

Public Works Committee

Tuesday, March 10, 2020

6:30 PM

McFarland Municipal Center
Conference Room A

AGENDA

1. CALL TO ORDER, ROLL CALL.
2. PUBLIC APPEARANCES.
3. APPROVAL OF MINUTES.
 - a. Discussion and action regarding the minutes from the meeting held on January 14, 2020.
4. BUSINESS.
 - a. Discussion and action to accept the final design for the improvements to the Public Works Center and authorize the project for bidding.
 - b. Discussion regarding a proposal for solar panels on the Public Works Center.
 - c. Discussion and action to make a recommendation to the Village Board regarding replacement of air conditioning units at the Municipal Center.
 - d. Discussion and action to make a recommendation to the Village Board regarding the proposal for 2020 Crackseal and Chipseal street maintenance.
5. SCHEDULE NEXT MEETING DATE.
 - a. Tuesday, April 14, 2020 at 6:00 pm.
6. ADJOURNMENT.

This meeting notice constitutes an official meeting of the above referenced group and was posted in accordance with all applicable laws related to Open Meetings Law. It is possible that members of and possibly a quorum of members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals. For additional information or to request this service, contact the McFarland Municipal Center at (608) 838-3153 or cassandra.suettinger@mcfarland.wi.us.

VILLAGE OF MCFARLAND
Public Works Committee Minutes

Tuesday January 14, 2020

1. CALL TO ORDER, ROLL CALL

The meeting was called to order by Village Board Trustee and Chairperson Dan Kolk at 6:00 pm.

Members present: Village Board Trustee; Jerry Adrian, Richard Vela, Marv Meyers, Chris Fredrick arrived at 6:09pm. *Absent:* Elizabeth Bohuski, Terry Lawrin

Staff present: Matt Schuenke (Village Administrator), Cassandra Suettinger (Village Clerk), Jim Hessling (Director of Public Works), Aimee Irwin (Assistant to the Public Works Director), Brian Berquist (Town & Country Engineering), Tim Stieve (Town & Country Engineering)

2. PUBLIC APPEARANCES

None.

3. APPROVAL OF MINUTES

- a. Discussion and action regarding the minutes from the Public Utilities/Works joint meeting held on November 19, 2019.
 - Chairperson Kolk asked for any changes or modifications. Hearing none, the minutes stand as presented.
- b. Discussion and action regarding the minutes from the Public Works meeting held on November 19, 2019.
 - Chairperson Kolk asked for any changes or modifications. Hearing none, the minutes stand as presented.

4. BUSINESS

- a. Discussion and action to make a recommendation to the Village Board on Ordinance 2020-06: an ordinance amending the provisions for excavation and street privilege permits.
 - Jim Hessling provided background regarding this topic and stated staff engaged in review and edits of this ordinance along with recommendations from the attorney. Suggested edits would provide clarification for staff regarding excavation and street privilege permits as well as clearer guidelines for permittees.
 - Committee members discussed and reviewed the presented edited ordinance. Dan Kolk asked for clarification regarding how the work area would be evaluated in that it had been returned to its original state or improved following the completed work. Jim Hessling stated the area would be reviewed prior to work beginning and after

the work had been concluded. Richard Vela recommended further edits to the ordinance to limit the confusion of work area versus street wording. Chris Fredrick asked if the insurance requirement amount was large enough to cover extreme situations that could occur. Jim Hessling stated that the attorney had clarified that the Village is covered beyond this portion of the ordinance.

- Motion by Jerry Adrian to the Village Board for approval of Ordinance 2020-06. Seconded by Richard Vela. Motion passed 5-0-0.

b. Discussion and action to make a recommendation to the Village Board on Ordinance 2020-07: an ordinance adopting a fee and bond schedule for excavation permits.

- Cassandra Suettinger explained the suggested edits to ordinance 2020-07. The recommended edits would include an increase cost for permit fees. These costs were reviewed in conjunction with actual or estimated costs of completing the permitting process including locates associated with the permit.
- Committee members discussed and reviewed Ordinance 2020-07. Dan Kolk clarified if the utility would be involved with locating their own services in relation to the permit. Jim Hessling stated yes the utility is responsible for completing locates as it applies to utility services. Chris Fredrick asked about penalties for contractors who do not abide by the guidelines. Jim Hessling stated that the permit would be revoked for the contractor.
- Motion by Dan Kolk to recommend to the Village Board to approve Ordinance 2020-07 as presented. Seconded by Jerry Adrian. Passed 5-0-0.

c. Discussion and action to make a recommendation to the Village Board on Ordinance 2020-02: an ordinance to update the size of brush accepted at the Village drop side and curbside.

- Jim Hessling provided explanation regarding the recommended changes to Ordinance 2020-02. The edits would match contractor specifications along with other signage.
- Committee members discussed and reviewed Ordinance 2020-02. Chris Fredrick asked if there has been concerns regarding the brush size left at the drop off site. Jim Hessling stated that it has occurred. Richard Vela presented the situation of storm damage and how this situation would be handled. Members discussed that that a situation similar to this likely would be handled under emergency management guidelines and evaluated as necessary. Members asked if the size specified (3 inches) had been discussed with the contractor or if there would be an increased fee for utilizing the current ordinance specification (6 inches).

- No action taken made by the committee at this time. Members would like to revisit this ordinance at its next meeting.
- d. Discussion and action to make a recommendation to the Village Board regarding engineering services from Town and Country Engineering in order to design the reconstruction of County Highway MN from Holscher Road to County Highway AB.
- This item was presented out of order. Matt Schuenke provided explanation of design services for County Highway MN beginning at Holscher Road to County Highway AB. This project was previously included for 2019 but deferred. The designing of this project is included in the 2020 budget and the project could be set to complete in its entirety or phases.
 - Committee member discussed this topic. Richard Vela asked for clarification regarding the areas that are the Township as to who will be funding the improvements. Matt responded that the Township would not cost share for this project. Dan Kolk asked if the design costs would be shared with the county to which Brian Berquist responded that the county would reimburse up to 50% at the time of construction.
 - Motion by Dan Kolk to recommend to the Village Board to engage in the engineering services of Town & Country from Holscher to County Highway AB. Seconded by Marv Meyers. Passed 5-0-0
- e. Presentation of the Public Works Monthly Report from the Director.
- Jim Hessling provided an update regarding Public Works activity for the month of December 2019.
 - Brian Berquist provided a brief review of the projects projected for 2020 and included in the 2020 budget.
5. SCHEDULE NEXT MEETING DATE
- a. Tuesday February 11, 2020
6. ADJOURNMENT
- a. Motion by Dan Kolk to adjourn at 7:01 p.m. Seconded by Marv Meyers. Motion passed 5-0-0.

Respectfully submitted by Aimee Irwin



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, March 10, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT: Matt Schuenke, Village Administrator, Jim Hessling, Public Works Director

AGENDA ITEM: Discussion and action to accept the final design for the improvements to the Public Works Center and authorize the project for bidding.

PREVIOUS ACTION:

The Committee reviewed the design plan as well as an estimated cost for design services through Strand Associates at its meeting on November 19, 2019.

ISSUE SUMMARY:

Previously in 2019, it was approved for Strand Associates to prepare a design of the planning improvements and upgrades for the Public Works Facility. Enclosed within your packet is the design of the planning improvements as provided by Strand Associates. This includes office renovation, office expansion, addition of a mezzanine, improvements to HVAC, new roof, yard improvements, and other items. In order to continue this process we are seeking approval to put this design out for bid. Bids will be reviewed at the May meeting in order to consider a recommendation to the Village Board on project award. The intent then is to complete the project before next Winter.

FINANCIAL/BUDGET IMPACT:

This project is now projected at \$1,141,621 for all of the planned improvements. The 2020 Budget includes an approved \$1,000,000 in funds to support the proposed improvements for this project which included \$750,000 in borrowed money and \$250,000 from the sinking fund on building maintenance. While the project estimates are higher than what was budgeted, there are several contingencies built into the project as well as items considered as alternatives which can keep the cost down. Furthermore, utility funds could be used also to fill in any gaps as they also occupy these spaces.

VILLAGE PLAN REFERENCE:

Included project within the approved 2019-2023 Capital Improvement Plan and also the adopted 2020 Budget.

ORDINANCE REFERENCE:

None.



BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Recommended for approval to authorize the project for bid.

ATTACHMENTS:

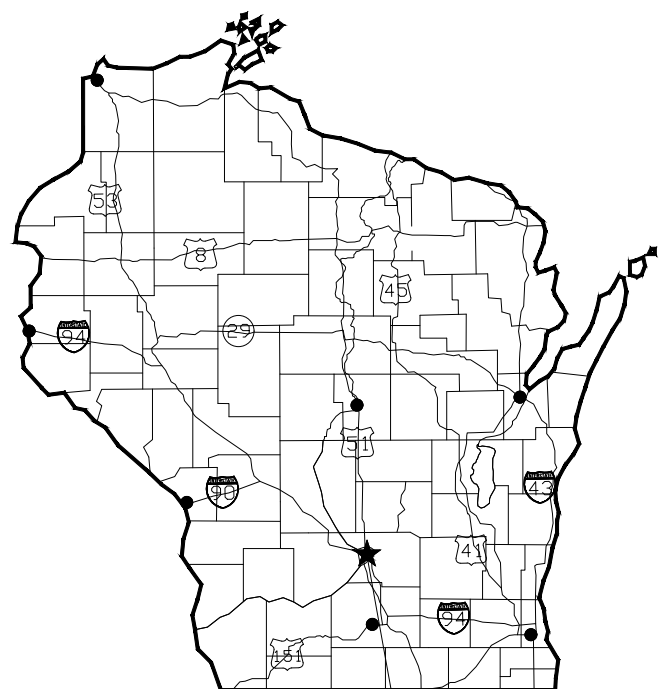
1. Drawings for Public Works Committee
2. McFarland DPW - PW Committee - OPCC

