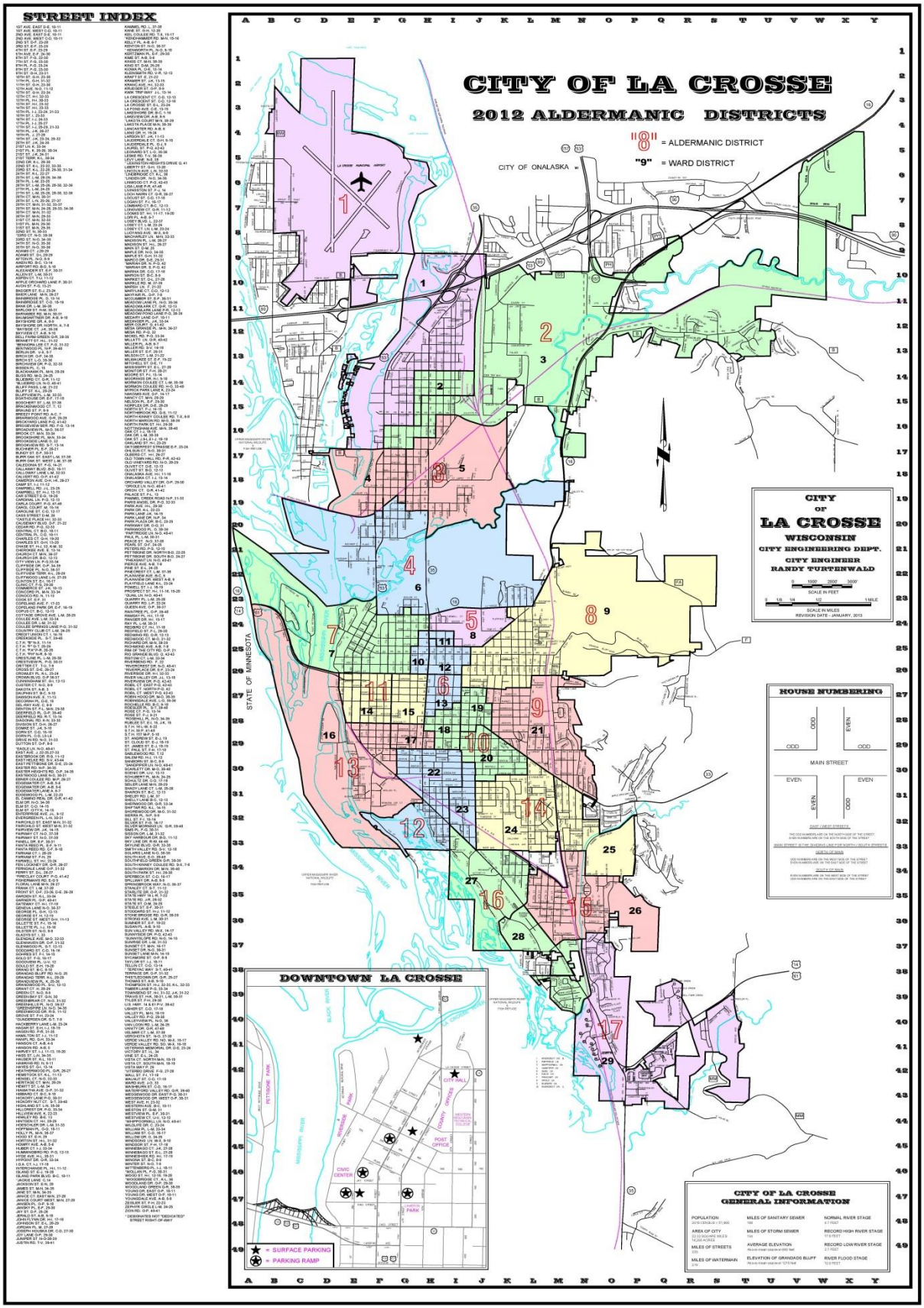
La Crosse Fire Department Standards of Cover

