



Willow Road Phase I Study Summary of CAG Meeting #5 and Public Comment Period

Date: September 15, 2010
Time: 6:00 p.m. to 8:10 p.m. CAG Meeting
8:10 p.m. to 9:00 p.m. Public Comment Period
Place: New Trier High School, Northfield Campus, Room C-234
Attendance: See Sign-in Sheet at the end of the Meeting Summary

IDOT is conducting planning studies along Willow Road from Waukegan Road (IL 43) to the Edens Expressway (I-94). The intent of the Community Advisory Group (CAG) is to provide a forum for community members to provide input into IDOT's project development process and provide feedback about their transportation needs and community issues throughout the study. IDOT will consider this input, along with all of its other work and analysis, to make their planning and design decisions.

At each meeting, topics are discussed with the CAG to solicit ideas and feedback. The meeting topics discussed at CAG Meeting #5 included the traffic and crash analysis, the revised Problem Statement; and introduction of the travel pattern analysis, physical inventory, and the Purpose and Need.

I. Introduction (Pete Harmet)

Overview:

Changes implemented at CAG meeting #4 (addition of an audio podcast and updated meeting format based on brief presentations followed by questions and answer periods) will continue for this CAG meeting. Comments received on the traffic and crash studies are very beneficial.

Meeting Schedule

The length of the meeting was extended to allow for enough additional time for discussions as needed. The public comment portion of the meeting was still held at the adjournment of the CAG meeting.

Post Meeting Comments

IDOT noted that several new topics are being presented, and requested that any initial CAG comments on these technical studies be provided to IDOT by October 22, 2010.

II. Traffic and Crash Reports Follow Up Discussions

Presentation:

A summary of the draft crash and traffic analyses was presented by TranSystems to the CAG. Subsequent to CAG Meeting #4, TranSystems has begun making updates where appropriate to the analysis, exhibits, and reports. The presentation and exhibits incorporate any known revisions/updates.

A summary of the crash analysis was presented.

- There are approximately 17 crashes per month.
- There are about 3 injury crashes per month.
- Rear end and sideswipe injury Type B crashes occurred up to 3 times higher than statewide averages for similar roadway types in some locations.
- There was a higher percentage than statistical averages for Type A crashes for the segment of Willow Road from Wagner Road to Old Willow/Northfield Road.
- There was a higher percentage of crashes than expected based on statistical averages for Type B crashes for the segments of Willow Road between Sunset Ridge Road to Old Willow Road, from Wagner Road to Old Willow

Road/Northfield Road, and from Central Avenue/Happ Road through the I-94 interchange (this last segment was not mentioned in the CAG Meeting #4 presentation, but was included in the draft report).

- Weather and lighting conditions were not significant factors.
- Rear end crashes accounted for more than 70% of the total crashes. Driver behavior and failure to reduce speed were two reasons for these crashes. Long queue lengths at some intersections and lack of left turn lanes at other intersections also lead to these crashes.
- There are no recorded pedestrian crashes during the study period of 2006 to 2008. One cyclist crash occurred during this period.

A summary of the traffic analysis was presented.

- In the existing condition there is failing Level of Service "E" or "F" at 4 of the 6 signalized intersections and for over half of the roadway segments.
- There are long vehicle queues, and volume-to-capacity (v/c) ratios are greater than 1.0.
- In 2030 with a No-build scenario all of these measures (levels of service, queues, v/c ratios) worsen.
- Maps showing Level of Service, queue lengths, and volume to capacity ratios for existing traffic and for 2030 No-build traffic within the study area were presented.

Next Steps

- For both the traffic and crash analysis, IDOT will review comments received and incorporate changes as necessary.
- The discussion of pedestrian safety will continue throughout the CAG and alternatives development and evaluation process. IDOT anticipates having a presentation regarding potential pedestrian enhancements.
- Will begin to develop and evaluate alternatives that address deficiencies based on forecast traffic.

Draft Crash and Traffic Analysis Discussion

Following are CAG member questions and comments on the traffic and crash reports.

The CAG member asked that IDOT respond to all of the specific comments in the report.

Both the Villages of Northfield and Glenview hired independent consultants to review the draft crash and traffic analyses. Stacy Sigman, Northfield Village Manager and CAG member summarized the comments received from their consultant. Don Owen, a Glenview CAG member, summarized comments received from their consultant. Copies of all comments received by IDOT were forwarded to the CAG members in advance of CAG Meeting #5.

Northfield's Independent Consultant Comments

- Ms. Sigman summarized a review prepared by Northfield's independent consultant for the CAG members.
- The consultant report disputes many conclusions in the draft report from TranSystems.
- Overall based on the draft crash analysis, the existing roadway appears to be functioning very safely.
- Crash severity is very low and there are low numbers of pedestrian and bicycle crashes. The severity of crashes is far less than the state average. Ms. Sigman noted that this is remarkable given the presence of several schools and churches in the area.
- 75% of the crashes occurred at the intersections and 54% of these intersection crashes occurred at the ends of the project where the roadway is already expanded.
- Within the 2 lane areas, there are very few crashes.
- Based on the consultant's review of the data, they did not consider queuing and congestion to be the primary concern. Rather, most crashes are because of driver error or inattentive drivers. The consultant noted that most

crashes did not occur during peak travel periods when the roadway is most congested as supported by the crash reports completed by the police officers.

- Willow Road is not noted as a five percent location in the *2009 FHWA HSIP Five Percent Report – State of Illinois*. Based on this, the roadway does not exhibit the most pressing safety needs according to the State of Illinois.
- The consultant's review questioned why the draft crash analysis did not compare the roadway to statewide averages for similar types of road but instead considered the intersections and segments. The state calculations show that 25 times more Type A crashes should be expected, 3 times more Type B crashes, and 5 times the number of injury crashes than were observed in the study area.
- Based on their review, the consultant considers the most dangerous portion of the roadway to be the existing six-lane configuration at the Willow Road/Waukegan Road intersection; about 32% of all crashes occurred at this intersection.
- The peak hour and average daily traffic volumes have decreased in the 9 years since the 2000 Burke report. The consultant does not believe this is related to the current economy but rather as part of a larger longer term regional trend. Peak hour traffic on various segments has declined 20% to 40% in the last 9 years.
- Traffic volumes on all of the east-west roadways near the study area in the past 20 years (except for the Edens Spur) have seen a decline or no increase in traffic volumes.
- It has been suggested over the years that Willow Road has caused increases in traffic on roads like Lake Avenue, Dundee Avenue, and Lake Cook Road. Data analyzed by the consultant shows that the volumes on these roads has decreased since 1990.
- The consultant review noted that traffic and saturation flow rate counts were conducted on Monday and Friday. IDOT usually conducts counts on Tuesday, Wednesday, or Thursday. They also noted that daily 24-hour traffic count data was not collected; instead 12-hour counts were used. The review noted that they felt a 24-hour count is more accurate.
- The capacity analysis shows the greatest delay in the study area is at the intersection of Willow Road and Waukegan Road. Major contributors to delay in the corridor are due to the existing infrastructure problems (poor Level of Service and queuing are due to outdated traffic signal equipment, poor timing, lack of interconnected traffic signals, and insufficient left turn lanes).
- The 2030 No-build traffic assumptions forecast 14% growth while the 20-year historical data shows that traffic volumes have decreased. Even though the region has seen tremendous economic and development growth from 1990 to 2006, the traffic on almost every east-west corridor either declined or stayed the same. The consultant believes this trend will continue over the next 20 years and volumes will either remain stable or decline.
- It was stated that the independent consultant's review was objective and non-judgmental. The same consultant has performed work for IDOT.

