



## 2011 Countywide Speed Management Study

CTH A, CTH B, CTH C, CTH D, CTH E,  
CTH F, CTH G, CTH H, CTH K, CTH P, CTH S,  
CTH T, CTH W, CTH Y and Business 53

Douglas County, Wisconsin

*October 5, 2011*



Highway Committee Meeting

*Prepared by:*  
**JEWELL** Associates Engineers, Inc  
Wisconsin Rapids, Wisconsin



# Presentation Overview

- Study Overview
- Statewide Speed Management Guidelines
- Study Location
- Data Collection Results
- Recommended Speed Limits & Speed Zones
- Questions & Answers





# Study Overview

- **Review 10 Speed Zones to assess compliance by motorists and assess posting for conformance with Statewide guidelines**
  - Collected vehicle speeds
  - Gathered crash data
  - Prepared memorandum detailing findings
- **Complete Comprehensive study of speed zones and speed limit posting for 17 highway segments**
  - Collected vehicle speeds
  - Gathered crash data & developed crash statistics for comparison to Statewide Average
  - Prepared Speed Study Report with recommended postings and speed zone limits
  - Review roadway alignments and safe travel speeds based on design of roadway



# Statewide Speed Management Guidelines

- Established in June 2009 by WisDOT as part of Statewide Strategic Highway Safety Plan
- Provides uniform guidelines for setting speed limits & speed zones
- Based upon traffic engineering principles
  - Measured travel speeds
  - Crash history
  - Roadway alignment
  - Adjacent land use
- Establishes Speed limits based upon S.S. 346.57 (4) fixed limits definitions
- Recognizes local authority in adjusting speed limits as defined in 349.11(3)



# Speed Limit Postings per 346.57(4)



Speed limit typically established within corporate limits of a city or Village, other than those highways in an outlying area.



Speed limit typically established in any outlying area within a corporate limit of a city or village. Additionally, on any town road where on either side of a highway the buildings in use for business, industrial or residential purposes are on average less than 150 feet apart and a town ordinance has been passed.



Speed limit typically established on a “Rustic Road”.

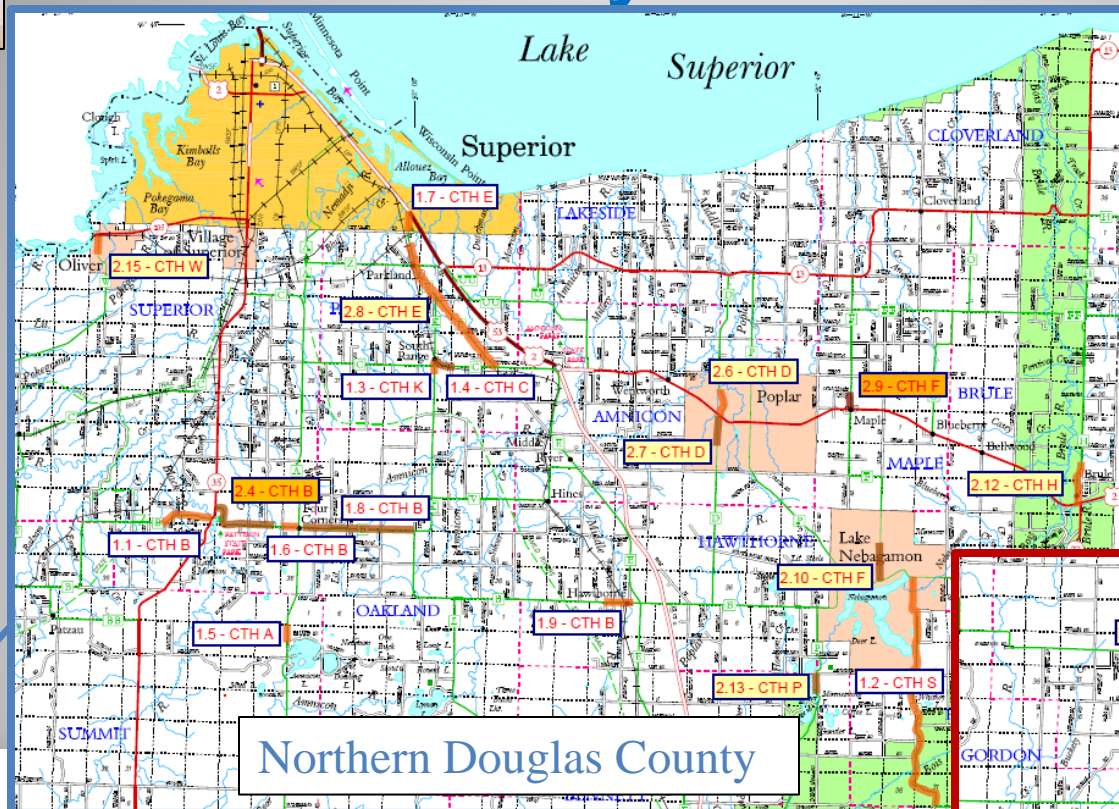


Speed limit established on those highways without a designated speed limit as defined in S.S. 346.57. Typically established on rural county truck and state truck highways.