Appendixes A - I

La Crosse Fire Department

Standards of Cover

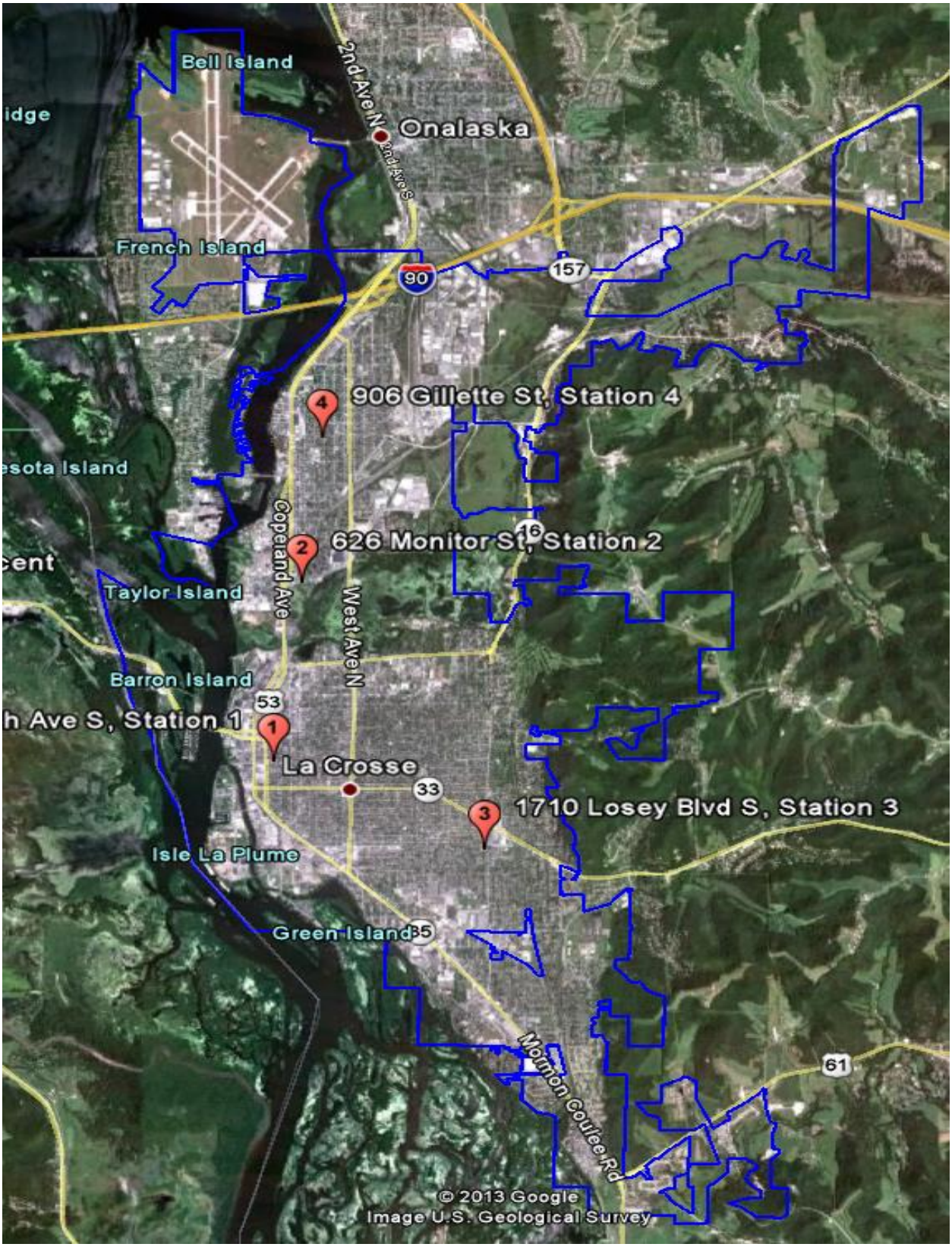
Appendix A
Council Member Districts


STREET INDEX
CITY OF LA CROSSE
2012 ALDERMANIC DISTRICTS
"8" = ALDERMANIC DISTRICT
"9" = WARD DISTRICT
CITY OF ONALASKA
STATE OF MINNESOTA
CITY OF LA CROSSE
WISCONSIN
CITY ENGINEERING DEPT.
CITY ENGINEER
RANDY TURTENWALD
SCALE IN FEET
SCALE IN MILES
REVISION DATE - JANUARY, 2013
HOUSE NUMBERING
ODD
EVEN
MAIN STREET
DOWNTOWN LA CROSSE
= SURFACE PARKING
= PARKING RAMP
CITY OF LA CROSSE
GENERAL INFORMATION
POPULATION
AREA OF CITY
MILES OF STREETS
MILES OF WATERMAIN
MILES OF SANITARY SEWER
MILES OF STORM SEWER
AVERAGE ELEVATION
ELEVATION OF GRANDADS BLUFF
NORMAL RIVER STAGE
RECORD HIGH RIVER STAGE
RECORD LOW RIVER STAGE
RIVER FLOOD STAGE

La Crosse Fire Department

Standards of Cover

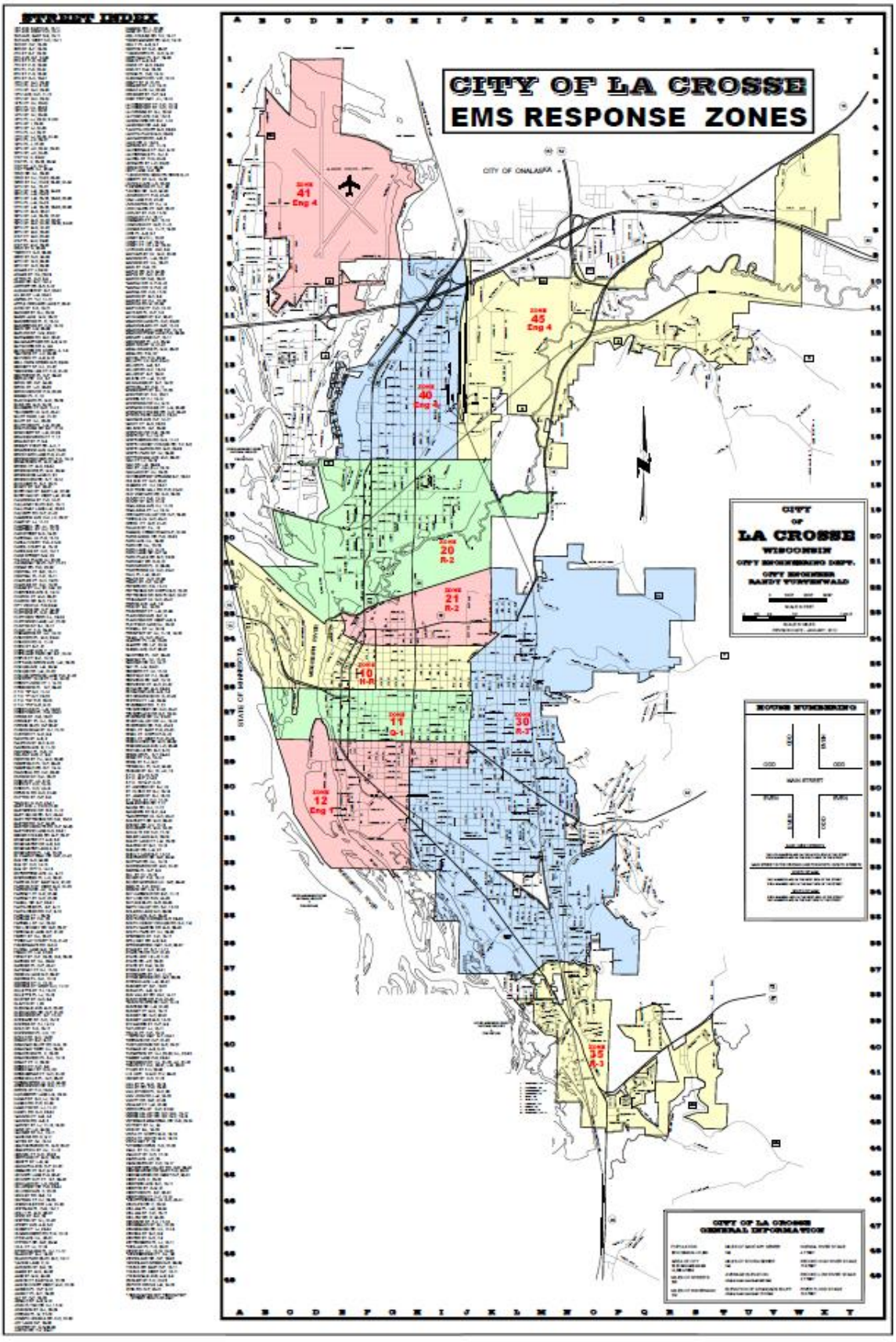
Appendix B
Fire Station Locations


Bell Island
idge
2nd Ave N
2nd Ave S
Onalaska
French Island
90
157
906 Gillette St, Station 4
esota Island
Copeland Ave
626 Monitor St, Station 2
16
cent
Taylor Island
West Ave N
Barron Island
53
h Ave S, Station 1
La Crosse
33
1710 Losey Blvd S, Station 3
Isle La Plume
Green Island
35
Mormon Coulee Rd
61
© 2013 Google
Image U.S. Geological Survey

La Crosse Fire Department

Standards of Cover

Appendix C
Response Zone Map


STREET INDEX
CITY OF LA CROSSE
EMS RESPONSE ZONES
CITY OF ONALASKA
ZONE 41 Eng 4
ZONE 45 Eng 4
ZONE 40 Eng 3
ZONE 20 R-2
ZONE 21 R-2
ZONE 10 R-3
ZONE 11 Q-1
ZONE 30 R-1
ZONE 12 Eng 1
ZONE 35 R-3
STATE OF MINNESOTA
CITY OF LA CROSSE WISCONSIN
CITY ENGINEERING DEPT.
CITY ENGINEER RANDY FORTENBACH
ROUTE NUMBERING
MAIN STREET
CITY OF LA CROSSE GENERAL INFORMATION