Mr. Harmet provided some general responses to Northfield consultant's review comments.

- Although fatal crashes and more Type A crashes did not occur, it does not mean there is not a safety concern. The overall average of 3 injury crashes per month and the over representation of Type B crashes warrant further consideration.
- There are crashes in both the 4-lane and the 2-lane sections. The crashes in the 2-lane sections occur at a higher rate than in the 4-lane sections, when considering the volume of traffic.
- Instances of driver error were cited where the crash reports actually said it.
- Crashes occurred throughout the day. There is no traditional peak hour on Willow Road., instead traffic volumes build throughout the day. Approximately 31% of the crashes occurred during the traditional morning (7 am to 9 am) and afternoon (4 pm to 6 pm) peak periods. During the mid-day, 32% of the crashes occurred, showing crashes occur during both congested and less congested times of the day.
- Regarding the traffic volumes discussed by the consultant, that analysis does not change the fact that Willow Road is over capacity in the existing conditions.

- Traffic signal equipment is outdated in the study area. No data is available yet that supports the consultant comment that significant capacity could be added by interconnecting the traffic signals. This will be part of the future alternative analysis.
- There are safety and congestion problems in the 2-lane and 4-lane sections.

CAG Member draft crash analysis comments and responses

- A CAG member specifically questioned conclusions in the report when only 3 of 14 locations showed higher observed numbers of crashes. The CAG member stated the conclusions in the report are wrong and the report is worthless. The CAG member asked if the draft report will be updated.

Mr. Harmet responded that a comparison to total number of locations is not relative or correct. The purpose of the crash analysis is to determine which locations have an over-representation of crashes and not to create a comparison to number of segments. For example, if only six locations were reviewed, and three had an over-representation of crashes, it would not change the results; since what is relative is the three locations with an over-representation of crashes. The consultant's conclusion that since something worse did not happen in the other 11 locations, we can dismiss what did happen in the 3 locations, is inaccurate.

Regarding the *2009 FHWA HSIP Five Percent Report – State of Illinois*, Mr. Harmet stated there is nothing that states what rate of crashes a roadway should or should not have. The report prepared by TranSystems only flags locations above the expected values. There is nothing in the *Five Percent Report* that says calculations below the state wide averages should be dismissed and not evaluated for safety improvements.

- A CAG member responded that the report should not conclude that there are crash problems in the study area when only some locations in the study area are higher than the statewide average. The report should note that other locations are fine.
- A CAG member said that while the report may be fair, the executive summary is false and misleading and should be revised.
- A CAG member noted that the expected Type A crashes are supposed to be 25 times higher than the observed, and that the expected Type B crashes are supposed to be 3 times higher than observed. The CAG member also noted that 50% of the 1.2 miles of the road in the study area is only 2 lanes and it produces less than 29% of the crashes observed.
- A CAG member noted that the paramount issue for this project is safety and no one can present data that says increasing lanes which increases speed will not lead to fatal crashes.
- As previously noted, the Village of Glenview hired an independent consulting firm to review the draft crash and traffic analyses. Don Owen, CAG member, stated their consultant found the reports to be complete and thorough. Glenview's consultant will make a presentation during the public comment portion of the meeting. See Comment 6 (Lou Haussmann, Mokena, IL).

Draft traffic analysis comments and responses

- A CAG member asked how an assumed 14% growth in traffic by 2030 can be supported when data shows a decline in volumes of significant amount in recent years.

Mr. Harmet responded that the traffic projections are from CMAP. The data used by the Northfield consultant are taken from IDOT traffic maps that present annual average daily traffic. These volumes are averages that include traffic volumes from all days of the week including weekends and holidays and based on a wide range of locations. This data cannot be correlated to the CMAP traffic models. Mr. Harmet stated that the existing road is congested and even moderate growth above current levels will lead to more congestion. Mr. Harmet stated that IDOT would provide a written response/explanation to the question concerning the 14% growth in traffic.

- A CAG member stated that as IDOT moves into the design phase, they should ensure that segments that are working well should not be negatively impacted. But areas that are not working well should be addressed.

- A CAG member stated that Willow Road should be classified as a Class III roadway and not a Class II roadway. A function of a roadway class is its speed limit, and almost all of Willow Road in the study area has a 35 miles per hour (mph) speed limit and that matches the Class III roadway criteria.
Mr. Harmet clarified that the roadway functions as a Class II. The maximum speed for Class III is 35 mph. With higher speed and access to an interstate, Willow Road functions as a higher class road (Class II).
- A CAG member said the submittal of the Traffic Report was just 4 days before the last CAG meeting. It was stated by IDOT that the submittal of the report was late because of its complexity and level of detail. But this report said that Willow Road is a Class III Roadway and then IDOT issued a subsequent version that altered the information to say it is a Class II Roadway. The CAG member said that other outside influences told IDOT to change the information to say it is a Class II Roadway. IDOT responded that this is not true. The CAG member asked for a written response on this topic.

Safety comments and responses

- A CAG member stated that pedestrian safety is very important. Concerning pedestrian safety, the CAG member stated that she does not want to see an intersection at Willow and Wagner that is like the one at Willow and Waukegan.
- A CAG member stated that everyone on CAG is concerned about safety, especially school children.
- A CAG member asked why there is not a school zone on Willow Road and would a four-lane road lead to approval of a school zone. Another CAG member stated that a letter was sent to IDOT requesting a school speed zone in June.
- A CAG member said this request has been stated at the last three CAG meetings but no information or response has been presented. The CAG member asked that IDOT provide the exact criteria for implementing a school zone.
- A CAG member said he thought IDOT had previously committed to implementing school zones. He has not seen them but is looking forward to it and wondered if IDOT would address during the meeting. Mr. Harmet stated that IDOT is considering the school zone request and expects a response in the coming weeks. He noted that the existing school signage was updated in July following receipt of letter.
- A CAG member asked the CAG to identify the school zone as an initiative that they are all in favor of; attempting to get what he referred to as a "quick win". Another CAG member noted that the rules of the CAG state that there would be no voting. In addition, the CAG member noted that IDOT must follow their policies, and a vote on this subject would not mandate IDOT to create a school zone. The CAG member who ended the voting process was threatened with a lawsuit by another CAG member.

