

SPACE NEEDS SUMMARY

for

La Cròsse Fire Department

January 9, 2017

ARCHITECTURAL DESIGN FOR PUBLIC SAFETY

Overview and Executive Summary

Station #1

Description of Station #1
Opinion of Probable Construction Costs
Space Needs: Station 1 and Building Inspection
Existing Plans

Station #2

Description of Station #2 Opinion of Probable Construction Costs Space Needs Existing Plans

Station #3

Description of Station #3
Opinion of Probable Construction Costs
Space Needs
Existing Plans

Station #4

Description of Station #4
Opinion of Probable Construction Costs
Space Needs
Existing Plans

Future Station #5

Description of Station #5 Opinion of Probable Construction Costs Space Needs



OVERVIEW and EXECUTIVE SUMMARY

In June of 2016, ADG / Five Bugles Design was retained by the City of La Crosse, Wisconsin to provide a facility analysis and space needs assessment for each of the City's current four Fire Stations. The following requirements were required to complete the need analysis:

- Visiting each station and meeting with shift personnel to obtain feedback with respect to the strengths and weaknesses of each station:
 - o Physical size
 - Date of construction
 - Station site dimensions:
- Recommendations regarding the potential for improving/upgrading each station to bring the building into compliance with current building codes, including the Americans with Disabilities Act, energy/thermal performance, and industry standards for the fire service;
- Perform a space programming assessment of each station to establish the potential square footage of a newly constructed building that meets operational, housing and functional considerations;
- Provide current day cost estimates, based on the program results of the potential costs of new construction for replacing stations that no longer meet current response and housing demands.

Five Bugles Design were also charged with programming space needs for a possible 5th fire station. The proposed site for Station #5 has not determined but in probability would serve an area of the City with less than desirable response times.

To meet these goals, our methodology included providing a space needs analysis for each of the existing stations as well as documenting current facility conditions. The information contained herein has been developed with the cooperation and participation of the La Crosse Fire Department, with representation at all levels. Our team meet with station crews at each of the four (4) stations on three separate occasions to include input from each of the three shifts; A shift, B shift, C shift. Results of the Space Needs Analysis are included in the in the summary of each station as well as scale plans of each of the four stations.

An inclusive list of staff provided deficiencies has been included for review.

General

- Larger/more energy efficient windows and natural lighting
- New speaker system integrated into alerting system
- Station HVAC with negative pressure system to reduce living quarter contamination
- New flooring station wide appropriate for each area
- More electrical outlets station wide
- Updated proper wiring station wide

General Continued

- New emergency generator
- Laundry room
- Decontamination room
- Outlets on roof and exterior of station for ease of access

Apparatus Bay

- Roof vents
- New gear lockers
- Gear drying rack
- · Gear washing machine
- Decon shower and proper decon room

Office

- More functional office space
- · Washers and dryers at all stations
- Gender equity in bathrooms
- A real EMS decon area
- More storage room both on the apparatus floor and in locker room
- · More parking at stations needed
- Workout rooms at all stations
- Extra vehicle parking/storage at all stations. Drive thru stations not being used that way.

The following is a synopsis of the recommendations of our facility analysis and space needs programming efforts. Our study found that each of the stations have serious concerns, both in required space needs and physical condition of the facilities.

EXECUTIVE SUMMARY OF RECOMMENDATIONS

As a general statement, all four La Crosse's fire stations have exceeded, or nearly exceeded their expected life cycles. In terms of asset management, it is evident that La Crosse has funded station upgrades and repairs on emergency needs basis. Modifications to bring the stations into compliance with current codes would be difficult and in our opinion not prudent financially. Each of the four (4) stations suffer from numerous deficiencies including inadequate station size, lack of energy performance related to both inadequate insulation and dated inefficient HVAC systems, ADA compliance, living quarter conditions (gender equity issues, sleeping quarters, rest room facilities), lack of onsite training, lack of onsite physical training areas, lack of proper vehicle exhaust systems in three of the four (4) stations, and of immediate concern, health issues regarding decontamination and cleaning of blood borne pathogens.

Firefighting apparatus has growth steadily and considerably in the last 50 years to match an ever-increasing mission creep. Apparatus is now arguably manufactured to the allowable maximum size and still function within US infrastructure i.e.; street width and allowable height of highway overpasses. Industry standards for firefighting apparatus currently is based on 18'-0" bays with centered 14'x14' doors. None of the La Crosse stations meet this standard. Nor is there sufficient site size at any of the stations to accommodate additions to correct the situation.

Purchasing additional land adjacent to an existing station for an addition is not an adequate solution. Wisconsin State Statues will require upgrading the station(s) into compliance with all State codes. Given the size of an addition, this would mandate meeting ADA and energy codes. ADA compliance in all stations would be problematic and expensive, with a value proposition of little gained in the Stations mission for the investment. Space needs analysis recommends serious improvement in the functionality of the stations including apparatus bay size, sleeping quarters, rest room facilities, and classroom training areas, physical training areas, and gender equity issues. Given the existing state of affairs, Five Bugles Design recommends that the City of La Crosse begin budgeting for replacement of the four existing stations. We have provided cost estimates for each station based on recommended station size and current cost data. We understand a site location study is underway for a proposed Station #5. We would encourage city officials to begin discussions regarding the site locations of the four existing stations as well. Site acquisition remains the largest hurdle in a new station. In La Crosse's case, none of the existing sites are large enough to accommodate their respective building program, and the stations must remain fully operational 24/7 during any construction.

Existing conditions in the stations pose immediate health concerns that should be addressed immediately. Three of the four (4) stations lack vehicle exhaust control (Station #1 has a limited exhaust system), with living/sleeping quarters in direct contact with exhaust on a continuous basis. None of the stations have adequate decontamination areas with blood borne pathogens being cleaned in station common areas. Only station 1 is equipped the washer/dryers.

Recommended Immediate Actions:

- Installation of an encapsulated vehicle exhaust system in Stations #1, #3 and #4.
- Renovation of adequate decontamination areas into each of the four (4) stations.
- Installation of washer/dryers in Stations #2, #3, and #4.

Opinion of Probable Cost Based on 2017 Cost Data

 Station #1
 \$8,809,349

 Station #2
 \$5,532,485

 Station #3
 \$5,550,829

 Station #4
 \$4,038,227

 Station #5
 \$4,038,227

The above estimates do not include site acquisition costs.

LA CROSSE FIRE DEPARTMENT FIRE STATION COMPARISON DATA

No FFE, Site Acquisition, A/E Fees, etc.



Verona Fire Station and EMS Facility Verona, WI

Year Built: 2014-2015 Square Footage: 46,701

Building and Site Work Costs: \$9,281,317

Cost Per SF: \$198



Janesville Fire Station Janesville, WI

Year Built: 2015-2016 Square Footage: 31,525

Building and Site Work Costs: \$5,948,750

Cost Per SF: \$188

LA CROSSE FIRE DEPARTMENT FIRE STATION COMPARISON DATA

No FFE, Site Acquisition, A/E Fees, etc.



Chippewa Falls Fire Station Chippewa Falls, WI

Year Built: 2016 - Current Square Footage: 20,450 SF

Building and Site Work Cost: \$4,152,974

Cost Per SF: \$203



Ashland Fire Station Ashland, WI

Year Built: 2015

Square Footage: 22,273

Building and Site Work Costs: \$4,304,634

Cost Per SF: \$193

Description of Station #1

Constructed in 1967

Total Existing Area: 15,700 SF plus 8,900 SF Basement

Total Program Space Requirement: 34,049 SF Station #1 is located 726 5th Avenue South

Space Needs Analysis

Space Needs Analysis of Station #1 reveals a significant lack of recommended space. 34,049 SF recommended vs 24,622 SF existing (of which 8,900 SF is substandard basement). Included in the space needs analysis is the relocation of the City's Building Inspection Department into a central fire station.

Existing Conditions

The two-story station with a basement is arguably in the best condition of the City's four fire stations. The Station received a new HVAC system, structural floor



slab replacement of the mechanic's bay, along with minor remodeling in 2009. Cost of the upgrade was approximately \$1,000,000. However, serious facility issues remain. At 49 years old, the Station is nearing the expected 50-year life cycle. The construction of existing exterior walls is 12" masonry walls. Wall insulation is inadequate and does not meet current energy code.



The existing windows are extremely narrow, single pane units built literally into the masonry wall assembly. Window replacement would be cost prohibitive and not recommended due to the resulting small amount of glazing area. The apparatus doors are 12'x12'; not an adequate size for current apparatus (14'x14' door size is recommended). Quint 1 has only several inches of space to exit the station. Snow buildup during a

major snowfall could cause impact when exiting. Overhead door spacing is also not adequate to allow internal circulation around apparatus. 4'-0" between doors is recommend. To meet size limitations, new apparatus is specified on size requirements rather than mission requirements. This results in newer apparatus procured without all desired new technology. Additionally, current space limitations prohibits the transfer of certain apparatus between stations.

SPACE NEEDS SUMMARY

In general, Station #1 was designed and constructed when fire apparatus was considerably smaller in both length and height. The number and type of apparatus, along with mission statements of fire departments, have evolved significantly over the years.

Existing Site Limitations

As problematic, Station #1 is plagued by severe site limitations. The current site does not allow adequate off street staff parking. The situation is remedied only by an understanding neighbor owning the adjacent bowling alley. A condition that could change at any time. Off street parking for the public is non-existent. There is not adequate space available for exterior apparatus staging,



training simulations, or vehicle drive through bays. Site acquisition is a significant hurdle for the construction of a new station. Recommended site acquisition costs frequently exceed \$1,000,000

ADA Compliance

Station #1 does not meet current ADA requirements in circulation and toilet/shower rooms. Any remodeling/renovation of significant scope would require building modifications to bring the facility into ADA compliance.

Station #1 Functionality

Station #1's crew living and working spaces have doors/sliding poles connected directly to the apparatus bays; resulting in exhaust gases coming into the sleeping/living areas posing a serious health issue.

Station #1 is equipped with a limited encapsulated exhaust systems for apparatus (one bay).



Dormitory accommodations are substandard to the fire industry and lack gender considerations, isolation of health issues, and privacy (snoring). Likewise, shower/toilet rooms are not gender specific, and are gender shared. Noise issues affecting full time living conditions are brought on by poor building insulation/construction combined with high road traffic.

The 2009 limited remodeling did allow for a staff training room in the basement. However, the space is constructed around imposing structural concrete columns that result in problematic sightline issues, as well as ADA issues.

Station #1 suffers from inadequate storage rooms, causing equipment to be stored wherever there may be space, such as electrical/HVAC rooms. This is particularly true in regards to the lack of medical storage. Station #1 suffers from inadequate biohazard decontamination rooms. Blood Borne Pathogens are currently cleaned in common areas of the station.

Recommendations - Station #1

Station #1 functions as the City of La Crosse's Central Fire Station. In both physical condition of the station and function, Station #1 provides a higher degree of service to the fire department than the remaining three stations. In that respect, we view it as a lower priority for improvements. However, the Station is nearly 50 years ago, insufficient by in program space by 9,427 SF of recommended space, plagued by site limitations, lack of handicap accessibility, gender equity, dormitory issues, inefficient thermal insulation, health and safety issues, and lack of adequate medical storage. Even with additional property purchased, we do not anticipate a building addition being a viable financial option to address all the problems/existing conditions listed in our report. It is our recommendation the City begin planning for a replacement Central Fire Station.

Immediate Concerns:

- Lack of a fully functional encapsulated exhaust system
- Lack of adequate decontamination rooms
- Lack of adequate medical storage

We recommend the City correct existing health safety issues concerning the lack of a complete apparatus exhaust system and adequate decontamination areas. Installation of an encapsulated exhaust system currently cost approximately \$10,000 to \$12,000 per vehicle drop. On the upside, a large portion of installed system can be salvaged and relocated to a new station.

We have provided a preliminary planning estimate based on our understanding of current market conditions for stations of similar scope.



