

# CITY OF ROCHELLE, ILLINOIS

## TRAFFIC STUDY 20<sup>th</sup> St. – 8<sup>th</sup> Ave. to Flagg Rd.

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Prepared By:



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**Enclosure(1)**

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## Purpose of Report

The purpose of this report is to:

1. Identify the volume of traffic using 20<sup>th</sup> Street from 8<sup>th</sup> Avenue to Flagg Road.
2. Identify the speed of the traffic using 20<sup>th</sup> Street from 8<sup>th</sup> Avenue to Flagg Road to determine whether an adjustment to the current posted speed is necessary.

## Definition of Terms Used in Report

*Average Daily Traffic (ADT)* is the average number of vehicles two-way passing specific point in a 24-hour period, normally measured throughout a year.

## Narrative Report

### General

Traffic counts were obtained using TRAX RD automatic traffic recorders designed and built by JAMAR Technologies, Inc.. Sensors consisting of road tubes were installed to record a time stamp as tires of a vehicle cross the tubes. Road tube layout L6 (Two directions w/ lane separation) was used.

A variety of reports and graphs were created to obtain the volume, class, and speed of vehicles in each direction and combined.

Speed data was obtained by using the Speedster III radar speed gun by Bushnell and the TRAX RD automatic traffic recorder.

The “Policy on Establishing and Posting Speed Limits on the State Highway System” by the Illinois Department of Transportation was used as a guide to determine whether an adjustment to the posted speed is warranted.

## Data Summary

### Volume – ADT

|   | <u>TRAX RD</u> | <u>IDOT ADT Map</u> |
|---|----------------|---------------------|
| <u>20<sup>th</sup> St.</u>                    |                |                     |
| 8 <sup>th</sup> Ave. to 10 <sup>th</sup> Ave. | 468            | 650 (2007)          |
| 10 <sup>th</sup> Ave. to Carrie Ave.          |                | 1,050 (2007)        |
| 10 <sup>th</sup> Ave. to Squires Landing      | 1,115          |                     |
| Squires Landing to Carrie Ave.                | 1,111          |                     |
| Carrie Ave. to Flagg Rd.                      |                | 1,500 (2007)        |
| <br>  |                |                     |
| <u>Carrie Ave.</u>                            |                |                     |
| 20 <sup>th</sup> St. to Clifton Terrace       | 966            |                     |

### Speed – 85<sup>th</sup> Percentile Ave.

|   | <u>TRAX RD</u> | <u>Speedster III Radar Gun</u> |
|---|----------------|--------------------------------|
| <u>20<sup>th</sup> St.</u>                    |                |                                |
| 8 <sup>th</sup> Ave. to 10 <sup>th</sup> Ave. | 39 MPH         |                                |
| 10 <sup>th</sup> Ave. to Squires Landing      | 38.5 MPH       |                                |
| Squires Landing to Carrie Ave.                | 43 MPH         |                                |
| 10 <sup>th</sup> Ave. to Carrie Ave.          |                | 44.5 MPH                       |

## Recommendations

Utilizing the speed data collected in the field and the resulting data obtained from the “Policy on Establishing and Posting Speed Limits on the State Highway System”, it is recommended that the current posted speed of 30 mph be increased to 40 mph.

**City of Rochelle, Illinois**  
**Establishment of Speed Zone**  
 2012

Location: 20th Street From: 8th Avenue To: Flagg Rd.

Distance: Approx. 1 Mile

**1 Spot Speed Studies (Attached)**

| Date      | 85th % (MPH) | 10 MPH Pace      |
|-----------|--------------|------------------|
| 2/7/2012  | 45.1         | 34 - 43 (70.0%)  |
| 2/17/2012 | 44.7         | 32 - 41 (66.94%) |
| 3/16/2012 | 43.8         | 31 - 40 (55.10%) |
|           |              |                  |

**2 Prevailing Speed**

|                           |      |     |
|---------------------------|------|-----|
| 85th Percentile Ave.      | 44.5 | MPH |
| Upper Limit - 10 MPH Pace | 41.3 | MPH |
| Test Run Ave.             |      | MPH |
| Prevailing Speed          | 42.9 | MPH |

**3 Existing Speed Limits**

|                     |       |     |
|---------------------|-------|-----|
| Zone being Studied  | 30    | MPH |
| Violation Rate      | 96.3% |     |
| Adjacent Zones: (N) | 45    | MPH |
| (E & S)             | 30    | MPH |

**4 Driveway/Sideroad Conflicts**

|   |          |        |                   |
|---|----------|--------|-------------------|
| Residential Drives                      | 4        | x 1.0  | 4.0               |
| Minor Street Intersections              | 2        | x 5.0  | 10.0              |
| Major Street Intersections              | 2        | x 10.0 | 20.0              |
| Driveway/Sideroad Conflict Number Total |          |        | 34.0              |
| 34.0                                    | D/S.C.N. |        | 34.0              |
| 1.0                                     | Miles    | =      | Conflict No./Mile |

**5 Misc. Factors**

|                                |     |
|--------------------------------|-----|
| 10 Peds/Hr, 3+ Hrs? (Yes / No) | No  |
| Accident Rate Ratio            |     |
| Route = State Ave.             |     |
| Parking Permitted? (Yes / No)  | Yes |

**6 Prevailing Speed Adjustment**

|                              |              |
|------------------------------|--------------|
| Driveway/Sideroad Adjustment | 0.0%         |
| Pedestrian Adjustment        | 0.0%         |
| Accident Adjustment          |              |
| Parking Adjustment           | 5.0%         |
| Total (Max 20.0%)            | 5.0%         |
| 42.9 MPH                     | x 5.0%       |
| Prev. Speed                  | % Adj. = 2.1 |
|                              | Max 9 MPH    |

**7 Revised Speed Limit**

|                            |                |     |
|----------------------------|----------------|-----|
| Recommended Speed Limit    | 40.0           | MPH |
| Anticipated Violation Rate | 38.2%          |     |
| Prepared By                | Mike Hielsberg |     |
| Date                       | March 30, 2012 |     |