Next Steps/Other

- A CAG member asked if IDOT will respond to all of these various comments and if they will be incorporated in a revised version of the report. Mr. Harmet said a written response will be provided to all comments received in writing and stated at the meeting. These responses will be posted on the project website. The reports will also be adjusted as needed.
- A CAG member asked Ms. Sigman to summarize her opinion of the Northfield consultant's report. Ms. Sigman responded that the review noted, in general, that the roadway operates safely and the congestion and safety problems can be resolved with technological upgrades and addition of left turn lanes.
- A CAG member stated that he believes traffic volumes on the east-west roads seem to be increasing over the past few years not decreasing, and has seen volumes of nearly 50,000 vehicles per day on Lake Cook Road. The CAG member questioned the volumes cited by the Northfield consultant.
- A CAG member stated that along with the written response to the comments anything short of a red-lined version of these reports is inadequate.

III. Problem Statement

Presentation:

- The Problem Statement was presented at the last two meetings (April and July 2010). Members provided their view points on transportation issues.
- Subsequent to the July 2010 CAG meeting discussion, IDOT made the following edits to the second paragraph in response to CAG comments: Willow Road was added since it was not specifically named in the previous problem statement. The statement that Willow Road is used primarily for residential purposes was changed to state "Willow Road, an east-west road, is used for residential purposes as well as commercial, commuter, school, church, and park uses."
- The final version of the problem statement captures the fundamental elements discussed and will be used to help shape the needs and alternative analysis.

Problem Statement Discussion

CAG members provided following comments on the Problem Statement.

- A CAG member from Glenview thought that some key concepts discussed at CAG Meeting #4 were missing, specifically that Willow Road is a Strategic Regional Arterial. The CAG member asked for a second problem statement to be documented and be carried forward along with the September 2010 problem statement. This problem statement prepared by Glenview and distributed to CAG members is:
Willow Road is a Strategic Regional Arterial, or SRA, that carries approximately 30,000 vehicles per day and is projected to carry approximately 9% to 18% more vehicles by the year 2030 within the project area between Waukegan Road and the Edens Expressway. Since this segment of the SRA is adjacent to homes, schools, churches, parks, and businesses, it must serve as a multi modal corridor and should safely and efficiently accommodate vehicles, pedestrians, especially school age children, bicyclists and transit users. Solutions for all modes of transportation problems need to be developed ensuring that ample roadway capacity is provided to serve the needs of the SRA while avoiding, minimizing and/or mitigating the impacts to the surrounding environment where feasible.
- Mr. Harmet said the problem statement prepared by Glenview was fully noted in the CAG Meeting #4 meeting summary. The September 2010 version of the problem statement fits within the framework of the alternative analysis process.
- A CAG member said he thought the problem statement was completed at the last meeting. The CAG member thinks the July 2010 version was acceptable and felt that consensus was reached on the statement at the last meeting.
- A CAG member stated that the growth percentages noted in the Glenview version cannot be substantiated and he cannot agree to further changes of the problem statement.
- Mr. Harmet thanked the group for the comments and stated that the current problem statement does reflect the opinions provided by CAG members, addressing key points made regarding congestion and safety. The current version of the problem statement will be carried forward.

IV. Travel Pattern Analysis Introduction

Presentation:

- A new topic, Travel Pattern Analysis was introduced to CAG members. A draft report entitled Draft Existing Travel Pattern Analysis was distributed to CAG members for review, and further discussion at the next CAG meeting scheduled for November 18.
- The Chicago Metropolitan Agency for Planning (CMAP) is the official Metropolitan Planning Organization (MPO) for Northeastern Illinois. CMAP is made up of 7 counties in northeastern Illinois. The area modeled by CMAP includes the 7 counties and adjacent areas in Illinois, Wisconsin and Indiana.
- MPOs are required by federal law for urbanized areas over 50,000 in population. MPOs maintain long range transportation plans and monitor clean air act requirements for their planning area. Travel demand models are used by MPOs to assist in these activities.
- A travel demand model set is used by CMAP for long range planning and to evaluate the travel benefits and air quality impacts of highway and transit projects. The model is used for travel forecasting at both project and regional levels and can also be used to analyze travel patterns; where is traffic coming from and going to. This process is termed a “select link” analysis.
- The CMAP model region is organized into approximately 1,960 Traffic Analysis Zones (TAZ). Each TAZ is typically one square mile in size, but can be larger or smaller depending on the level of development.
- Each TAZ represents a geographic area with its households, population, and employment. Each TAZ functions as an origin and destination for people to travel from or travel to. Models of travel behavior developed using observed data such as household travel surveys and census data are used to understand how many trips for various purposes households are likely to make.
- The model uses the roadway and transit characteristics to measure accessibility and model what destinations travelers will chose to fill travel needs. This information is also used to model whether the trip is likely to be completed using auto or transit modes.
- Once all the region’s auto trips are identified, the traffic assignment model identifies roadway routes the trips are likely to take. This is accomplished taking into consideration congestion impacts.
- The process results in travel patterns and performance measures for the region’s travel on an average weekday.
- A select link analysis identifies where trips using a specific roadway originate and travel to. This is done to further define the existing conditions and introduces this modeling tool that will be used to analyze alternatives in the future. A select link analysis was completed for the section of Willow Road between Wagner Road and Old Willow Road and the result is a dataset containing all trips using the selected link. The dataset includes information on the origins and destinations of the trips.
- This select link analysis shows the predominant travel pattern is from the northwest to the southeast. A map was shown that presented colored boxes indicating the number of trip ends to that box associated with the select link.
- About 40% of the daily trips are either entering or leaving an area from west of Waukegan Road to east of I-94.
- The remaining trips passing through this link of Willow Road primarily begin or end at three other locations: downtown Chicago, the northwest area, or the north shore area.
- Most expressway travel is using the Edens Expressway. There is significantly less travel using I-294 to the north or south.

CMAP, Regional Model, and Travel Pattern Analysis Discussion

- A CAG member asked if the 2010 census data is included in the current model.
Mr. Harmet responded that the information is not available but will be included automatically into CMAPs databases when it is available.