Opinion of Probable Construction Costs

PROJECT:

City of La Crosse Fire Station #1 Replacement

LOCATION:

La Crosse, WI

PHASE:

Study Estimate

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Intic	onst	ö

Estimated Construction Cost		\$7,150,290	
Bidding Contingency	5%	\$357,515	
Probable Construction Cost		\$7,507,805	
Construction Contingency	5%	\$375,390	

Total Construction Cost

Not Including Site Acquisition Cost

\$7,883,195

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Soft Cost		\$630,655
Architecture/Engineering Fee @ 8%		
Possible Additional Services		
(Should LEED Certiciation be desired)		
Sustainable Design (LEED)	\$37,000	
Commissioning	\$20,000	
Technology	\$8,000	
TOTAL - ADDITIONAL SERVICES	\$65,000	
Reimbursables (estimated)		
PRINTING - EXISTING DOCUMENTS		
PRINTING - REVIEW DOCUMENTS	\$3,500	
PRINTING - BID DOCUMENTS	\$9,000	
PROJECT WEBSITE (dfm)	\$3,000	
POSTAGE / UPS		
SITE SURVEY (Topo & Historical)	\$8,500	
SOIL TESTING	\$5,000	
CONSTRUCTION TESTING	\$15,000	
LEED Certification Fees	\$6,500	
TOTAL - REIMBURSABLES		\$50,500
Other Project Costs		
LAND ACQUISITION		
External SITE Costs	\$15,000	
INTERIOR SIGNAGE & GRAPHICS		
*TECH., TELECOM, SECURITY	\$85,000	
*FURNITURE & EQUIP	\$145,000	
Programming		
OTHER		40
TOTAL OTHER COSTS		\$245,000
TOTAL ADDITIONAL COSTS		\$926,155

*Technology (Provided by Owner)
Network, Comp, Phone
Video Surveillance In Constrction
AV Equipment In Construction
Alerting Wiring In Costruction
Alerting
Radio

*Furniture & Equipment (Provided by Owner) Furniture

Gear Lockers
Plymovent
SCBA Comp & Fill
Extractor



Project: LaCrosse Fire Department

Location: Station #1 20-Jun-16 Date:

Apparatus Floor

and the second s	and the same	I amount of		2000.000		2	S. Jackson	Total Ft ²	Proposed	Maria
	xisting	Length	Х	Width		Ft ²	Quantity		Bay	Notes
Engines		45	X	16	10	720	2	1440		1450 F 175 F
Quint	_	90	X	16	=	1440	1	1440		75" Quint
Engine Reserve		90	X	16	#	1440	0	0		
Trailers		30	×	16	#	480	3	1440		Trench & Heavy rescue
Boat/Trailer		40	X	16	=	640	1	640		18" Boat
Arson Unit		45	х	16	=	720	0	0		
Jtility/Pickup		22	х	16	=	352	6	2112		
laz Mat		22	х	16	=	352	0	0		
ATV/Trailer			x		=	0	0	0		
Firefighter Rehab Unit			×		Ħ	0	0	0	-	
Rescue		50	х	16	=	800	0	0		
Command Vehicle		35	x		=	0	0			
Portable Lighting		24	×	16	88	384	0	0		
Squad		45	×	16		720	0	0		
Brush Buggy #31		24	×	16	ja .	384	0	Ó		
Mass Casualty		24	×	16	=	384	0	0		
/ehicle Maintenance Bay		40	×	16	Ħ	640	1	640		Not high enough for vehicles
Wash Bay		70	x		=	0	1	0		
Portable air and light unit		24	x	16	=	384	0	0		
MS					R. S. H					
MS Command Vehicle			x		=	0	0	0		
future Bay		20	x	80	n	1600	1	1600		Future consideration
Mass Casualty Trailer			x		=	0	0	0		
he City of La Crosse currently does not a			EMS			rice has b	een the topic	9,312 1,862		Subtotal (Ft ²) Efficiency Ratio of 20%
is a remained an absolute and are saile, and are also designed	de de la lectu				Activities of			11,174		Apparatus Floor Total (Ft

Existing Equipment

= Future Equipment
See also Training for other Apparatus and Large Equipment

pparatus Sizing Table (Ft²)						- 1	9,312
	Number of Bays	3	4	5	6	7	8
			100	7	Lengt	h	
	Market Ma	80	104	128	152	176	200
<u></u>	60	4800	6240	7680	9120	10560	12000
Depth	80	6400	8320	10240	12160	14080	16000
Ö	100	8000	10400	12800	15200	17600	20000

Located in the flood plain

Not in correct GIS location Mice, frogs, vermain throughout the building 35,650 Overall Space Estimate (Ft²)



Project: LaCrosse Fire Department

Location: Station #1 Date: 20-Jun-16

Apparatus Support

Spaces	Existing	Length	X	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Protective Gear Locker		2	X	2	=	4	60	240	24" by 24"
Dirty Restroom		8	X	8	=	64	1	64	70000
Hose/Training Tower		30	X	20	=	600	1	600	If Possible
Mezzanine		80	×	20	=	1600	0	0	
Detached garage			х		=	0	0	0	
Walk-in med check/ed space		6	×	8	=	48	0	0	
Work Room/SCBA		8	X	11	=	88	1	88	
SCBA Clean and Fill Room		8	X	12	=	96	1	96	
Gear Dryer			X		=	0	1	0	
Commercial Laundry Room		10	х	10	=	100	1	100	
Vehicle Maintenance Room		10	х	12	=	120	1	120	Welding, cutting etc.
EMS Report Writing		8	X	12	=	96	1	96	
EMS Storage		8	×	20	=	160	1	160	
Regulated Storage		6	×	6	=	36	1	36	
Bio Hazard Control/Deconl		6	X	6	=	36	1	36	
Janitors Closet		6	×	4	=	24	1	24	
Equipment Decon		8	×	10	=	80	1	80	and district the last of the second
Vehicle Lift									* Included in Mechanic Bay
Maintenance storage									* Included in Mechanic Bay
Lub dispensing									* Included in Mechanic Bay
Mechanic work area								77.7	* Included in Mechanic Bay
the same of the sa								1,740 348	Subtotal (Ft ²) Efficiency Ratio of 20%

2,088 Apparatus Support Total (Ft²)



Project: LaCrosse Fire Department

Location: Station #1 Date: 20-Jun-16

Training

Mark Control	N 2 5 4 7 1 1	The state of the state of	N 15 1 2 1	SECTION 1	-	Tanini	AND DESCRIPTION OF THE PARTY OF			
Spaces	Existing	Length	X	Width	#	Ft ²	Quantity	Total Ft ²		Notes
Training Office		12	X	12	=	144	1	144	- 0	Exterior wall, public access
Training Room		20	×	30	=	1500	1	1500		40 Firefighters
Training Storage (supplies)		10	×	12	=	120	1	120		
Training Storage (equipment)		10	×	24	=	240	1	240		
Table and Chair Storage		10	×	12	=	120	1	120		
Exercise/Wellness Room		30	×	30	=	900	1	900		
Kitchenette		16	X	12	=	192	1	192		
								Sub Total		4020
										Includes efficiency ratio
									Proposed	
APPARATUS & EQUIPMENT									Вау	
Mobile Live Burn Trlr (MLFTU)		60	×	16	=	960	0	0		
Mobile Training Tower (MTT)		60	×	16	=	960	0	0		
Ventilation Trlr (Vent)		40	×	16	=	640	0	0		
Training 1 (Semi)		30	x	16	=	480	0	0		
Training 2 (Semi)		30	x	16	=	480	0	0		
Survive Alive Trailer		40	x	16	=	640	0	0		
Suburban (chief 3)		24	X	16	=	384	0	0		
Pick up (Rehab)		24	×	16	=	384	0	0		
Pick up -104		24	x	16	=	384	0	0		
Portable lighting		24	X	16	=	384	0	0		
Boat and Trailer		35	X	16	=	560	0	O		
								Sub Total	A COLUMN	0
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									100000	
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									1	
	+									
									No. of Lot	

3,216	Subtotal (Ft²)	
804	Efficiency Ratio of 25%	
4,020		Training Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #1 Date: 20-Jun-16

Administration/Office Spaces

Spaces	Existing	Length	X	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Fire Chief		20	х	12	=	240	1	240	
nspector/Fire Marshal		16	×	12	=	192	1	192	
Evidence Storage		6	х	8	=	48	1	48	
Assistant Chief		16	x	12	=	192	1	192	
Division Chiefs	=1	30	×	10	=	300	1	300	
Sleeping Room		10	×	13	=	130	1	130	
Tollet shower		8	×	10	=	80	1	80	
Captains Office Suite		20	×	12	=	240	0	0	
oub Ed Storage		14	х	12	=	168	0	0	
Pub Ed Storage		6	×	8	=	48	1	48	
Study/Work Area		8	×	10	=	80	1	80	
Resource Library	4	2	×	10	=	20	1	20	
Administrative Assist, Office		16	×	12	=	192	1	192	
Station Dispatch Office		16	x	12	=	192	1	192	
uture		16	×	10	=	160	0	0	
Conference Room		20	х	20	=	400	1	400	
Communications/ IT		10	х	20	=	200	1	200	
Record/Report Storage		8	х	10	=	80	1	80	
Misc. Office Supplies		4	х	6	=	24	1	24	
Seneral Storage		8	x	10	=	80	1	80	
New Gear and Uniform Storage		8	х	16	=	128	1	128	
Elevator		10	х	20	=	200	1	200	
Public Toilets		10	x	14	=	140	2	280	
anitors Closet		6	X	4	=	24	2	48	
Entrance Vestibule		20	x	20	=	400	1	400	
Stairs		24	х	10	=	240	2	480	
Other			х		=	0		0	
Other			х		=	0		0	
Other	1		X		=	0		0	
			X		=	0		0	
								100	
					_	_		4.034	Subtotal (Ft²)

5,043 Administration/Office Spaces Total (Ft²)

Efficiency Ratio of 25%

1,009

NOTES:

Fire Chief's office is sized for an executive desk/credenza with separate table with seating for up to 6.

Battalion Chief Suite consists of the following: Open office space with 3 work stations, single-bed sleeping room, toilet room with shower.



Project: LaCrosse Fire Department

Location: La Crosse Building Inspectors

Date:

20-Jun-16

Administration/Office Spaces

Spaces	Enterta Longato	TO UNIT	DEAL STATE	H	Ft ²	ice Spa	THE RESERVE TO SERVE	Andrew Co.
	Existir Length	X	Width			Quantity		Notes
Assistant Chief - Fire Prevention	16	X	12	=	192	1	192	
Chief, Inspector	14	X	12	=	168	1	168	
Building Inspector	10	X	12	=	120	4	480	
Elec Inspector	10	X	12	=	120	1	120	
Code Enforcement	10	X	12	=	120	1	120	
Plumbing Inpector	10	X	12	=	120	1	120	
Administrative Assist./Receptionist	16	Х	16	=	256	1	256	
Conference Room	20	X	14	=	280	1	280	
Communications/ IT	10	X	20	=	200	1	200	
Record/Report Storage	8	X	10	=	80	1	80	
Misc. Office Supplies	4	×	6	=	24	1	24	
General Storage	8	×	10	=	80	1	80	
Public Toilets	10	×	14	=	140	2	280	
Janitors Closet	6	×	4	=	24	2	48	
Entrance Vestibule	20	×	20	=	400	0	0	
Stairs	24	×	10	=	240	0	0	
Layout Space	20	×	20	=	400	1	400	
Break Room	14	×	14	=	196	1	196	
Staff Restroom	8	×	10	=	80	2	160	
Other		X		=	0		0	
Other		x		m	0		0	
Other		x		=	0		0	
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				_		-	The second	Service Annual Service
							3,204 801	Subtotal (Ft²) Efficiency Ratio of 25%

4,005 Administration/Office Spaces Total (Ft²)

Fire Chier's office is sized for an executive desk/credenza with separate table with seating for up to 6.

Battalion Chief Suite consists of the following: Open office space with 3 work stations, single-bed sleeping room, toilet room with shower.



