

To: Phil Frei, SFO, Director of Business and Finance, Sun Prairie Area School District
cc: Rhonda Page, Business Services Manager, Sun Prairie Area School District
From: John Campbell, P.E., RSP₂, Christian R. Sternke, P.E., RSP₂, Amy Pomeroy, P.E., RSP₁
Subject: Sun Prairie Area School District – Unusually Hazardous Transportation Plan



Sun Prairie Area School District

Futures depend on us...every child, every day.

**Sun Prairie Area School District
501 S Bird St, Sun Prairie, WI 53590**

**Sun Prairie Area School District
Board of Education**

Approved on _____

TRANSPORTATION IN AREAS OF UNUSUAL HAZARDS

Transportation in areas of unusual hazards and pick-up points for District based students require constant evaluation. Wisconsin statutes require transportation of children residing 2 miles or more from the school, except in cities where school boards choose not to transport children within the school boundaries.

Because of unusually hazardous conditions in certain areas, a school board may deem it necessary to provide transportation to some children residing less than 2 miles from the school. An unusual hazard is an existing condition which seriously jeopardizes the safety of students in their travel to and from school and is further defined below. It is recognized that all traffic situations through which students must travel present some degree of hazard. When such hazards reach a degree of danger that is unacceptable to the community, the school board may identify such hazards as unusual for the purpose of proposing a plan to remove or diminish them.

Section 121.54(9), Wis. Stats., permits a school board to provide transportation in areas of unusual hazards.

Procedures for the Development or Revision of an Unusually Hazardous Transportation (UHT) Plan as Delineated in State Statutes

1. The school board shall develop a plan which shall show by map and explanation the nature of the unusual hazards to pupil travel and propose a plan of transportation if such transportation is necessary, which will provide proper safeguards for the school attendance of such pupils.
2. Copies of the plan shall be filed with the sheriff of the county in which the principal office of the school district is located.
3. The sheriff shall review the plan and may make suggestions for revision deemed appropriate. The sheriff shall investigate the site and plan and make a determination as to whether unusual hazards exist which cannot be corrected by local government and shall report the findings in writing to the state superintendent and the school board concerned.
4. Within 60, but not less than 30, days from the day on which the state superintendent receives the sheriff's report, the state superintendent shall determine whether unusual hazards to pupil travel exist and whether the plan provides proper safeguards for such pupils.
5. If the state superintendent makes findings which support the plan and the determination that unusual hazards exist which seriously jeopardize the safety of the pupils in their travel to and from school, the school board shall put the plan into effect and state aid shall be paid under s.121.58(2)(c) for any transportation of pupils under this subsection.

The Appeal Process in State Statute

1. Any person aggrieved by the failure of the school board to file a UHT plan with the sheriff may notify the school board in writing that an area of unusual hazard exists.
2. The school board shall reply to the aggrieved person in writing within 30 days of receipt of the aggrieved person's notice.
3. The school board shall send a copy of the board's reply to the sheriff of the county in which the principal office of the school district is located and to the state superintendent.
4. Upon receipt of the school board's reply, the aggrieved person may request a hearing before the state superintendent for a determination that an area of unusual hazard exists.
5. If the state superintendent determines that an area of unusual hazard exists, the state superintendent shall direct the school board to proceed as stated in the development and revision procedures listed previously.
6. Within 30 days after the sheriff's report is received by the state superintendent, any aggrieved person may request a hearing before the state superintendent on the determination by the sheriff and on the plan. After such hearing, the state superintendent shall proceed as stated in the development and revision procedures listed previously.

Suggested Criteria to Use for Identifying UHT Areas

Width of the shoulder of the road	Traffic count
Lack of crossing guards	Lack of law enforcement
Ages of children	Railroad crossing
Temporary hazards (e.g. construction projects or street repairs)	Lack of sidewalks

DEFINITIONS OF "UNUSUAL HAZARD"

Chapter PI 7.01(2) of DPI Administrative Code defines an unusual hazard as an existing condition which constitutes more than an ordinary hazard and which seriously jeopardizes the safety of pupils in their travel to and from school. It is recognized that all traffic situations through which pupils must travel present some degree of hazard. That degree of hazard often depends on the age of the pupils concerned. When such hazards reach a degree of danger which is unacceptable to the community in which they exist, the school board, with its combined judgment reflecting the safety interests of the community, may identify such hazards as unusual for the purpose of proposing a plan to remove or diminish them.

UNUSUAL HAZARD CRITERIA DEVELOPMENT

TADI’s team of Road Safety Professionals (RSP), as certified through the Transportation Professional Certification Board, reviewed unusual hazard criteria in both Wisconsin and national school districts and researched factors that impacted pedestrian safety. The team developed objective and science-based criteria based on amount of exposure to a potential hazard a student would be subjected to on a walking route to or from school.

The criteria estimates the risk a student would be exposed to walking along roadways and crossing roadways. The resultant numerical values are based on fundamental criteria research of hazards which have been shown to impact risk to pedestrians.

Walking Along Criteria

- Distance Walked
- Available Walking Path
- Traffic Volume
- Vehicle Speeds
- Parking Activity

Crossing Criteria

- Crossing Width
- Traffic Volume
- Vehicle Speeds
- Risk Adjustments
- Existing Safety Features

The total exposure score is calculated by summing the walking along exposure score and the crossing exposure score.



Hazardous Classification Thresholds

The hazardous classification thresholds used for categorizing routes as acceptable or hazardous are shown in the following graphic. The thresholds vary for school type and are decided upon by the school district and project team using principles based on research that shows crash risk varies by the age of the child and that younger children have less perceptual judgement and motor skills than older children¹.



¹ O’Neal, Elizabeth & Jiang, Yuanyuan & Franzen, Lucas & Rahimian, Pooya & Yon, Junghum & Kearney, Joseph & Plumert, Jodie. (2017). Changes in Perception-Action Tuning Over Long Time Scales: How Children and Adults Perceive and Act on Dynamic Affordances When Crossing Roads. *Journal of Experimental Psychology: Human Perception and Performance*. 44. 10.1037/xhp0000378.

WALKING ALONG EXPOSURE SCORE

The walking along exposure score is calculated by summing the score for each individual segment that pupils walk along from origin to school. Each segment score is calculated by multiplying the factors of each of the five *Walking Along* criteria.

$$\text{Walking Along Exposure Score} = \sum W_D * W_P * W_V * W_S * W_R$$

Where

- W_D = distance walked (mi);
- W_P = available walking path;
- W_V = hourly traffic volume;
- W_S = posted speed limit;
- W_R = parking activity and sight distance restrictions.

Distance Walked (W_D)

The numerical value for walking distance, W_D , is the number of miles a student walks along the particular segment being analyzed.

Available Walking Path (W_P)*

Numerical values for available walking path, W_P , are based on crash modification factors developed from research that showed sidewalks resulted in an 88% reduction in pedestrian crash risk² and that paved shoulders of at least 4 feet results in a 71% reduction in pedestrian crash risk³. The categories used in selecting W_P are shown in the following table.

Category	W_P
Walking Path \geq 10 feet from Thru Lane	1
Sidewalk without Driveways	5
Sidewalk with Driveways	10
\geq 4 feet	25
<4 feet*	50
None	85

**Automatic hazard:* It is considered an automatic hazard if pupils would need to navigate an arterial roadway with a posted speed limit of 45 mph or above that does not have a sidewalk or multiuse path.

The values above were estimated based on the results of the referenced research. For example, the value of 10 used for the “*Sidewalk with Driveways*” category is 88 percent less than the value of 85 used for the “*None*” category [$85 * (1 - 0.88) = 10$].

Most sidewalk crashes occur at driveway conflict points, thus stretches of sidewalk that do not have conflicting driveways are expected to have lower crash risk. Roadways with no access points have

² McMahon, P., Zegeer, C., Duncan, C., Knoblauch, R., Stewart, R., and Khattak, A., “An Analysis of Factors Contributing to ‘Walking Along Roadway’ Crashes: Research Study and Guidelines for Sidewalks and Walkways,” FHWA-RD-01-101, (March 2002).