- A CAG member asked how long CMAP has been in existence and also asked if 30-year no-build projections were done in the late 1970s so one could gauge their accuracy for the current time period.
Mr. Harmet responded that CMAP has existed since 1954. A no-build travel forecast was not completed by CMAP until the 1990s but future forecasts have always been developed. These forecasts always assumed a series of set circumstances.
- A CAG member asked if IDOT will review the previous CMAP forecasts to see if they've been correct.
Mr. Harmet responded that the CMAP modeling process is federally accepted and considered to be state of the practice. The information is reviewed by the Federal Highway Administration.
- A CAG member asked how much traffic is generated locally.
Mr. Stenzel responded that kind data is not defined by a particular community. The TAZs can span across multiple communities.
- A CAG member said he did not understand how this travel demand model can be accurate. The CAG member said this data could only be accurate if transponders are in every single vehicle or if police officers track down where all vehicles are travelling through license plate data.
Mr. Harmet responded that decades of research information, census data, and household surveys are used to develop and refine the model. It is considered to be state of the practice methodology and is used for all transportation planning in the region. Mr. Stenzel stated the data is constantly updated as new census data becomes available.
- A CAG member asked if it is fair to state that this is just a model and that there are other models that could be used for this purpose and the data cannot be 100% correct.
Mr. Harmet responded that this is the only model used by CMAP and the results of the model are accepted by the Federal Highway Administration.
- A CAG member stated that the CAG has not agreed on any other topics up to now and does not understand why we are considering a traffic model.
Mr. Harmet responded that there has been good comments and discussion on the previously discussed topics including the traffic and crash reports and the problem statement. The traffic model is used to further define existing conditions.
- A CAG member stated he does not understand how CMAP has the data on where people want to travel. The CAG member also asked the significance of the data presented tonight and its significance on Willow Road.
Mr. Harmet noted there has been a lot of previous discussion about the users of Willow Road. Studying the existing travel patterns can help define future alternatives. The select link analysis helps show that there is a combination of local and regional travel on Willow Road.
- A CAG member stated that the results shown here are based on the current roadway network. More vehicles do not travel to or from I-294 because you cannot get off of I-294. It is obvious the Edens Expressway is used more because it has more exits.
Mr. Harmet responded that the analysis is used to help show travel patterns and further define existing conditions. This information then could be used to develop alternatives.
- A CAG member discussed that more traffic should be able to use the regional roadway network. He assessed that if more interchanges were added to I-94, the Edens Spur, and I-294, the regional transportation system will carry the traffic and it would not be diverted to the local system.
Mr. Harmet responded that at the November CAG meeting the CAG will start to build a list of alternatives for consideration.
- A CAG member asked if the trips specify the number of average daily trips and if that equates to the observed traffic volumes.
Mr. Stenzel responded that it equates well with the average daily traffic volumes. Mr. Harmet noted that the trips are a sum of all trips throughout the day.

- A CAG member asked if at the next CAG meeting someone could give a presentation on how the travel demand model works.
Mr. Harmet responded that it could be considered for future meetings. CMAP staff may make a presentation.
- A CAG member asked if there is a way to breakdown how much traffic on Willow Road is regional and how much is local.

Other Comments and Discussion

- A CAG member asked if CAG member comments and public comments are being considered during this process. The CAG member said they felt the information is confusing and inaccurate. Mr. Harmet responded that the information presented to the CAG is complex material and the goal of the presentations is to put it in layperson's terms as much as possible. Mr. Harmet disagreed that the information being presented has been inaccurate. The information presented is thorough, comprehensive, and professionally prepared.
- A CAG member asked if a November CAG meeting is too soon if materials will continuously be worked on up to a few days before the CAG meetings. Mr. Harmet re-stated that CAG members are receiving information in a timely manner. For the select link analysis, CAG members are being provided approximately 60 days to review the information prior to the November CAG meeting. CAG meetings are anticipated to occur every other month.
- A CAG member asked why this information was not presented to the CAG well in advance (not 4 days) of the meeting even if the topic is only being introduced. Mr. Harmet said that the information is being forwarded as completed. The select link analysis is only being introduced at this meeting, and will be discussed again at the November CAG meeting. This allows additional time for CAG members to review information.

V. Physical Inventory Introduction

Presentation:

A draft report entitled Draft Physical Inventory of Infrastructure Elements was distributed to CAG members for review and comment. IDOT requested that CAG members provide initial comments by October 22.

The Physical Inventory provides a general overview of the project's physical features within the study area. It is a summary of the physical features along the roadway and helps identify factors that are contributing to the safety problems. Items considered include: pavement age and type, roadway lane width and edge treatment, lane drop tapers, horizontal and vertical alignments, drainage, bridges, sidewalks, location and condition of signalized intersections, driveway access, mail delivery, bus stops and shelters, utilities, interchanges.

Initial findings:

- The Willow Road pavement is over 60 years old, and exceeds its design life.
- The bridge over the North Branch of the Chicago River is also 60 years old and exceeds its design life (the Edens Expressway bridge is in better condition).
- The roadway is generally flat and needs improvement for better drainage.
- There are incomplete sidewalk facilities.
- There is 30-year old traffic signal equipment that needs modernizing.
- The westbound lane drop taper west of Central Avenue/Happ Road is too short.
- The corner radii at many cross streets are too tight for bus turns.
- The left turn bays need to be improved or added.
- The interchange ramps at I-94 do not meet current standards.

Physical Inventory Discussion

- A CAG member asked about the bridge over the Chicago River. The CAG member said it seemed that extensive work was completed on the bridge in the last year or so and assumed that this work on the bridge would extend its design life.
Mr. Harmet responded that the bridge substructure (abutments and piers) of the bridge were not touched and still exceed their design life.
- A CAG member asked if this listing is complete since there is no mention in this report about safety. The CAG member asked why the existence of school crossings was not included in this report.
Mr. Harmet responded that the safety component has been thoroughly documented through the Community Context Audit at the beginning of this study.
- Mr. Harmet asked for comments on the report for future consideration.
- A CAG member asked where the westbound lane taper identified as too short is located. The CAG member asked if these findings of the report will be tied to safety issues.
Mr. Stenzel said the westbound lane taper is between Bristol Street and Old Willow Road/Northfield Road. Mr. Harmet responded that these points were also noted in the crash analysis report.
- A CAG member asked if access management components are included in this report, since the previous "3-Lane Plan" by Northfield was supposed to remove access points along Willow Road.
Mr. Harmet responded that access management is part of the safety tool kit that will be discussed in the next CAG meeting. Mr. Harmet said access points can be added to the report.
- A CAG member stated that there are certainly tradeoffs to some of these physical inventory shortcomings. For example, applying the intersection radii criteria may have impacts on the distance a pedestrian would have to cross.
Mr. Harmet agreed and noted that this type of discussion will be part of the alternatives analysis.
- A CAG member asked which particular corner radii need to accommodate a bus; if bus routes had been identified.
Mr. Harmet responded that based on the SRA design criteria, the intersections with Willow Road should accommodate a 55-foot long truck, but that it seemed excessive. He stated it may be more appropriate to consider a delivery truck or a bus. This concept of design vehicle will continue to be discussed.

Other Comments/Discussion

- A CAG member asked if we will ever complete discussion on a subject and reach consensus.
Mr. Harmet reminded that group that as part of the ground rules discussion it was noted that consensus may not be reached on every issue.
- The CAG member responded that it does not appear IDOT is trying to obtain consensus between communities.
Mr. Harmet disagreed and reminded the group that the CAG ground rules stated that consensus may not be reached on every issue. The process has been comprehensive and professional.

VI. Purpose and Need Introduction

Presentation:

- A draft Purpose and Need statement outline was distributed to CAG members for review and comment. Mr. Harmet asked for initial comments by October 22, 2010 for discussion at the CAG Meeting #6.
- A purpose and need statement is comprised of the problem statement and the technical evaluation of existing conditions. It is part of state and federal requirements (National Environmental Policy Act or NEPA). It summarizes the transportation needs to be addressed, identifies the deficiencies, and describes why the deficiencies should be fixed.