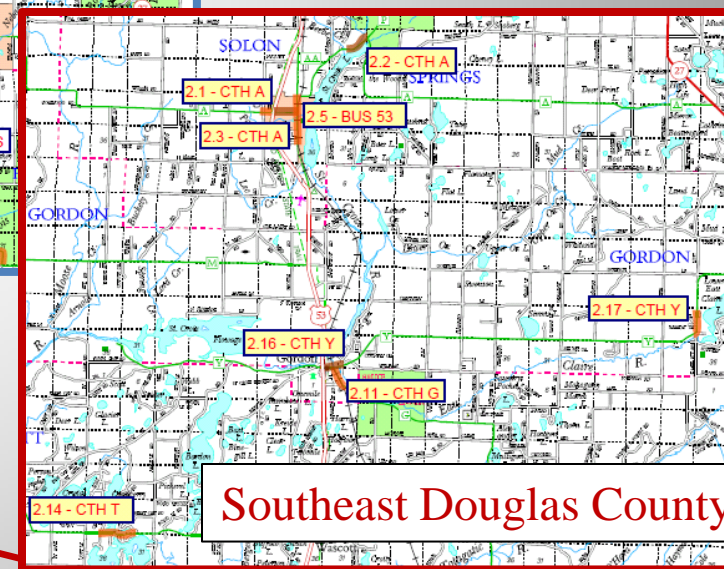




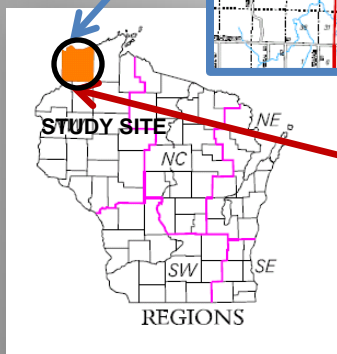
# Study Location



Northern Douglas County



Southeast Douglas County



STUDY SITE

NE  
NC  
SW  
SE  
REGIONS



# Inventory of Existing Speed Limits



Highway	From	To	Municipality	Comment
CTH B	Leggate Rd	0.2 Mi East of Leggate	Town of Superior	School Zone
CTH E	City Limits Rd	USH 2	City of Superior	School Zone
CTH G	Antoine Circle	CTH Y	Town of Gordon	---
CTH P	S Rousseau Rd	Minnesuing Rd	Town of Bennett	---
CTH T	Kennedy Rd	Lakewood Dr	Town of Wascott	
CTH W	STH 105	0.14 Mi south of 3 <sup>rd</sup> Ave	Village of Oliver	---
CTH Y	USH 53	St Croix Road	Town of Gordon	---





# Inventory of Existing Speed Limits



Highway	From	To	Municipality	Comment
CTH D	USH 2	South of USH 2	Village of Poplar	---
CTH F	USH 2	Gronschorek Loop	Town of Maple	School Zone
CTH F	CTH B	Industrial Park Rd	Lake Nebagamom	---
CTH H	USH 2	0.1 Mi north of 3 <sup>rd</sup> Ave	Town of Brule	---



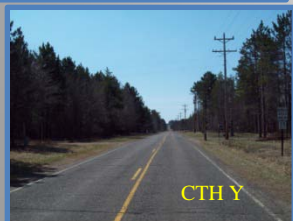




# Inventory of Existing Speed Limits



Highway	From	To	Municipality	Comment
CTH B	Meierotto Rd	STH 35	Town of Superior	---
CTH K	CTH C (East)	Ontario St	Town of Parkland	South Range
CTH C	CTH K	0.4 Mi East	Town of Parkland	South Range
CTH A	Milchesky Rd	Tri Lakes Rd	Town of Summit	---
CTH B	Cemetery Rd	Pine Rd	Town of Hawthorne	RR Track
CTH A	Ellen Smith Rd	USH 53	Village of Solon Springs	Posted EB Only
CTH A	USH 53	Business 53	Village of Solon Springs	---
CTH A	Heyer Rd	CTH P	Town of Solon Springs	---
CTH D	USH 2	½ Mi north	Village of Poplar	---
CTH Y	East Mail Rd	Lake View Cir.	Town of Gordon	Curve
Business 53	N. of Baldwin	850' N. of CTH A	Village of Solon Springs	---