Project: LaCrosse Fire Department

Location: Station #1 Date: 20-Jun-16

Living Quarters Spaces

Day Room Kitchen Pantry Dining for 14-20 Bedroom Restrooms/Showers Linen Closet Supply Closet Residential Laundry Janitor's Closet	Existing	20 20 8 20 10 8 6 4	X X X X X X X	15 15 8 15 13 10 8		300 300 64 300 130	1 1 3	Total Ft ² 300 300 192 300	Notes
Kitchen Pantry Dining for 14-20 Bedroom Restrooms/Showers Linen Closet Supply Closet Residential Laundry		20 8 20 10 8 6 4	x x x x x	15 8 15 13	п п п	300 64 300 130	1 3 1	300 192	
Kitchen Pantry Dining for 14-20 Bedroom Restrooms/Showers Linen Closet Supply Closet Residential Laundry		20 8 20 10 8 6 4	x x x x x	15 8 15 13	п п п	300 64 300 130	1 3 1	300 192	
Pantry Dining for 14-20 Bedroom Restrooms/Showers Linen Closet Supply Closet Residential Laundry		8 20 10 8 6 4 8	X X X X	8 15 13 10	11 11 11	64 300 130	3	192	
Dining for 14-20 Bedroom Restrooms/Showers Linen Closet Supply Closet Residential Laundry		20 10 8 6 4 8	x x x	15 13 10	n n	300 130	1	192 300	
Bedroom Restrooms/Showers Linen Closet Supply Closet Residential Laundry		10 8 6 4 8	X X X	13 10	=	130		300	
Restrooms/Showers Linen Closet Supply Closet Residential Laundry		8 6 4 8	X	10				All the second	
Linen Closet Supply Closet Residential Laundry		6 4 8	X		=		14	1820	
Supply Closet Residential Laundry		4 8		8		80	8	640	
Residential Laundry		8	X		=	48	1	48	
Residential Laundry Janitor's Closet				5	=	20	1	20	
Janitor's Closet			Х	10	=	80	1	80	
		6	х	6	=	36	11	36	
			-					39	
								TRU III	
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								50	
								C 244	
								(F/S/)	
								Y	
								31.0	
					-			1 V (2	

3,736	Subtotal (Ft²)
934	Efficiency Ratio of 25%
4,670	Living Quarters Spaces Total (Ft ²)



Project LaCrosse Fire Department Location Station #1

Date: June 21, 2016

Site

aces	xisting Quantity	Notes
Fire Staff Parking	30	Includes shift change
Administrative Staff Parking	6	
Public Parking	4	
Other Parking needs	0	
Fire Apparatus Apron EMS Apparatus Apron	0	
	0	
Outdoor Training	0	
Outdoor Patio	0	
Enclosed Dumpster	0	
External Generator	0	
Storm Water Treatment	0	
Extrication pavement	0	
Other		



Project: LaCrosse Fire Department

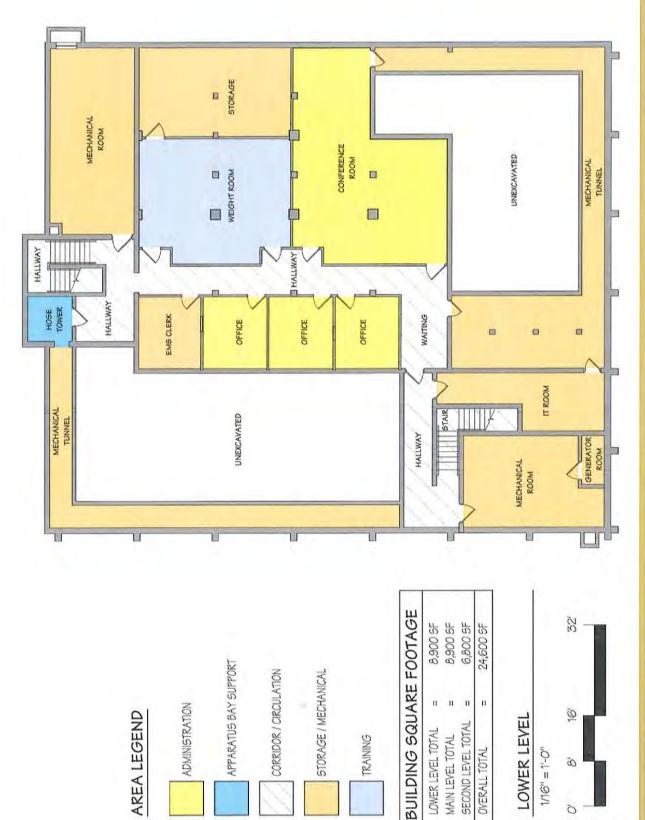
Location: Station #1 Date: 20-Jun-16 Totals Apparatus Bays 11,174 **Apparatus Bay Support** 2,088 Training 4,020 Administration 5,043 La Crosse Building Inspectors 4,005 Living Quarters 4,670 Training - Tempered

31,000 Station Footprint (Ft²) Sub Total

4,650 Infrastructure (M & E) Space Factor 15%

35,650 TOTAL PROGRAM SPACE REQUIRMENT





ADMINISTRATION

AREA LEGEND

LA CROSSE FIRE STATION STUDY

10

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LOWER LEVEL

1/16" = 1"-0"

SECOND LEVEL TOTAL

OVERALL TOTAL

LOWER LEVEL TOTAL

MAIN LEVEL TOTAL

TRAINING

12.01.2016 STATION 1

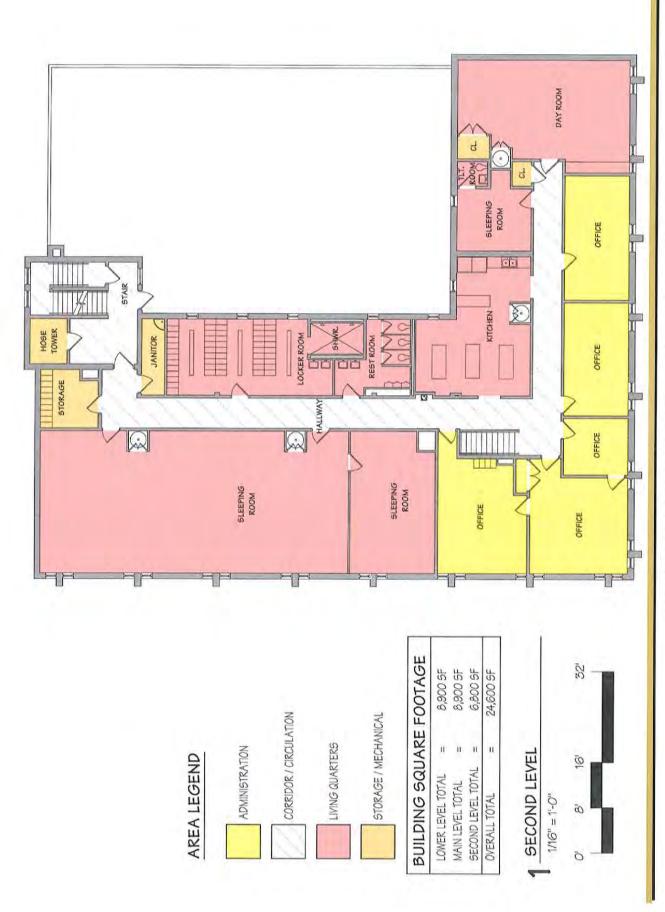




LA CROSSE FIRE STATION STUDY

STATION 1 12.01.2016





LA CROSSE FIRE STATION STUDY

STATION 1

12.01.2016

Description of Station #2

Constructed in 1956
Total existing area 8,163 SF
Total Program Space Requirement 20,944 SF
Station #2 is located at 626 Monitor Street.

Space Needs Analysis

The station size is inadequate. The Space Needs analysis recommends a station size of 20,144 SF as contrasted by the existing building area of 8,163 SF; a recommended increase of 12,781 SF.

Existing Conditions

The single-story facility is constructed of with masonry walls; brick on the original 1956 portion and EFIS clad



walls on the single bay addition. Moisture problems and mold are constant issues, and evident in the building envelope. Frogs, snakes and other vermin are also frequent problems. Ventilation/HVAC systems in the stations are dated and inefficient. In Station #2, the HVAC system is enormously ineffective and in some cases during severe winter weather, never turns off. Windows have been infilled and do not allow adequate daylighting.



Existing Site Limitations

The existing site will not allow a building increase of the recommended 12,000 SF increase. According to a recent GPS Study; the site location does not allow for adequate emergency response times. The site does allow drive though bay operation, but is limited for any future growth/expansion. Station #2 site efficiencies are numerous. The site is in a flood plain and suffers from frequent moisture and flooding issues.

ADA Compliance

Station #2 does not meet current ADA requirements for toilet/shower facilities. Any remodeling/renovation of significant scope with require building modifications to bring the facility into ADA compliance

Station #2 Functionality

Station #2's crew living and working spaces have doors connected directly to the apparatus bays. Resulting exhaust gases coming into the station continue to pose a serious health issue.

SPACE NEEDS SUMMARY



The apparatus doors are 12'x12'; not an adequate size for current apparatus (14'x14' door size is recommended). Quint 2 has only several inches of space to exit the station. Snow buildup during a major snowfall could cause impact when exiting. To meet size limitations, new apparatus is specified on size requirements rather than mission requirements.

There are no training accommodations in Station #2;

crews have to train on the apparatus floor; in the day room, or the kitchen.

There are no exercise/fitness areas other than ones the crew has tried to develop. These are on the apparatus floor, in bedroom areas or storage areas.

Station #2 suffers from inadequate Biohazard Decontamination rooms. Blood Borne Pathogens are currently cleaned in common areas of the station. Station #2 is not equipped with an in-house washer/dryer, posing health issues for decontamination.

Dormitory accommodations are substandard to the fire industry and lack gender considerations, isolation of health issues, and privacy (snoring). Likewise, shower/toilet rooms are not gender specific and



are gender shared. Noise issues affecting full time living conditions are brought on by poor building insulation/construction combined with high road traffic.

Recommendations – Station #2

Station #2 is in the worst condition of the City's four fire stations. In both physical condition and function as a fire station, we view it as the highest priority for improvement/replacement. The station is 60 years old, insufficient in recommended program space by nearly 12,000 SF, plagued by severe potential health issues (mold) along with a lack of decontamination rooms, vehicle exhaust, lacks handicap accessibility, lack of medical storage, lacks gender equity, dormitory issues, inefficient thermal insulation and inadequate HVAC and electrical systems. It is our recommendation the City begin planning for a replacement Fire Station #2 immediately. Even with additional adjacent property being purchased, we do not anticipate a building addition being a viable financial option to address all the problems identified with the existing conditions listed within the body of this report. Given recent GPS studies indicating site location response issues, we recommend the City begin a search for a new site in accordance with location recommendations outlined in the GPS study.

SPACE NEEDS SUMMARY

LA CROSSE FIRE DEPARTMENT

We have provided preliminary planning estimate based on our understanding of current market conditions for stations of similar scope.

Immediate Concerns:

- Lack of adequate decontamination rooms
- Lack of adequate medical storage
- Lack of on-site washer and dryer

We recommend the City correct existing health safety issues concerning the inadequate decontamination areas.



Opinion of Probable Construction Costs

PROJECT: City of La Crosse Fire Station #2 Replacement

LOCATION: La Crosse, WI PHASE: Study Estimate

100 mm	Estimated Construction Cost		\$4,398,240	
p 5	Bidding Contingency	5%	\$219,912	
ate ictic	Probable Construction Cost		\$4,618,152	
icip	Construction Contingency	5%	\$230,908	
Ant	Total Construction Cost			
- 0	Not Including Site Acquisition Cost			\$4,849,060

	with a second		- 10 - 10 - 10 - 10
	Soft Cost		\$387,925
	Architecture/Engineering Fee @ 8%		
	Possible Additional Services		
	(Should LEED Certiciation be desired)		
	Sustainable Design (LEED)	\$37,000	
	Commissioning	\$20,000	
	Technology	\$8,000	
	TOTAL - ADDITIONAL SERVICES	\$65,000	
	Reimbursables (estimated)		1
	PRINTING - EXISTING DOCUMENTS		
	PRINTING - REVIEW DOCUMENTS	\$3,500	
- 1	PRINTING - BID DOCUMENTS	\$9,000	
	PROJECT WEBSITE (dfm)	\$3,000	
	POSTAGE / UPS	1000	
	SITE SURVEY (Topo & Historical)	\$8,500	
	SOIL TESTING	\$5,000	
	CONSTRUCTION TESTING	\$15,000	
	LEED Certification Fees	\$6,500	-
	TOTAL - REIMBURSABLES		\$50,500
	descriptions.		2012
	Other Project Costs		
	LAND ACQUISITION		
	External SITE Costs	\$15,000	
	INTERIOR SIGNAGE & GRAPHICS	4.654.355	
	*TECH., TELECOM, SECURITY	\$85,000	
	*FURNITURE & EQUIP	\$145,000	
	Programming	*******	
	OTHER		Section and
	TOTAL OTHER COSTS		\$245,000
	TOTAL ADDITIONAL COSTS		\$683,425

*Technology (Provided by Owner)
Network, Comp, Phone
Video Surveillance In Constrction
AV Equipment In Construction
Alerting Wiring In Costruction

Alerting Radio

*Furniture & Equipment (Provided by Owner)

Furniture Gear Lockers Plymovent SCBA Comp & Fill

Extractor



Project: LaCrosse Fire Department

20-Jun-16 Location: Station #2 Date:

Apparatus Floor

Spaces	Existing	Longth	x	Width		Ft ²	Quantity	Total Ft ²	Proposed Bay	Notes
Engines		45	×	16	22	720	0	0		
Quint		90	×	16	=	1440	1	1440		
Telesquirt		90	×	16	- 11	1440	0	0		
Rescue #2		30	×	16	=	480	1	480		
Boat/Trailer		40	×	16		640	1	640		21' Boat & trailer
Arson Unit		45	×	16	=	720	0	0		
Utility/Pickup		22	×	16	=	352	2	704		
Haz Mat		22	×	16	=	352	0	0		
Haz Mat-Diking/Booming	7.5	22	×	16	=	352	2	704		Trailer outside, housing for R & R trailer
FoamTrailer		22	х	16	=	352	1	352		
Snowmobile/ATV/Trailer		22	x	16	=	352	1	352		
Firefighter Rehab Unit			x		=	0	1	0		
Tanker		50	x	16	=	800	1	800		
Command Vehicle		35	x		n	0	0	0		
Portable Lighting		24	х	16	=	384	0	0		
Rescue Squad	- 1	45	x	16	4	720	0	0		
Brush Buggy #31		24	X	16	=	384	0	0		
Mass Casualty		24	x	16	=	384	0	0		
Vehicle Maintenance Bay		40	x	16	=	640	0	0		
Wash Bay		70	×		=	0	0	0		
Portable air and light unit		24	x	16	b.	384	0	0		
EMS										
EMS Command Vehicle			x		=	0	0	0		
Future Bay		80	×	20		1600	1	1600		
De-Tox Sauna		10	x	10	=	100	1	100		Crew safety issue suggestion
Dive Trailer		25	x	16	=	400	1	400		Unclear where it will end up
The City of La Crosse currently doe of discussion for several years. A fu						ice has be	en the topic	7,572 1,514		Subtotal (Ft²) Efficiency Ratio of 20%
								9,086		Apparatus Floor Total (Ft ²)

= Existing Equipment
= Future Equipment
See also Training for other Apparatus and Large Equipment

pparatus Sizing Table (Ft²)		7,572				
Number of Bays	3	4	5	6	7	8
			4	Lengi	h	Language 1
	80	104	128	152	176	200
_ 60	4800	6240	7680	9120	10560	12000
80 80 100	6400	8320	10240	12160	14080	16000
<u>ධි</u> 100	8000	10400	12800	15200	17600	20000

Located in the flood plain Not in correct GIS location Mice, frogs, vermain throughout the building

Overall Space Estimate (Ft²) 21,248



Project: LaCrosse Fire Department

Location: Station #2 Date: 20-Jun-16

Apparatus Support

Spaces	Existing	Length	X	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Protective Gear Locker		2	х	2	=	4	24	96	24" by 24"
Dirty Restroom		8	X	8	=	64	1	64	
Hose/Training Tower		30	x	20	=	600	1	600	
Mezzanine	7	80	×	20	=	1600	0	0	
Detached garage	5		X		=	0	0	0	
Walk-in med check/ed space		6	X	8	=	48	0	0 0	
K-9 spaces		6	×	8	=	48	0	0	
Work Room/SCBA	5	8	×	11	=	88	1	88	possible
SCBA Clean and Fill Room		8	X	12	=	96	1	96	possible
Hose Dryer			×		=	0	0	0	
Commercial Laundry Room		10	×	10	=	100	1	100	
Maintenance Room		10	×	12	=	120	1	120	
EMS Report Writing		8	X	12	=	96	0	0	
EMS Storage		8	×	20	=	160	1	160	
Regulated Storage	24	6	×	6	=	36	1	36	
Bio Hazard Control		6	x	6	=	36	1	36	
Janitors Closet		6	X	4	=	24	1	24	
Equipment Decon		8	x	10	=	80	1	80	
								3.4	
								1,500	Subtotal (Ft²)
								300	Efficiency Ratio of 20%

1,800 Apparatus Support Total (Ft²)

SCBA to service north side of LaCrosse



Project: LaCrosse Fire Department

Location: Station #2 Date: 20-Jun-16

Training

						rainin	g			
Spaces	Existing	Length	x	Width	=	Ft ²	Quantity	Total Ft ²		Notes
Training Office		12	X	12	=	144	0	0	100	
Training Room		20	X	30	=	600	1	600		20-joins w/station
Training Storage (equip)		10	×	12	=	120	1	120		
Training Storage (equip)		10	X	24	=	240	0	0		
Table and Chair Storage		10	×	12	=	120	0	0	1	
Exercise/Wellness Room		30	X	30	=	900	1	900		
Kitchenette		16	X	12	=	192	0	0		
			- 11					Sub Total		2025
										Includes efficiency ratio
									Proposed	The Carry Maga
APPARATUS & EQUIPMENT									Bay	
Mobile Live Burn Trlr (MLFTU)		60	X	16	=	960	0	0		
Mobile Training Tower (MTT)		60	X	16	=	960	0	0		
Ventilation Trlr (Vent)		40	X	16	=	640	0	0		
Training 1 (Semi)		30	X	16	=	480	0	0		
Training 2 (Semi)		30	X	16	=	480	0	0		
Survive Alive Trailer		40	Х	16	=	640	0	0		
Suburban (chief 3)		24	X	16	=	384	0	0		
Pick up (Rehab)		24	×	16	=	384	0	0		
Pick up -104		24	X	16	=	384	0	0		
Portable lighting		24	X	16	=	384	0	0		
Boat and Trailer	7-1-1	35	X	16	=	560	0	0		
Snowmobile/ATV/Trailer		16	X	16	=	256	0	0		
								Sub Total		0
										Includes efficiency ratio
									555	
									20	
									100	
									100	
			-							
			-							
					1				77.27	
									10.0	
									9 (-1)	

1,620	Subtotal (Ft²)
405	Efficiency Ralio of 25%
2,025	Training Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #2 Date: 20-Jun-16

Administration/Office Spaces

Spaces	Existing	Length	x	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Fire Chief		20	X	12	=	240	0	0	
Inspector/Fire Marshal		16	x	12	=	192	0	0	
Evidence Storage		6	х	8	=	48	0	Ó	
Assistant Chief		16	х	12	=	192	0	0	
Battalion Chiefs		30	x	10	=	300	0	0	
Sleeping Room		10	×	13	=	130	0	0	
Foilet shower		8	x	10	=	80	0	0	
Captains Office Suite		20	×	12	=	240	1	240	
ieutenants's Offices		20	X	12	=	240	1	240	Combined office area
Pub Ed Storage		6	×	8	=	48	0	0	
Study/Work Area		8	×	10	=	80	1	80	
Resource Library		2	X	10	=	20	0	0	
Administrative Assist, Office		16	×	12	=	192	0	0	
Station Dispatch Office		16	x	12	=	192	1	192	
Future		16	х	10	Ė	160	0	0	
Conference Room		20	x	20	=	400	0	0	
Communications/ IT		10	X	20	=	200	0	0	
Record/Report Storage		8	x	10	=	80	0	0	
Misc. Office Supplies		4	x	6	=	24	0	0	
General Storage		20	x	20	=	400	1	400	
New Gear and Uniform Storage		8	х	16	=	128	0	0	
Elevator		10	х	20	=	200	1	200	5,7
Public Toilets		10	х	14	=	140	1	140	Unisex
Janitors Closet		6	х	4	=	24	1	24	
Entrance Vestibule		20	х	20	=	400	1	400	
Stairs		24	х	10	=	240	2	480	
PPE Storage			X		=	0		0	
Other			х		=	0		0	
Other			X		=	0		0	
			х		12	0		0	
								2,396 599	Subtotal (Ft ²) Efficiency Ratio of 25%

2,995 Administration/Office Spaces Total (Ft²)



Project: LaCrosse Fire Department

Location: Station #2 Date: 20-Jun-16

Living Quarters Spaces

	Living Quarters Spaces								
Spaces	Existing	Length	×	Width		Ft ²	Quantity		Notes
Day Room		20	x	15	=	300	1	300	7 Staff
Kitchen		20	X	15	=	300	1	300	
Pantry		8	X	8	=	64	3	192	
Dining for 7-9		20	x	15	=	300	1	300	
Bedroom		10	х	13	=	130	6	780	
Restrooms/Showers		8	X	10	=	80	0	0	
Linen Closet		6	×	8	=	48	1.	48	
Supply Closet		4	X	5	=	20	1	20	
Residential Laundry		8	X	10	=	80	1	80	
Janitor's Closet		6	×	6	=	36	1	36	
Voting takes place at this station									
	-								
				-		_			
					_				
				2.2.					
		1							

2,056	Subtotal (Ft²)
514	Efficiency Ratio of 25%
2,570	Living Quarters Spaces Total (Ft ²)



Project LaCrosse Fire Department

Location Station #2 Date: June 20, 2016

Site

aces	Existing	Quantity	Notes
Fire Staff Parking		0	
EMS Staff Parking		0	
Public Parking		0	
Other Parking needs		0	
Fire Apparatus Apron EMS Apparatus Apron		0	
EMS Apparatus Apron		0	
Outdoor Training		0	
Outdoor Patio		0	
Enclosed Dumpster		0	
External Generator		0	
Storm Water Treatment		0	
Extrication pavement		0	
Other			



Project: LaCrosse Fire Department

Location: Station #2 Date: 20-Jun-16

Totals
Apparatus Bays
Apparatus Bay Support
1,800
Training
2,025
Administration
2,995

Living Quarters 2,570

Training - Tempered 0

18,476 Station Footprint (Ft²) Sub Total

2,771 Infrastructure (M & E) Space Factor 15%

21,248 TOTAL PROGRAM SPACE REQUIRMENT

AREA LEGEND



ADMINISTRATION

APPARATUS BAY

APPARATUS BAY SUPPORT

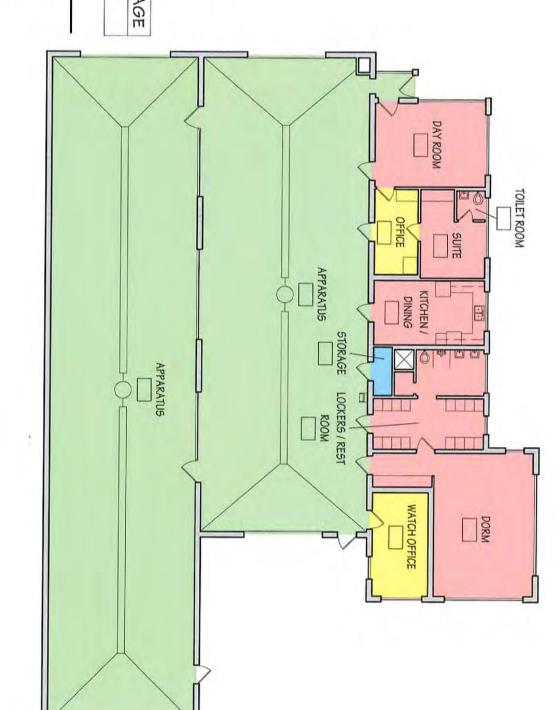
LIVING QUARTERS

BUILDING SQUARE FOOTAGE 8,140 SF

OVERALL TOTAL

MAIN LEVEL





LA CROSSE FIRE STATION STUDY

STATION 2 12.01.2016



PROJECT: 16-039

Description of Station #3

Constructed in 1967

Total Existing Area: 7,807 SF

Total Program Space Requirement: 20,917 SF Station #3 is located at 1710 Losey Boulevard South

Space Needs Analysis

Station #3 size is inadequate. The Space Needs Analysis recommends a station size of 20,144 SF as contrasted by the existing building area of 7,807 SF. The existing site will not allow a building increase of that scope.

PIRE STATION



Existing Conditions

The two-story facility is constructed with single width brick walls, much in the manner of Station #1's masonry walls. Ventilation/HVAC systems in the stations are dated and

inefficient. The existing windows are extremely narrow, single pane units built literally into the masonry wall



assembly. Window replacement would be cost prohibitive and not recommended due to the resulting small amount of glazing area.

Existing Limitations

The site does allow drive though bay operation, but is limited for any future growth/expansion. A storage



building for fire department operations is planned for the near future. The Losey Boulevard site is challenged by the location on Losey Boulevard and peak time traffic build up. Ramp areas in the front of the stations are too small for safe exiting from the station.

ADA Compliance

Station #3 does not meet current ADA requirements for circulation and toilet/shower areas. Any remodeling/renovation of significant scope with require building modifications to bring the facility into ADA compliance.