- A purpose and need statement is written broadly enough to consider a range of potential solutions and provides a basis for evaluating potential alternatives.
- The purpose is to address existing and 2030 transportation needs along Willow Road from Illinois Route 43 (Waukegan Road) to Interstate 94 (Edens Expressway), through either local or regional improvements, or a combination of improvements.
- The needs are to improve or enhance safety for all users, improve mobility, and improve facility condition and design. These needs are defined by the technical analysis, the problem statement, and stakeholder input.
- The purpose and need document is prepared by and for IDOT for coordination with other agencies. It is the intent to share the document with the CAG as it is developed.

Purpose and Need Discussion

Following are CAG member questions and comments on the purpose and need outline.

- A CAG member expressed concern with the statement of the project's purpose to address 2030 transportation needs. The CAG member asked if the project will be accepting CMAP's growth projections. Mr. Harmet explained that on these types of studies the planning horizon is out to 2030, and will soon be expanded out to 2040.

VII. Recap and Next Meeting

- A CAG member asked at a previous meeting what roadways were used in the comparisons to the statewide averages. The CAG member requested this list at the last meeting and asked if that information is available. Mr. Stenzel said the meeting summary from CAG Meeting #4 provided a link to 2009 FHWA HSIP Five Percent Report – State of Illinois (<http://safety.fhwa.dot.gov/hsip/fivepercent/2009/09il.htm>). The CAG member said he did not want the five percent locations, but list of all similar roadways used to develop 5% locations. Mr. Stenzel stated that the team will look into this issue further and see if this data can be provided to CAG members. A CAG member requested that clarification be provided by IDOT.
Mr. Harmet stated that the written responses will be provided by IDOT to the traffic and crash comments prior to the next meeting.
- CAG Meeting #6 is scheduled for November 18, 2010. Topics for discussion will included further discussion on the travel pattern analysis, physical inventory, and purpose and need outline. Evaluation criteria will be introduced as well as development of a list of alternatives. Pedestrian Safety Alternatives will also be discussed.
- A CAG member asked if a discussion of the CMAP model would be added to the agenda. A CAG member asked if the first bullet point on the next CAG meeting will be to continue the discussion on the traffic and crash reports. The CAG member asked for red-line markups of the reports.
- Mr. Murtha from CMAP noted that CMAP has invited federal safety experts to the Chicago area in the last week of October for training for IDOT and consultant staff on the new safety manual. A workshop will also be open to municipal engineers and planners on October 28 and 29 at CMAP's office.
- CAG Meeting #7 is schedule for January 20, 2011. The meeting adjourned at approximately 8:10 p.m.
- Public comments were taken following adjournment of the CAG meeting, but are included as part of this summary.

VIII. Public Comment Summary following Adjournment of CAG Meeting

The following comments were made during the public comment session that immediately followed CAG Meeting #5. The summary below reflects the general intent of the comments or questions and is not meant to be verbatim. The name and residency of the speaker is listed with the comment.

Comment 1 (Patrick O'Donoghue, Northfield)

Mr. O'Donoghue stated that the proposed January 20, 2011 date for a future CAG meeting may conflict with the State of the Union Address. He stated that based on the TAZ map in the slideshow Glenview is not affected by many trips on the select link. Mr. Harmet stated the map shows that travel on the select link effects the northern parts of Glenview. Mr. O'Donoghue stated that 40% of the trips are generated and end up in Northfield itself and that Glenview and Winnetka are not affected. He wants to know why these communities are involved in the CAG process. He also requested the list of roadways used to develop the 5% locations.

[Post Meeting Clarification: The select link analysis shows that a majority of the users of the Willow Road link are from outside the study area, including the adjacent communities of Glenview and Winnetka. The CAG's composition reflects the fact that there are both local and regional issues to consider.]

Comment 2 (June O'Donoghue, Northfield)

Ms. O'Donoghue asked about IDOT's position on the comments of Senator Schoenberg in his recent newsletter about a four-lane roadway. Mr. Harmet responded that he did not have any comment on the newsletter. He noted that alternatives have not been developed yet.

Ms. O'Donoghue presented pictures of her grade school in East Moline, Illinois, and discussed how two classmates were killed near her school trying to cross a 4-lane road. She also presented pictures near her current home in Northfield and talked about the character of her neighborhood. She stated that this character is very important to her.

Comment 3 (Linda Veith, Northfield)

Ms. Veith is the superintendent of Sunset Ridge School District 29. She stated that a school zone is needed near Sunset Ridge School. She discussed how 2 students were killed crossing Willow Road while she worked in a neighboring school district to the west of Northfield.

Comment 4 (Mary Novotny, Glenview)

Ms. Novotny mentioned multiple intersections around Glenview that have four or more lanes and are near schools. She stated that play areas near these schools have fences to help separate these areas from the roadway. She discussed the story of an ice cream truck (discussed at a previous meeting) stopping on Willow Road as a larger safety issue that Northfield should address.

She stated that when IDOT widened out the intersection of Willow Road and Pfingsten Road, Glenview residents were invited to a few public meetings and then construction happened. She stated that there was no committee like this CAG and no input solicited from surrounding communities. She said it seems to her that Northfield is getting special consideration that was not given to Glenview before. In her opinion Northfield is just delaying this process. She said Northfield should consider they are fortunate to still have only two lanes. She said Willow Road is not Northfield's road, it is IDOT's road and it is there for people from other communities too. She agrees that safety is always a concern but she is sure that IDOT considered safety when the intersection of Willow Road and Landwehr Road was widened.

Comment 5 (Carl Bova, Evanston)

Mr. Bova, Cooper Civil Engineering, Ltd. is a civil engineer contracted by the Village of Northfield. Mr. Bova reviewed the traffic and crash analysis at the request of the Village of Northfield. Mr. Bova provided a packet of information to all of the CAG members prior to start of CAG meeting. During the for public comment period, Mr. Bova summarized his reports for the public. The data provided by Mr. Bova to the CAG is attached as part of this summary.