³ Gan, A., Shen, J., and Rodriguez, A., “Update of Florida Crash Reduction Factors and Countermeasures to improve the Development of District Safety Improvement Projects.” Florida Department of Transportation, (2005).

been shown to have crash reductions of up to 44 percent for all crash types⁴. Thus, stretches of sidewalk that do not have conflicting driveways, “Sidewalks without Driveways”, are expected to have a lower crash risk than sidewalks that cross driveways. The lower risk for sidewalks without driveways is reflected in the scoring criteria.

Lastly, when sidewalks or pathways do not have conflicting driveways, and have a large buffer zone from the travel lane, the risk to pedestrians is further reduced. To account for pathways with a large buffer, a category for pathways separated from the thru-lane of roadway travel by 10 feet or more was included and assigned a low risk exposure factor.

Hourly Traffic Volume (W_v)

Numerical values for hourly traffic volume, W_v , assumes a linear relationship that more traffic volume will lead to more risk exposure to a pedestrian. The categories used in selecting W_v are shown in the following table and represent the peak hour of traffic volumes. If peak hour volumes were not available but daily traffic counts were available, the peak hour volumes were estimated to be 10 percent of the daily traffic volumes. Any roadways with peak hour volumes exceeding 3,000 vehicles per hour are considered an automatic hazard for walking along.

Category	W_v	Category	W_v	Category	W_v
≤ 200	1	1,001-1,200	11	2,001-2,200	21
201-400	3	1,201-1,400	13	2,201-2,400	23
401-600	5	1,401-1,600	15	2,401-2,600	25
601-800	7	1,601-1,800	17	2,601-2,800	27
801-1,000	9	1,801-2,000	19	2,801-3,000	29

Posted Speed Limit (W_s)

Numerical values for posted speed limit, W_s , are based on a AAA research⁵ regarding speed and pedestrian injury risk. The categories used in selecting W_s are shown in the following table.

Category	W_s	Category	W_s
≤25 or NP [^]	1.0	40	3.0
25	1.5	45	3.1
30	2.0	50	3.2
35	2.5	55	3.3

[^]NP = not posted

Parking Activity & Sight Distance Restrictions (W_R)

Limited research is available that specifically isolates the impact of parking on pedestrian crash risk with regard to walking along roadways, but it is known that limiting sight distance increases crash risk⁶. When a sidewalk is not available, parking activity is expected to increase the risk of pedestrian

⁴ Lee, C., Xu, X., and Nguyen, V, "Non-intersection-related Crashes at Mid-block in an Urban Divided Arterial Road with High Truck Volume." Presented at the 90th Meeting of the Transportation Research Board, Washington, D.C., (2011).

⁵ Tefft, B.C. (2011). Impact Speed and a Pedestrian’s Risk of Severe Injury or Death. AAA Foundation for Traffic Safety.

⁶ Elvik, R. and Vaa, T., "Handbook of Road Safety Measures." Oxford, United Kingdom, Elsevier, (2004)

crashes as students would need to navigate around parked vehicles. This activity would put students closer to the travel lanes and could create sight distance restrictions as they navigate around vehicles.

The numerical values for parking activity and sight distance restrictions, W_R , were estimated based on research⁷ regarding sight distance for injury crashes of all crash types. The categories used in selecting W_R are shown in the following table and defined below.

Category	W_R	Definitions
N/A - Sidewalk	1.0	A sidewalk is present for pupils to walk on.
No Parking	1.0	Parking is not allowed or rarely used.
Light Parking	1.2	Sporadically parked vehicles during school arrival or departure hours.
Moderate Parking	1.5	Approximately half of available on-street parking spaces are parked in during school arrival or departure hours.
Heavy Parking or Other Sight Distance Restriction	2.0	Majority of the available parking spaces are parked in during school arrival or departure hours or another sight distance restriction, such as horizontal or vertical curvature exists that could impede the visibility of pedestrians.

⁷ Elvik, R. and Vaa, T., "Handbook of Road Safety Measures." Oxford, United Kingdom, Elsevier, (2004)

CROSSING EXPOSURE SCORE

The crossing exposure score is calculated by summing the score for each individual crossing that students must cross from origin to school. Each crossing score is calculated by multiplying the factors of each of the five crossing criteria.

$$\text{Crossing Exposure Score} = \sum C_W * C_V * C_S * C_R * C_E$$

Where

- C_W = crossing width;
- C_V = hourly traffic volume;
- C_S = posted speed limit;
- C_R = risk adjustments;
- C_E = existing safety feature adjustment.

Crossing Width (C_W)

Numerical values for crossing width, C_W , are based on an assumed linear relationship that more distance to cross will lead to more risk exposure. The categories used in selecting C_W are shown in the following table.

Category	C_W	Category	C_W
≤ 10 ft	1	51-60 ft	6
11-20 ft	2	61-70 ft	7
21-30 ft	3	71-80 ft	8
31-40 ft	4	81-90 ft	9
41-50 ft	5	>90 ft	10

Hourly Traffic Volume (C_V)

Numerical values for hourly traffic volume, C_V , assumes a linear relationship that more traffic volume will lead to more risk exposure to a pedestrian. The categories used in selecting C_V are shown in the following table and represent the peak hour of traffic volumes. If peak hour volumes were not available but daily traffic counts were available, the peak hour volumes were estimated to be 10 percent of the daily traffic volumes. Any roadways with peak hour volumes exceeding 3,000 vehicles per hour are considered an automatic hazard for crossing.

Category	C_V	Category	C_V	Category	C_V
≤ 200	1	1,001-1,200	11	2,001-2,200	21
201-400	3	1,201-1,400	13	2,201-2,400	23
401-600	5	1,401-1,600	15	2,401-2,600	25
601-800	7	1,601-1,800	17	2,601-2,800	27
801-1,000	9	1,801-2,000	19	2,801-3,000	29

Posted Speed Limit (C_S)*

Numerical values for posted speed limit, C_S , are based on a AAA research⁸ regarding speed and pedestrian injury risk. The categories used in selecting C_S are shown in the following table and represent the posted speed of the roadway to be crossed.

Category	C_S	Category	C_S
≤25 or NP [^]	1.0	40	3.0
25	1.5	45	3.1
30	2.0	50	3.2
35	2.5	55	3.3

[^]NP = not posted

***Automatic hazard:** It is considered an automatic hazard if pupils would need to cross a roadway with a posted speed of 45 mph or greater.

Risk Adjustments (C_R)*

Numerical values for risk adjustments, C_R , are based on *CMF Clearinghouse* data regarding the impact of all-way stop control⁹, traffic signals with right-turn-on-red allowed¹⁰ and sight distance restrictions¹¹. Research has shown that these characteristics impact the likelihood of pedestrian related crashes. Intersections with all-way stop control, for instance, require all vehicles to stop thereby reducing vehicle speeds and reducing the risk to pedestrians. At signalized intersections, right-turn-on-reds (RTORs) can increase the risk to pedestrians as drivers can be focused on looking for approaching traffic to their left rather than looking for pedestrians in their path. Lastly, if the crossing has sight-distance restrictions, such as roadway curvature or nearby parking, applying the sight distance restrictions adjustment is suggested. The categories used in selecting C_R are shown in the following table and include combination categories if all-way stop control or traffic signals with RTORs are combined with a sight distance restriction.

Category	C_R
Sight Distance Restriction	2.0
All-Way Stop Control	0.6
All-Way Stop Control with Sight Distance Restriction	1.2
Traffic Signal with RTORs	1.7
Traffic Signal with RTORs and Sight Distance Restriction	3.4

***Automatic hazard:** It is considered an automatic hazard if pupils would need to cross an on- or off-ramp to a freeway.

Existing Safety Features (C_E)

At roadway and intersection crossings, there are several safety improvements that have been shown to reduce the risk of pedestrian crashes. Numeric values for safety treatment adjustment, C_E , are based on research showing certain treatments reduce the risk of pedestrian crashes. Note that only one treatment can be selected for this analysis and it is suggested that the most effective treatment be

⁸ Tefft, B.C. (2011). Impact Speed and a Pedestrian's Risk of Severe Injury or Death. AAA Foundation for Traffic Safety.

⁹ Lovell, J. and Hauer, E., "The Safety Effect of Conversion to All-Way Stop Control." Transportation Research Record 1068, Washington, D.C., Transportation Research Board, National Research Council, (1986) pp. 103-107.