PUBLIC WORKS BUILDING RENOVATION

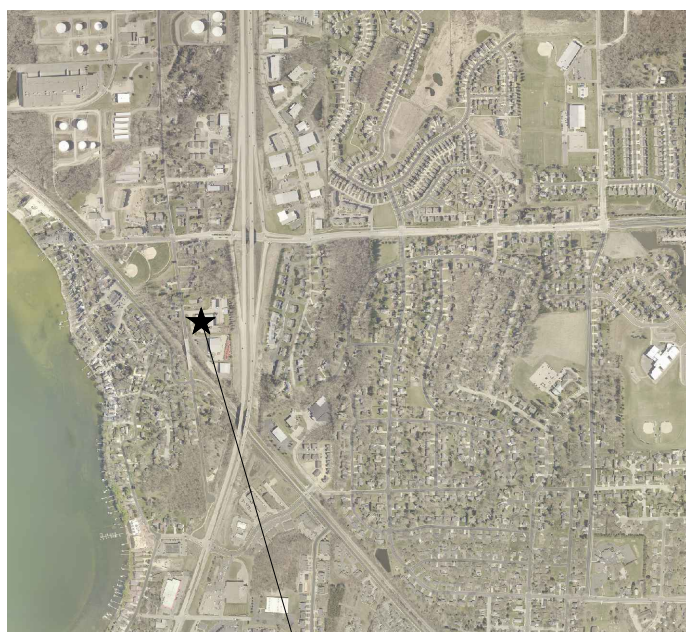
FOR THE

VILLAGE OF MCFARLAND

MCFARLAND, WISCONSIN

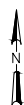


MCFARLAND, WI



5115 TERMINAL DR,
MCFARLAND, WI 53558

VICINITY MAP
NO SCALE



126 NORTH JEFFERSON STREET, SUITE 350
MILWAUKEE, WI 53202
414 271-0771
414 271-8312 FAX
WWW.STRAND.COM

CONTRACT 1-2020

LIST OF DRAWINGS			
	SHEET NO.	DRAWING NO.	REVISION NO. 1 TITLE
<u>GENERAL</u>	1	G0.1	TITLE
	2	G0.2	STANDARD SYMBOLS AND ACCESSIBILITY GUIDELINES
	3	G0.3	OFFICE AND MEZZANINE CODE REVIEW, LIFE SAFETY, AND EXITING PLAN
<u>DEMOLITION</u>	4	D1.1	OFFICE AND STORAGE GARAGE DEMOLITION PLAN
<u>ARCHITECTURAL</u>	5	A1.1	OFFICE AND STORAGE GARAGE FIRST FLOOR PLAN
	6	A1.2	MEZZANINE FLOOR PLAN
	7	A1.3	ROOF PLAN
	8	A2.1	SOUTH EXTERIOR ELEVATION
	9	A3.1	SECTIONS-1
	10	A3.2	SECTIONS-2
	11	A5.1	ARCHITECTURAL DETAILS-1
	12	A5.2	ARCHITECTURAL DETAILS-2
	13	A6.1	DOOR AND WINDOW FINISH SCHEDULES AND DETAILS
	14	A6.2	OFFICE REFLECTED CEILING PLAN, FLOOR FINISH PLAN, AND ROOM FINISH SCHEDULE
<u>STRUCTURAL</u>	15	S1.1	CANOPY AND MEZZANINE ENLARGED FOUNDATION AND FRAMING PLANS
	16	S3.1	STRUCTURAL SECTIONS AND DETAILS
<u>HVAC</u>	17	H0.1	HVAC SYMBOLS AND ABBREVIATIONS
	18	H1.1	OFFICE ENLARGED HVAC PLAN
	19	H1.2	STORAGE GARAGE HVAC PLAN
	20	H3.1	HVAC SECTIONS
	21	H5.1	HVAC DETAILS
	22	H6.1	HVAC SCHEDULES
<u>PLUMBING AND FIRE PROTECTION</u>	23	P0.1	PLUMBING SYMBOLS AND ABBREVIATIONS
	24	FP1.1	OVERALL PLUMBING AND FIRE PROTECTION
	25	P1.2	STORAGE GARAGE ENLARGED PLUMBING PLAN
	26	P5.1	PLUMBING DETAILS AND SCHEDULES
<u>ELECTRICAL</u>	27	E0.1	ELECTRICAL SYMBOLS AND ABBREVIATIONS
	28	DE1.1	ELECTRICAL DEMOLITION FLOOR PLAN
	29	E1.1	OVERALL ELECTRICAL FLOOR PLAN
	30	E1.2	POWER PLAN
	31	E1.3	LIGHTING PLAN
	32	E4.1	UPPER AND LOWER LEVEL MEZZANINE POWER PLANS
	33	E4.2	UPPER AND LOWER LEVEL MEZZANINE LIGHTING PLANS
	34	E5.1	ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES
	35	E5.2	ELECTRICAL DETAILS



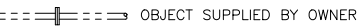
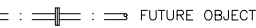
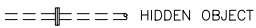
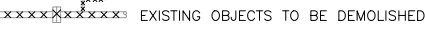
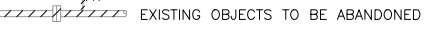
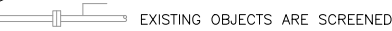
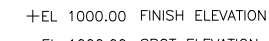
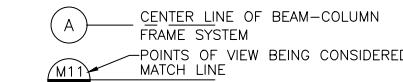
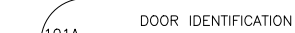
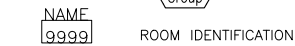
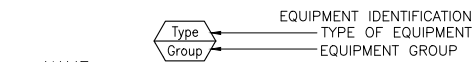
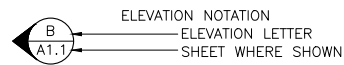
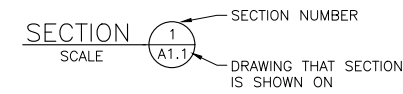
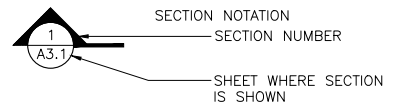
PUBLIC WORKS COMMITTEE SUBMITTAL, 03/09/20

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G0.01

DETAIL NOTATION

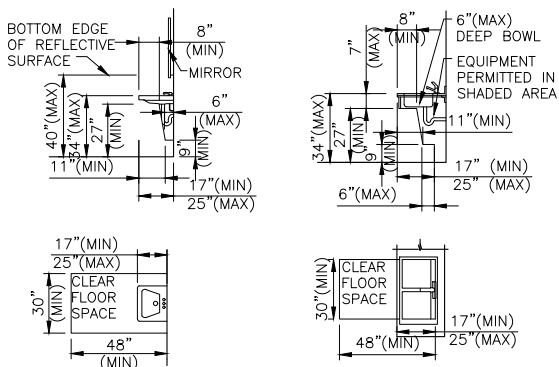
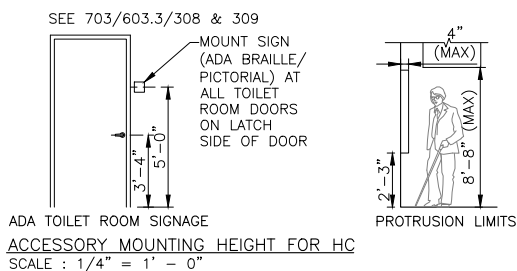
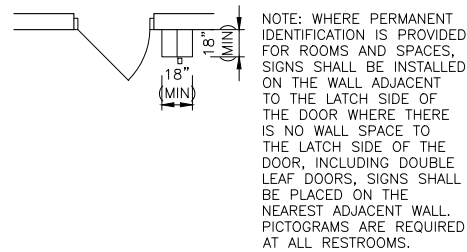
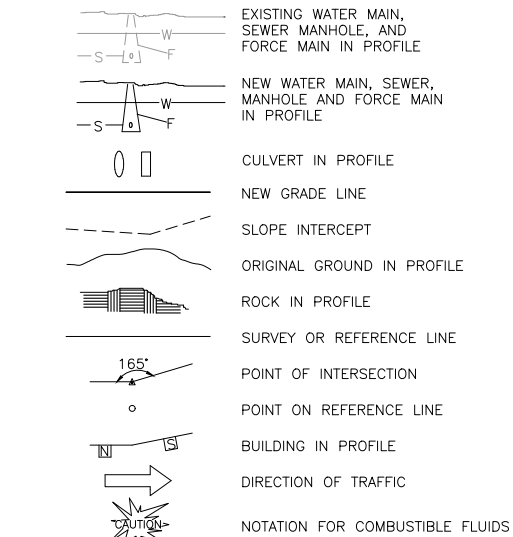
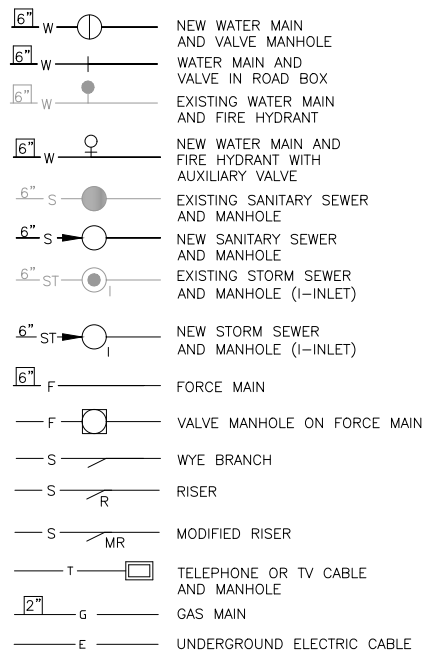
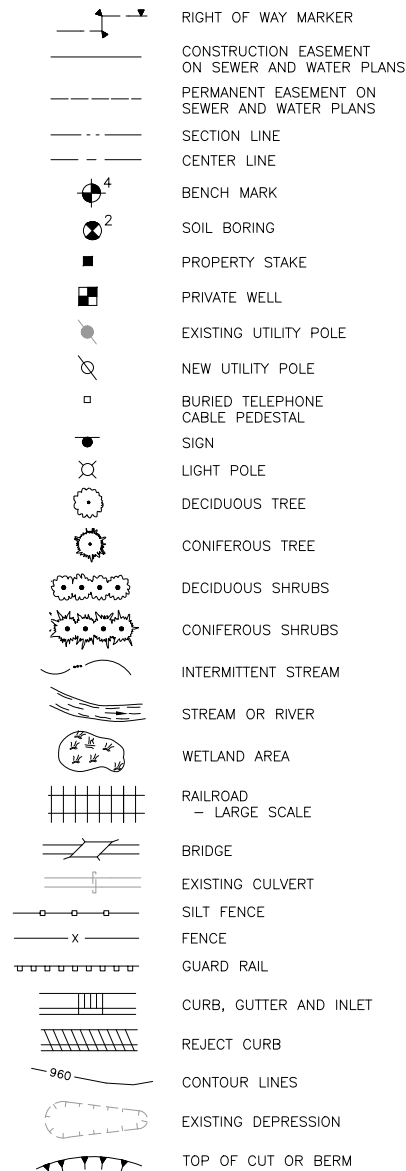
DETAIL LETTER