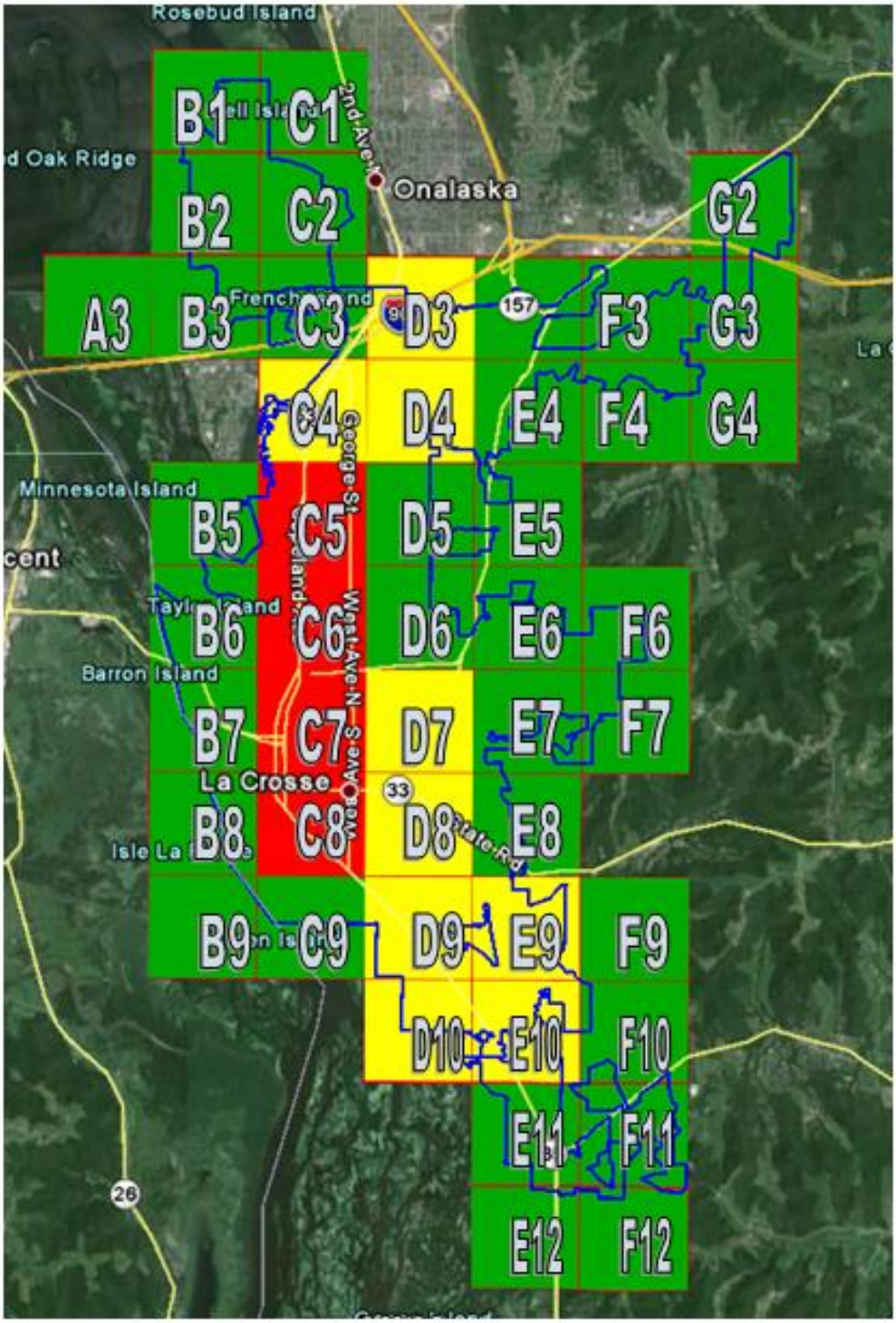
La Crosse Fire Department

Standards of Cover

Appendix D
Planning Zones

City of La Crosse Fire Department

Fire Risk Response



The following is an explanation of the planning zone analysis (Appendix J):

District Overview: a brief explanation of the; planning zone location within the city, planning zone occupancy, planning zone risk assessment scores, and special hazards within the planning zone.

Special Hazards: Identified building name, address, associated risk, fire flow, and risk assessment score.

Inspected Occupancy Risk Assessment: Inspected occupancy risk assessment scores and percentages. These are all occupancies within the planning zone that the agency inspects on a semi-annual basis.

Occupancy Analysis: Classification of planning zone occupancy and percentages. These are all occupancies within the planning zone, both inspected properties and residential properties.

Emergency Call History: Emergency call history within the planning zone, analyzed by call type.

90^{th} Percent Priority Fractile Total Response Time for Emergency Responses: 90^{th} percent priority fractile total response times, analyzed by call type.

Fire Flow Analysis: Fire flow analysis and percentages within the planning zone.

La Crosse Fire Department

Standards of Cover

Appendix E
Fire Flow Analysis

Inspected Property Fire Flow Analysis				
Planning Gird	**Low <1000**	**Moderate 1000-3000**	**High>4000**	**Special>4000**
A3	0	1	0	0
B1	0	0	0	0
B2	6	23	0	0
B3	0	9	0	0
B5	1	0	0	0
B6	3	2	0	0
B7	2	4	1	0
B8	8	1	0	0
B9	0	0	0	0
C1	0	0	0	0
C2	0	2	0	0
C3	3	36	0	0
C4	18	130	1	0
C5	23	300	1	0
C6	28	167	3	1
C7	85	723	6	0

Planning Gird	Low <1000	Moderate 1000-3000	High>4000	Special>4000
C8	46	263	2	0
C9	8	10	0	0
D3	21	46	1	0
D4	11	71	0	0
D5	11	20	1	1
D6	3	18	1	0
D7	9	97	8	3
D8	14	119	2	0
D9	28	121	5	1
D10	30	76	2	1
E3	0	2	0	0
E4	0	10	0	0
E5	0	1	0	0
E6	0	1	0	0
E7	0	3	0	0
E8	0	11	0	0
E9	2	62	0	0
E10	20	50	0	0

Planning Gird	Low <1000	Moderate 1000-3000	High>4000	Special>4000
E11	2	25	1	1
E12	0	0	0	0
F3	0	1	0	0
F4	0	6	1	0
F6	0	0	0	0
F7	0	0	0	0
F9	0	1	0	0
F10	0	0	0	0
F11	0	18	0	0
F12	0	0	0	0
G2	8	6	0	0
G3	0	0	0	0
G4	0	0	0	0

La Crosse Fire Department

Standards of Cover

Appendix F
Summary of Risk Assessment Process

The following is a summary of the fourteen categories of data that were entered into Zoll Fire Records Management System(RMS):

Age of Building:

The year the building was constructed

Construction Type:

Construction type of building based on NFPA code classifications

Area of Building:

Main floor area of building

Height of Building:

Stories above grade

Density of Building:

Square footage of building compared to square footage of the lot

Separation Distance:

Distance in feet, between building and nearest building

Built in fire protection systems – detectors:

Level of fire detection systems

Built in fire protection systems – automatic extinguisher systems:

Level of automatic extinguishing systems

Fire flow requirements:

Amount of water necessary to control the emergency, based on structure, contents and exposures

Exposures:

The number of exposures as defined by NFPA 1142, "any building over 100 square feet within 50 feet of the building"

Hazards in Building:

Building contains a reportable quantity of hazardous materials

Access to Building:

The ability of firefighters to get personnel and apparatus to the all sides of the building to attack a fire and conduct a rescue

Life Safety/Occupancy:

Life safety/occupancy classification of the building; unoccupied, single family, group, assembly, or mass

Property Value of Building:

Estimated property value of building

Target Hazard:

Identified high hazard occupancy not reflected in all other categories. Example: Hydrite Chemical.

***SCORING SYSTEM*:** A risk assessment scoring system was created using NFIRS 5ALIVE software. Points were assigned to each of the fourteen categories:

Year built

1 1985 and after
2 1960 – 1984
3 1935 – 1959
4 1910 – 1934
5 Prior to 1910

Construction type

1	1 – type I fire resistive
2	2 – type II non combustible
3	4 – type IV heavy timber
4	3 – type III ordinary
5	5 - type V wood frame, 9 - not classified, U - undetermined

Main floor area

1	0 – 7,500
2	7,501 – 15,000
3	15,001 – 25,000
4	25,001 – 40,000
5	40,000 and up

Additional stories above grade

1	1
2	2
3	3
20	4
20	5 and up

Density

1	.00 - .19
2	.20 - .39
3	.40 - .59
4	.60 - .79
5	.80 – 1

Separation Distance

1	100 and up
2	61 – 99
3	31 – 60
4	11 – 30
5	0 – 10

Built in fire protection systems – detector type

1	01 – fire alarm system, 4 - sprinkler, water flow detection
2	5 – more than one type
3	1 – smoke, 2 heat, 3 combination, 0 detector other
4	Blank
5	U1 – none, U - undetermined