¹⁰ American Association of State Highway and Transportation Officials. Highway Safety Manual. Washington, DC, 2010.

¹¹ Elvik, R. and Vaa, T., "Handbook of Road Safety Measures." Oxford, United Kingdom, Elsevier, (2004)

chosen. For example, if the crossing has a high visibility crosswalk and a pedestrian countdown timer, the factor of 0.3 for pedestrian countdown timer is suggested. The categories used in selecting C_E are shown in the following table and are based on crash modification factors from either the Wisconsin DOT’s Crash Modification Factor Spreadsheet¹² or the Crash Modification Factor Clearinghouse¹³.

Research is limited on the specific safety benefit of crossing guards – which are difficult to isolate in studies. It is reasonable to conclude, however, that the safety benefits of crossing guards are expected to exceed that of engineering countermeasures. In a 2009 study of school zones in Florida¹⁴, it was stated “perhaps the clearest observation from the site visits and data analysis conducted for the 14 school sites throughout Florida was the great beneficial value of school crossing guards”. It is suggested that sites with a crossing guard or guards be provided with a high-visibility crosswalk to help users of the crosswalk and the roadway recognize the importance of the crossing.

Category	C_E	Category	C_E
Multiple Crossing Guards	0.1	Rectangular Rapid Flash Beacon	0.5
Single Crossing Guard	0.2	High-Visibility Crosswalk	0.6
Pedestrian Hybrid Beacon	0.25	Median Refuge	0.7
Pedestrian Countdown Timer	0.3	Standard Crosswalk	1.0

¹² <https://wisconsindot.gov/Pages/doing-bus/local-gov/traffic-ops/manuals-and-standards/teops/ch12.aspx>

¹³ www.cmfclearinghouse.org/

¹⁴ Study of school zones with traffic signals : final report, June 2009. M3 - Tech Report M1 - Report No. 7762-110 UR - https://rosap.nhtl.bts.gov/view/dot/17495/dot_17495_DS1.pdf?

RECOMMENDATIONS

The areas recommended to be classified as unusually hazardous are displayed on Exhibits 1 – 5.

- Exhibit 1 – Patrick Marsh MS
- Exhibit 2 – Central Heights MS
- Exhibit 3 – Prairie View MS
- Exhibit 4 – East HS
- Exhibit 5 – West HS

The analysis includes updated traffic count information for three intersections from December 2023 after the traffic signal at Blue Heron and Grand Avenue was operational. The three intersections counted were:

- Blue Heron & Grand Avenue (Hwy C)
- Windsor Street (Hwy 19) & Thompson Road
- Thompson Road & Pennsylvania Avenue

The traffic counts were conducted from 7am to 9am and 2pm to 5pm during typical weekdays. The traffic count information is provided in Appendix A.

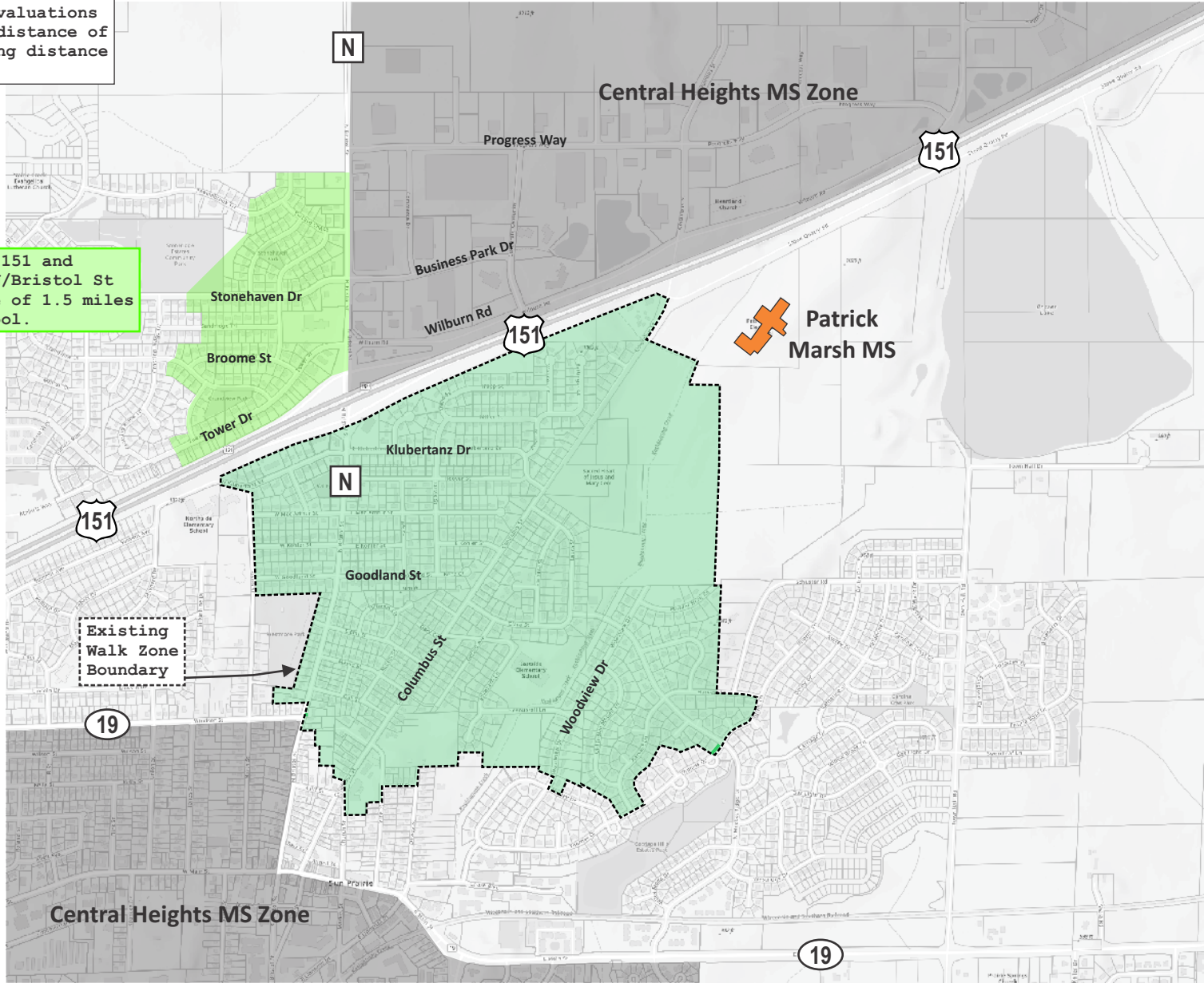
The analysis also includes several safety improvements the City of Sun Prairie has implemented, or assumed will be implemented by the Fall 2023 school semester. The improvements are listed below:

- *CTH N/Bristol Street Intersection with Tower Drive/Wilburn Road*
 - Pedestrian countdown timers added.
- *CTH N/Bristol Street Intersection with Stonehaven Drive/Business Park Drive*
 - High-visibility crosswalk added.
- *CTH N/Grove Street Intersection with Park Street*
 - Median refuge added.
 - High-visibility crosswalk will be painted in spring.
- *CTH C/Grand Avenue Intersection with Blue Heron Blvd*
 - “No turn on red when pedestrians are present” signs added.
 - One crossing guard added.
- *CTH C/Grand Avenue Between Main Street and City Station Drive*
 - Sidewalk modified along east side of CTH C to provide buffer space.
- *Thompson Road South of Main Street*
 - Provided multi-modal connectivity via the addition of a multi-use path from Main Street to Spring Street.
- *STH 19 Intersection with Thompson Road*
 - Updated traffic signal timing with leading pedestrian interval (push button activated).
 - LED no-right-turn-on-red signs added.
 - Traffic signal and geometric improvements planned for construction in year 2023.
 - Addition of crossing guard for fall of 2023.

UHT Exhibits

Walking route evaluations completed to a distance of 1.5 miles from school.

North of USH 151 and west of CTH N/Bristol St to a distance of 1.5 miles from the school.