Station #3 Functionality

Station #3's crew living and working spaces have doors connected directly to the apparatus bays; resulting in exhaust gases coming into the living and sleeping areas continue to pose a serious health

issue. The station is not equipped with an encapsulated exhaust systems for apparatus.

The apparatus doors are 12'x12'; not an adequate size for current apparatus (14'x14' door size is recommended). The quint has only several inches of space to exit the station. Snow buildup during a major snowfall could cause impact when exiting. To meet size limitations, new apparatus is specified on size requirements rather than mission requirements.



There are no training accommodations in Station #3; crews have to train on the apparatus floor; in the day room, or the kitchen.



There are no health and fitness areas other than ones the crew tried to develop. These are on the apparatus floor, in bedroom areas or storage areas.

Station #3 suffers from inadequate Biohazard Decontamination rooms. Blood Bourne Pathogens are currently cleaned in common area of the station.

Station #3 is not equipped with an in-house washer/dryer, posing health

issues for decontamination.

Dormitory accommodations are substandard to the fire industry and lack gender considerations, isolation of health issues, and privacy (snoring). Likewise, shower/toilet rooms are not gender specific and are gender shared. Noise issues affecting full time living conditions are brought on by poor building insulation/construction combined with high road traffic.



Recommendations - Station #3

Station #3 is 49 years old, and was built in conjunction with Station #1. The common thread of the stations architecture is evident. Like Station #1 is insufficient in recommended program space, in this case by 13,140 SF. Like La Crosses other stations, Station #3 is additionally lacking in training areas (classroom, site specific, and wellness), gender equity, dormitory issues, health and safety issues, inefficient thermal insulation and inadequate HVAC, electrical systems and handicap accessibility. It is our recommendation the City begin planning for a replacement Fire Station #3. Even with additional property being purchased, we do not anticipate a building addition being a viable financial option to address all the problems identified with the existing conditions listed within the body of this report.

Immediate Concerns:

- Lack of encapsulated exhaust system
- Lack of adequate decontamination rooms
- Lack of adequate medical storage
- Lack of on-site washer and dryer

We recommend the City correct existing health safety issues concerning the lack of apparatus exhaust and adequate decontamination areas. Installation of an encapsulated exhaust system currently cost approximately \$10,000 to \$12,000 per vehicle drop. On the upside, a large portion of installed system can be salvaged and relocated to a new station.

We have provided an opinion preliminary planning estimate based on our understanding of current market conditions for stations of similar scope.



Opinion of Probable Construction Costs

PROJECT: City of La Crosse Fire Station #3 Replacement

LOCATION: La Crosse, WI PHASE: Study Estimate

ticipated	nstruction	Costs
Ant	Cons	-

Estimated Construction Cost \$4,398,870

Bidding Contingency 5% \$219,944

Probable Construction Cost \$4,618,814

Construction Contingency 5% \$230,941

Total Construction Cost

Not Including Site Acquisition Cost

\$4,849,754

Soft Cost		\$405,575
Architecture/Engineering Fee @ 8%		3012 2 24 e 6
Possible Additional Services		
(Should LEED Certiciation be desired)		
Sustainable Design (LEED)	\$37,000	
Commissioning	\$20,000	
Technology	\$8,000	
TOTAL - ADDITIONAL SERVICES	\$65,000	
Reimbursables (estimated)		
PRINTING - EXISTING DOCUMENTS		
PRINTING - REVIEW DOCUMENTS	\$3,500	
PRINTING - BID DOCUMENTS	\$9,000	
PROJECT WEBSITE (dfm)	\$3,000	
POSTAGE / UPS	9.004.03	
SITE SURVEY (Topo & Historical)	\$8,500	
SOIL TESTING	\$5,000	
CONSTRUCTION TESTING	\$15,000	
LEED Certification Fees	\$6,500	
TOTAL - REIMBURSABLES		\$50,500
Other Project Costs		
LAND ACQUISITION		
External SITE Costs	\$15,000	
INTERIOR SIGNAGE & GRAPHICS	N. W. S.	
*TECH., TELECOM, SECURITY	\$85,000	
*FURNITURE & EQUIP	\$145,000	
Programming	ALIANEST A	
OTHER		
TOTAL OTHER COSTS		\$245,000
TOTAL ADDITIONAL COSTS		\$701,075

*Technology (Provided by Owner)
Network, Comp, Phone

Video Surveillance In Constrction AV Equipment In Construction Alerting Wiring In Costruction Alerting

Radio

*Furniture & Equipment (Provided by Owner)

Furniture Gear Lockers Plymovent SCBA Comp & Fill

Extractor

TOTAL PROJECT COST

\$5,550,829



Project: LaCrosse Fire Department

Location:	Station #3	Date:	20-Jun-16

Apparatus Floor

Spaces	Existing	Length	х	Width		Ft ²	Quantity	Total Ft ²	Proposed Bay	Notes
Quint	Existing	45	X	16		720	O	0	Day	Notes
Reserve		90	X	16	=	1440	2	2880		
Telesquirt		90	×	16	-	1440	0	0		
Trailers		30	x	16	_	480	0	ő		
Boat/Trailer		40	×	16	m	640	0	ő		
Arson Unit		45	×	16		720	0	ő		
Utility/Pickup		22	×	16	10	352	0	Ö		
laz Mat		22	×	10	-	0	0	0		
Haz Mat-Diking/Booming		22	×		=	0	0	Ö		
Portable Pump/Trailer			×		-	0	0	0		
Snowmobile/ATV/Trailer			x		=	0	0	0		
Firefighter Rehab Unit			x		=	0	0	0		
l'anker		50	x	16		800	0	0		
Command Vehicle		35	x		=	0	0	Ö		
Portable Lighting		24	x	16	=	384	0	0		
Rescue Squad		45	x	16	=	720	1	720		Rescue #3
Brush Buggy #31		24	x	16	=	384	0	0		
Mass Casualty		24	x	16	=	384	0	0		
Vehicle Maintenance Bay		40	x	16		640	0	0		
Wash Bay		70	х		m	0	0	Ö		
Portable air and light unit		24	×	16	=	384	0	Ö		
EMS				4704						
Future Bay		80	×	20		1600	1	1600		Future
Mass Casualty Trailer			×		я	0	0	0		
Tech Rescue Trailers		25	×	16	=	400	2	800		Close to bluffs
The City of La Crosse currently does of discussion for several years. A fu						ice has b	een the topic	6,000 1,200		Subtotal (Ft ²) Efficiency Ratio of 20%
							0	7,200	1	Apparatus Floor Total (Ft

= Existing Equipment = Future Equipment

Exisiting outside storage OK
Needs a third bay

= Future Equipment
See also Training for other Apparatus and Large Equipment

pparatus Sizing Table (Ft²)			E.S.		1 3 5		6,000
	Number of Bays	3	4	5	6	7	8
	A lease to the lease of the				Lengt	h	
		80	104	128	152	176	200
上	60	4800	6240	7680	9120	10560	12000
Depth	80	6400	8320	10240	12160	14080	16000
ă	100	8000	10400	12800	15200	17600	20000

21,521 Overall Space Estimate (Ft²)



Project: LaCrosse Fire Department

_ocation: Station #3	Date:	20-Jun-16
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Apparatus Support

Protective Gear Locker Dirty Restroom	Existing	Length	X	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Dirty Restroom		2	X	2	=	4	20	80	24" by 24"
anti i todii doiii		8	×	8	=	64	1	64	
lose/Training Tower		30	X	20	=	600	1	600	If possible
Mezzanine		80	X	20	=	1600	0	0	
Detached garage		12	×	12	=	144	1	144	
Valk-in med check/ed space		6	×	8	=	48	0	0	
<-9 spaces		6	×	8	=	48	0	0	
Vork Room/SCBA	-	8	X	11	=	88	1	88	
SCBA Clean and Fill Room		8	x	12	=	96	1	96	
Sear Dryer			х		=	0	1	0	
Commercial Laundry Room		10	х	10	=	100	1	100	
Naintenance Room		12	X	14	=	168	1	168	
MS Report Writing		8	x	12	=	96	1	96	
MS Storage		8	x	20	=	160	1	160	
Regulated Storage		6	х	6	=	36	1	36	
Bio Hazard Contro/deconl		6	X	6	=	36	1	36	
anitors Closet	-1	8	X	8	=	64	1	64	
quipment Decon		8	x	10	=	80	1	80	
Residential laundry		12	x	14	0	168	1	168	
								100	
								1,980 396	Subtotal (Ft²) Efficiency Ratio of 20%

Training capacity: Station #4 can't train w/o without moving aparatus from another station to cover their response area

2,376 Apparatus Support Total (Ft²)



Project: LaCrosse Fire Department

Location: Station #3 Date:

Training

		-			Ir	ainin	g			
Spaces	Existing	Length	х	Width		Ft ²	Quantity	Total Ft ²		Notes
Training Office		12	X	12	=	144	0	0		7
Training Room		14	×	12	=	168	1	168		Conference room
Training Storage (supplies)		10	×	12	=	120	1	120		***************************************
Training Storage (equip)		10	×	24	=	240	1	240		
Table and Chair Storage		10	×	12	=	120	1	120		
Exercise/Wellness Room		30	×	30	=	900	1	900		Crew W/O togerther
Kitchenette		16	X	12	=	192	1	192	100	
								Sub Total		2175
									land of	Includes efficiency ratio
فالمراب والمناف والمحاص والمعاول									Proposed	
APPARATUS & EQUIPMENT									Bay	
Mobile Live Burn Trlr (MLFTU)		60	×	16	=	960	0	0		
Mobile Training Tower (MTT)		60	×	16	=	960	0	0		
Ventilation Trlr (Vent)		40	X	16	=	640	0	0		
Training 1 (Semi)		30	X	16	=	480	0	0		
Training 2 (Semi)		30	X	16	=	480	0	0		
Survive Alive Trailer		40	×	16	=	640	0	0		
Suburban (chief 3)		24	×	16	=	384	0	0		
Pick up (Rehab)		24	x	16	=	384	0	0		
Pick up -104		24	X	16	=	384	0	0		
Portable lighting		24	×	16	=	384	0	0		
Boat and Trailer		35	X	16	=	560	0	0		
Snowmobile/ATV/Trailer		16	х	16	=	256	0	0		
								Sub Total		0
										Includes efficiency ratio
					- 2				2.7	
					- 1					
					000				-	
							/			
									-	
									- 6	
	100000								. 8	
									100	
									1 33 (5)	

1,740	Subtotal (Ft²)
435	Efficiency Ratio of 25%
2,175	Training Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #3 Date: 20-Jun-16

Administration/Office Spaces

Spaces	Existing	Length	x	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Fire Chief		20	х	12	=	240	0	0	
nspector/Fire Marshal		16	x	12	=	192	0	0	
Evidence Storage		6	х	8	=	48	0	0	
Assistant Chief		16	x	12	=	192	0	0	
Captains Office Suite		30	х	10	=	300	1	300	
Sleeping Room		10	x	13	=	130	1	130	
Toilet shower		8	×	10	=	80	1	80	
ieutenants Office Suite		20	×	12	=	240	1	240	
Sleeping Room		14	×	12	=	168	1	168	
Foilet shower		6	x	8	=	48	1	48	
Study/Work Area		8	×	10	=	80	1	80	
Resource Library		2	×	10	=	20	0	0	
Administrative Assist. Office		16	x	12	=	192	0	0	
Station Dispatch Office		16	x	12	=	192	1	192	
Future		16	×	10	=	160	0	0	
Conference Room		20	×	20	=	400	1	400	Training room
Communications/ IT		10	x	20	=	200	1	200	
Record/Report Storage		8	x	10	=	80	1	80	
Misc. Office Supplies		4	x	6		24	1	24	
General Storage		8	x	10	=	80	1	80	
New Gear and Uniform Storage		8	x	16	=	128	1	128	
Elevator		10	×	20	=	200	1	200	Possible
Public Toilets		10	х	14	=	140	2	280	
Janitors Closet		6	х	4	=	24	2	48	
Entrance Vestibule		20	х	20	=	400	1	400	
Stairs		24	х	10	=	240	1	240	There are two listed on a different station
Other			x		=	0		0	
Other			x		=	0		0	
Other			x		=	0		0	
			х		=	0		Ó	
			_			_		3,318	Subtotal (Ft²)
							- 1	830	Efficiency Ratio of 25%

4,148 Administration/Office Spaces Total (Ft²)