Built in fire protection systems – automatic extinguisher system

1	1 – 7
2	0 – special hazard system
3	01 – kitchen wet chemical system
4	Blank
5	U1 – none, U – undetermined

Fire Flow

1	0 – 1000
2	1,001 – 2,000
3	2,001 – 3,000
4	3,001 – 4,000
5	4,001 and up

Exposures

1	0
2	1
3	2
4	3
5	4 or more

Hazards

1	No
5	Yes

Access

1	All sides
2	3 sides
3	2 sides
4	1 side
5	None

Life safety factors

1	Unoccupied
2	Single family
3	Group
4	Assembly
5	Mass

Estimated property value

1	0 - 250,00
2	250,001 – 500,000
3	500,001 – 750,000
4	750,001 – 1,000,000
5	1,000,00 and up

Target Hazard

0	No
20	Yes

Total Scores:

Low	< 19
Moderate	19-44
High	45-69
Maximum	> 69

Maximum Risk:

This is the highest degree of risk. Maximum risk properties are defined as properties presenting a high risk of life loss, loss of economic values to the community, or large loss damage to the property. For a building to be classified a maximum risk it must receive a score of greater than 69. 0.3 % (9) of the inspected buildings in La Crosse scored at a maximum risk.

High Risk:

The next highest degree of risk is the high risk category. High risk properties are defined as properties presenting a substantial risk of life loss, a severe financial impact on the community, or unusual potential damage to property. For a building to be classified a high risk it must score a value between 45 and 69. 15.4 % (459) of the inspected buildings in La Crosse scored at a high risk.

Moderate Risk:

The next highest degree of risk is the moderate risk category. Moderate risk properties are defined as properties of average size, where the risk of life loss or damage to property in the event of a fire in a single occupancy is usually limited to the occupants. For a building to be classified a moderate risk it must score a value between 19 and 44. 83.9 % (2,497) of the inspected buildings in La Crosse scored at a moderate risk.

Low Risk:

The lowest degree of risk is the low risk category. Low risk properties are defined as properties that are small non-commercial structures that are remote from other buildings, such as detached residential garages and out buildings. For a building to be classified a low risk it must score a value of less than 19. 0.3 % (11) of the inspected buildings in La Crosse scored at a low risk. The table below shows all inspected properties in the city.

Inspected Properties in La Crosse

Category	Score	Total	Percent
Maximum	> 69	9	0.3
High	45-69	459	15.4
Moderate	19-44	2497	84
Low	< 19	11	0.3

The City of La Crosse has 12,217 residential properties that are two unit apartments or single family properties. These 12, 217 residential properties fall within the moderate risk category. The table below shows all properties in La Crosse, including these 12,217 residential properties.

Inspected and Residential Properties in La Crosse

Category	Score	Total	Percent
Maximum	> 69	9	0.05
High	45-69	459	3
Moderate	19-44	14714	96.9
Low	< 19	11	0.05

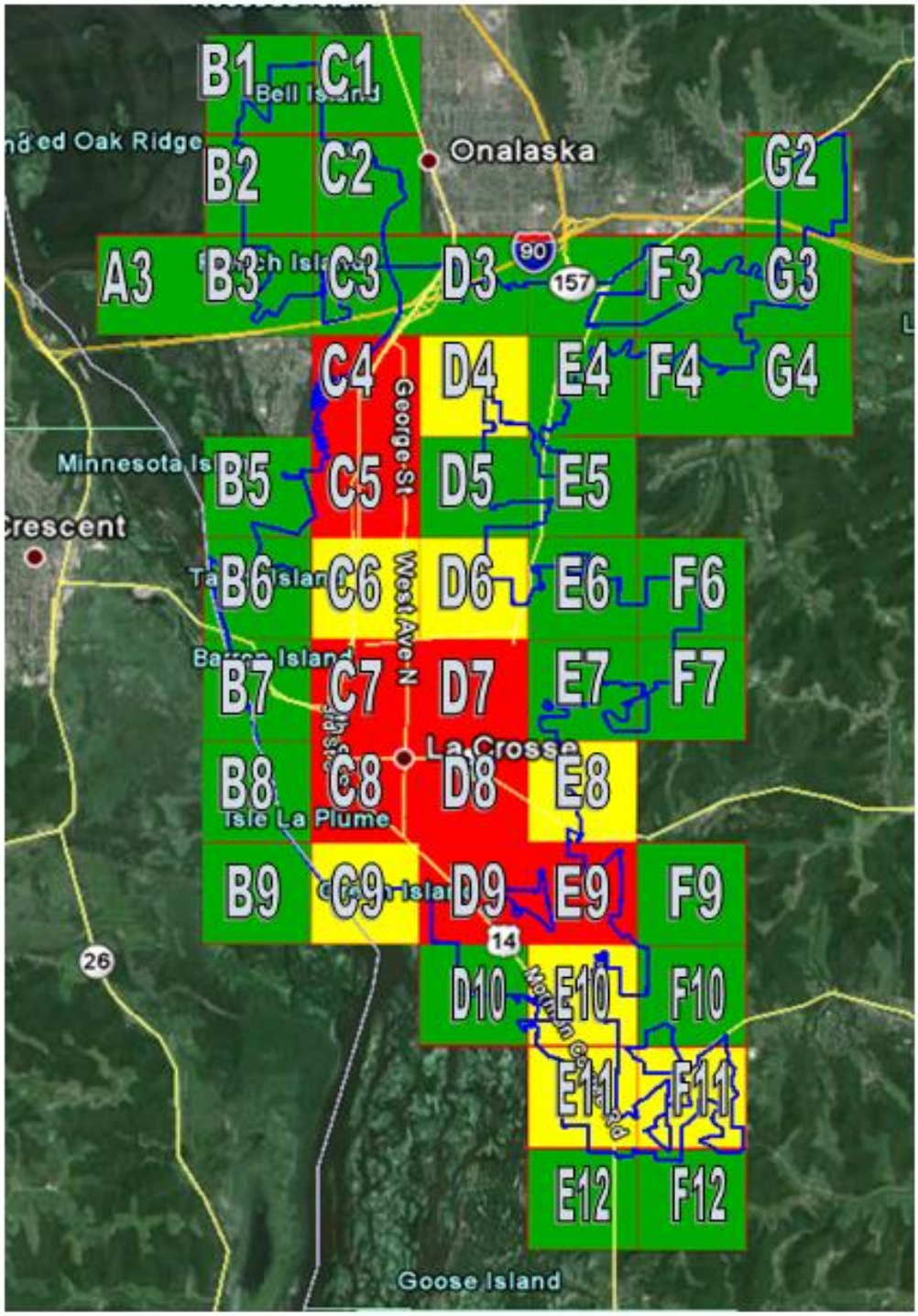
La Crosse Fire Department

Standards of Cover

Appendix G
Population Map

City of La Crosse Fire Department

Population Risk Response



>2500 High Risk | 500-2500Moderate Risk | <500 Low Risk

La Crosse Fire Department

Standards of Cover

Appendix H
GIS Analysis

-Analysis Overview

The goal of this analysis is to provide the following deliverables:
-1 overall overview initial response map of the city with the 4 current stations
-1 overall overview initial response map of the city with the 4 current stations plus planned station at Hwy 14/61 & MM
-1 initial response map per station including planned station at Hwy 14/61 & MM
-1 analysis map of estimated best locations for station distribution for initial response
-If time allows we will assemble 1 overall overview response map of the city with the 4 current stations taking into account time needed for a full response (ie. all apparatus needed.) This will be done for as many types of response as time allows.

Further notes:
-All response maps will show 4 & 8 minute estimated response times
-We will take the existing stop signs into account and try to apply a standard lesser barrier where those signs may be missing.
-We will take into account railroad crossing barriers.
-When all stop signs are complete we can complete a new updated set of maps under a new contract.
-All maps will be estimates based on available data and not fact.