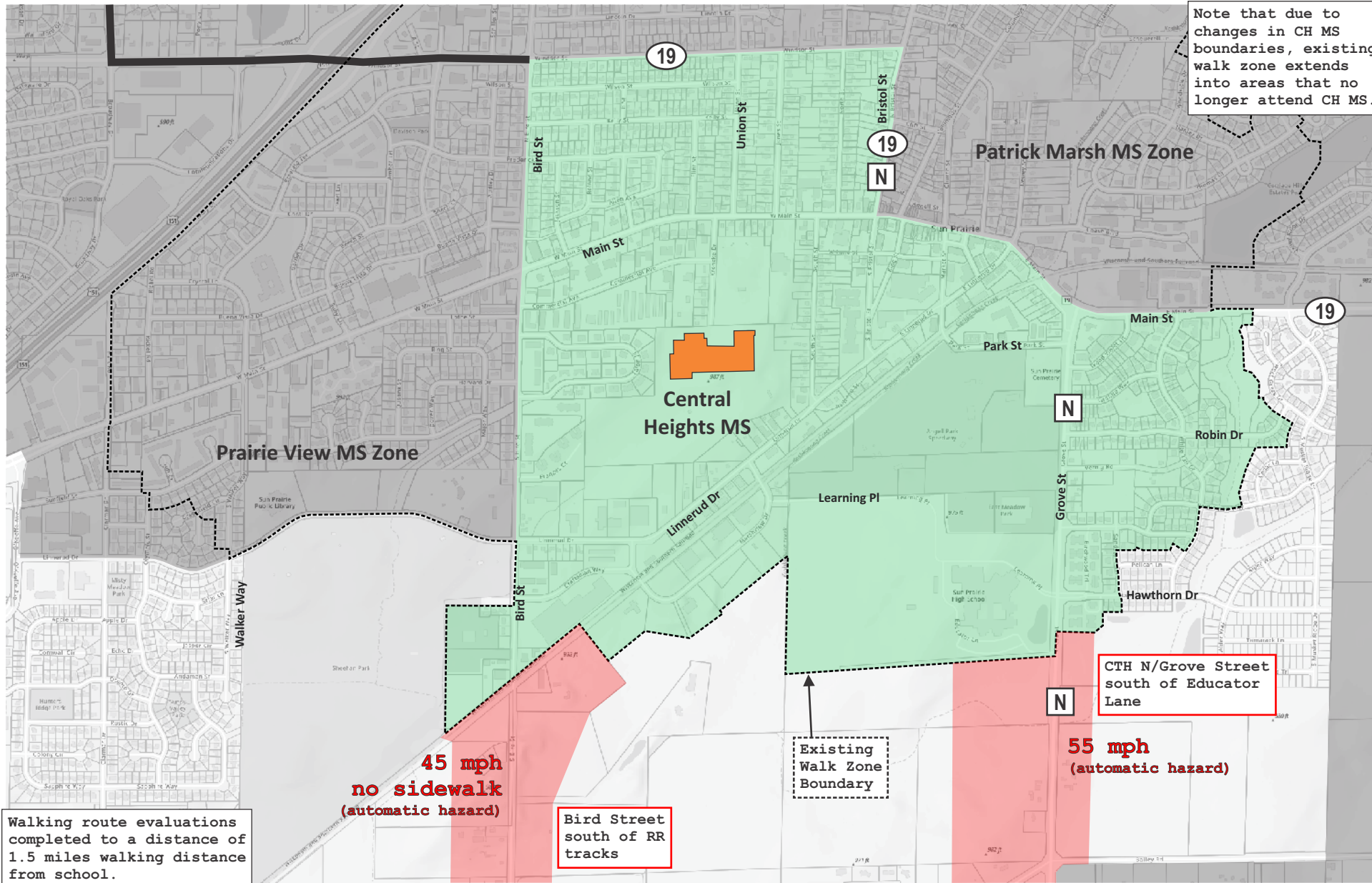
NOT TO SCALE

LEGEND

- Walk Zone Same As Existing
- New Walk Zone
- Unusually Hazardous Area Same As Existing
- New Unusually Hazardous Area

**EXHIBIT 1
PATRICK MARSH MIDDLE SCHOOL
UHT EVALUATION**

SUN PRAIRIE, WISCONSIN



Note that due to changes in CH MS boundaries, existing walk zone extends into areas that no longer attend CH MS.

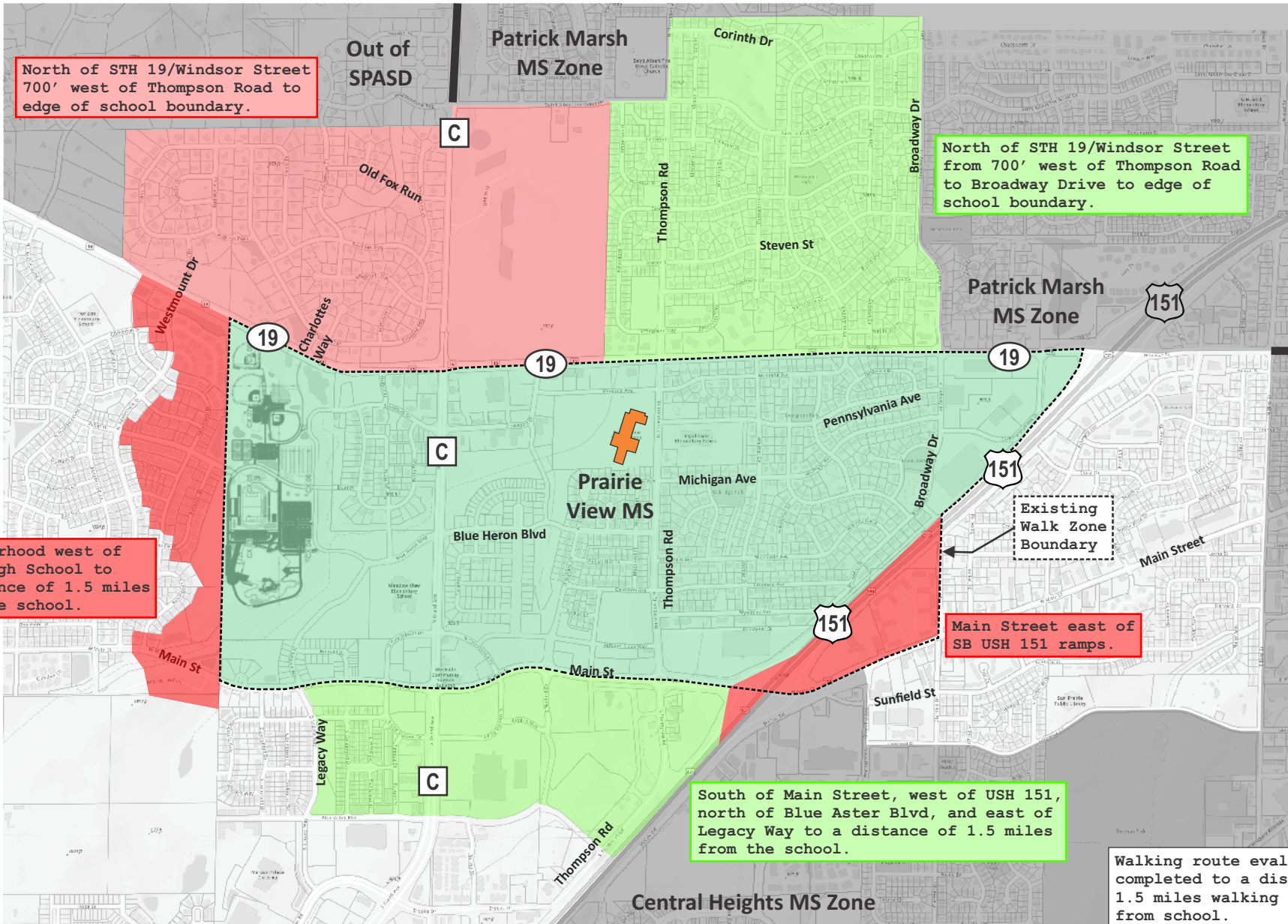
Walking route evaluations completed to a distance of 1.5 miles walking distance from school.



