes

# Pedestrian Operation

- Both systems provide efficient pedestrian circulation
- One-Way System
  - ❖ Decreases number of intersection vehicle movements which pedestrians must cross
  - ❖ Increases the travel/circulation through the CBD
- Two-Way System
  - ❖ Decreases the travel/circulation through the CBD
  - ❖ Increases number of intersection vehicle movements which pedestrians must cross
- Two-way alternative includes pedestrian enhancements at the Crescent/Forest intersection

# On-Street Parking Supply

Roadway Sections	One-Way System	Two-Way System	Change
Pennsylvania	17	19	+2
Forest Avenue	14	16	+2
Crescent Boulevard	43	34	-9
Main Street	<u>26</u>	<u>18</u>	<u>-8</u>
Sub Total	100	87	-13
Duane Street	<u>29</u>	<u>42</u>	<u>+13</u>
Total	129	129	0

# Open House

- Exhibits are provided throughout the Auditorium for additional review
- Representatives of the project team will be stationed at the exhibits to answer specific questions

Thank you for coming!