SHEET WHERE SHOWN



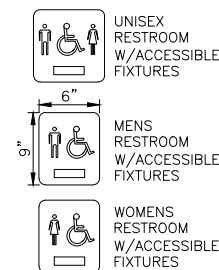
	EARTH
	SAND, PLASTER, STUCCO
	CONCRETE
	BRICK
	CONCRETE BLOCK
	ACOUSTIC BLOCK
	STONE VENEER
	METAL
	METAL LATH
	WOOD-FINISH
	WOOD-FRAMING
	PLYWOOD
	ACOUSTICAL TILE
	GYPSUM BOARD
	BATT INSULATION
	RIGID INSULATION
	GRATING
	CHECKERBOARD PLATE
	HANDRAIL

 AREA OF THE SITE
 CORPORATE LIMITS
 PROPERTY LINE AND/OR RIGHT OF WAY



NOTE: HOT WATER AND DRAIN
PIPES UNDER LAV/SINK SHALL
BE INSULATED. THERE SHALL
BE NO SHARP OR ABRASIVE
SURFACES UNDER LAV/SINK.
LAVS. & SINKS SEE 606

ACCESSIBILITY GUIDELINES
SCALE : 1/4" = 1' - 0"



NOTE:

1. SIGNAGE TO BE MOLDED PLASTIC FRAMES WITH SEMI-PERMANENT SIGNAGE.
2. TEXT TO BE:
 - 1 1/2" LETTERS
 - RAISED 1/32"
 - CENTERED IN PANEL
 - ACCOMPANIED BY GRADE 2 BRAILLE
 - ALL COLORS TO BE MATTE FINISH
3. NOT ALL SIGNS ARE USED SEE PLANS FOR ALL APPLICABLE SIGNS.

TWO HINGED DOORS IN SERIES
FIRE EXTINGUISHER CABINET, FULLY RECESSED

FIGURE 404.2.3.1(A)
FRONT APPROACHES

FIGURE 404.2.3.1(B)
FRONT APPROACHES

FIGURE 404.2.3.1(F)
LATCH SIDE APPROACHES

FIGURE 404.2.3.1(G)
DOOR HAS CLOSER

MANEUVERING CLEARANCES AT DOORS
SCALE: 1/4" = 1' - 0"

URINALS SEE 605

SEE 308 & 309
REACH RANGE AND OPERABLE PARTS

MIRRORS

ADA COUNTERTOP DROP-IN SINK

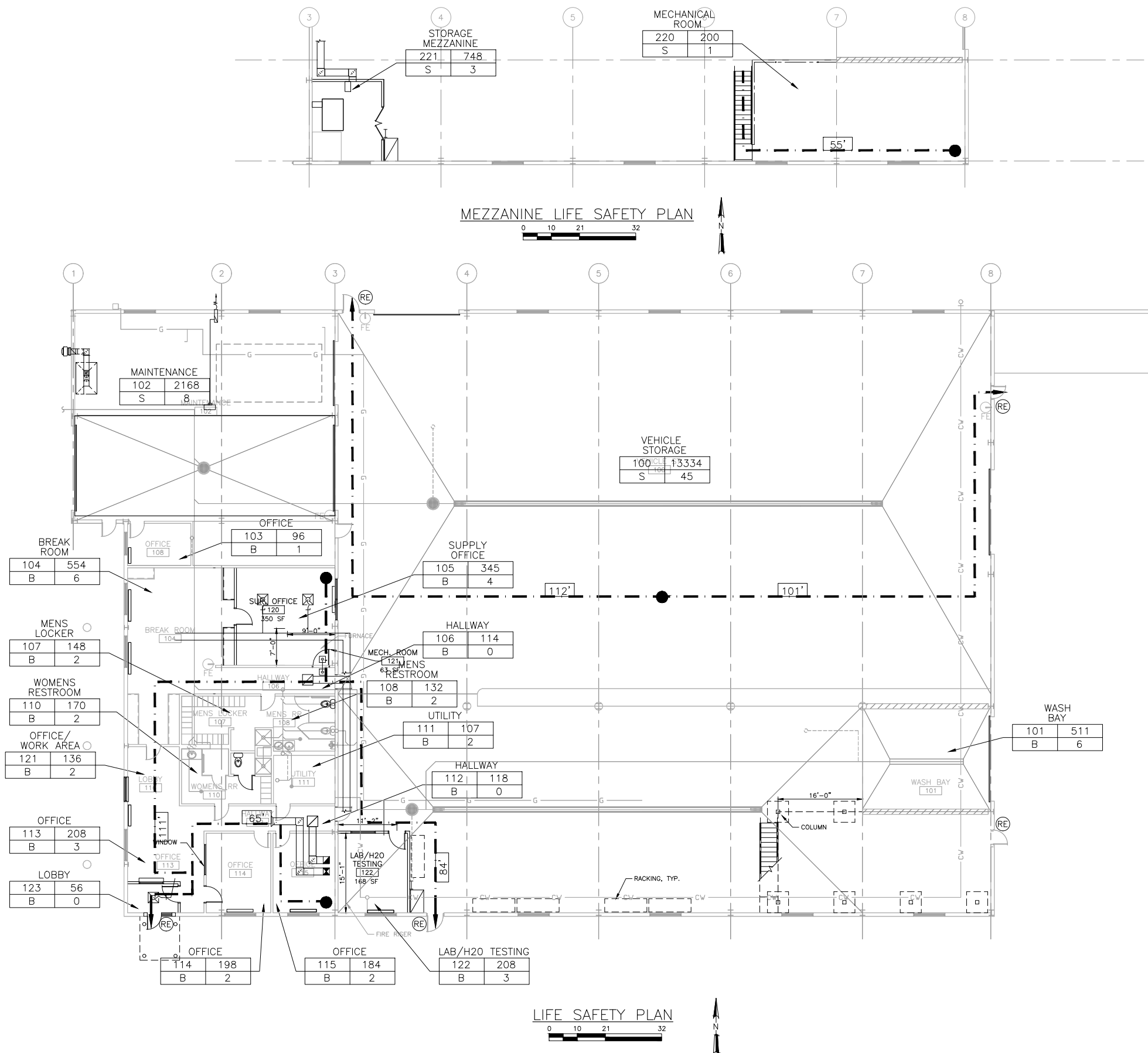
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**PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**



STRAND
ASSOCIATES®

SHEET
2
G0.2



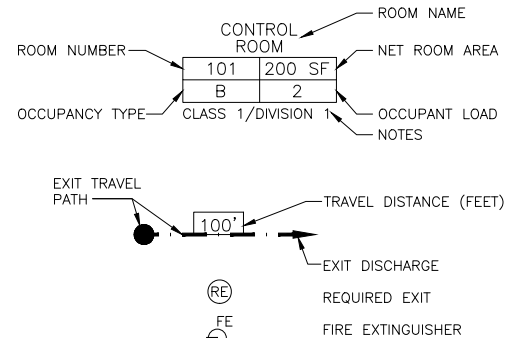
MEZZANINE LIFE SAFETY PLAN

STRUCTURE 48 BUILDING CODE INFORMATION			
BUILDING CODE	2015 INTERNATIONAL BUILDING CODE (SPS 362)		
	2015 INTERNATIONAL FUEL GAS CODE (SPS 365)		
	2015 INTERNATIONAL MECHANICAL CODE (SPS 364)		
	2015 INTERNATIONAL ENERGY CONSERVATION CODE (SPS 365)		
	2015 INTERNATIONAL EXISTING BUILDING CODE		
	2011 NATIONAL ELECTRIC CODE (SPS 316)		
	2012 FIRE CODE		
	PLUMBING CODE (SPS 382)		
ADA STANDARDS (SPS 362)			
SCOPE OF WORK:			
LEVEL 2 ALTERATION TO EXISTING OFFICE LAYOUT, STORAGE ROOF, AND ADDITION OF 758 SF MEZZANINE TO VEHICLE STORAGE.			
OCCUPANCY TYPE	NON-SEPARATED USE		
USE GROUPS	B AND S-1		
CONSTRUCTION TYPE	TYPE VB		
OCCUPANCY SEPARATION - NONE REQUIRED			
HAZARDOUS MATERIALS - NOT PRESENT			
CHEMICAL	CHEMICAL CLASSIFICATION	MAX. CONTROL AREA QUANTITY	ACTUAL QUANTITY
GENERAL BUILDING INFORMATION			
ALLOWABLE			ACTUAL
NO. OF STORIES	2 STORIES		1 STORY
HEIGHT	60 FEET		20'-5" T.O. STORAGE ROOF
AREA PER FLOOR LEVEL (GROSS SF)			
B: EXIST 3,585		S-1: EXIST 15,716 SF	
B: NEW 3,795		S-1: NEW 15,505 SF	
TOTAL ALLOWABLE AREA PER FLOOR LEVEL	36,000 SF	TOTAL ACTUAL AREA (FIRST FLOOR, GROSS SF)	19,740 SF
PUBLIC WAYS OR YARDS	ACCESSIBLE FROM 4 SIDES, MIN. 60-FOOT ACCESS WIDTH		
FIRE SUPPRESSION SYSTEM			
SPRINKLERED - PORTABLE FIRE EXTINGUISHERS, RATED CLASS A, B, C; 10-POUND CAPACITY.			
NUMBER OF OCCUPANTS			
OCCUPANT LOAD FACTOR	100 GROSS (B)	300 GROSS (S-1)	
OCCUPANT CALCULATION - SEE PLANS			
ACTUAL NUMBER OF OCCUPANTS	ZERO PERMANENT OCCUPANTS, ONLY PRESENT FOR MAINTENANCE AND OPERATION		
TRAVEL DISTANCE		EXIT ACCESS	COMMON PATH
	B	300 FEET	100 FEET
	S-1	250 FEET	100 FEET
EXITS			
ALL OTHER SPACES/OCCUPANCIES NOT LISTED ABOVE REQUIRE 1 EXIT.			
NOTES:			

LIFE SAFETY KEY NOTES:

①

LIFE SAFETY LEGEND



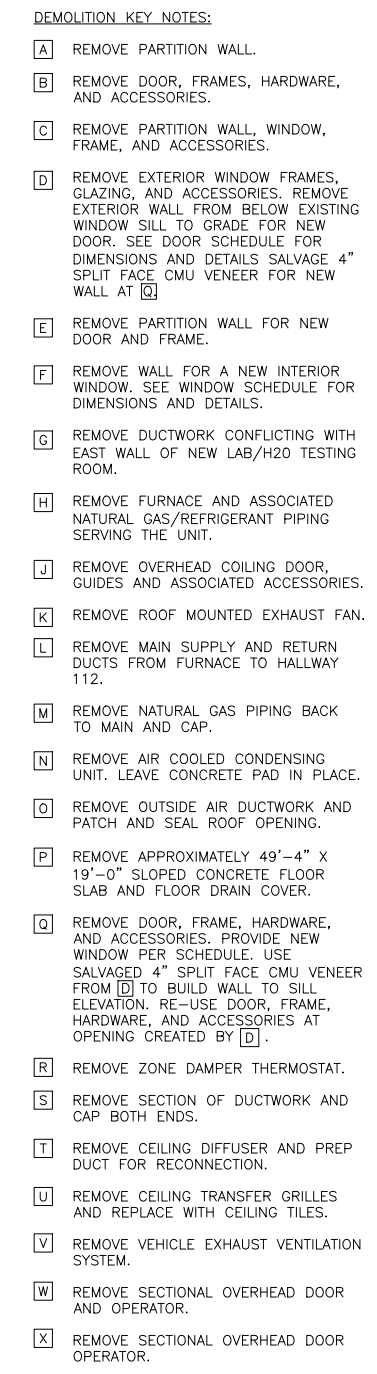
LIFE SAFETY PLAN

OFFICE AND MEZZANINE
CODE REVIEW, LIFE SAFETY, AND EXITING PLAN
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004
PROJECT MGR.
SCOTT HERKERT



SHEET
3
G.03



OFFICE AND STORAGE GARAGE DEMOLITION FLOOR PLAN

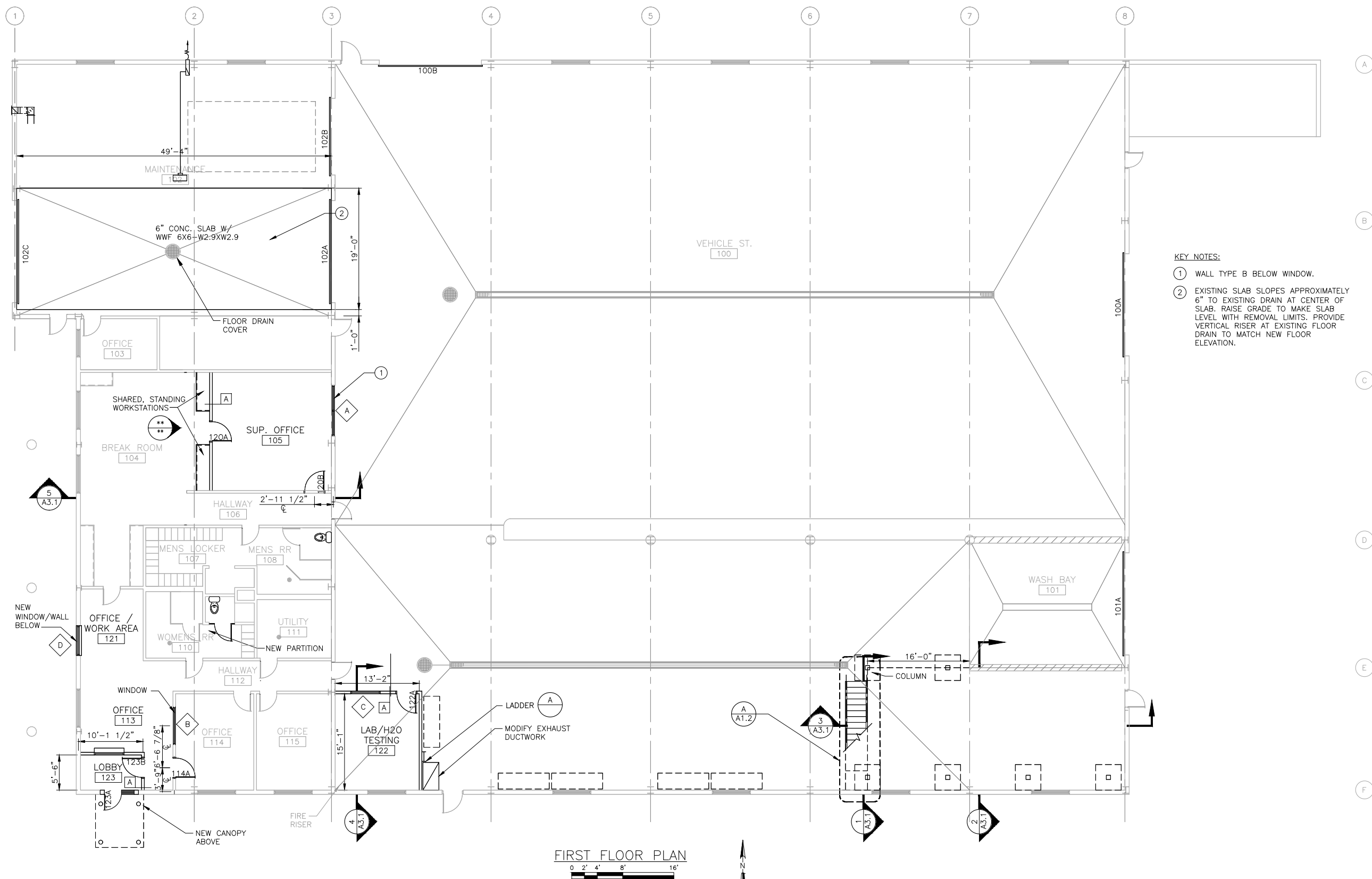
**PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

JOB NO.	1426.004
PROJECT MGR.	SCOTT HERKERT



SHEET
4
D1.1

[illegible]



FIRST FLOOR PLAN

0 2' 4' 8' 16'

- KEY NOTES:

- ① WALL TYPE B BELOW WINDOW.
- ② EXISTING SLAB SLOPES APPROXIMATELY 6" TO EXISTING DRAIN AT CENTER OF SLAB. RAISE GRADE TO MAKE SLAB LEVEL WITH REMOVAL LIMITS. PROVIDE VERTICAL RISER AT EXISTING FLOOR DRAIN TO MATCH NEW FLOOR ELEVATION.

[illegible]

OFFICE AND STORAGE GARAGE FIRST FLOOR PLAN

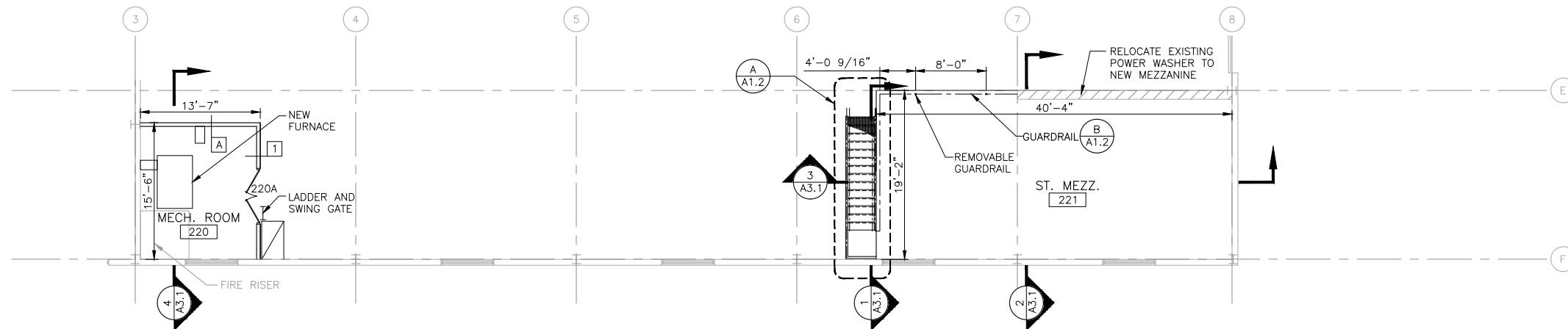
**PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT

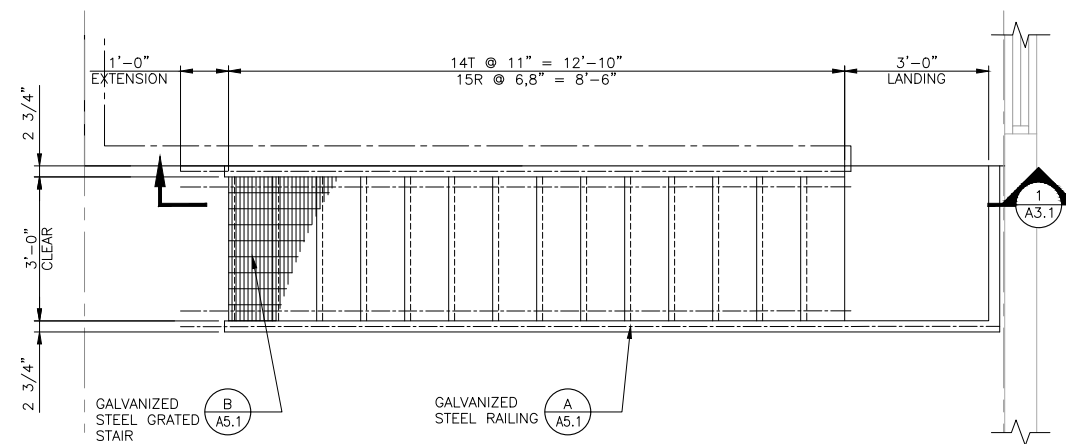


SHEET
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A1.1



MEZZANINE FLOOR PLAN

0 2' 4' 8' 16'



MEZZANINE STAIR

1/2" = 1'-0"

KEY NOTES:

1



NO.	REVISIONS	DATE
1	PUBLIC WORKS COMMITTEE REVIEW	3/9/20

MEZZANINE FLOOR PLAN

PUBLIC WORKS BUILDING RENOVATION

VILLAGE OF MCFARLAND

MCFARLAND, WISCONSIN

JOB NO.
1426.004

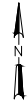
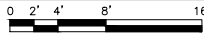
PROJECT MGR.
SCOTT HERKERT



SHEET
6
A1.2



OVERALL ROOF PLAN



GENERAL NOTES:

1. VERIFY REQUIRED OPENINGS IN NEW ROOF SYSTEM FOR SKYLIGHTS, ROOF EQUIPMENT, AND HVAC OPENINGS.
2. FLASH ALL PENETRATIONS PER ROOFING MANUFACTURER REQUIREMENTS.