# Inventory of Existing Speed Limits



Highway	From	To	Municipality	Comment
CTH B	CTH A	CTH K	Town of Oakland	---
CTH B	STH 35	Preston Rd	Town of Superior	Reconstruct with 45 mph curves
Business 53	S. of Jack Pine Ave	N. of Baldwin	Village of Solon Springs	Transition Zone
CTH E	City Limits Rd	CTH C	Town of Parkland/ Amnicon	Multiple driveways
CTH S	Sandmon Rd	CTH B	Highland/Lake Nebagamon	Brule River Area
CTH K	CTH E	Ontario St	Town of Parkland	55 mph





# Setting Speed Limits is Based on Primary and Secondary Factors

- **Primary Factors**: Actual Travel Speeds
  - Based on 85<sup>th</sup> percentile speed rounded to nearest 5 mph increment
  - Speed should be within 10 mph pace at which 70% of all traffic travels
  - Speed is within 2 mph of 50<sup>th</sup> percentile speed
- **Secondary Factors**: Other Considerations
  - Crash frequency, types, and severity
  - Roadway alignment & design features
  - Number of intersecting driveways & side roads
  - Adjacent land use/ zoning





# Existing Speed Limits & Speed Zones



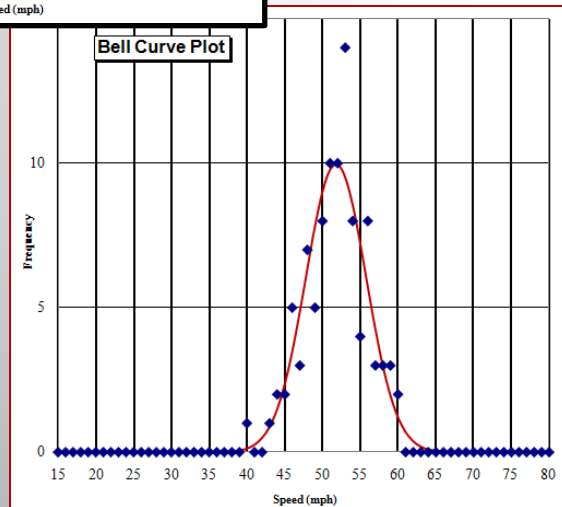
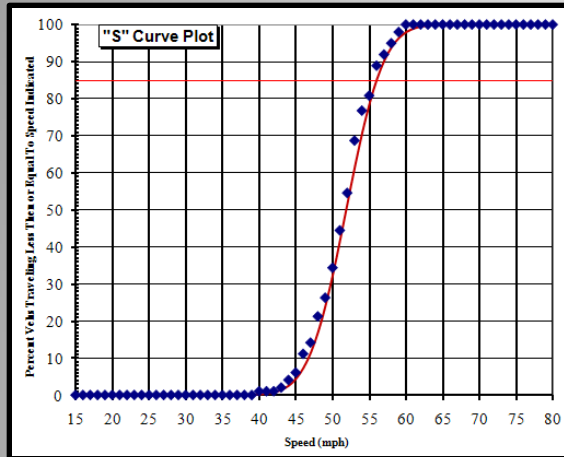
- Measured actual travel speeds using LTI Laser Gun & Automatic Traffic Data Recorders
- Collected land use and zoning information from County
- Obtained 5 years of Crash data for entire County and sorted to individual roadway segments
- Conducted field survey of roadway centerlines to establish design speed of curves and collected driveway and side road locations







# Speed Profile Data reveals the Speed Motorists are Comfortable Driving

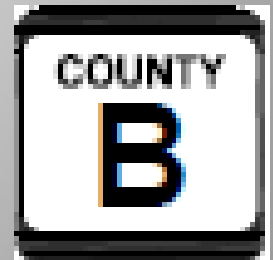


- 85% Percentile speed means most drivers travel at or below this speed by choice
- Requires less Law Enforcement efforts due to voluntary compliance
- Preferred criteria for setting a speed limit