LEGEND	
■	Walk Zone Same As Existing
■	New Walk Zone
■	Unusually Hazardous Area Same As Existing
■	New Unusually Hazardous Area

**EXHIBIT 2
CENTRAL HEIGHTS MIDDLE SCHOOL
UHT EVALUATION**

SUN PRAIRIE, WISCONSIN



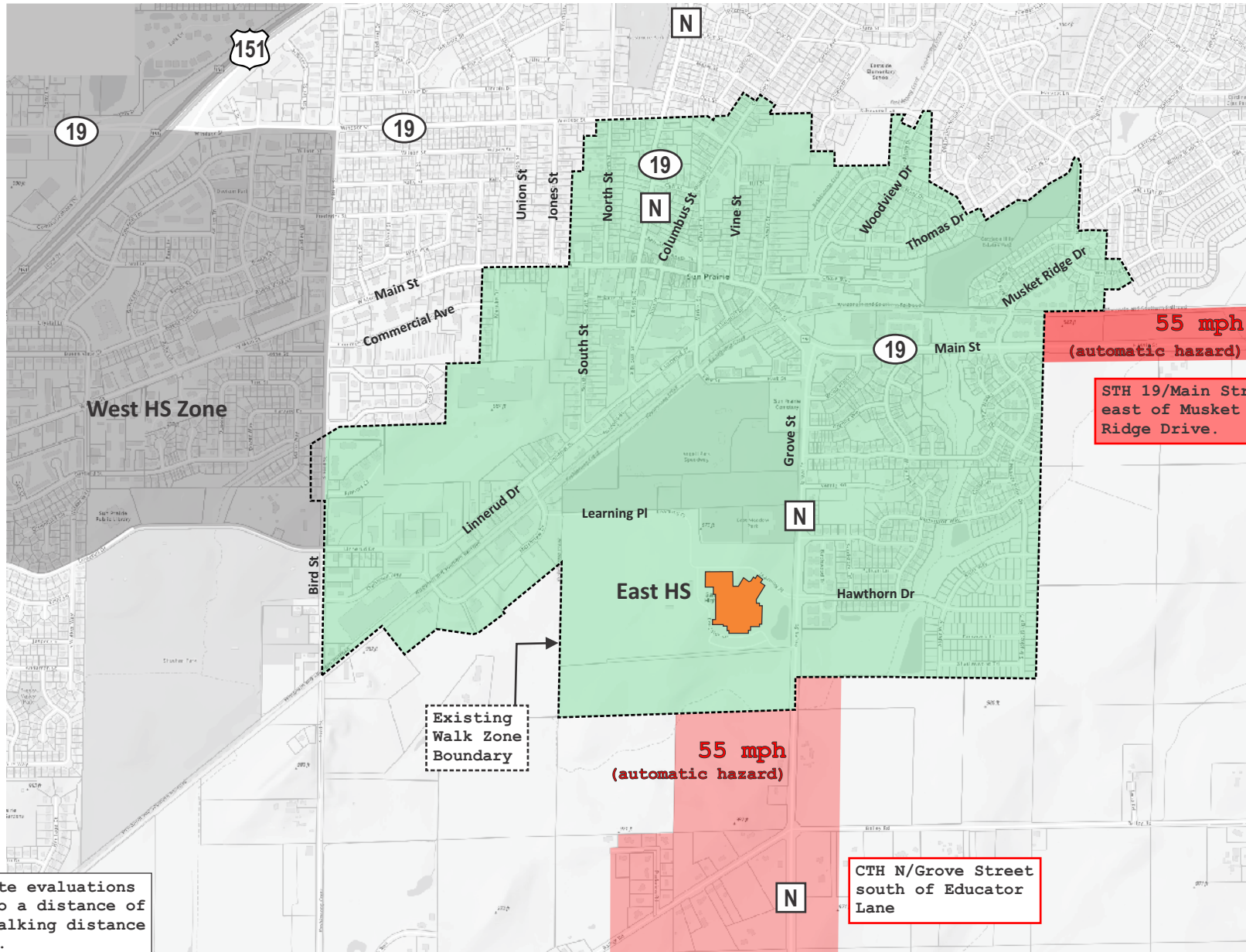
NOT TO SCALE

LEGEND

- Walk Zone Same As Existing
- New Walk Zone
- Unusually Hazardous Area Same As Existing
- New Unusually Hazardous Area

**EXHIBIT 3
PRAIRIE VIEW MIDDLE SCHOOL
UHT EVALUATION**

SUN PRAIRIE, WISCONSIN



Walking route evaluations completed to a distance of 1.5 miles walking distance from school.



LEGEND

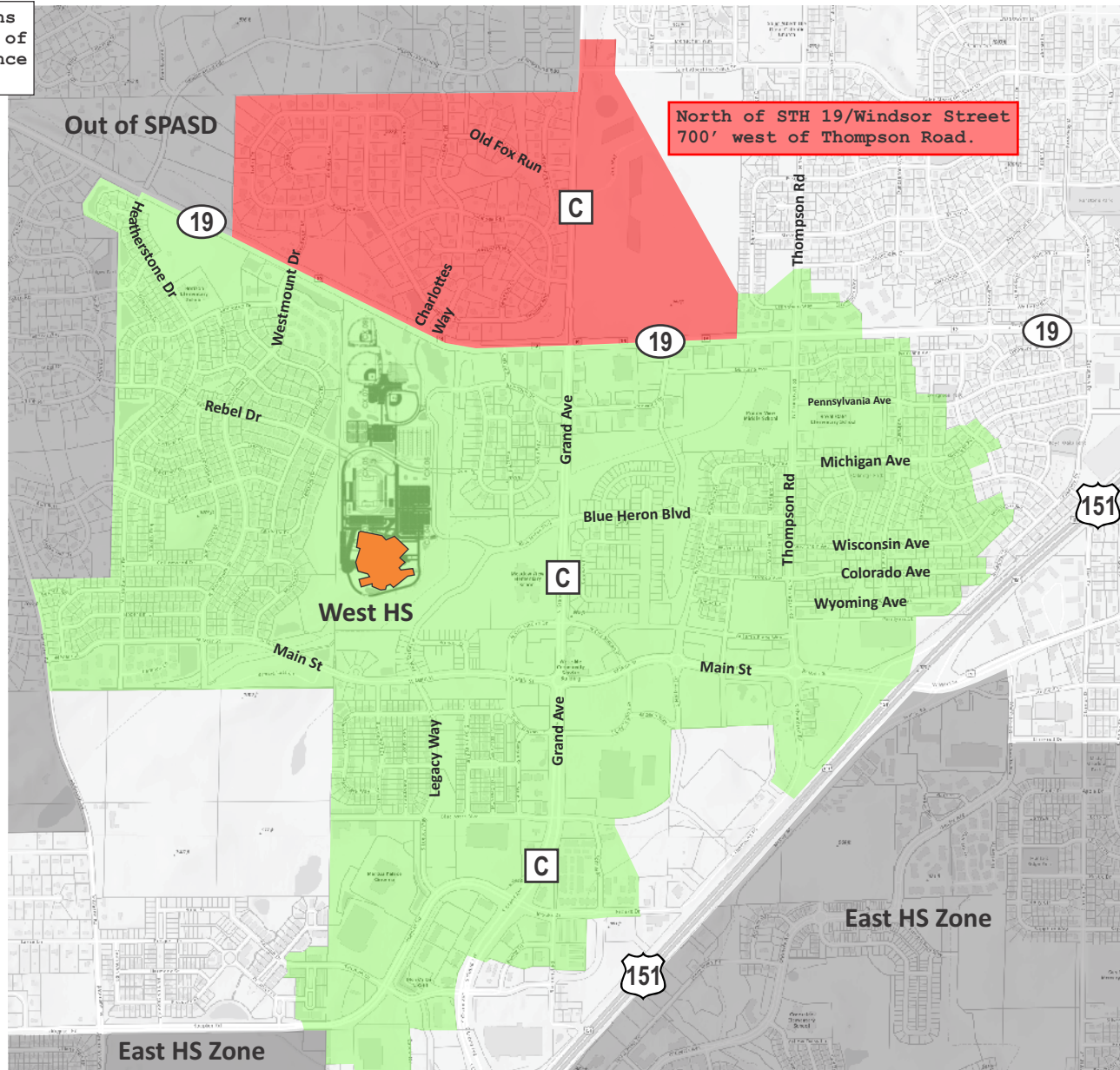
- Walk Zone Same As Existing
- New Walk Zone
- Unusually Hazardous Area Same As Existing
- New Unusually Hazardous Area

**EXHIBIT 4
EAST HIGH SCHOOL
UHT EVALUATION**

SUN PRAIRIE, WISCONSIN

Walking route evaluations completed to a distance of 1.5 miles walking distance from school.