Captains- Dorm/suite Lieutenants - Dorm/suite Office



Project: LaCrosse Fire Department

Location: Station #3 Date: 20-Jun-16

Living Quarters Spaces

Spaces	Living dual ters opaces								
Kitchen 20 x 15 = 300 1 300 3 Refrigerators and 3 pantry Pantry 8 x 8 = 64 3 192 Dining for 14-20 20 x 15 = 300 1 300 Bedroom 10 x 13 = 130 6 780 Restrooms/Showers 8 x 10 = 80 2 160 Linen Closet 6 x 8 = 48 1 48 Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80	Ex								
Kitchen 20 x 15 = 300 1 300 3 Refrigerators and 3 pantry Pantry 8 x 8 = 64 3 192 Dining for 14-20 20 x 15 = 300 1 300 Bedroom 10 x 13 = 130 6 780 Restrooms/Showers 8 x 10 = 80 2 160 Linen Closet 6 x 8 = 48 1 48 Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80	1								
Pantry 8 x 8 = 64 3 192 Dining for 14-20 20 x 15 = 300 1 300 Bedroom 10 x 13 = 130 6 780 Restrooms/Showers 8 x 10 = 80 2 160 Linen Closet 6 x 8 = 48 1 48 Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80									
Dining for 14-20 20 x 15 = 300 1 300 Bedroom 10 x 13 = 130 6 780 Restrooms/Showers 8 x 10 = 80 2 160 Linen Closet 6 x 8 = 48 1 48 Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80	777.								
Restrooms/Showers 8 x 10 = 80 2 160 Linen Closet 6 x 8 = 48 1 48 Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80	14-20								
Restrooms/Showers 8 x 10 = 80 2 160 Linen Closet 6 x 8 = 48 1 48 Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80	1120								
Linen Closet 6 x 8 = 48 1 48 Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80	s/Showers								
Supply Closet 4 x 5 = 20 1 20 Residential Laundry 8 x 10 = 80 1 80	et								
Residential Laundry 8 x 10 = 80 1 80	eet								
Janitor's Closet 6	I January								
	locat								
	loset								

2,252	Subtotal (Ft²)
563	Efficiency Ratio of 25%
2,815	Living Quarters Spaces Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #3 Date: June 21, 2016

Site

Spaces	Existing	Quantity	Notes
Fire Staff Parking		12	Includes shift change
Administrative Staff Parking		0	
Public Parking		2	
Other Parking needs		0	
Fire Apparatus Apron		0	
EMS Apparatus Apron		0	
Outdoor Training		1	
Outdoor Patio		0	
Enclosed Dumpster		0	
External Generator		0	
Storm Water Treatment		0	
Extrication pavement		0	
Other			
Other			
Other			
Other	-0		



Training - Tempered

SPACE NEEDS SUMMARY

Project: LaCrosse Fire Department

Location: Station #3 Date: #VALUE!

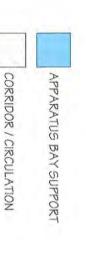
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Totals
Apparatus Bays
Apparatus Bay Support
2,376
Training
2,175
Administration
4,148
Living Quarters
2,815

18,714 Station Footprint (Ft²) Sub Total

2,807 Infrastructure (M & E) Space Factor 15%

21,521 TOTAL PROGRAM SPACE REQUIRMENT



LIVING QUARTERS

STORAGE / MECHANICAL

O CONTROL OF THE CONT

TRAINING

BUILDING SQUARE FOOTAGE

LOWER LEVEL TOTAL = 2,600 SF

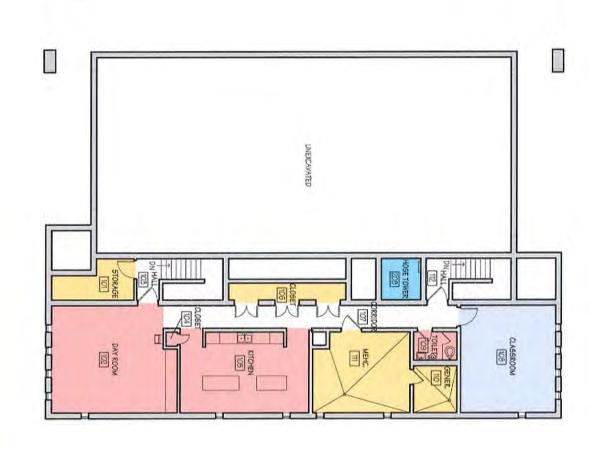
MAIN LEVEL TOTAL = 3,310 SF

UPPER LEVEL TOTAL = 2,150 SF

OVERALL TOTAL = 8,060 SF

LOWER LEVEL

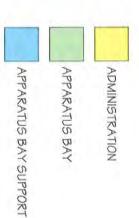




LA CROSSE FIRE STATION STUDY

STATION 3 12.01.2016





CORRIDOR / CIRCULATION

LIVING QUARTERS

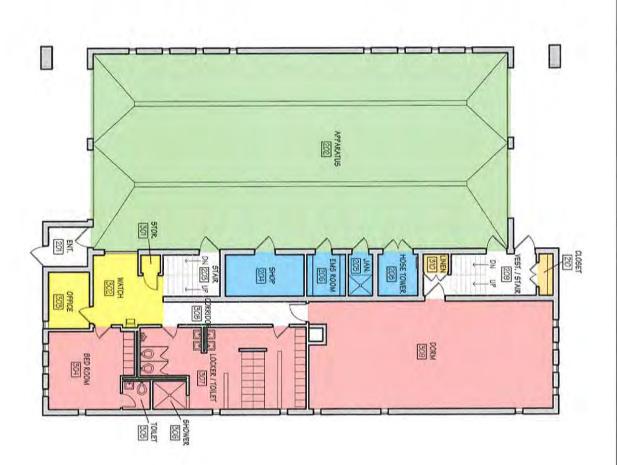
STORAGE / MECHANICAL

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UPPER LEVEL TOTAL	MAIN LEVEL TOTAL	LOWER LEVEL TOTAL
ti	u	11
2,150 SF	3,310 SF	2,600 SF
	tı	11 11

MAIN / UPPER LEVEL





LA CROSSE FIRE STATION STUDY

STATION 3 12.01.2016



Description of Station #4

Constructed in 1940

Total Existing Area: 7,807 SF

Total Program Space Requirement: 14,924 SF Station #4 is located at 906 Gillette Street

Space Needs Analysis

The size of Station #4 is inadequate. The Space Needs Analysis recommends a station size of 14,924 SF as contrasted by the existing area of 7,807 SF a recommended increase of 7,116 SF.



Existing Conditions

The two-story station with a basement is the oldest of the City's four (4) fire stations.

The construction of existing exterior walls is brick masonry walls. Wall insulation is inadequate and does not meet current energy code. The existing windows are inadequate

Existing Site Limitations

Station #4's site does allow for off street parking, but the facility does not provide drive through bays. Station #4's site will not allow building additions to meet the program requirements.



ADA Compliance

Station #4 does not meet current ADA requirements. Any remodeling/renovation of significant scope would require building modifications to bring the facility into ADA compliance.



Station #4 Functionality

Station #4 functions as a two bay station with a single overhead door. The apparatus door is not an adequate, for current apparatus (14' door height is recommended). The single bay width is not adequate to allow internal circulation around apparatus. 8'-0" between is recommended. To meet size limitations, new apparatus is purchased to meet building size limitations rather than mission requirements.

In general, Station #4 was designed and constructed when fire apparatus was considerably smaller in both length and height. The number and type of apparatus, along with mission statements of fire departments, have evolved significantly over the years.

Station #4's crew living and working spaces having doors/sliding poles connected directly to the apparatus bays. Resulting exhaust gases coming into the station continue to pose a serious health issue. The Station is not equipped with an encapsulated exhaust systems for

apparatus.

Dormitory accommodations are substandard to the fire industry and lack gender considerations, isolation of health issues, and privacy (snoring). Likewise, shower/toilet rooms are not gender specific, and are gender shared. Noise issues affecting full time living conditions are brought on by poor building insulation/construction.





Station #4 suffers from inadequate storage rooms, causing equipment to be stored wherever there may be space, such as electrical/HVAC rooms. This is particularly true for medical storage.

Station #4 suffers from inadequate Biohazard

Decontamination areas. Blood Borne Pathogens are
currently cleaned in the common areas of the station.

Recommendations - Station #4

Station #4 is 76 years old. Like La Crosse's other stations, Station #4 is insufficient in recommended program space, in this case by 12,610 SF. Also, like La Crosses other stations, Station #4 is additionally lacking in training areas (classroom, site specific, and wellness), gender equity, dormitory issues, inefficient thermal insulation and inadequate HVAC, electrical systems and handicap accessibility. It is our recommendation the City begin planning for a replacement Fire Station #4. Even with additional property being purchased, we do not anticipate a building addition being a viable financial option to address all the problems identified with the existing conditions listed within the body of this report.

We have provided an opinion preliminary planning estimate based on our understanding of current market conditions for stations of similar scope.

Immediate Concerns:

- Lack of encapsulated exhaust system
- Lack of adequate decontamination rooms
- Lack of adequate medical storage
- Lack of on-site washer and dryer

We recommend the City correct existing health safety issues concerning the lack of apparatus exhaust and adequate recontamination areas. Installation of an encapsulated exhaust system currently cost approximately \$10,000 to \$12,000 per vehicle drop. On the upside, a large portion of installed system can be salvaged and relocated to a new station.



Opinion of Probable Construction Costs

PROJECT:

City of La Crosse Fire Station #4 Replacement

LOCATION: PHASE: La Crosse, WI Study Estimate

Anticipated Construction Costs Estimated Construction Cost @ \$210 SF (Smaller Size) \$3,143,300
Bidding Contingency 5% \$157,165
Probable Construction Cost \$3,300,465

Construction Contingency

5% \$165,023

Total Construction Cost

Not Including Site Acquisition Cost

\$3,465,488

Soft Cost		\$277,239
Architecture/Engineering Fee @ 8%		
Possible Additional Services		
(Should LEED Certiciation be desired)		
Sustainable Design (LEED)	\$37,000	
Commissioning	\$20,000	
Technology	\$8,000	
TOTAL - ADDITIONAL SERVICES	\$65,000	
Reimbursables (estimated)		
PRINTING - EXISTING DOCUMENTS		
PRINTING - REVIEW DOCUMENTS	\$3,500	
PRINTING - BID DOCUMENTS	\$9,000	
PROJECT WEBSITE (dfm)	\$3,000	
POSTAGE / UPS		
SITE SURVEY (Topo & Historical)	\$8,500	
SOIL TESTING	\$5,000	
CONSTRUCTION TESTING	\$15,000	
LEED Certification Fees	\$6,500	
TOTAL - REIMBURSABLES		\$50,50
Other Project Costs		
LAND ACQUISITION		
External SITE Costs	\$15,000	
INTERIOR SIGNAGE & GRAPHICS	V	
*TECH., TELECOM, SECURITY	\$85,000	
*FURNITURE & EQUIP	\$145,000	
Programming	1.0/000	
OTHER		
TOTAL OTHER COSTS		\$245,00

*Technology (Provided by Owner)
Network, Comp, Phone
Video Surveillance In Constrction
AV Equipment In Construction
Alerting Wiring In Costruction
Alerting
Radio

*Furniture & Equipment (Provided by Owner) Furniture

Furniture Gear Lockers Plymovent SCBA Comp & Fill Extractor

TOTAL PROJECT COST

TOTAL ADDITIONAL COSTS

\$4,038,227

\$572,739



Project: LaCrosse Fire Department

Location: Station #4 Date: 20-Jun-16

Apparatus Floor

Spaces	Existing	Length	x	Width	-	Ft ²	Quantity	Total Ft ²	Proposed Bay	Notes
Engines	- Company of the Comp	45	×	16	=	720	1	720		
Ladder/Snorkel		90	x	16	-	1440	0	0		
4WD Land Access Vehicle		45	x	16		720	1	720	1	
Trailers		30	x	16	=	480	0	0		
Boat/Trailer		40	x	16	-	640	0	0		
Arson Unit		45	x	16	- =	720	0	0		
Utility/Pickup		22	x	16	=	352	0	Ö		
Haz Mat		22	x		=	0	0	O		
Haz Mat-Diking/Booming		22	×			0	0	0		
Portable Pump/Trailer			x		=	0	0	Ō		Inflatable stored in a bag
Snowmobile/ATV/Trailer			x		=	0	0	0		
Firefighter Rehab Unit			x		=	0	0	Ó		
Tanker Tanker		50	x	16	10.	800	0	0		
Command Vehicle		35	x		=	0	0	0		
Portable Lighting		24	x	16	=	384	0	Ö		
Rescue Squad		45	x	16	=	720	0	0		
Brush Buggy #31		24	x	16	=	384	0	Ö		
Mass Casualty		24	x	16	п	384	0	O		
Vehicle Maintenance Bay		40	×	16	=	640	0	0		
Wash Bay		70	×		11	0	1	0		
Portable air and light unit		24	×	16	=	384	0	0		
EMS		4 3				25'3				
EMS Command Vehicle			×		=	0	0	0		
uture Bay		80	×	20	-	1600	1	1600		Future
Mass Casualty Trailer			×		=	0	0	0		7,30019
Phsyc Unit		25	×	16	п	400	0	0		
he City of La Crosse currently does of discussion for several years. A ful	not provide a (ure bay has bee	City operated en included in	EMS :	service, EM eeds analys	IS servi	ce has be	en the topic	3,040 608		Subtotal (Ft ²) Efficiency Ratio of 20%
								3,648		Apparatus Floor Total (F