-Analysis Process

An analysis network was built using ArcGIS 9.2 that models navigation on the streets of La Crosse. Street direction was modeled. All one-way streets and divided lanes present in the provided data were modeled as traversable only under the appropriate conditions. Road elevation (overpasses/bridges) and connectivity (turn restrictions) were also modeled and implemented when the appropriate conditions in the data were met. Speed limits were modeled as an impedance value for traversing the network. Speed limit data was provided for a portion of the city, the speed limit was modeled at the appropriate values where the data was provided. A default value of 25 mph was implemented for all other streets. Street lights, stop signs, and yield signs were modeled in the best possible manner given the provided data. These traffic intersections were modeled with impedance values that are appended to the traversal time of the route given the manner in which the route is being traversed. The below table (***fig 1***) explains the impedance values that were used. All intersections (not just the ones that do not involve a traffic signal) have a global impedance value assigned to it that varies given the nature of how the intersection is being traversed (i.e. right turn, left turn, u-turn etc.). The railroad overheads were modeled by placing barriers on the roads that should be avoided due to railroad tracks. These points in the road are made non- traversable in the analysis.

The process of this analysis involved building a GIS network that implements the above rules and impedance values. Once the network is properly modeled, it can be used to perform an analysis such as identifying the service area of given points.

Fig. 1

Turn Type	Impedance Value (in minutes)
Yield (left turn)	0.15
Yield (right turn)	0.05
Yield (straight)	0.1
Yield (u turn)	0.15
Stop Light (left turn)	0.33
Stop Light (right turn)	0.1
Stop Light (straight turn)	0.33
Stop Light (u turn)	0.33
Stop (left turn)	0.16666
Stop (right turn)	0.083
Stop (straight turn)	0.125
Stop (u turn)	0.16666