No existing walk zone boundary as West HS was recently constructed.



NOT TO SCALE

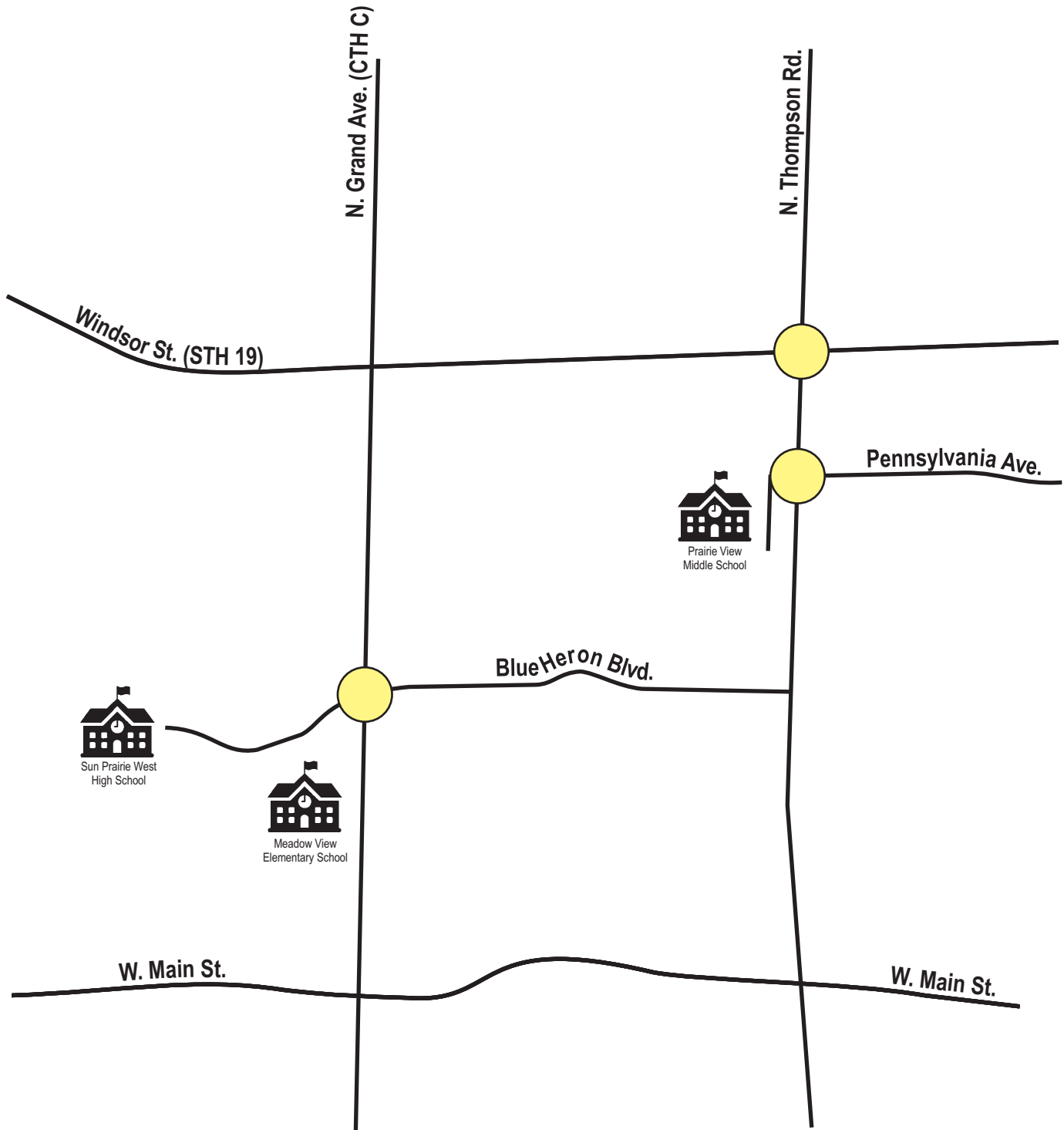
LEGEND

- Walk Zone Same As Existing
- New Walk Zone
- Unusually Hazardous Area Same As Existing
- New Unusually Hazardous Area