Comment 6 (Lou Haussmann, Mokena)

Mr. Haussmann, from Baxter & Woodman, is a civil engineer contracted by the Village of Glenview. Mr. Haussmann read his comments that were submitted to the Village of Glenview. Their independent consultant review was shared with the CAG in advance of the meeting. Mr. Haussmann provided the following information about the traffic and crash reports:

- Traffic and crash data has been collected and processed for the Willow Road Study using standard and acceptable engineering practices.
- Most of Willow Road is operating in excess of its capacity to accommodate existing traffic. The volume to capacity (V/C) ratios are typically greater than 1 along the entire corridor. Level of Service for most of the roadway segments is poor. The highest congestion is found between the intersection of Three Lakes Drive and Fox Meadow Drive and the intersection of Old Willow Road and Northfield Road. Traffic delays and queues are highest at locations where the Willow Road lane configuration reduces from two thru lanes to one thru lane in each direction. By 2030 these conditions will worsen.
- Queue lengths for left turn vehicles are worst at the intersections of Willow Road with IL Route 43 and Central Avenue. Dual left turn lanes are needed at both of these intersections. Willow Road will need to have two through lanes in each direction next to these intersections to accommodate the dual left turn lanes.
- Left turn signal phasing should be implemented at all signalized intersections. Left turn storage bay lengths should be increased. Left turn lanes should be added to all Willow Road side streets. Consideration should be given to reducing the number of side streets and driveways with access to Willow Road.
- Pedestrian facilities should be improved and upgraded throughout the study limits to increase safety. Traffic signal equipment should be improved and upgraded throughout the study limits.
- The majority of crashes reported within the study area are rear end collisions with an average much higher than the state average. However, the severity of crashes on Willow Road is typically lower than statewide averages. But one segment of Willow Road between Wagner Road and Old Willow Road had a higher percentage of Type A crashes.
- Statements made tonight about the two-lane segments of Willow Road only having 29% of the crashes is a misleading statement. The data in the summary shows that crashes at the I-94/Willow Road interchange ramps and other intersection crashes are included with the four-lane segment. Comparisons of the two-lane and four-lane segments are not fair if the four-lane segments include all of these other crashes. If the two-lane and four-lane segments are compared with out the I-94 related crashes and intersection crashes, the percentages are approximately equal (49 % vs 51%).

Comment 7 (Kate Rekett, Northfield)

Ms. Rekett stated that Ms. Juli Blunt's comments about school zones on Willow Road from previous CAG meetings have still not been answered. She asked why IDOT continuously says they will provide an answer to this question but then never responds.

Ms. Rekett stated that if the road is widened but the school zone is added, travel times really won't be decreased because of the lowered speed limit. She said she was sorry that Glenview did not get the same opportunities to fight a project that Northfield has been given. She said that the people of Northfield will not sit back and just accept a roadway widening project.

[Post Meeting Clarification: IDOT is carefully considering this issue and will respond in the coming weeks.]

Comment 8 (John Raymond, Northfield)

Mr. Raymond stated he likes Willow Road as it is now. He discussed the many kids who could possibly wander out onto a larger roadway and how a widened road would increase the chances of injuries to pedestrians. He discussed the wildlife along portions of Willow Road that would be scared away with a widened roadway due to getting hit by cars and air pollution. He stated that \$25 million is too expensive for a project that no one in Northfield wants.

Comment 9 (Nancy Hagen, Northfield)

Ms. Hagen stated there has been much discussion about safety but asked when a discussion about the reduced property values along the roadway will occur. She also asked about what noise reduction measures will be taken if the road is expanded. She asked if eminent domain will be used to widen the road. She said that if IDOT does not intend to exercise any eminent domain rights she would like this documented.

[Post Meeting Clarification: The impacts associated with various alternatives will be defined and considered as part of the alternatives development and evaluation process. The need for property or how it would be acquired is unknown at this time.]

Comment 10 (John Nicolau, Glenview)

Mr. Nicolau disputed some of the comments from other members of the public. He stated that he has lived on Wagner Road in Glenview for the last 18 years and has seen a dramatic increase in traffic on Wagner Road because of cut through traffic avoiding the bottleneck on Willow Road. He stated that Willow Road is not a local road but a regional road. While safety is a number one concern on Willow Road he is equally concerned for the safety of the kids in Glenview affected by cut through traffic avoiding Willow Road. He referenced the quaintness of Northfield referenced by another commenter. He stated that one cannot expect Northfield to remain quaint when development in Northfield at places like Kraft and the car dealerships along the Frontage Road is allowed to occur. He stated that if these kinds of developments are allowed the infrastructure is needed to support that development.

He stated his support for adding features like countdown pedestrian signals, fencing, overpasses, underpass, and school speed zones to help keep pedestrian safe in Northfield. He stated he did not agree with comments from CAG member who say they do not comprehend IDOT's figures but seem to comprehend the figures developed by their own consultant. He stated that Glenview has schools, parks, and places of worship that rival the features in Northfield and Glenview has been able to keep the roads near these features safe. He stated that Glenview pays for busing for their kids so that they are safe travelling to school.

Comment 11 (Brian Kozminski, Northfield)

Mr. Kozminski stated that Northfield is in favor of widening Willow Road to three lanes.

Comment 12 (Laura Conklin, Northfield)

Ms. Conklin expressed her concerns about the newsletter from Senator Schoenberg. She has concerns about what a widened Willow Road will mean to the drainage in the area during heavy rain storms. She stated that there are so many issues that affect the residents of Northfield. She stated it is not fair that members of other communities feel they can have a say so on what happens in Northfield.

Attendance Roster - CAG Members

Community Advisory Group Meeting #5

Willow Road Study: Illinois Route 43 to Interstate 94
 September 15, 2010; 6:00 p.m. to 8:00 p.m.
 New Trier High School, Northfield Campus, Building C, Room 234



	CAG Member	Community	Email Address	Present (Please initial)
1	William J. Baltutis	At Large	bill_baltutis@baxter.com	WJS
2	John Birkinbine	Northfield	jbirkinbine@aiaac.org	J&TB
3	Hallie Bodman	Northfield	ahkbod@aol.com	HAB
4	Dan de Loys	Northfield	ddeloys@comcast.net	DdeL
5	Rick Filler	Glenview	rfiller@harlemirving.com	
6	Tensley Garris	Northbrook	tensley@northbrookchamber.org	
7	Ted Greene	Northfield	ted@tgreenefamily.com	
8	Robert Hayward	Northfield	robert.hayward@kirkland.com	
9	Todd Heller	Northbrook	todd@thellerlaw.com	
10	Steve Hirsch	Northfield	sbhirsch@hotmail.com	S.H.
11	Kate Katz	Northbrook	Kk2667@aol.com	KK
12	John Kemper	Northfield	jkemper@mac.com	J.K.
13	Peggy Kozminski	Northfield	kozpbs@comcast.net	PBK
14	Penny Lanphier	Winnetka	lanphieriv@sbcglobal.net	
15	Jeffrey G. Liss	Winnetka	JGLJGL@aol.com	J.L.
16	Kathy Miles	Glenview	gcstaff@glenviewchamber.com	
17	Tom Murtha	At Large	tmurtha@cmap.illinois.gov	
18	Buggie O'Grady	Northfield	buggieogrady@yahoo.com	BOG
19	Don Owen	Glenview	dowen@glenview.il.us	D.O.
20	Phoebe Raymond	Northfield	nomedad@mindspring.com	PSR
21	Stacy Sigman	Northfield	ssigman@northfieldil.org	
22	Jim Smirles	Glenview	jws9@att.net	
23	Stephanie Stuckey	Northbrook	sstuckey@ups.com	
24	Scott Turban	Northfield	scottturban@aim.com	
25	Don Whiteman	Northfield	kk9h@earthlink.net	DKW

me, com

Attendance Roster - CAG Alternates

Community Advisory Group Meeting #5

Willow Road Study: Illinois Route 43 to Interstate 94
 September 15, 2010; 6:00 p.m. to 8:00 p.m.
 New Trier High School, Northfield Campus, Building C, Room 234