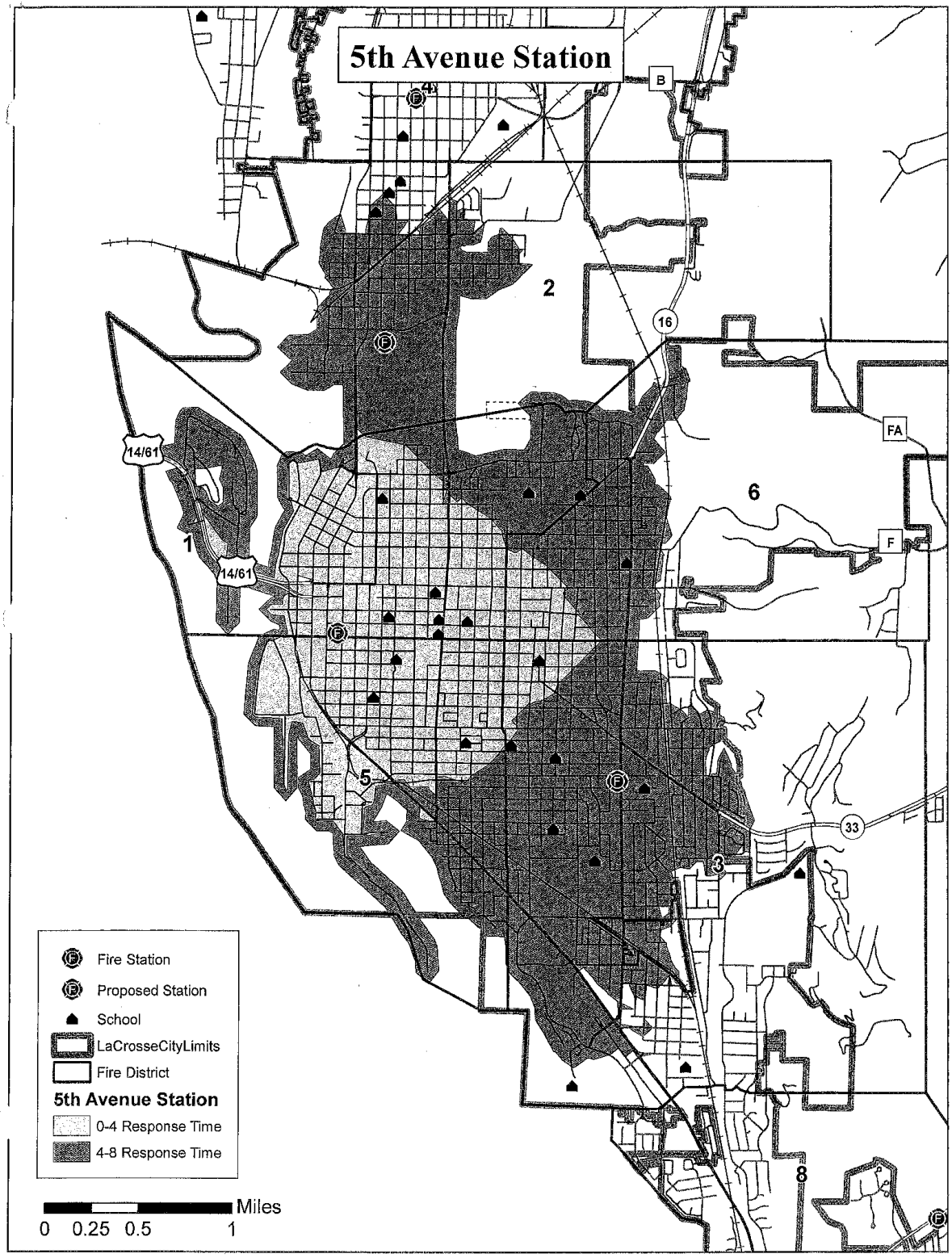
Work done to clean data

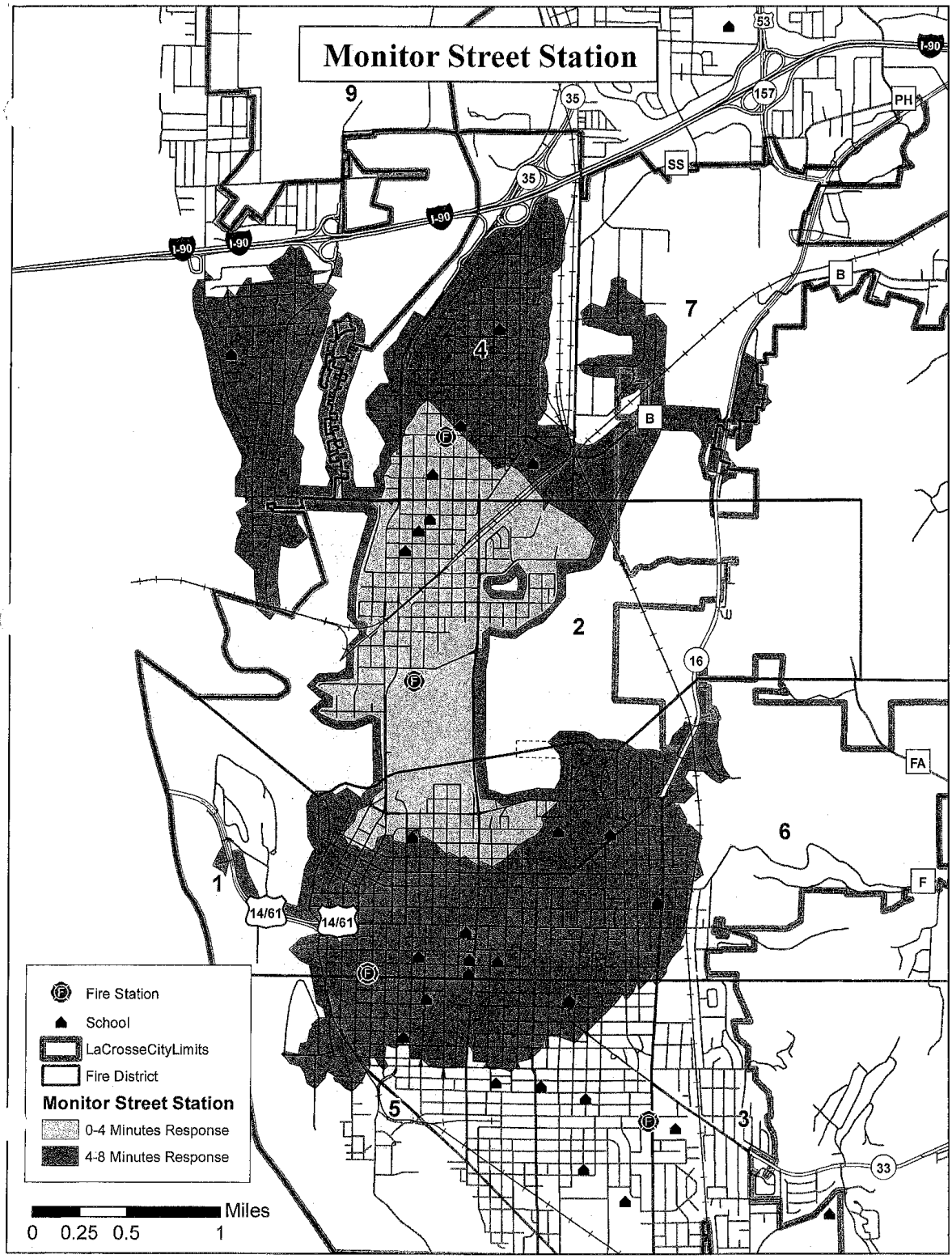
- Conflation of stop sign data and road data was required. We were unable to systematically snap all stop signs to the appropriate road. Furthermore, digitizing direction of roads was not consistent or accurate so assigning a To-From / From-To value to identify location of a stop sign could not be automated. All stop signs had to be either manually verified as correct or manually edited.
- Conflation of stop light data and road data was required. All stop lights had to be either manually verified as correct or manually edited for the same reasons as above.
- Conflation of yield data and road data was required. All yields had to be either manually verified as correct or manually edited for the same reasons as above.
- Road digitizing direction (direction of lines) was not consistently accurate needed to be manually corrected and analyzed to implement one way roads appropriately.
- Barrier information had to be manually extracted from railroad overhead descriptions.
- In some cases, ramps were missing and did not allow for vehicle access where it should be available. These ramps were digitized from aerial photographs.
- In some cases network topology had small breaks or line ends were inappropriately snapped to line vertices when they should be snapped to line end points (and vice versa). This was also the cause of errors in lane elevation which is used to model overpasses and highway intersections.
- Speed limit data was provided for only the city and was spatially joined to the complete county network a default value was systematically applied to the streets that did not receive a speed limit from the spatial join. It is a requirement that all roads have a speed limit value.

Analysis Restraints

There are some restraints that limited the network's ability to model reality:

-Incomplete / confused data – for several of the layers, we went in and cleaned up the data but there was only so much we could do here. (See the descriptions above).
-Speed limit data was only available in the city limits; having speed limits for the entire county dataset would increase accuracy.
-Stop & yield signs were only available for portions of the city; having complete datasets for the county dataset would increase accuracy.
-Stop sign, yield sign, & stop light data was not available outside city limits; having complete datasets for the county dataset would increase accuracy.
-Modeling impedance values – as expected, the variables used for implementing impedance (***fig 1***) are an estimation of what would happen in reality. The above values could be a better simulation of reality if research of each individual intersection in La Crosse were available.
- Traffic density per road and per time of day could be implemented to better simulate reality. These factors have been left out of the analysis because the data is not available.


5th Avenue Station
B
16
FA
F
14/61
14/61
33
1
2
3
4
5
6
8
Fire Station
Proposed Station
School
LaCrosseCityLimits
Fire District
5th Avenue Station
0-4 Response Time
4-8 Response Time
Miles
0 0.25 0.5 1


Monitor Street Station
9
4
7
2
1
6
5
3
53
I-90
157
PH
35
SS
B
16
FA
F
14/61
33
Fire Station
School
LaCrosseCityLimits
Fire District
Monitor Street Station
0-4 Minutes Response
4-8 Minutes Response
Miles
0 0.25 0.5 1

La Crosse Fire Department

Standards of Cover

Appendix I
Comparable City Data

Wisconsin Fire Department Staffing and Spending

	Population	Sq. Miles	# of St	Sta/sq mi	Authorized FF's	Firefighters/ 1000 population	Budget	Expenditures Per Capita
*Wauwatosa	46396	13.2	3	4.40	111	2.39	$13,186,741	$284.22
Merrill	9661	7.5	2	3.75	23	2.38	$2,259,392	$233.87
*Beloit	36966	16.4	3	5.47	65	1.76	$8,109,192	$219.37
West Allis	60411	14.1	3	4.70	109	1.80	$12,930,600	$214.04
Rhinelander	7798	7.9	1	7.90	20	2.56	$1,601,534	$205.38
Wisconsin Rapids	18367	14.1	2	7.05	32	1.74	$3,677,529	$200.22
North Shore	68000	25	5	5.00	105	1.54	$13,478,447	$198.21
Racine	78860	18.7	6	3.12	142	1.80	$15,490,746	$196.43
*La Crosse	51320	22.2	4	5.55	95	1.85	$9,973,050	$194.33
*Brookfield	37920	27.2	3	9.07	57	1.50	$7,360,681	$194.11
Green Bay	104057	54.3	7	7.76	181	1.74	$20,008,300	$192.28
Chippewa Falls	13661	11.4	2	5.70	25	1.83	$2,566,558	$187.87
Stevens Point	26717	16.2	2	8.10	39	1.46	$4,954,681	$185.45
Oak Creek	34451	28.6	3	9.53	52	1.51	$6,165,100	$178.95
Madison	233209	84.7	12	7.06	366	1.57	$41,176,979	$176.57
Marinette	10968	8	1	8.00	16	1.46	$1,887,672	$172.11
Caledonia	24705	48.7	3	16.23	43	1.74	$4,239,190	$171.59
Neenah/Menasha	43999	15.3	4	3.83	67	1.52	$7,474,195	$169.87
Milwaukee	594833	96.9	36	2.69	881	1.48	$99,820,902	$167.81
Franklin	35451	34.7	3	11.57	44	1.24	$5,882,112	$165.92
Manitowoc	33736	17.2	4	4.30	57	1.69	$5,534,577	$164.06
*Waukesha	70718	27.2	5	5.44	103	1.46	$11,565,567	$163.54
*Wausau	39106	17.8	3	5.93	59	1.51	$6,384,621	$163.26
*Oshkosh	66083	24.4	6	4.07	103	1.56	$10,782,100	$163.16
Greenfield	36720	11.6	2	5.80	54	1.47	$5,836,031	$158.93
*Eau Claire	65883	32.4	6	5.40	92	1.40	$10,311,300	$156.51
*Janesville	63575	28.1	5	5.62	92	1.45	$9,816,053	$154.40
Marshfield	19118	12.7	1	12.70	36	1.88	$2,876,341	$150.45
*Sheboygan	49288	14.1	5	2.82	78	1.58	$7,270,513	$147.51
*Appleton	72623	21.4	6	3.57	92	1.27	$10,205,362	$140.53
Superior	27244	55.4	3	18.47	37	1.36	$3,780,545	$138.77
Cudahy	18267	4.7	2	2.35	25	1.37	$2,445,488	$133.87
Kenosha	99218	24	6	4.00	153	1.54	$12,028,021	$121.23
*Fond du Lac	43021	18.2	3	6.07	67	1.56	$4,561,415	$106.03

*Comparable Cities Identified by Council Resolution

Title from Wisconsin Taxpayers Alliance

Individuals and Families Below the Poverty Level
2005-2009 (U.S. Census Bureau, n.d.)