KEY NOTES:

- ① METAL-OVER-METAL RE-ROOF SYSTEM. FASTEN TO EXISTING DECK PER MANUFACTURER REQUIREMENTS AND PROVIDE 4" INSULATION BETWEEN NEW AND EXISTING ROOF PANELS.

NO.	REVISIONS	DATE:
1	PUBLIC WORKS COMMITTEE REVIEW	3/9/20

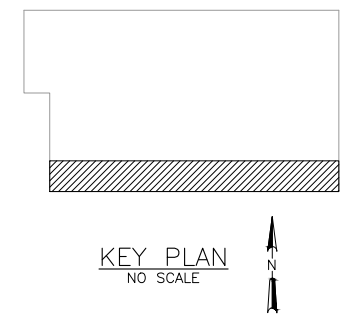
ROOF PLAN
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT



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7
A1.3

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EXTERIOR ELEVATIONS

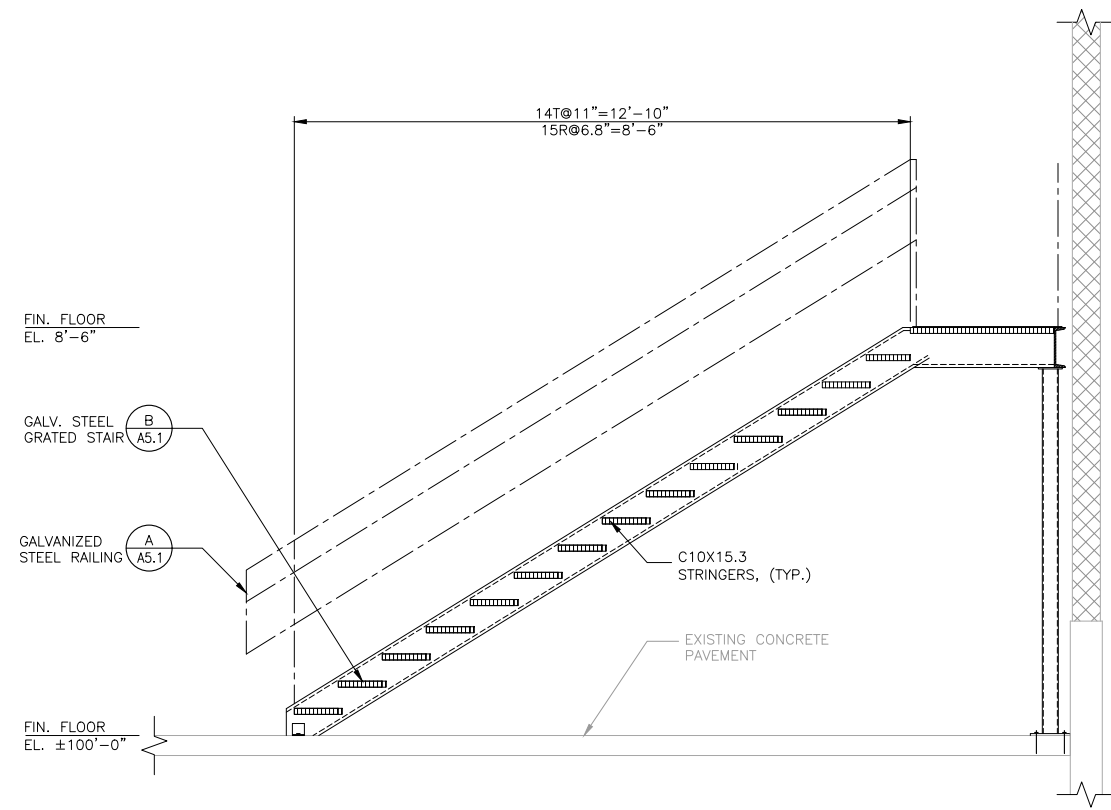
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

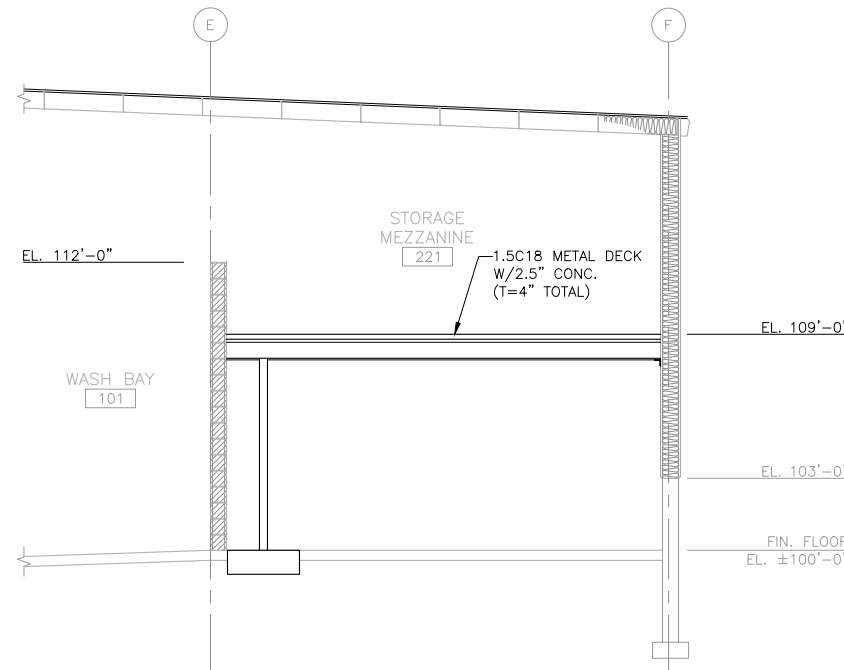
PROJECT MGR.
COTT HERKERT



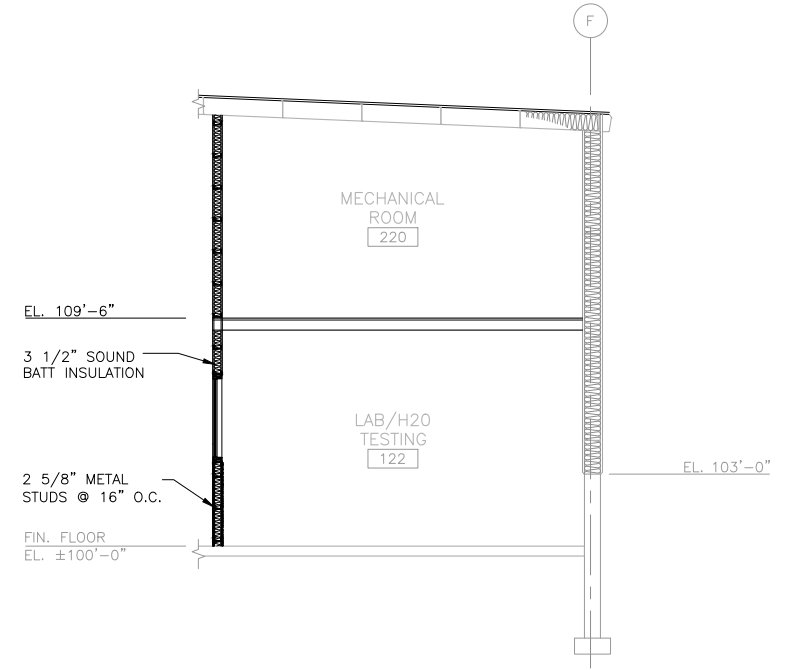
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8
A2.1