# Data Collection Results

- ✓ Recorded vehicle speeds are typically above the posted speeds
- ✓ Crashes were typically weather related and/or involved single car leaving highway
- ✓ Twelve of 27 speed limits conform to Statewide guidelines
- ✓ Recommended changes to Posted Speed limits require a higher posting to comply with S.S. 346.57 (4) “fixed limit” definition
- ✓ Over 60% of the recommended speed zone increase are based on secondary factors and not measured travel speeds
- ✓ Added Law enforcement may be necessary





# School Zone Review



- ☐ WisDOT Traffic Guidelines recommend speed limit 10 mph below adjacent segment speed limit
- ☐ Only use 15 mph at marked school crossings where children walk to School
- ☐ Contacted Four Corners & Lake Superior Elementary Schools

*“All children bussed or driven to school”*

Setting is rural no walkways provided

- ☐ Post School Zones & Raise limit to 10 mph below adjacent segments





# Recommended Speed Limits & Speed Zones



Highway	From	To	Findings	Recommended Posted Speed
CTH B	Leggate Rd	0.2 Mi E. of Leggate	Post School Zone Raise to 10 mph below adjacent segments	45 mph
CTH E	City Limits Rd	USH 2	Post School Zone Raise to 10 mph below adjacent segments	35 mph
CTH G	Antoine Circle	CTH Y	Raise speed limit to match 85 <sup>th</sup> percentile	45 mph
CTH P	S Rousseau Rd	Minnesuing Rd	Substandard Alignments	35 mph
CTH T	Kennedy Rd	Lakewood Dr	Raise limit & start speed zone at Geshn Rd	35 mph
CTH W	STH 105	0.14 Mi south of 3 <sup>rd</sup> Ave	OK as is per Statue	25 mph
CTH Y	USH 53	St Croix Road	OK to CTH G transition zone to St Croix	25/35 mph





# Recommended Speed Limits & Speed Zones

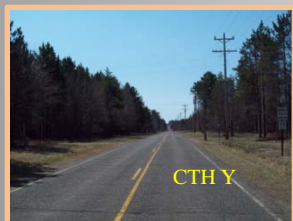


Highway	From	To	Findings	Recommended Posted Speed
CTH D	USH 2	South of USH 2	Speeds higher than posted use 35 mph per S.S. 349.11	35 mph
CTH F	USH 2	Gronschorek Loop	Pending final review	35 mph
CTH F	CTH B	Industrial Park Rd	Speeds higher than posted use 35 mph per S.S. 349.11	35 mph
CTH H	USH 2	0.1 Mi north of 3 <sup>rd</sup> Ave	“semi-urban district” Measured speeds above posted	35 mph





# Recommended Speed Limits & Zones



Highway	From	To	Findings	Recommended Posted Speed
CTH B	Meierotto Rd	STH 35	Raise speed limit to match 85 <sup>th</sup> percentile	45 mph
CTH K	CTH C (East)	Ontario St	Raise speed limit to match 85 <sup>th</sup> percentile	45 mph
CTH C	CTH K	0.4 Mi East	Measured speeds match limit	35 mph
CTH A	Milchesky Rd	Tri Lakes Rd	Raise speed limit to match 85 <sup>th</sup> percentile	45 mph
CTH B	Cemetery Rd	Pine Rd	Adjust Speed Zone “semi-urban district”	35 mph
CTH A	Ellen Smith Rd	USH 53	Post 35 mph in both directions “outlying district”	35 mph
CTH A	USH 53	Business 53	“semi-urban district”	35 mph
CTH A	Heyer Rd	CTH P	“semi-urban district”	35 mph
CTH D	USH 2	½ Mi north	Meets State Statutes/ Curves	35 mph
CTH Y	East Mail Rd	Lake View Cir.	“semi-urban district” 40 mph curves	35 mph
Business 53	N. of Baldwin	850' N. of CTH A	“outlying district”	35 mph



# Recommended Speed Limits & Speed Zones



Highway	From	To	Findings	Recommended Posted Speed
CTH B	CTH A	CTH K	Raise speed limit to match 85 <sup>th</sup> percentile	55 mph
CTH B	STH 35	Preston Rd	Match design speed of new curves	45 mph
Business 53	S. of Jack Pine Ave	N. of Baldwin	OK as is	45 mph
CTH E	City Limits Rd	CTH C	OK as is	45 mph
CTH S	Sandmon Rd	CTH B	OK as is	45 mph
CTH K	CTH E	Ontario St	OK as is	55 mph







# Questions