**EXHIBIT 5
WEST HIGH SCHOOL
UHT EVALUATION**

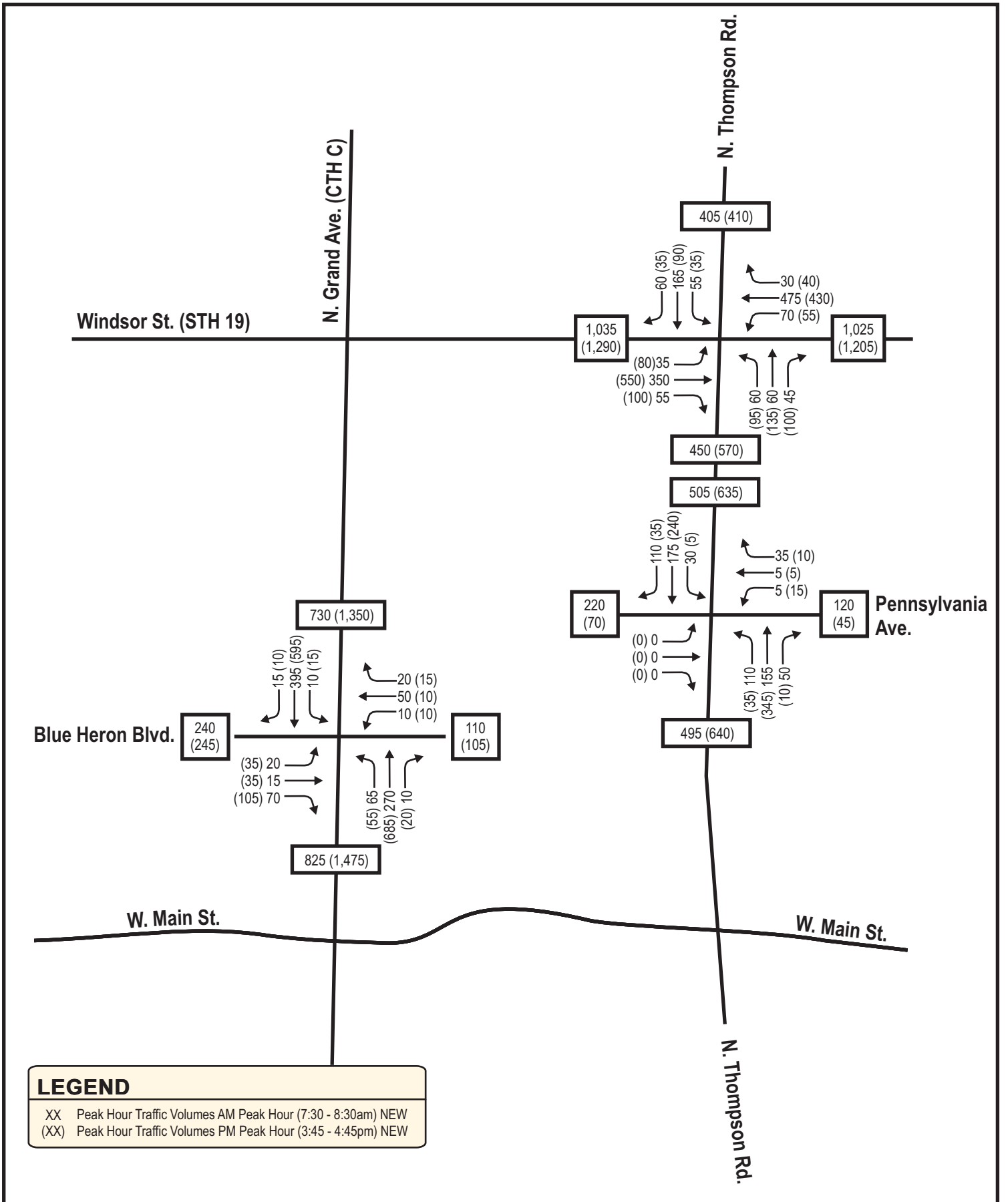
SUN PRAIRIE, WISCONSIN

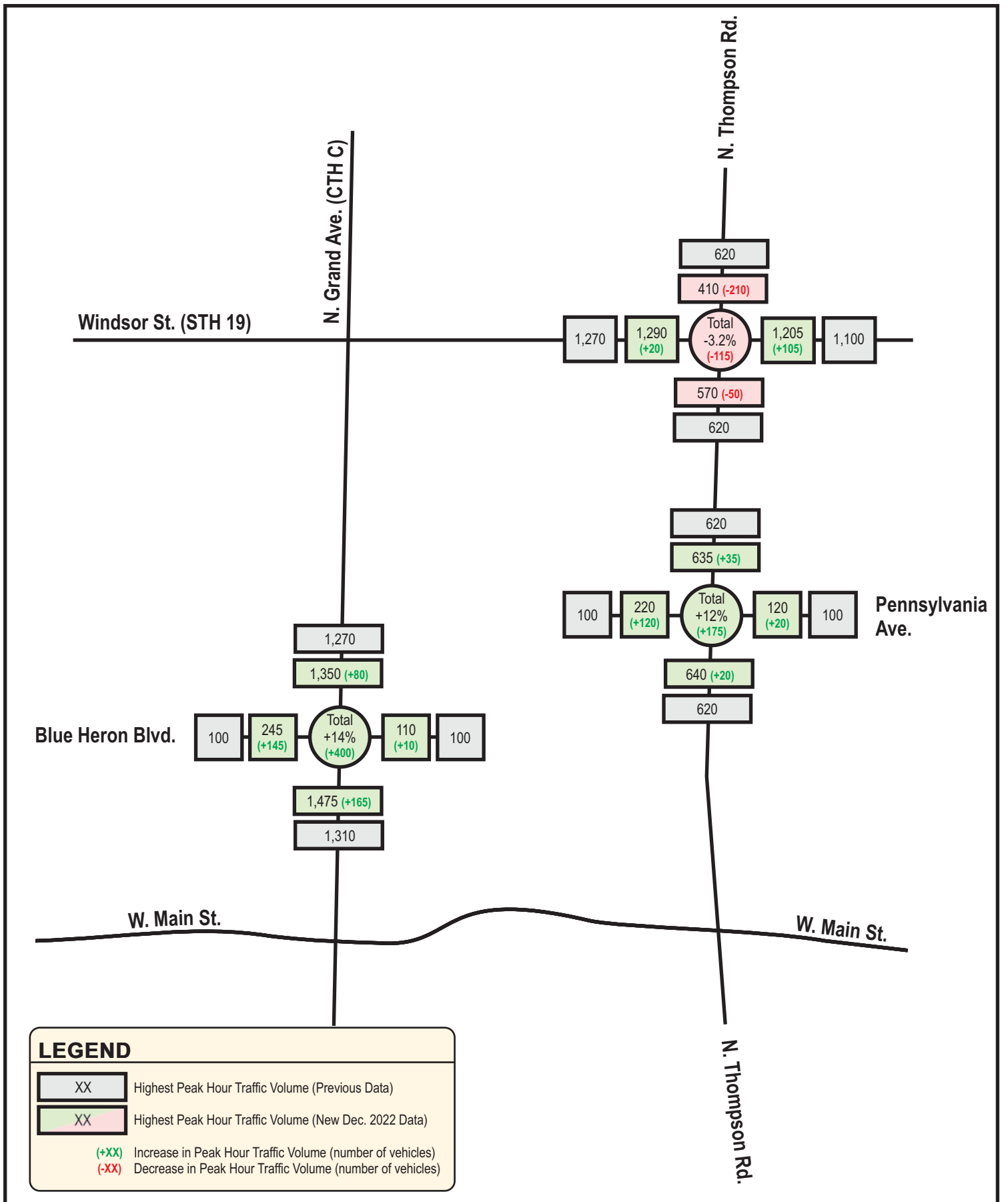
Appendix A



LEGEND

 New Traffic Count Site (December 2022)



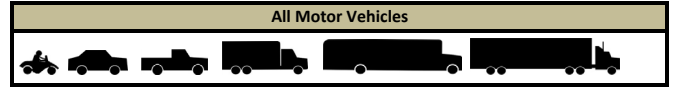


Intersection Traffic Volume Report

Count Basics		<i>Page 5 of 13</i>	
Start Date:	Monday, December 5, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	5	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

Grand Avenue & Blue Heron Blvd



15-Minute Motor Vehicle Data

15-Minute Time Period Start Time	From North Grand Avenue					From East Blue Heron Blvd					From South Grand Avenue					From West Blue Heron Blvd					15-Min Totals	Hourly Sum	PHF
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
	7:00 AM	3	77	0	0	80	0	1	1	0	2	1	46	2	0	49	5	2	3	0			
7:15 AM	7	89	0	0	96	3	2	1	0	6	1	61	12	0	74	4	1	0	0	5	181	838	0.92
7:30 AM	4	96	1	0	101	5	3	2	0	10	3	70	8	0	81	25	3	7	0	35	227	952	0.81
7:45 AM	4	119	3	0	126	1	1	1	0	3	1	65	10	0	76	4	1	1	0	6	211	960	0.81
8:00 AM	3	93	1	0	97	3	9	4	0	16	3	63	20	0	86	13	2	5	0	20	219	937	0.79
8:15 AM	7	86	3	0	96	9	37	3	0	49	2	74	29	0	105	29	10	6	0	45	295		
8:30 AM	5	91	1	0	97	2	9	4	0	15	3	54	17	0	74	32	9	8	0	49	235		
8:45 AM	3	83	1	0	87	1	1	2	0	4	1	74	8	0	83	12	1	1	0	14	188		
2:00 PM	1	103	1	0	105	1	0	0	0	1	6	130	2	0	138	5	0	2	0	7	251	1144	0.91
2:15 PM	4	107	0	0	111	2	2	2	0	6	1	143	8	0	152	8	3	3	0	14	283	1214	0.95
2:30 PM	9	105	1	2	117	4	2	2	0	8	2	140	9	0	151	14	3	2	0	19	295	1288	0.90
2:45 PM	4	135	3	0	142	2	0	2	1	5	6	129	5	0	140	17	3	8	0	28	315	1355	0.94
3:00 PM	0	140	4	0	144	1	0	4	0	5	3	142	5	0	150	13	3	6	0	22	321	1486	0.83
3:15 PM	1	151	0	0	152	2	1	5	0	8	9	169	11	0	189	6	2	0	0	8	357	1526	0.86
3:30 PM	6	148	1	0	155	3	15	2	0	20	5	160	12	0	177	6	0	4	0	10	362	1569	0.88
3:45 PM	4	144	3	0	151	5	6	2	0	13	6	150	20	2	178	50	27	27	0	104	446	1589	0.89
4:00 PM	3	128	3	0	134	0	3	4	0	7	2	166	8	0	176	36	6	2	0	44	361	1474	0.92
4:15 PM	1	173	5	1	180	3	1	2	0	6	7	185	11	0	203	7	1	3	0	11	400		
4:30 PM	0	149	4	0	153	6	0	4	0	10	7	183	12	0	202	14	0	3	0	17	382		
4:45 PM	0	142	2	1	145	1	0	2	0	3	1	170	7	0	178	4	0	1	0	5	331		
Totals	69	2359	37	4	2469	54	93	49	1	197	70	2374	216	2	2662	304	77	92	0	473	5801		