City	Individuals Below the Poverty Level	Families Below the Poverty Level
Stevens Point	26.2%	8.6%
*La Crosse	25.2%	13.3%
Milwaukee	24.3%	19.9%
*Beloit	19.5%	16.8%
Madison	19.4%	8.1%
*Eau Claire	18.7%	9.0%
Marinette	18.7%	16.4%
Rhinelander	18.3%	15.8%
Racine	17.7%	13.6%
Superior	15.7%	12.2%
Green Bay	15.5%	11.4%
Kenosha	15.0%	10.9%
*Oshkosh	14.5%	8.1%
Merrill	14.4%	13.3%
*Wausau	12.4%	8.4%
Cudahy	12.2%	8.6%
West Allis	11.8%	8.7%
*Fond du Lac	11.6%	8.1%
Wisconsin Rapids	11.4%	10.3%
*Sheboygan	11.3%	8.8%
Chippewa Falls	11.0%	9.4%
*Janesville	11.0%	8.6%
*Appleton	10.3%	7.9%
Manitowoc	10.0%	6.2%
Marshfield	8.8%	3.6%
*Waukesha	8.8%	6.1%
Caledonia	8.2%	1.6%
Oak Creek	6.1%	5.0%
Greenfield	5.2%	2.0%
*Wauwatosa	5.0%	2.0%
Franklin	4.1%	2.9%
*Brookfield	2.6%	1.6%

*Comparable Cities Identified by Council Resolution

The Influence that Poverty has on Fire Rates

- Average fire rates 2-4 times higher in census tracts with high levels of poverty (Karter and Donner, 1978).
- Strong negative relationship between income and fire rates (Gunther, 1981).
- Poorest groups of neighborhoods have 14 times the number of suspicious fires (Gunther, 1981).
- Poorest groups of neighborhoods 14 times more likely to have children start a fire (Gunther, 1981).
- Poorest groups of neighborhoods 8 times more likely to have a fire started by careless smoking (Gunther, 1981).

The Influence that Rentals have on Fire Rates

- A lower rate of owner-occupied homes related to an increased fire risk (Munson and Oates, 1987).
- Two times more likely to have a fire in a rental (Karter and Donner, 1978).

Reasons why Poverty and Rentals Increase Fire Rates

- Housing Quality
    - Withdrawal of routine maintenance services erodes the quality of housing units (USFA, 1997).
    - Electrical wiring not designed to carry the load placed on it (Jennings, 1996).
    - Risk increases when households try to compensate for inadequate heating/cooling systems (Jennings, 1996).
- Smoke Detectors
    - Older structures less likely to have smoke detectors (USFA, 1997).
    - People living in poverty do not have the financial resources to invest in fire safety (Munson and Oates, 1987).
- Children are more likely to be left alone (Kraizer et al, 1990).
- Increased levels of alcohol and drug abuse (USFA, 1997).

Multiple City Comparisons

	Geographical Info				Personnel				
City	Square Miles	2010 Population Estimation	Fire Stations	Square Miles Per Station	Total Personnel	Per Capita Staffing	Day Personnel	Shift Personnel	# of FFs Responding to Fire
Beloit	17.00	37,100	3	5.67	65.75	1.77	5	60	
Eau Claire	34.00	66,149	6	5.67	94	1.42	8	86	18
Janesville	33.60	63,600	5	6.72	92.75	1.46	7	87	14
La Crosse	22.20	51,900	4	5.55	95	1.83	7	88	14
Oshkosh	24.89	66,080	6	4.15	108	1.64	7	96	17
Sheboygan	15.00	50,400	5	3.00	79.5	1.58	8	69	12 + 4[3]
Waukesha	25.11	69,100	5	5.02	107	1.55	10	96	21
Wausau	19.20	40,700	3	6.40	60	1.49	5	54	12
Wauwatosa	13.07	45,800	3	4.36	99	2.16	8	102	15
Racine	18.70	80,100	6	3.12	144	1.80	12	132	14
Merrill	8.24	10,130	2	4.12	23	2.28	2	21	9
Green Bay	46.00	104,000	7	6.57	186	1.79	13	172	14
West Allis	11.40	60,600	3	3.80	107	1.77	8	99	19
Chippewa Falls	11.40	13,470	2	5.70	27	2.01	3	24	17
Manitowoc	17.20	34,700	4	4.30	57	1.64	15	51	12
Milwaukee	96.60	594,833	36	2.68	1027	1.73		810	14+
North Shore	25.00	66,000	5	5.00	113	1.71	8	105	21
Brookfield	26.80	39,600	3	8.93	60	1.52	5	55	16
Fond du Lac	20.17	43,600	3	6.72	67	1.54	7	60	17
Appleton	24.9	72,563	6	4.15	98	1.35	13	85	17
Rhinelander	7.9	8,210	1	7.9	20	2.44	2	18	7
Superior									
Kenosha									
Madison									

[3] Additional Personnel for 2nd Alarm

Multiple City Comparisons

City	Services						Equipment			
	Water Rescue	Technical Rescue	Haz Mat Team	High Angle Rescue	EMS Services	Ambulance Service	Quints	Engines	Rescues	
Beloit	Yes[1]	Yes	No[2]	Yes	Paramedic	Yes	1	3	4	
Eau Claire	No	Yes	Yes	No	Paramedic	Yes	2	6	6	
Janesville	Yes	Yes	No[2]	Yes	Paramedic	Yes	3	3	1	
La Crosse	Yes	Yes	Yes	Yes	EMT	No	3	4	3	
Oshkosh	Yes	Yes	Yes	Yes	Paramedic	Yes	2	4	1	
Sheboygan	Yes	Yes	No[2]	Yes	Paramedic	Yes	1	5	2	
Waukesha	Yes	Yes	No[2]	Yes	Paramedic	Yes	2	3	See List	
Wausau	Yes	No	Yes	Yes	Paramedic	Yes	1	3	3	
Wauwatosa	Yes[1]	Yes	No[2]	Yes	BLS & ALSA	Yes	2	2	4	
Racine	Yes	Yes	Yes	Yes	Paramedic	Yes	3	8	8	
Merrill	Yes	Yes	No	Yes	Paramedic	Yes	1	1	3	
Green Bay	Yes	Yes	No[2]	Yes	Paramedic	Yes	3	7	4	
West Allis	Yes	Yes	No[2]	No	Paramedic	Yes	1	3	3	
Chippewa Falls	No	Yes	No[2]	No	BLS & ALS A	Yes	1	3	4	
Manitowoc	Yes	yes	Yes	Yes	Paramedic	Yes	1	5	10	
Milwaukee	Yes	Yes	Yes	Yes	Paramedic	Yes				
North Shore	Yes	Yes	No	No	BLS & ALA A	Yes	2	5	5	
Brookfield	Yes	Yes	No[2]	No	Paramedic	Yes	1	2	3	
Fond du Lac	Yes	Yes	Yes	Yes	Paramedic	Yes	2	4	6	
Appleton	Yes	Yes	Yes	Yes	BLS	No	1	6	1	
Rhinelander	Yes	Yes	No[2]	Yes	Paramedic	Yes	1	2	4	
Superior										
Kenosha										
Madison										