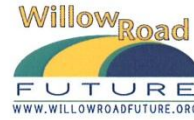


	CAG Member	Community	Email Address	Present (Please initial)
1	Melissa Bianucci	Northfield	bianucci@comcast.net	
2	Juli Blunt	Northfield	jrb.freshideas@earthlink.net	
3	Jack Bodman	Northfield	jpbod@viennabeef.com	
4	Jeff Brady	Glenview	jeffb@glenview.il.us	<i>J. Brady</i>
5	Steve Bucklin	Glenview	sbucklin@glenbrooksecurity.com	<i>S. Bucklin</i>
6	Sydney Clark	Northfield	sclark4994@yahoo.com	
7	Pat Doherty	Northfield	dohertypat@aol.com	
8	Nancy Firfer	Glenview	nancy.l.firfer@cm2020.org	<i>Nancy Firfer</i>
9	Nancy Garrity	Northbrook	ngarrity@ups.com	<i>Nancy Garrity</i>
10	Becky Hurley	Winnetka	hurley5@comcast.net	
11	Don Kopec	At Large	dkopec@cmap.illinois.gov	
12	Brian Kozminski	Northfield	bkozminski@llegal.com	<i>Brian Kozminski</i>
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14	Brian Moran	Northfield	bmoran@femoran.com	
15	Patrick O' Donaghue	Northfield	northfieldpat@yahoo.com	<i>P. O' Donaghue</i>
16	Sean O'Grady	Northfield	sogrady@northshore.org	
17	Anne Peterson	Northfield	apeterson70@comcast.net	<i>Anne Peterson</i>
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20	Theresa Snyder	Northfield	theresasnyder14@gmail.com	<i>T. Snyder</i>
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Attendance Roster - Project Team Members

Community Advisory Group Meeting #5

Willow Road Study: Illinois Route 43 to Interstate 94
 September 15, 2010; 6:00 p.m. to 8:00 p.m.
 New Trier High School, Northfield Campus, Building C, Room 234



	Project Team Member	Community	Email Address	Present (Please initial)
1	Pete Harmet	IDOT	Pete.Harmet@illinois.gov	X
2	John Baczek	IDOT	John.Baczek@illinois.gov	X
3	Marie Glynn	IDOT	Marie.Glynn@illinois.gov	X
4	Srikanth Panguluri	IDOT	Srinkanth.Panguluri@illinois.gov	X
5	Athreya Sreenivasan	IDOT	Athreya.Sreenivasan@ch2m.com	X
6	Chuck Stenzel	TranSystems	CJStenzel@transystems.com	✓
7	Grace Dysico	TranSystems	GLDysico@transystems.com	X
8	Kathy Meyerkord	TranSystems	KMMeyerkord@transystems.com	X
9	Matt Smith	TranSystems	MJSmith@transystems.com	X
10	Wayne Miczek	TranSystems	WRMiczek@transystems.com	X
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Willow Road Phase I Review

Draft Crash Analysis of Existing Conditions
Presentation of Village of Northfield Comments
@ Willow Road CAG Meeting – September 15, 2010
By Cooper Civil Engineering, Ltd.

General

- Recommend draft to be revised to reflect findings of significance that are representative of existing conditions.**
- Draft does not consider safety of Willow Rd west of project, other adjacent/nearby roadways (such as IL-43), or other roads in the region. Especially Willow sections with fatalities.**
- ¼-mile I-94 mainline section (Section 4) is not long enough to be meaningful relative to expressway conditions, nor reflective of regional conditions.**
- Presentation comments herein augment earlier Village comments (KLOA Review).**

Outstanding Three-Year Record

- No fatal crashes
- No pedestrian crashes
- One pedal cyclist crash
- 2 Type A crashes (one was a motorcyclist merging on I-94, south of the project)

3

2009 Illinois Five Percent Report

- Willow Road is *not* one of the five percent roadways.
- State identifies "at least five percent of highway locations exhibiting the most pressing safety needs, those being fatal and severe injury crashes."
- The State's objective is to reduce fatal and severe injury crashes.
- Willow record – 0 fatal crashes and 2 Type A crashes in three years.

4

Section 2 – Crash Analysis Summary

- 56 % of total rear end crashes at three locations: IL-43 intersection, I-94 interchange, and Happ/Central to I-94 interchange. All are at extreme ends of project.
- 75 % of rear end crashes at intersections, 25 % at segments. To be expected.
- 71 % of rear end crashes within road Sections 1, 3, & 4. All are 4-5 lane roadways. Sections 1, 3, & 4 represent only 51 % of the length.
- 29 % of rear end crashes within road Section 2. This is a 2-lane roadway. But Section 2 represents 49 % of the length.
- So, a disproportionate share is observed on multi-lane sections.

5

Section 2 (cont'd)

- 51 % of all injury crashes also at the same three locations as the rear end crashes: IL-43, I-94 interchange, and Happ/Central to I-94 interchange.
- 68 % of injury crashes occur where there is 4-5 lanes; 32 % where there are 2-3 lanes.
- Total crashes by time of day *do not coincide with peak periods*: 38 % occur from 12 noon to 4 PM, but only 24% occur from 7-9 AM & 4-6 PM.
- Queues stated as cause for rear end crashes in Section 2 text. But Section 6 (Conclusions) cite that 40 % of crash reports state driver's failure to reduce speed as primary or secondary cause of crash, and 1/3 of the reports cite following too closely to the vehicle in front of them as the causes.

6

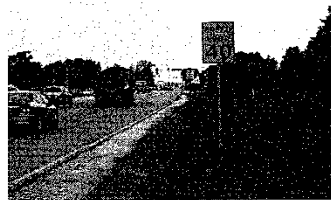
Section 2 (cont'd)

- It appears that most rear end crashes are due to driver error or inattentiveness as the predominate causes for the crashes.
- Physical causes are given little attention in the report. Consider the next few slides....
- Revamp the Report Section 4 descriptions accordingly.

7

Example - IL-43

- Crest vertical curve
- Speed limit changes
- Acute right turn lane
- Variety of speeds, users
- Unfamiliar users
- Mix of short and (inappropriate) long commuters.



8

Example – Sunset Ridge Rd

- LTL channel too short
- LTL channel constrained by corrugated median!
- Excess pavement
- Speed limit changes within merge!
- Merge in wrong location
- S-curves
- School crossing
- Traffic signal not coordinated



9

Section 5 – Injury Crashes

- 0 Fatal, 2 Type A, 46 Type B
- 0% Fatal, 4.2% Type A, 95.8% Type B
- Everyone should have this problem!

10

Section 5 (cont'd)

- Report states that 95.8 % Type B are overrepresented vs. statewide peer group's 66-72 %.
- Of course, Willow is overrepresented here!
- That's because the fatals and Type As are below expected occurrence!
- Delete this characterization from report.
- For example, Table 22 is an overrepresentation for this reason and should be deleted/de-emphasized.