= Existing Equipment
= Future Equipment
See also Training for other Apparatus and Large Equipment

pparatus Sizing Table (Ft²)						3,040
Number of Bays	3	4	5	6	7	8
			100	Leng	th	
	80	104	128	152	176	200
E 60	4800	6240	7680	9120	10560	12000
Depth 90 100	6400	8320	10240	12160	14080	16000
ă 100	8000	10400	12800	15200	17600	20000

14,924 Overall Space Estimate (Ft²)

Would like Drive through bays



Project: LaCrosse Fire Department

Location: Station #4 Date: 20-Jun-16

Apparatus Support

Spaces	Existing	Length	x	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Protective Gear Locker		2	×	2	=	4	16	64	24" by 24"
Dirty Restroom		8	×	8	=	64	1	64	
Hose/Training Tower	54	30	X	20	=	600	1	600	
Mezzanine		80	×	20	=	1600	0	0	
Detached garage		6	×	10	=	60	1	60 0 0 0	Shed
Walk-in med check/ed space		6	×	8	=	48	0	0	
K-9 spaces		6	×	8	=	48	0	0	
Work Room/SCBA		8	×	11	=	88	0	0	
SCBA Clean and Fill Room		8	×	12	=	96	1	96	
Gear Dryer			×		=	0	0	0	
Commercial Laundry Room		10	×	10	=	100	1	100	
Vehicle Maintenance Room	-1	10	×	12	=	120	0	0	
EMS Report Writing		8	×	12	=	96	0	0	
EMS Storage		8	×	20	=	160	1	160	
Regulated Storage		6	×	6	=	36	1	36	
Bio Hazard Contro/deconl		6	X	6	=	36	1	36	
Janitors Closet		6	×	4	=	24	1	24	
Equipment Decon		8	×	10	=	80	1	80	
								1,320 264	Subtotal (Ft ²) Efficiency Ralio of 20%

1,584 Apparatus Support Total (Ft²)

The lot next door to the station is owned by the city



Project: LaCrosse Fire Department

Location: Station #4 Date: 20-Jun-16

Training

					-	rainin	g			
Spaces	Existing	Length	x	Width	=	Ft ²	Quantity	Total Ft ²		Notes
Training Office		12	Х	12	=	144	0	0	W 4	
Conference Room		30	X	50	=	1500	1	1500		For training
Training Storage (supplies)		10	×	12	=	120	1	120	- 1	
Training Storage (equip)		10	X	24	=	240	0	0	- 2	
Table and Chair Storage		10	х	12	=	120	0	0		
Exercise/Wellness Room		30	х	30	=	900	1	900	200	
Kitchenette		16	Х	12	=	192	0	0	100	
			11-11					Sub Total		3150
									Company of the last	Includes efficiency ratio
APPARATUS & EQUIPMENT									Proposed Bay	
Mobile Live Burn Trlr (MLFTU)		60	X	16	-	960	0	0	Бау	
Mobile Training Tower (MTT)		60	X	16	=	960	0	Ö		
Ventilation Trlr (Vent)		40	X	16	=	640	0	Ö		
Training 1 (Semi)		30	X	16		480	0	Ö		
Training 7 (Semi)	-	30	X	16		480	0	Ó		
Survive Alive Trailer		40	×	16	=	640	0	Ö	1	
Suburban (chief 3)		24	×	16	=	384	0	ŏ	_	
Pick up (Rehab)		24	×	16	-	384	0	Ö		
Pick up -104		24	×	16	=	384	0	0		
Portable lighting		24	×	16	=	384	0	ő		
Boat and Trailer		35	×	16	=	560	0	ŏ		
Snowmobile/ATV/Trailer		16	×	16	=	256	0	ŏ		
Onownobile/AT V/ Trailer		10	^	10		200		Sub Total	1	0
								Gas Io		Includes efficiency ratio
									200	
									-	
									1000	
									1.0	
									-2013	
									7 3 4	
					1				(1)	
								1000		
			- 1						1000	

2,520 630	Subtotal (Ft²) Efficiency Ratio of 25%
3,150	Training Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #4 Date: 20-Jun-16

Administration/Office Spaces

Spaces	Existing	Length	×	Width	-	Ft ²	Quantity	Total Ft ²	Notes
ire Chief		20	×	12	=	240	0	0	
nspector/Fire Marshal		16	×	12	=	192	0	0	
Evidence Storage		6	×	8	=	48	0	0	
Assistant Chief		16	x	12	=	192	0	0	
Captains Office/suite		30	x	10		300	1	300	
Sleeping Room		10	x	13	=	130	1	130	
Toilet shower		8	×	10	=	80	1	80	
Captains Office		20	×	12	=	240	0	0	
Pub Ed Office		14	x	12	=	168	0	0	
Pub Ed Storage		6	х	8	=	48	0	0	
Study/Work Area		8	х	10		80	1	80	
Resource Library		2	х	10	=	20	0	0	
Administrative Assist. Office		16	x	12	=	192	0	0	
Station Dispatch Office		16	×	12	=	192	0	0	
Future		16	x	10	=	160	0	0	
Conference Room		20	×	20	=	400	0	0	
Communications/ IT		10	x	20	=	200	0	0	
Record/Report Storage		8	x	10	=	80	0	0	
Misc. Office Supplies		4	х	6	=	24	1	24	
General Storage		20	×	20	=	400	1	400	
New Gear and Uniform Storage		8	×	16	=	128	0	0	
Elevator		10	×	20	=	200	1	200	
Public Toilets		10	×	14	=	140	1.	140	Unisex
Janitors Closet		6	×	4	m	24	1	24	
Entrance Vestibule		20	x	20	=	400	1	400	
Stairs		24	×	10	=	240	1	240	
Other			×		=	0		0	
Other			×	-	=	0		0	
Other			×		=	0		0	
			x		=	0		0	
								The same	
								8 65	
								2,018	Subtotal (Ft²)
								505	Efficiency Ratio of 25%

2,523 Administration/Office Spaces Total (Ft²)



Project: LaCrosse Fire Department

Location: Station #4

Date:

20-Jun-16

Living Quarters Spaces

				LIVI	ng (Quart	ers Spac	es	
Spaces	Existing	L.ength	Х			Ft ²	Quantity	Total Ft ²	Notes
Day Room		20	x	15	н	300	1	300	4 to 6 staff
Kitchen		20	×	15	=	300	1	300	4 to 0 stall
Pantry		8	×	8	=	64	1	64	3 refrigerators, 3 pantrys
Dining for 14-20		20	×	15	=	300	0	0	o reingerators, o pantrys
Bedroom		10	×	13	=	130	5	650	
Restrooms/Showers		8	×	10	=	80	2	160	
Linen Closet		6	×	8	=	48	1	48	
Supply Closet		4	×	5	=	20	1	20	
Supply Closet Residential Laundry		8	×	10	=	80	1	80	
Janitor's Closet		6	×	6	=	36	1'	36	
Santoi s Closet		0	×	0	_	30		30	
							-		
			-						
				-					
				200-					
		-				-			
		-			-	_	-		
							-		
				-					
					-				

1,658	Subtotal (Ft²)
415	Efficiency Ratio of 25%
2,073	Living Quarters Spaces Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #4 Date: June 21, 2016

Site

Spaces	Existing	Quantity	Notes
Fire Staff Parking		12	Includes shift change
Administrative Staff Parking		0	DAG DESCRIPTION OF THE PROPERTY OF THE PROPERT
Public Parking		2	
Other Parking needs		2	
Fire Apparatus Apron		0	
EMS Apparatus Apron		0	
Outdoor Training		0	
Outdoor Patio		0	
Enclosed Dumpster		0	
External Generator		0	
Storm Water Treatment		0	
Extrication pavement		0	
Other			
	- 1		



Training - Tempered

SPACE NEEDS SUMMARY

Project: LaCrosse Fire Department

Location: Station #4 Date: 20-Jun-16

Totals
Apparatus Bays 3,648
Apparatus Bay Support 1,584
Training 3,150
Administration 2,523
Living Quarters 2,073

12,977 Station Footprint (Ft²) Sub Total
1,947 Infrastructure (M & E) Space Factor 15%

14,924 TOTAL PROGRAM SPACE REQUIRMENT



CORRIDOR / CIRCULATION



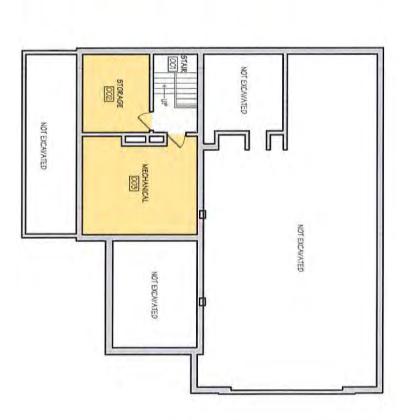
STORAGE / MECHANICAL

BUILDING SQUARE FOOTAGE

	EVE TOTAL
MAIN LEVEL TOTAL = SECOND LEVEL TOTAL = OVERALL TOTAL =	Ü
5,420 SF 1,400 SF	720 65

LOWER LEVEL





LA CROSSE FIRE STATION STUDY

STATION 4 12.01.2016





APPARATUS BAY SUPPORT

CORRIDOR / CIRCULATION

LIVING QUARTERS

BUILDING SQUARE FOOTAGE

LOWER LEVEL TOTAL = 780 SF

MAIN LEVEL TOTAL = 3,420 SF

SECOND LEVEL TOTAL = 1,400 SF

OYERALL TOTAL = 5,600 SF

MAIN LEVEL 1/16" = 1'-0" 8' 16' 32'



LA CROSSE FIRE STATION STUDY

STATION 4 12.01.2016







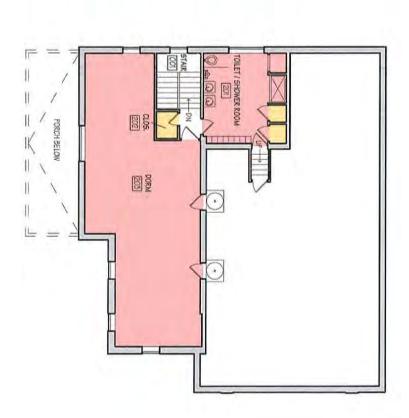
STORAGE / MECHANICAL

BUILDING SQUARE FOOTAGE

LOWER LEVEL TOTAL = 780 SF MAIN LEVEL TOTAL = 5,420 SF SECOND LEVEL TOTAL = 1,400 SF	5,600 SF	n	OVERALL TOTAL	
II II	1,400 SF	H	SECOND LEVEL TOTAL	
u	3,420 SF	11		
	780 SF	u	LOWER LEVEL TOTAL	

SECOND LEVEL





LA CROSSE FIRE STATION STUDY

STATION 4 12.01.2016



Future Station #5

Location: Site Selection in Progress

A future Station #5 is proposed to improve emergency service response times to an area currently under served. The actual site for Station #5 has not been selected. A space needs analysis suggests a recommended building size of 14,924 SF.

Optimally, a site of 2.5 acres is ideal for a State of the Art Fire Station. Such a site would allow drive through bays, adequate staff and public parking, adequate apparatus bay aprons to allow exterior vehicle staging (70' recommended), and on-site training. Such sites are rare in urban areas and frequently require a protracted acquisition process.

As a value proposition, Five Bugles Design recommends the City of La Crosse consider a single story, masonry fire station. In our opinion, a masonry structure offers the best cost us life cycle performance. We have provide an opinion of probable cost at \$4,038,277 based on current 2017 cost models.