Peak Hour All Vehicle Volume Summary

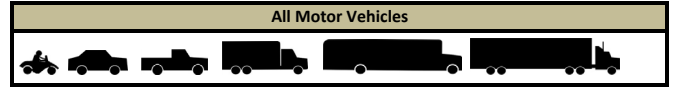
Hourly Time Period Start Time	From North Grand Avenue					From East Blue Heron Blvd					From South Grand Avenue					From West Blue Heron Blvd					Total Hourly Volume	PHF
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
	AM 7:30 AM	18	394	8	0	420	18	50	10	0	78	9	272	67	0	348	71	16	19	0		
PM 3:45 PM	8	594	15	1	618	14	10	12	0	36	22	684	51	2	759	107	34	35	0	176	1589	0.89

Intersection Traffic Volume Report

Count Basics		Page 5 of 13	
Start Date:	Tuesday, December 13, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	5	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

Thompson Road & Pennsylvania Avenue



15-Minute Motor Vehicle Data

15-Minute Time Period Start Time	From North Thompson Road					From East Pennsylvania Avenue					From South Thompson Road					From West Pennsylvania Avenue					15-Min Totals	Hourly Sum	PHF
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
	7:00 AM	0	55	5	0	60	0	0	2	0	2	5	28	5	0	38	0	0	0	0			
7:15 AM	6	36	16	0	58	4	0	0	0	4	19	33	6	0	58	0	0	0	0	0	120	597	0.86
7:30 AM	3	51	21	0	75	19	0	1	0	20	43	28	7	0	78	0	0	0	0	0	173	671	0.86
7:45 AM	11	59	5	0	75	8	0	0	0	8	5	35	15	0	55	0	0	0	0	0	138	575	0.74
8:00 AM	36	34	3	0	73	3	1	1	0	5	3	44	41	0	88	0	0	0	0	0	166	535	0.69
8:15 AM	59	33	1	0	93	4	2	0	0	6	0	50	45	0	95	0	0	0	0	0	194		
8:30 AM	6	44	0	0	50	1	0	0	0	1	1	18	7	0	26	0	0	0	0	0	77		
8:45 AM	6	54	1	0	61	1	0	1	0	2	4	28	3	0	35	0	0	0	0	0	98		
2:00 PM	2	44	4	0	50	0	0	0	0	0	3	43	3	0	49	0	0	0	0	0	99	470	0.93
2:15 PM	2	51	3	0	56	2	0	3	0	5	18	43	0	0	61	0	0	0	0	0	122	502	0.96
2:30 PM	0	47	11	0	58	4	0	0	0	4	16	46	2	0	64	0	0	0	0	0	126	501	0.96
2:45 PM	3	42	3	0	48	18	0	1	0	19	5	44	7	0	56	0	0	0	0	0	123	519	0.90
3:00 PM	6	43	2	0	51	3	0	1	0	4	2	65	9	0	76	0	0	0	0	0	131	543	0.92
3:15 PM	8	46	5	0	59	5	0	2	0	7	6	37	12	0	55	0	0	0	0	0	121	572	0.89
3:30 PM	12	44	3	0	59	7	0	1	0	8	4	59	14	0	77	0	0	0	0	0	144	628	0.89
3:45 PM	2	55	1	0	58	6	1	2	0	9	1	73	6	0	80	0	0	0	0	0	147	694	0.83
4:00 PM	1	62	2	0	65	0	0	6	0	6	6	80	3	0	89	0	0	0	0	0	160	693	0.83
4:15 PM	10	57	2	1	70	1	1	4	0	6	1	93	6	1	101	0	0	0	0	0	177		
4:30 PM	20	64	1	0	85	4	0	1	0	5	3	99	18	0	120	0	0	0	0	0	210		
4:45 PM	0	58	3	0	61	3	0	2	0	5	6	73	1	0	80	0	0	0	0	0	146		
Totals	193	979	92	1	1265	93	5	28	0	126	151	1019	210	1	1381	0	0	0	0	0	2772		

Peak Hour All Vehicle Volume Summary

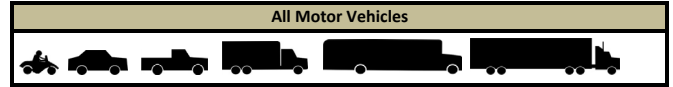
Hourly Time Period Start Time	From North Thompson Road					From East Pennsylvania Avenue					From South Thompson Road					From West Pennsylvania Avenue					Total Hourly Volume	PHF
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
	AM 7:30 AM	109	177	30	0	316	34	3	2	0	39	51	157	108	0	316	0	0	0	0		
PM 3:45 PM	33	238	6	1	278	11	2	13	0	26	11	345	33	1	390	0	0	0	0	0	694	0.83

Intersection Traffic Volume Report

Count Basics		Page 5 of 13	
Start Date:	Tuesday, December 13, 2022	Weekday	Schools in Session
Total Number of Hours Counted:	5	Non-Holiday	No Special Events

15-Minute Motor Vehicle Data

STH 19-Windsor Street & Thompson Road



15-Minute Motor Vehicle Data

15-Minute Time Period Start Time	From North Thompson Road					From East STH 19-Windsor Street					From South Thompson Road					From West STH 19-Windsor Street					15-Min Totals	Hourly Sum	PHF
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
	7:00 AM	15	37	8	0	60	4	87	11	0	102	3	9	11	0	23	7	74	3	0			
7:15 AM	11	30	8	0	49	8	118	13	0	139	6	6	12	0	24	10	75	5	0	90	302	1402	0.89
7:30 AM	11	55	29	0	95	10	112	12	0	134	12	16	24	0	52	8	102	4	0	114	395	1457	0.92
7:45 AM	13	32	11	0	56	10	129	16	0	155	4	15	8	0	27	14	95	8	0	117	355	1323	0.93
8:00 AM	21	36	7	1	65	7	120	28	0	155	13	10	10	0	33	17	69	11	0	97	350	1210	0.85
8:15 AM	17	40	8	0	65	5	114	12	0	131	15	17	19	0	51	17	83	10	0	110	357		
8:30 AM	15	23	9	0	47	6	99	6	0	111	3	3	5	0	11	13	73	6	0	92	261		
8:45 AM	7	29	5	0	41	7	73	8	0	88	4	9	9	0	22	18	68	5	0	91	242		
2:00 PM	7	13	8	0	28	5	74	8	0	87	9	16	10	0	35	11	105	9	0	125	275	1253	0.91
2:15 PM	11	20	7	0	38	8	76	13	0	97	8	21	11	0	40	18	93	14	0	125	300	1342	0.92
2:30 PM	7	24	4	0	35	6	104	14	0	124	9	20	15	0	44	19	104	9	0	132	335	1358	0.93
2:45 PM	7	17	12	0	36	12	79	6	0	97	10	25	15	0	50	21	124	15	0	160	343	1383	0.95
3:00 PM	9	19	12	0	40	13	91	11	0	115	13	30	20	0	63	9	121	16	0	146	364	1477	0.84
3:15 PM	11	26	7	0	44	10	76	12	0	98	10	14	9	0	33	21	107	13	0	141	316	1531	0.88
3:30 PM	7	20	9	0	36	11	79	14	0	104	15	30	17	0	62	19	127	12	0	158	360	1672	0.91
3:45 PM	9	18	7	0	34	9	94	16	0	119	32	27	22	0	81	18	159	26	0	203	437	1736	0.95
4:00 PM	9	15	9	0	33	9	113	10	0	132	24	34	17	0	75	26	129	23	0	178	418	1699	0.93
4:15 PM	9	28	8	0	45	10	118	11	0	139	22	37	24	0	83	31	141	18	0	190	457		
4:30 PM	8	27	13	0	48	10	104	16	0	130	20	36	34	0	90	23	121	12	0	156	424		
4:45 PM	9	25	7	0	41	10	88	9	0	107	20	28	21	0	69	13	148	22	0	183	400		
Totals	213	534	188	1	936	170	1948	246	0	2364	252	403	313	0	968	333	2118	241	0	2692	6960		

Peak Hour All Vehicle Volume Summary

Hourly Time Period Start Time	From North Thompson Road					From East STH 19-Windsor Street					From South Thompson Road					From West STH 19-Windsor Street					Total Hourly Volume	PHF
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
	AM 7:30 AM	62	163	55	1	281	32	475	68	0	575	44	58	61	0	163	56	349	33	0		
PM 3:45 PM	35	88	37	0	160	38	429	53	0	520	98	134	97	0	329	98	550	79	0	727	1736	0.95