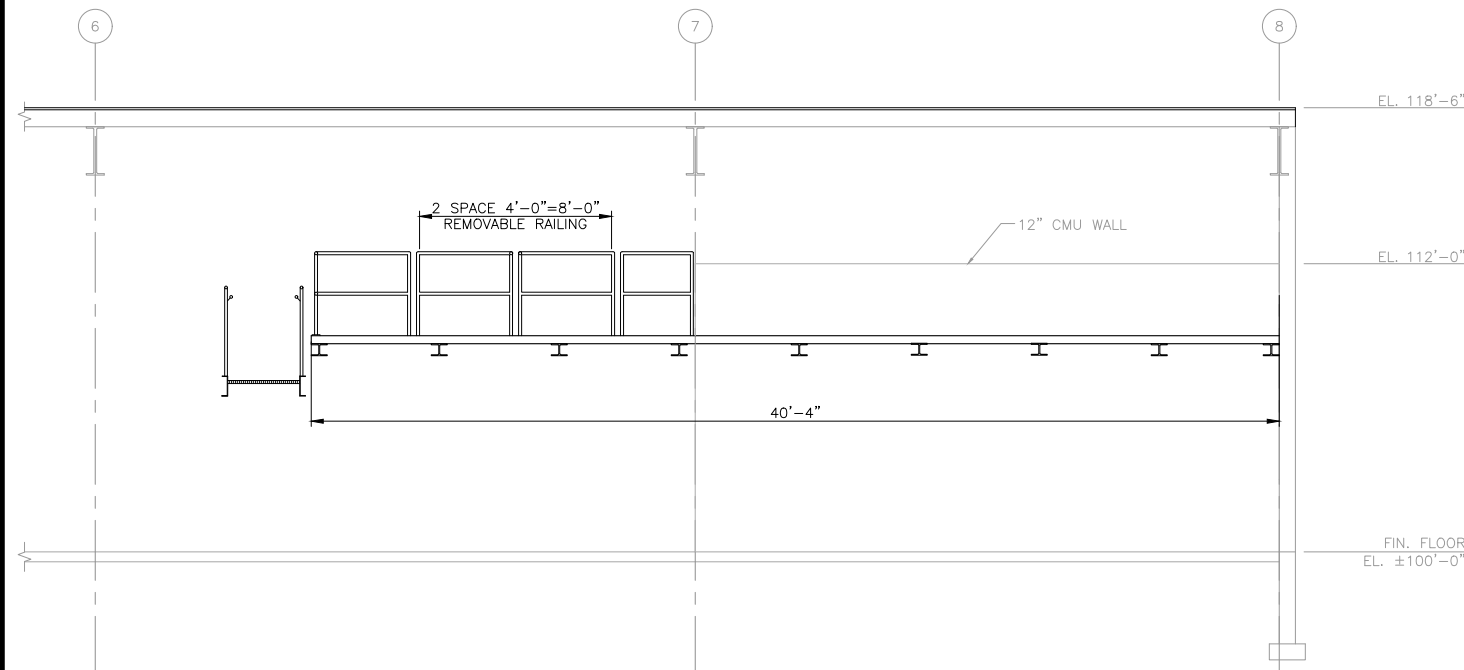
SECTION 1
1/2"=1'-0" A3.1



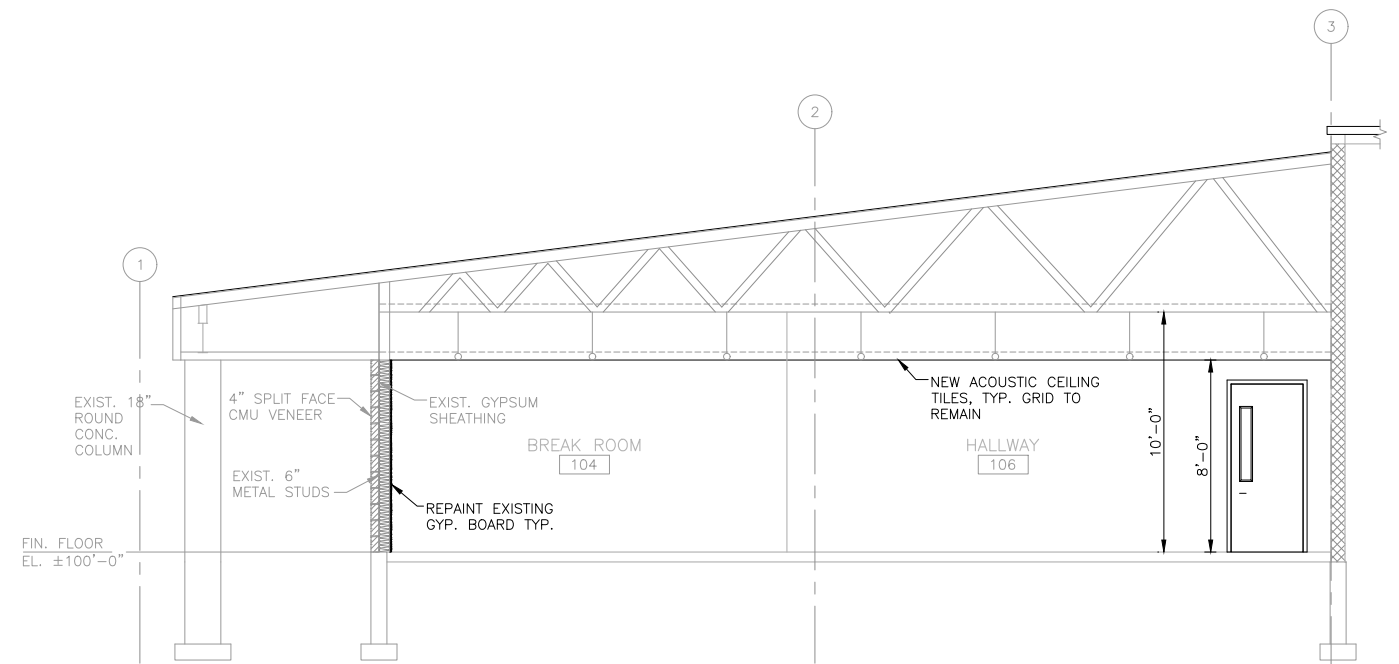
STORAGE MEZZANINE SECTION 2
1/4"=1'-0" A3.1



TESTING AND MECHANICAL SECTION 4
1/4"=1'-0" A3.1



STORAGE MEZZANINE SECTION 3
1/4"=1'-0" A3.1



OFFICE SECTION 5
1/4"=1'-0" A3.1

NO.	REVISIONS	DATE
1	PUBLIC WORKS COMMITTEE REVIEW	3/9/20

SECTIONS - 1
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

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9
A3.1



1. ALL RAILS AND POSTS SHALL BE 1 1/2" STANDARD PIPE (1.9" O.D.), SCHEDULE 40 GALVANIZED STEEL.
2. ALL RAIL SYSTEMS SHALL MEET OSHA PERFORMANCE STANDARDS FOR PUBLIC AND INDUSTRIAL APPLICATIONS AND 2015 INTERNATIONAL BUILDING CODE.
3. EXTEND HANDRAILS HORIZONTALLY A MINIMUM 1'-0" BEYOND TOP RISER, HANDRAILS SHALL CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND BOTTOM RISER.
4. MOUNT HANDRAIL TO WALLS OR GUARDRAIL

R

C
A5.1

[illegible]

ARCHITECTURAL DETAILS - 1

**PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

JOB NO.
1426.004

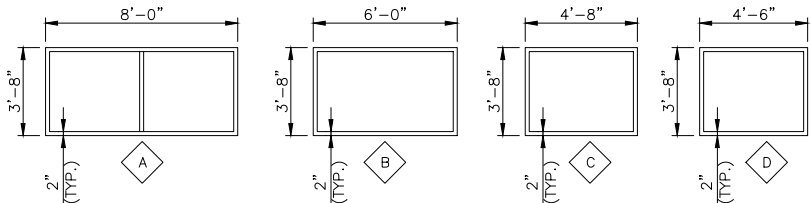
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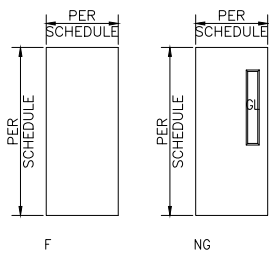
SHEET
11
A5.1

DOOR SCHEDULE																
DOOR NUMBER	SIZE (W x H)	MATERIAL	DOOR				FRAME		LABEL	HARDWARE GROUP		LINTEL	DETAILS			NOTES
			TYPE		SWING		TYPE	MATERIAL		TYPE	HEAD JAMB SILL					
			ACTIVE	INACTIVE	ACTIVE	INACTIVE					ACTIVE	INACTIVE				
100-OFFICE AND STORAGE																
100A	16'-0"x14'-0"	STL	OHS	—	—	—	—	STL	—	ELECTRIC: 1/2 HP, 115V, 1 PHASE	—		EXISTING	4		
100B	16'-0"x14'-0"	STL	OHS	—	—	—	—	STL	—	ELECTRIC: 1/2 HP, 115V, 1 PHASE	—		EXISTING	3		
101A	16'-0"x16'-0"	STL	OHS	—	—	—	—	STL	—	ELECTRIC: 1/2 HP, 115V, 1 PHASE	—		EXISTING	3		
102A	16'-0"x16'-0"	STL	OHS	—	—	—	—	STL	—	ELECTRIC: 1/2 HP, 115V, 1 PHASE	—		EXISTING	3		
102B	12'-0"x12'-0"	STL	OHS	—	—	—	—	STL	—	ELECTRIC: 1/2 HP, 115V, 1 PHASE	—		EXISTING	3		
102C	16'-0"x16'-0"	STL	OHS	—	—	—	—	STL	—	ELECTRIC: 1/2 HP, 115V, 1 PHASE	—		EXISTING	2		
114A	3'-0"x7'-0"	WD	F	—	RH	—	1	HM	—	—	—			5		
120A	3'-0"x7'-0"	WD	NG	—	RH	—	1	HM	—	—	—			5		
120B	3'-0"x7'-0"	WD	NG	—	RH	—	1	HM	—	—	—			5		
122A	3'-0"x7'-0"	STL	F	—	LH	—	1	STL	—	—	—			5		
123A	3'-0"x7'-0"	AL	FG	—	LHR	—	—	AL	—	—	EXIST.			1		
123B	3'-0"x7'-0"	WD	F	—	RH	—	1	AL	—	—	—			5		
200-MECHANICAL ROOM																
220A	(2)3'-0"x7'-0"	STL	F	—	RHR	LHR	1	STL	—	—	—			5		
LEGEND:																
		MATERIAL					TYPE			SWING						
	STL	= STEEL		NG	=	NARROW GLASS		LH	=	LEFT HAND						
	AL	= ALUMINUM		F	=	FLUSH		RH	=	RIGHT HAND						
	WD	= WOOD		FG	=	FULL GLASS		LHR	=	LEFT HAND REVERSE						
				OHS	=	OVERHEAD SECTIONAL		RHR	=	RIGHT HAND REVERSE						
NOTES:																
1. RE-USE EXISTING ALUMINUM DOOR AND ENTRANCE AS SHOWN ON DRAWINGS.																
2. EXISTING OVERHEAD SECTIONAL DOOR AND FRAME TO REMAIN. PROVIDE NEW NEMA 12 INTERIOR 3-BUTTON CONTROL STATION, OPERATOR, AND CONTROLS PER SPECIFICATIONS.																
3. PROVIDE NEW SECTIONAL OVERHEAD DOOR, NEMA 12 INTERIOR 3-BUTTON CONTROL STATION, OPERATOR, AND CONTROLS PER SPECIFICATIONS.																
4. PROVIDE NEW SECTIONAL OVERHEAD DOOR, NEMA 4X INTERIOR 3-BUTTON CONTROL STATION, OPERATOR, AND CONTROLS PER SPECIFICATIONS.																
5. SEE SPECIFICATIONS FOR HARDWARE GROUP.																

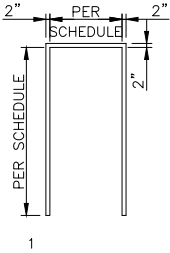
WINDOW SCHEDULE								
WINDOW NUMBER	SIZE (W x H)	SILL ELEVATION	FRAME MATERIAL	GLAZING TYPE	TYPE	SILL / JAMB / HEAD DETAILS	LINTEL TYPE	NOTES
A	8'-0"x3'-8"	3'-6"	AL	UNINSULATED	FIXED			
B	6'-0"x3'-8"	3'-6"	AL	UNINSULATED	FIXED			
C	4'-8"x3'-8"	3'-6"	AL	UNINSULATED	FIXED			
D	4'-6"x3'-8"	3'-6"	AL	INSULATED	FIXED			
LEGEND:								
AL = ALUMINUM								
NOTES:								



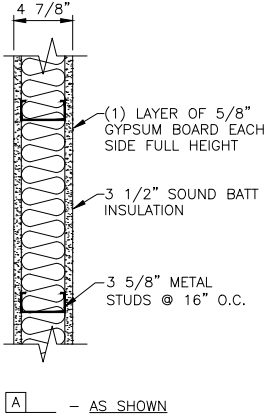
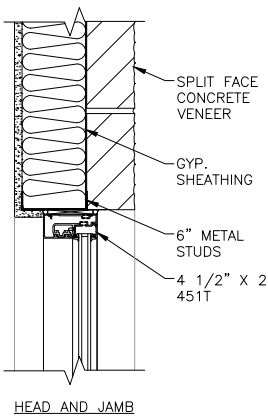
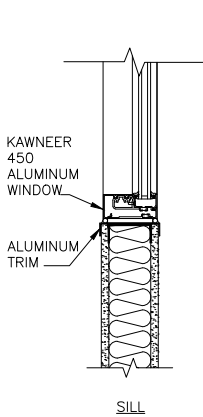
WINDOW TYPES
NO SCALE