[1] Surface Only
[2] County Level B

Multiple City Comparisons

City	# of calls (Primary City Only - Fire)	# of calls (Primary City Only - EMS)	# of calls (Primary City Only - Total)	# of Colleges / Universities	# of Students in Colleges / Universities	# of Hospitals
Beloit			0	1	2,000	1
Eau Claire	157	6010	6167	3	14,000	2
Janesville	1324	1978	3302	1	950	1
La Crosse	1250	3340	4590	3	15,000	2
Oshkosh	752	7222	7977	2	13,100	2
Sheboygan	917	2758	3675	2	730	2
Waukesha	1128	4536	5664	2	3,400	3
Wausau	1333	4161	5494	2	3,100	1
Wauwatosa	1671	3473	5144	2	1,500	3
Racine	898	8237	9135			2
Merrill	176	1577	1753	0		1
Green Bay	2584	7182	9766	4		4
West Allis	172	6456	7818	1		2
Chippewa Falls	669	2465*	3134	0	0	1
Manitowoc	500	5000**	5650	2		2
Milwaukee	13903	26128	40031			
North Shore	1827	4343	6170			1
Brookfield	1108	2092	3200	6		1
Fond du Lac	2605	4172	6777	3		2
Appleton	1396	2128	3524			
Rhinelander				0		1
Superior						
Kenosha						
Madison						

* Chippewa Falls responds to 3 townships as well

** Manitowoc covers 100 sq. miles in EMS coverage

Multiple City Comparisons

City	Annual Property Loss	90% Fractile Response Time(All Calls)	Avg Response Time (All Calls)	Mutual Aid?	# of Inspections (Annually)	Budgeted Overtime (2009)
Beloit	$1,332,272.00	N/A	5:00	Y (Airport)	4,800	$326,000
Eau Claire	$1,487,766.00	7.91	5.13	Y	6,029	$248,000
Janesville	N/A	Not Calculated	Not Calculated	Y	6,000	$232,921
La Crosse		4:14	2:39	N	5,412	$197,000
Oshkosh	$900,000.00	N/A	4:00	N	4,000	$206,000
Sheboygan	$450,000.00	Not Calculated	3:00	Y	3,800	45,000 + 50,000[4]
Waukesha	N/A	Not Calculated	5:34	Y	5,500	$257,000
Wausau	N/A	N/A	> 5:00	Y (Airport)	3,823	$120,000
Wauwatosa	$550,000.00	Not Calculated	Not Calculated	Y	6,800	$304,803
Racine		Not Calculated	6:13	Y	3,200	$300,000
Merrill		Not Calculated	2:43	Y	1,126	$125,000
Green Bay	$2,500,000.00	Not Calculated		Y	5,000	$481,120
West Allis	$797,251.00		>5:00 91%	Y	4,300	$187,500
Chippewa Falls	$175,000.00	Not Calculated	4:42	Y	1,600	$90,000
Manitowoc	$500,000.00	Not Calculated	>5:00 90%	Y	1,590	$98,000
Milwaukee		Not Calculated	> 7:00 90%	Y		
North Shore	$15,000,000.00	Not Calculated	5:30	Y	2700+	$350,000
Brookfield	$738,000.00	Not Calculated	5:40	Y	5,000	$210,000
Fond du Lac	N/A		6:21	Y	2,615	$464,000
Appleton	$1,200,000.00	Not Calculated	4:40	Y		
Rhinelander	N/A		3:30	Y	720	
Superior						
Kenosha						
Madison						

[4] 45,000 for Fire and 50,000 for EMS

Multiple City Comparisons

City	Housing (%)		Housing (Actual Numbers)		
	Owner Occupied	Rental	Owner Occupied	Rentals	Total
Beloit	62.0%	38.0%	8,277	5,093	13,370
Eau Claire	57.3%	42.7%	13,759	10,257	24,016
Janesville	68.2%	31.8%	16,289	7,605	23,894
La Crosse	51.0%	49.0%	10,746	10,364	21,110
Oshkosh	57.6%	42.4%	13,851	10,231	24,082
Sheboygan	61.2%	38.8%	12,698	8,081	20,779
Waukesha	56.6%	43.4%	14,508	11,155	25,663
Wausau	61.8%	38.2%	9,676	6,002	15,678
Wauwatosa	67.8%	32.2%	13,819	6,569	20,388
Racine	60.4%	39.6%	18,972	12,477	31,449
Merrill	65.4%	34.6%	2,732	1,451	4,183
Green Bay	56.0%	44.0%	23,281	18,310	41,591
West Allis	58.1%	41.9%	16,031	11,573	27,604
Chippewa Falls	58.3%	41.7%	3,284	2,354	5,638
Manitowoc	67.7%	32.3%	9,626	4,609	14,235
Milwaukee	45.4%	54.6%	232,188	126,953	232,188
North Shore	71.5%	28.4%	19,043	7,569	26,612
Brookfield	85.0%	15.0%	12,227	2,156	14,383
Fond du Lac	61.8%	38.2%	10,270	6,368	16,638
Appleton	68.7%	31.3%	18,455	8,409	26,864
Rhinelander	59.3%	40.7%	1,907	1,307	3,214
Superior					
Kenosha					
Madison					

Housing souce- www.maps n stats

Multiple City Comparisons

City	Community Programs					
	JFS	Fire Prevention K-6	Fire Safety House or equiv.	Senior Citizens (Get Out and Stay Alive)	Senior Citizens (Disabled Program)	Ethnic Community Services / Education
Beloit	Y	K-5	Y	N	N	Y
Eau Claire	Y	K-5	Y	Y	Y	Y
Janesville	N	K,1,3,5,9	Y	Y	N	Y
La Crosse	Y	K-6, 12	Y	Y	Y	Y
Oshkosh	Y	Y	Y	Y	Y	N
Sheboygan	N	K,1,3,4	N	Y	Y	Y
Waukesha	Y	K,1,4	N	Y	N	Y
Wausau	Y	Y	Y	Y	Y	Y
Wauwatosa	N	Y	Y	Y	N	Y
Racine						
Merrill	N	Y	N	Y	Y	N
Green Bay	Y	Y	Y	N	Y	Y
West Allis	Y	Y	Y	Y	N	N
Chippewa Falls	Y	Y	N	Y	N	N
Manitowoc	Y	Y	Y	Y	N	Y
Milwaukee						
North Shore	N	Y	Y	N	Y	N
Brookfield						
Fond du Lac	Y	Y	Y	Y	N	N
Appleton	Y					
Rhinelander	Y	Y	Y	N	N	N
Superior						
Kenosha						
Madison						

City	State LPO (Underground Tank Program
Beloit	Y
Eau Claire	Y
Janesville	Y
La Crosse	Y
Oshkosh	Y
Sheboygan	N
Waukesha	Y
Wausau	Y
Wauwatosa	Y
Racine	
Merrill	N
Green Bay	Y
West Allis	Y
Chippewa Falls	Y
Manitowoc	N
Milwaukee	
North Shore	N
Brookfield	
Fond du Lac	Y
Appleton	
Rhinelander	Y
Superior	
Kenosha	
Madison	

ISO Comparison of Wisconsin Cities

La Crosse	2
Wauwatosa	2
Merrill	4
Beloit	3
West Allis	2
Rhinelander	5
Wisconsin Rapids	3
North Shore	2
Racine	2
Brookfield	3
Green Bay	2
Chippewa Falls	3
Stevens Point	3
Oak Creek	3
Madison	3
Marinette	3
Caledonia	4
Neenah/Menasha	2
Milwaukee	2
Franklin	4
Manitowoc	2
Waukesha	2

Wausau	3
Oshkosh	2
Greenfield	3
Eau Claire	3
Janesville	3
Marshfield	4
Sheboygan	2
Appleton	2
Superior	4
Cudahy	4
Kenosha	2
Fond du Lac	2