SPACE NEEDS SUMMARY LA CROSSE FIRE DEPARTMENT



Opinion of Probable Construction Costs

PROJECT:

City of La Crosse Future Fire Station #5

LOCATION: PHASE: La Crosse, WI Study Estimate

Anticipated Construction Costs

Estimated Construction Cost @ \$210 SF		\$3,143,300
Bidding Contingency	5%	\$157,165
Probable Construction Cost		\$3,300,465

Construction Contingency

5% \$165,023

Total Construction Cost

Not Including Site Acquisition Cost

\$3,465,488

	Soft Cost		\$277,239
	Architecture/Engineering Fee @ 8%		
	Possible Additional Services		
	(Should LEED Certiciation be desired)		
	Sustainable Design (LEED)	\$37,000	
100	Commissioning	\$20,000	
Щ	Technology	\$8,000	
AB	TOTAL - ADDITIONAL SERVICES	\$65,000	
JRS	Reimbursables (estimated)		
B	PRINTING - EXISTING DOCUMENTS		
Σ	PRINTING - REVIEW DOCUMENTS	\$3,500	
豆	PRINTING - BID DOCUMENTS	\$9,000	
<u>H</u>	PROJECT WEBSITE (dfm)	\$3,000	
S	POSTAGE / UPS		
ST	SITE SURVEY (Topo & Historical)	\$8,500	
8	SOIL TESTING	\$5,000	
~	CONSTRUCTION TESTING	\$15,000	
FI	LEED Certification Fees	\$6,500	
ADDITIONAL (SOFT) COSTS / REIMBURSABLES	TOTAL - REIMBURSABLES		\$50,500
NOI	Other Project Costs		
5	LAND ACQUISITION		
	External SITE Costs	\$15,000	
<	INTERIOR SIGNAGE & GRAPHICS		
	*TECH., TELECOM, SECURITY	\$85,000	
	*FURNITURE & EQUIP	\$145,000	
	Programming		
	OTHER		
	TOTAL OTHER COSTS		\$245,000
	TOTAL ADDITIONAL COSTS		\$572,739

*Technology (Provided by Owner)

Network, Comp, Phone
Video Surveillance In Construction
AV Equipment In Construction
Alerting Wiring In Costruction
Alerting
Radio

*Furniture & Equipment (Provided by Owner)

Furniture Gear Lockers Plymovent SCBA Comp & Fill

Extractor

TOTAL PROJECT COST

\$4,038,227



Project: LaCrosse Fire Department

Location: Station #5 Date: 20-Jun-16

Apparatus Floor

	Existing	Length	×	Width		Ft ²	Quantity	Total Ft ²	Proposed Bay	Notes
S <mark>paces</mark> Engines	Existing	45	X	16	п	720	Quantity	720	Day	Motes
_adder/Snorkel		90	X	16	-	1440	0	0		
WD Land Access Vehicle	_	45	X	16	-	720	1	720		
Frailers	_	30	- 22	16	-	480	0	0		
Boat/Trailer		40	X	16	-	640	0	ò		
Arson Unit			×	16	=	720		o		
		45	X	3.00	-	100	0	ő		
Jtility/Pickup	-	22	x	16	=	352	0		-	
Haz Mat	-	22	×		=	0	0	0	-	
Haz Mat-Diking/Booming	_	22	Х		=	0	0	0		I-B-t-bl- stand I- a b-s
Portable Pump/Trailer			х			0	0	0		Inflatable stored in a bag
Snowmobile/ATV/Trailer			х		=	0	0	Ö	-	
Firefighter Rehab Unit			Х		22	0	0	0		
Tanker	- 1	50	×	16	=	800	0	0		
Command Vehicle		35	Х		10	0	0	0		
Portable Lighting		24	X	16	=	384	0	0		
Rescue Squad		45	X	16	m	720	0	0		
Brush Buggy #31		24	x	16	=	384	0	0		
Mass Casualty		24	X	16	m	384	0	0		
Vehicle Maintenance Bay		40	x	16	=	640	0	0		
Wash Bay		70	x		=	0	1	0		
Portable air and light unit	5/0	24	×	16		384	0	0		
MS			94			97541				
MS Command Vehicle			×			0	0	0		
uture Bay		80	×	20	-	1600	1	1600		Future
Mass Casualty Trailer	-		×		11	0	0	0		
Phsyc Unit		25	×	16	-	400	0	Ô		
he City of La Crosse currently does f discussion for several years. A fu		City operated				ice has be	en the topic	3,040 608		Subtotal (Ft ²) Efficiency Ratio of 20%
								3 648	100000000000000000000000000000000000000	Annaratus Floor Total (Et

= Existing Equipment
= Future Equipment
See also Training for other Apparatus and Large Equipment

aratus Sizing Table (Ft²)	- No. 10.555	-					3,040
1	Number of Bays	3	4	5	6	7	8
	The second second				Lengi	h	
		80	104	128	152	176	200
<u></u>	60	4800	6240	7680	9120	10560	12000
Depth	80	6400	8320	10240	12160	14080	16000
ä	100	8000	10400	12800	15200	17600	20000

14,924 Overall Space Estimate (Ft²)

Would like Drive through bays



Project: LaCrosse Fire Department

Location: Station #5 Date: 20-Jun-16

Apparatus Support

Spaces	Existing	Length	×	Width	=	Ft ²	Quantity	Total Ft ²	Notes
Protective Gear Locker		2	X	2	=	4	16	64	24" by 24"
Dirty Restroom		8	X	8	=	64	1	64	
Hose/Training Tower		30	X	20	=	600	1	600	
Mezzanine		80	x	20	=	1600	0	0	
Detached garage		6	×	10	m	60	1	60	Shed
Walk-in med check/ed space		6	×	8	=	48	0	0	
<-9 spaces		6	×	8	=	48	0	0	
Work Room/SCBA		8	×	11	=	88	0	0	
SCBA Clean and Fill Room		8	×	12	=	96	1	96	
Gear Dryer			×		=	0	0	0	
Commercial Laundry Room		10	×	10	=	100	1	100	
/ehicle Maintenance Room		10	×	12	=	120	0	0	
EMS Report Writing		8	×	12	=	96	0	0	
EMS Storage	1	8	×	20	=	160	1	160	
Regulated Storage		6	×	6	=	36	1	36	
Bio Hazard Contro/deconl		6	×	6	=	36	1	36	
Janitors Closet		6	×	4	=	24	1	24	
Equipment Decon		8	×	10	=	80	1	80	
7.0011111111111111111111111111111111111									
		-	1-					1 1 3	
								1,320 264	Subtotal (Ft ²) Efficiency Ralio of 20%

1,584 Apparatus Support Total (Ft²)

The lot next door to the station is owned by the city



Project: LaCrosse Fire Department

Location: Station #5 Date: 20-Jun-16

Training

				-		rainin	9			
Spaces	Existing		X	Width	=	Ft ²	Quantity	Total Ft ²		Notes
Training Office		12	Х	12	=	144	0	0		
Conference Room		30	X	50	=	1500	1	1500	100.00	For training
Training Storage (supplies)		10	X	12	=	120	1	120	100	
Training Storage (equip)		10	X	24	=	240	0	0	1000	
Table and Chair Storage		10	X	12	=	120	0	0	THE REAL PROPERTY.	
Exercise/Wellness Room		30	X	30	=	900	1	900		
Kitchenette		16	X	12	=	192	0	0	100	
								Sub Total		3150
									الفلتم	Includes efficiency ratio
									Proposed	
APPARATUS & EQUIPMENT									Bay	
Mobile Live Burn Trlr (MLFTU)		60	X	16	=	960	0	0		
Mobile Training Tower (MTT)		60	X	16	=	960	0	0		
Ventilation Trlr (Vent)		40	X	16	=	640	0	0		
Training 1 (Semi)		30	X	16	=	480	0	0		
Training 2 (Semi)		30	Х	16	=	480	0	0		
Survive Alive Trailer		40	X	16	=	640	0	0		
Suburban (chief 3)		24	X	16	=	384	0	0		
Pick up (Rehab)	- 1	24	X	16	=	384	0	0		
Pick up -104		24	X	16	=	384	0	0		
Portable lighting		24	X	16	=	384	0	0		
Boat and Trailer		35	X	16	=	560	0	0		
Snowmobile/ATV/Trailer		16	X	16	=	256	0	0		
								Sub Total		0
										Includes efficiency ratio
	1								STORY OF	
									311	
			/ 10							
									3 1 19	
									1-33	
									200	
									1	
									- 370	
									1.8	
									1-2.9	
	1								27050	
									200	

2,520	Subtotal (Ft²)
630	Efficiency Ratio of 25%
3,150	Training Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #5 Date: 20-Jun-16

Administration/Office Spaces

Spaces	Existing	Length	X	Width	=	Ft ²	Quantity	Total Ft ²	Notes
ire Chief		20	х	12	=	240	0	0	
nspector/Fire Marshal		16	×	12	=	192	0	0	
Evidence Storage		6	×	8	-	48	0	0	
Assistant Chief		16	×	12	=	192	0	0	
Captains Office/suite		30	×	10	=	300	1	300	
Sleeping Room		10	×	13	=	130	1	130	
Toilet shower		8	x	10	=	80	1	80	
Captains Office		20	x	12	=	240	0	0	
Pub Ed Office		14	×	12	=	168	0	0	
Pub Ed Storage		6	×	8	=	48	0	0	
Study/Work Area		8	×	10	=	80	1	80	
Resource Library		2	×	10	=	20	0	0	
Administrative Assist. Office		16	×	12	=	192	0	0	
Station Dispatch Office		16	×	12	=	192	0	0	
uture		16	×	10	=	160	0	0	
Conference Room		20	×	20	=	400	0	0	
Communications/ IT		10	×	20	=	200	0	0	
Record/Report Storage		8	×	10	=	80	0	0	
Misc. Office Supplies		4	×	6	=	24	1	24	
General Storage		20	×	20	=	400	1	400	
New Gear and Uniform Storage		8	×	16	=	128	0	0	
Elevator		10	×	20	=	200	1	200	
Public Toilets		10	×	14	=	140	.1	140	Unisex
Janitors Closet		6	x	4	=	24	1	24	
Entrance Vestibule		20	x	20	=	400	1	400	
Stairs		24	x	10	=	240	1	240	
Other			x		н	0		0	
Other			×		=	0		0	
Other			х		=	0		0	
			×		=	0		0	
								2,018	Subtotal (Ft²)

2,523 Administration/Office Spaces Total (Ft²)



Project: LaCrosse Fire Department

Location: Station #5 Date: 20-Jun-16

Living Quarters Spaces

Elving dual tolo opaces										
Spaces	Existing	Length	x			Ft ²	Quantity	Total Ft ²	Notes	
Day Room		20	x	15	=	300	1	300	4 to 6 staff	
Kitchen		20	×	15	=	300	1	300	110001	
Pantry		8	×	8	=	64	1	64	3 refrigerators, 3 pantrys	
Dining for 14-20		20	×	15	-	300	0	0	o romgoratoro, o partuyo	
Bedroom		10	×	13	=	130	5	650		
Restrooms/Showers		8	×	10	=	80	2	160		
Linen Closet		6	×	8	=	48	1	48		
Supply Closet		4	×	5	=	20	1	20		
Residential Laundry		8	×	10	=	80	1	80		
Janitor's Closet		6	×	6	-	36	1	36		
Janitor's Closet		0	^	0		30	-	30		
							-			
					-	_	-			
					-					
	_									
							-			
			_							
			777							

1,658	Subtotal (Ft²)
415	Efficiency Ratio of 25%
2,073	Living Quarters Spaces Total (Ft ²)



Project: LaCrosse Fire Department

Location: Station #5 Date: June 21, 2016

Site

Spaces	Existing	Quantity	Notes
Fire Staff Parking		12	Includes shift change
Administrative Staff Parking	- 1	0	
Public Parking		2	
Other Parking needs		2	
Fire Apparatus Apron		0	
EMS Apparatus Apron		0	
Outdoor Training		0	
Outdoor Patio		0	
Enclosed Dumpster		0	
External Generator		0	
Storm Water Treatment		0	
Extrication pavement		0	
Other			
Other		J	
Other			
Other			



Project: LaCrosse Fire Department

Location: Station #5 Date: 20-Jun-16

Totals
Apparatus Bays

Apparatus Bay Support

1,584

Training

3,150

Administration

2,523

Living Quarters

2,073

Training - Tempered

0

12,977 Station Footprint (Ft²) Sub Total
1,947 Infrastructure (M & E) Space Factor 15%

14,924 TOTAL PROGRAM SPACE REQUIRMENT



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FiveBuglesDesign.com

ARCHITECTURAL DESIGN FOR PUBLIC SAFETY