11

Section 5 (cont'd)

- Report Table 21 highlights just 2 segments/intersections with higher crash occurrences per year than the SPF calculations.
- The results for these 2 segments are statistically insignificant for the most part.
- The most powerful part of the table is *not* highlighted – that 12 segments/intersections have performed much better than the SPF calculations.
- In fact, of the total of 42 SPF calculations (14 x 3 categories), in only 3 instances are more crashes observed than SPF calculations!
- When Table 21 data were tallied, one finds that....

12

Section 5 (cont'd)

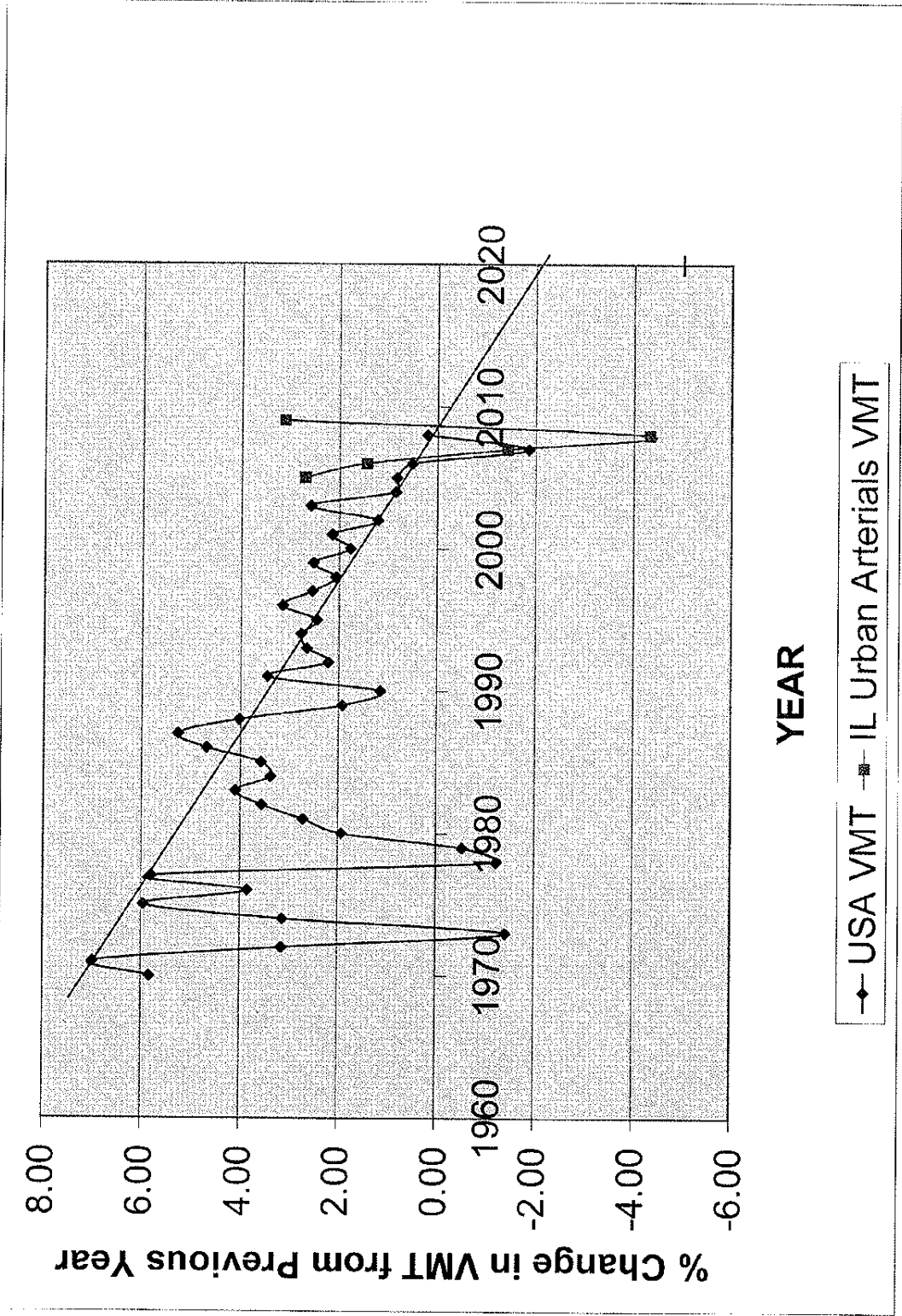
- Observed 0 Fataals vs. 0.85 fatal crashes/yr SPF calculated!
- Observed Type A: 1/25 of SPF calculated!
- Observed Type B: 1/3 of SPF calculated!
- Overall, observed crashes are 1/5 of SPF calculated!

13

Section 5 (cont'd) – Crash Rates

- Dependent upon traffic and/or miles traveled. Not the best measure.
- Recent FHWA research shows a profound relationship between slower vehicle speeds and fewer crashes. The old adage that "speed kills" is valid.
- Regarding Table 23 on p. 39, one usually finds crash rates to vary when looking at specific segments or intersections throughout a roadway section. Crash rates for Willow are not high – otherwise the SPF equations would have been exceeded many more times than 3/42.
- Why weren't crash rates compared to statewide rates, similar to how the observed crashes were compared to statewide SPF calculated expected numbers?

14



Comparison of Existing to 2030 Annual Average Daily Traffic (AADT)

WILLOW RD.		TO Col.(2)	BALANCED AADT		DIFFERENCE (2030-EXIST.) Col.(5)	TOTAL % CHANGE IN AADT IN 21 YEARS Col.(6)	RATE OF CHANGE OF AADT PER YEAR Col.(7)
			EXIST.* Col.(3)	2030** Col.(4)			
FROM Col.(1)							
W. of Vaukegan							
Waukegan		37200	40000	2800	7.53	0.36	
Three Lakes	Three Lakes	31700	36000	4300	13.56	0.65	
Sunset Ridge	Sunset Ridge	32000	36000	4000	12.50	0.60	
Sunset Ridge	Somerset/Old Will.	27200	31000	3800	13.97	0.67	
Somerset/Old Willow	Wagner	25700	29000	3300	12.84	0.61	
Wagner	Northfield/Old Will.	24800	28000	3200	12.90	0.61	
Northfield/Old Willow	Happ/Central	30100	32000	1900	6.31	0.30	
Happ/Central	I-94 Interchange	29100	31000	1900	6.53	0.31	
EB Willow to I-94 E:	I-94 E On Ramp	7100	9000	1900	26.76	1.27	
WB Willow to I-94 E:	I-94 E On Ramp	1400	2000	600	42.86	2.04	
I-94 W to Willow EB:	I-94 W Off Ramp	2500	3000	500	20.00	0.95	
I-94 W to Willow WB:	I-94 W Off Ramp	7000	9000	2000	28.57	1.36	
Total, Ramps:		18000	23000	5000	27.78	1.32	
E of I-94 Interchange		19000	19000	0	0.00	0.00	

* From Exhibit 2, Draft Traffic Analysis.
 ** From Exhibit 6, Draft Traffic Analysis