DOOR ELEVATIONS
NO SCALE



FRAME TYPES
NO SCALE



A - AS SHOWN

A
A6.2
NO SCALE

WALL TYPE
SCALE: 1-1/2"=1'-0"

DATE:	3/9/20								
REVISIONS									
1	PUBLIC WORKS COMMITTEE REVIEW								

DOOR AND WINDOW SCHEDULES AND DETAILS

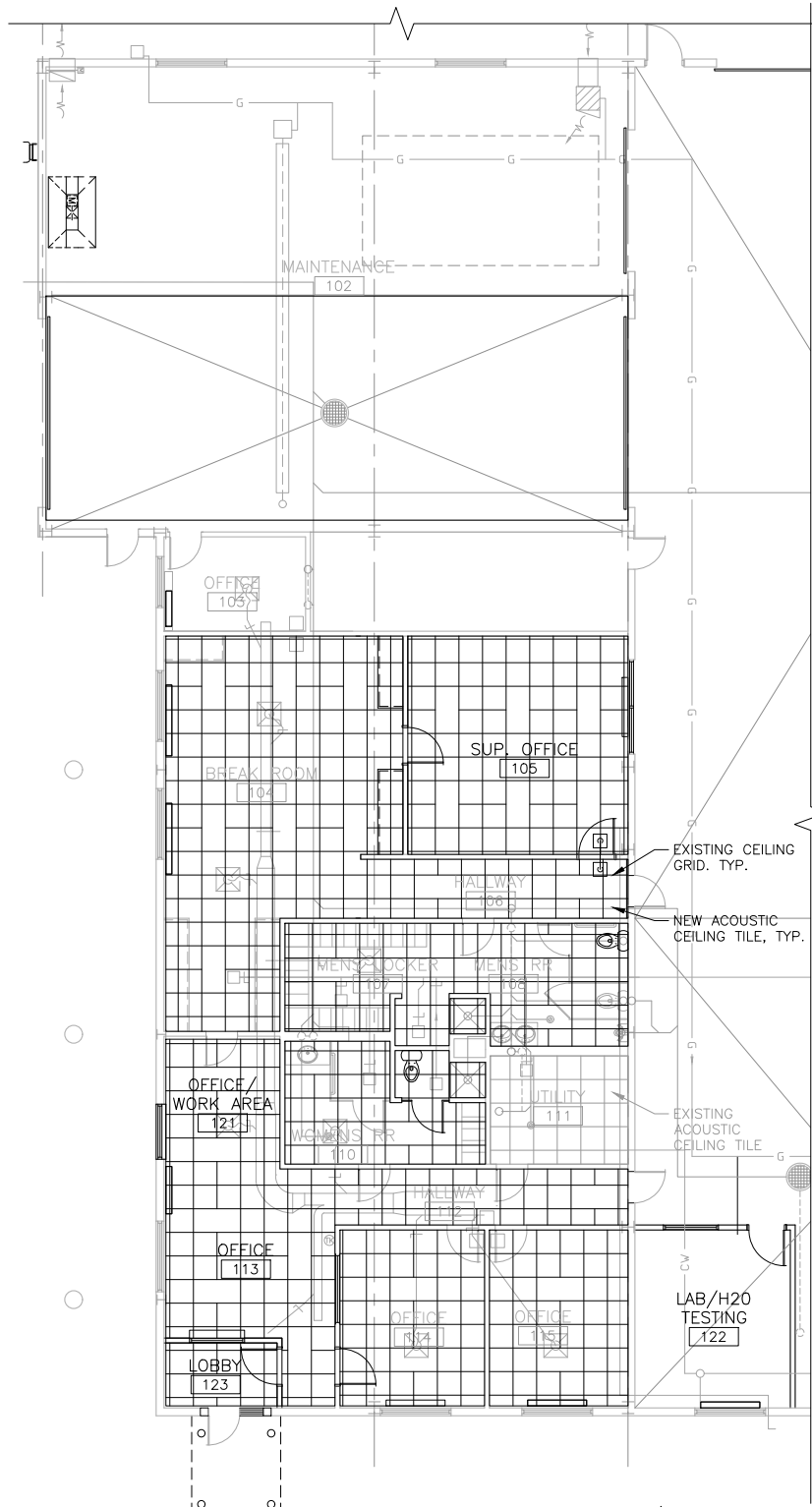
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
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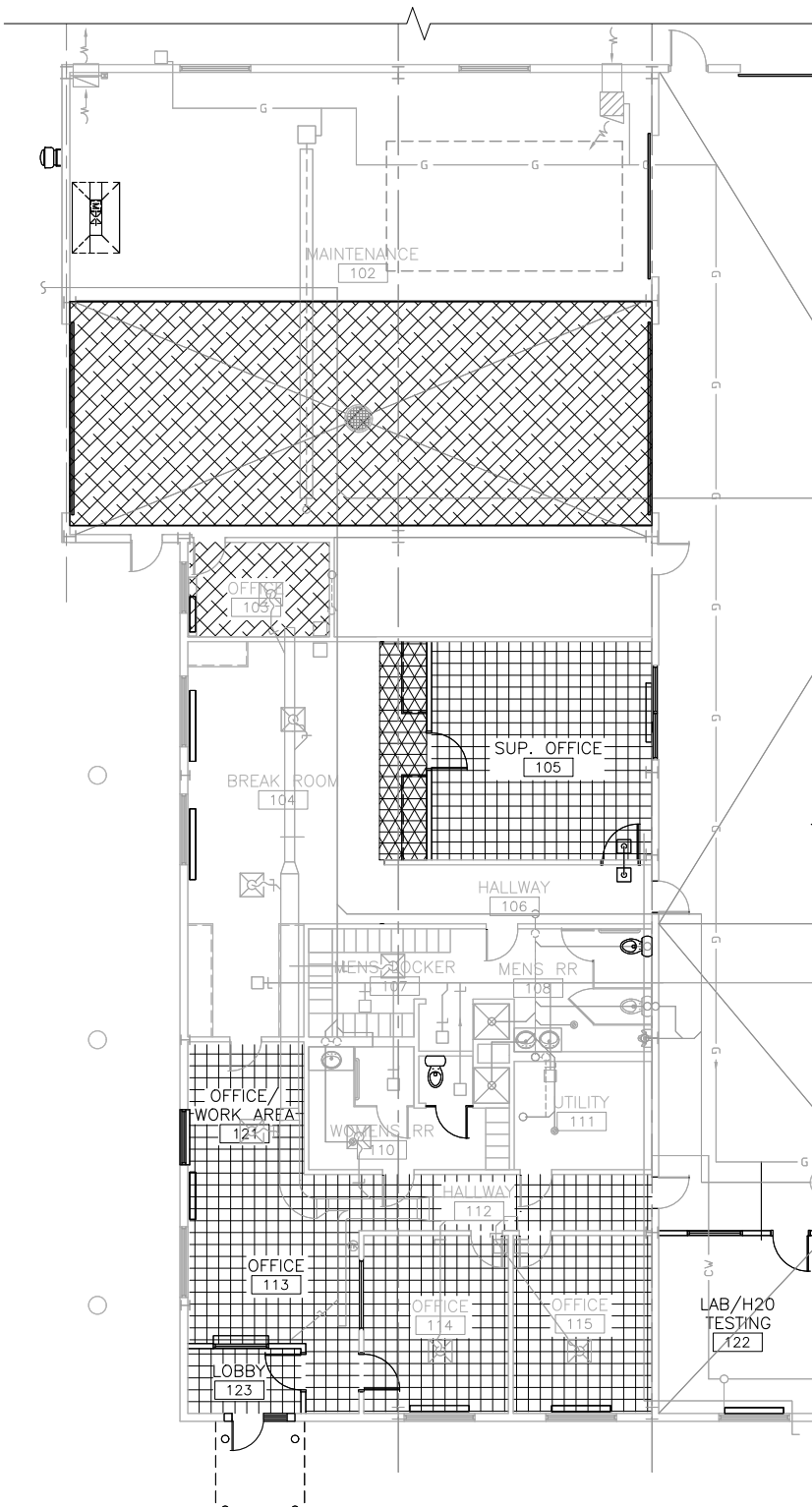
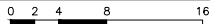
PROJECT MGR.
SCOTT HERKERT



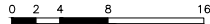
SHEET
13
A6.1



OFFICE REFLECTED CEILING PLAN

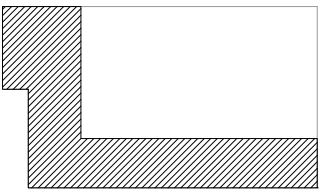


FIRST FLOOR FINISH PLAN



FLOOR FINISH LEGEND:

- = EXISTING FLOOR OR NO NEW WORK
- = SEALED CONCRETE
- = CARPET TILE
- = EPOXY



KEY PLAN
NO SCALE

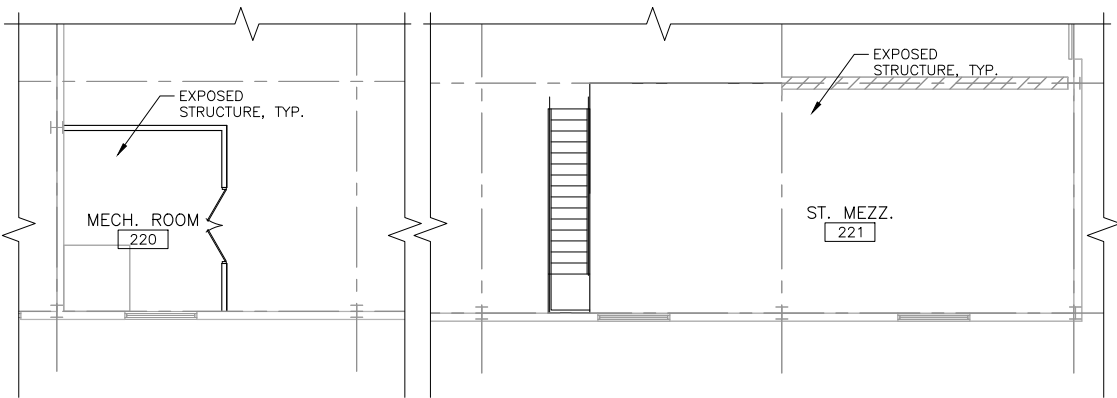


ROOM FINISH SCHEDULE										
ROOM NO.	ROOM NAME	FLOOR	BASE	N. WALL	E. WALL	S. WALL	W. WALL	CEILING		NOTES
								TYPE	HEIGHT	
100	VEHICLE STORAGE	-	-	-	-	-	-	-	-	
101	WASH BAY	-	-	-	-	-	-	-	-	
102	MAINTENANCE	F3	-	-	-	-	-	-	-	
103	OFFICE	F3	EC	W2	W2	W2	W2	-	-	1
104	BREAK ROOM	EP	TP	W2	W2	W2	W2	C1	8'-0"	2
105	SUPERINTENDENT OFFICE	F2	B1	W2	W2	W2	W2	C1	8'-0"	3
106	HALLWAY	-	-	W2	W2	W2	W2	C1	8'-0"	
107	MENS LOCKER	-	-	W2	W2	W2	W2	C1	8'-0"	4
108	MENS RESTROOM	-	-	W2	W2	W2	W2	C1	8'-0"	4
110	WOMEN	-	-	W2	W2	W2	W2	C1	8'-0"	
111	UTILITY	-	-	W2	W2	W2	W2	-	8'-0"	
112	HALLWAY	F2	-	W2	W2	W2	W2	C1	8'-0"	
113	OFFICE	F2	-	W2	W2	W2	W2	C1	8'-0"	
114	OFFICE	F2	-	W2	W2	W2	W2	C1	8'-0"	
115	OFFICE	F2	-	W2	W2	W2	W2	C1	8'-0"	
121	OFFICE/WORK AREA	F2	-	W2	W2	W2	W2	C1	8'-0"	
122	LAB H2O/TESTING	-	-	W2	W2	W2	W2	?	9'-0"	
123	LOBBY	F2	-	W2	W2	W2	W2	C1	8'-0"	
220	MECHANICAL ROOM	?	-	W2	W2	W2	W2	C2	VARIES	
221	STORAGE MEZZANINE	?	-	W4	W4	W4	W4	C2	VARIES	5

LEGEND:

FLOOR		BASE		WALL		CEILING	
CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION	CODE	DESCRIPTION
F1	SEALED CONCRETE	B1	VINYL BASE	W1	CONCRETE BLOCK	C1	ACOUSTIC CEILING
F2	CARPET TILE	CT	CERAMIC TILE	W2	PAINT DRYWALL	C2	EXPOSED STRUCTURE
F3	SEALED CONCRETE	EC	EPOXY COVING	W3	METAL PANEL	C3	METAL LINER PANEL
		TP	THERMAL PLASTIC RU	W4	EXPOSED STRUCTURE	C4	PAINT EXPOSED STRUCTURE

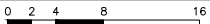
- NOTES:
1. PROVIDE EPOXY COVING FINISH ALONG PERIMETER. REPLACE DAMAGED DRYWALL AS REQUIRED AND PAINT.
 2. THERMAL PLASTIC RUBBER FINISH AT BASE OF EAST WALL ALONG WORKSTATION AREA.
 3. EXISTING CEILING HEIGHT AT 10'-0". INSTALL DROP ACOUSTICAL CEILING TO INTERIOR CEILING HEIGHT OF 8'-0".
 4. CLEAN AND SEAL EXISTING FLOOR TILE
 5. MAINTAIN A MIN. 9'-0" BELOW MEZZ. FOR TRUCK PARKING (WEST PORTION), 8'-0" CLEAR (EAST PORTION).



REFLECTED CEILING PLAN



REFLECTED CEILING PLAN



OFFICE REFLECTED CEILING PLAN,
FLOOR FINISH PLAN, AND ROOM FINISH SCHEDULE

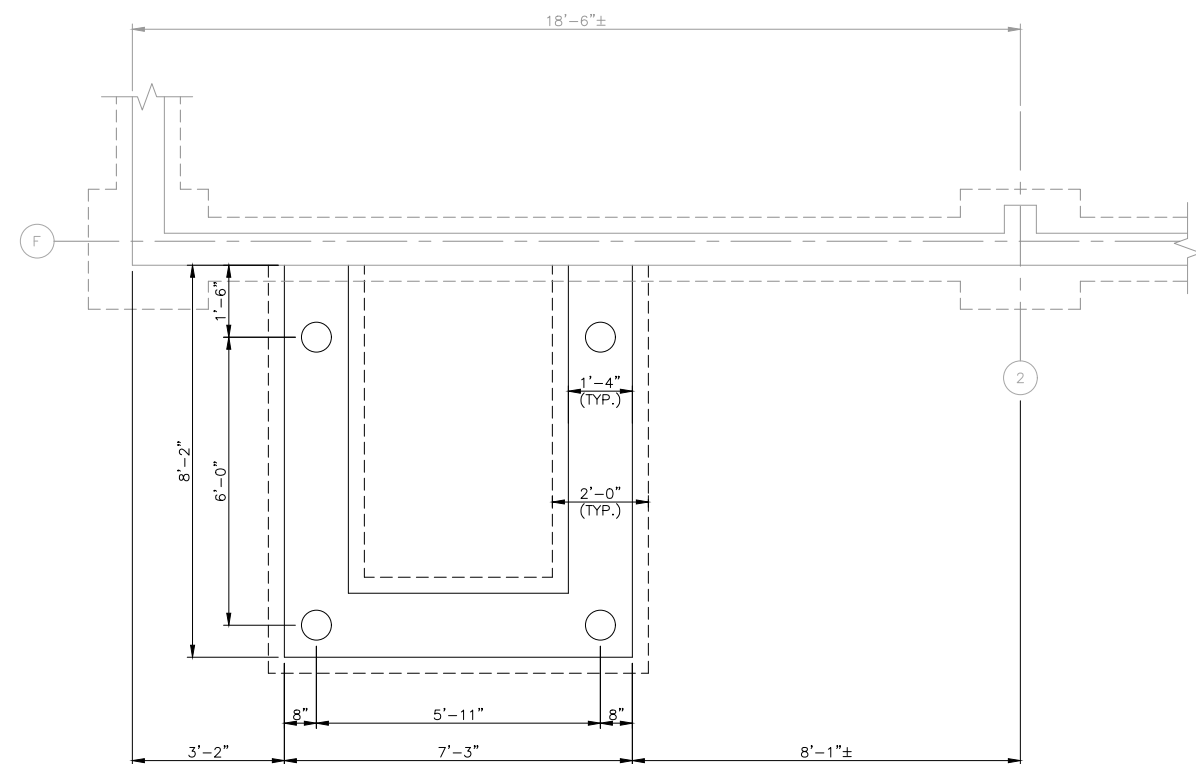
PUBLIC WORKS BUILDING RENOVATION
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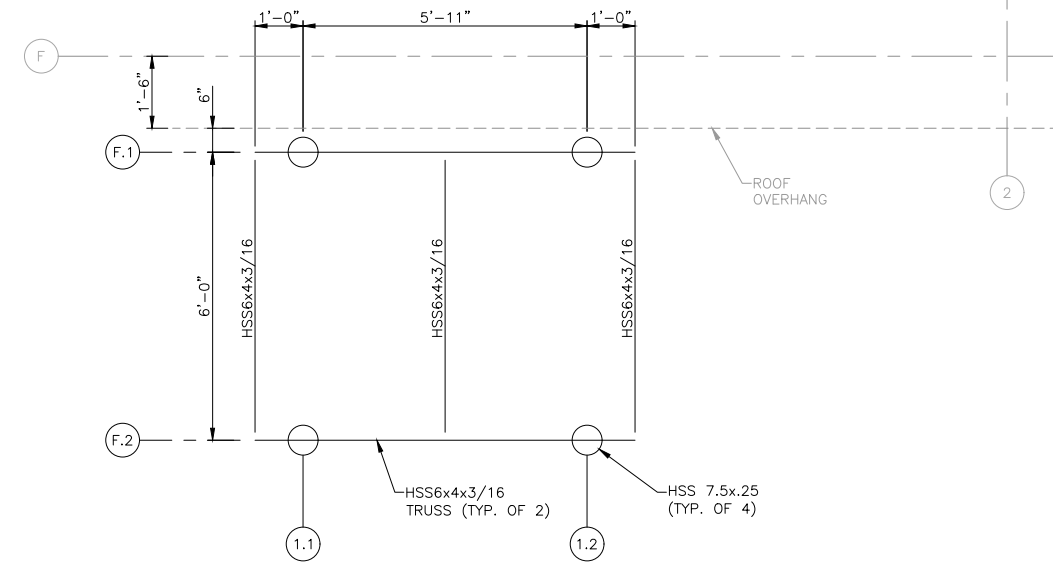
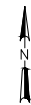
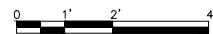
PROJECT MGR.
SCOTT HERKERT



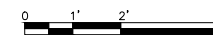
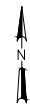
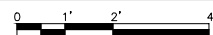
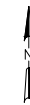
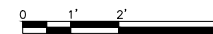
SHEET
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A6.2



CANOPY FOUNDATION PLAN



CANOPY FRAMING PLAN

[illegible]

CANOPY AND MEZZANINE ENLARGED FOUNDATION AND FRAMING PLANS

**PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

JOB NO.
1426.004

PROJECT MGR.
SCOTT HERKERT



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15
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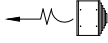
EQUIPMENT ABBREVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
BLR	BOILER
BB	BASEBOARD
CONV	CONVECTOR
CD	CEILING DIFFUSER
CHILL	CHILLER
CT	COOLING TOWER
CUH	CABINET UNIT HEATER
CWP	CHILLED WATER PUMP
DC	DRY COOLER
DH	DEHUMIDIFIER
DL	DRUM LOUVER
EBB	ELECTRIC BASEBOARD
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EG	EXHAUST GRILLE
EJ	EXPANSION JOINT
EL	EXPANSION LOOP
ER	EXHAUST REGISTER
ERC	ELECTRIC REHEAT COIL
ERU	ENERGY RECOVERY UNIT
EUH	ELECTRIC UNIT HEATER
EWB	ELECTRIC WALL HEATER
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FTR	FINNED TUBE RADIATION
FUR	FURNACE
HC	HEATING COIL
HP	HEAT PUMP
HU	HUMIDIFIER
HUH	HOT WATER UNIT HEATER
HWP	HOT WATER PUMP
HX	HEAT EXCHANGER
L	LOUVER
MAU	MAKE-UP AIR UNIT
P	PUMP
PC	PUMPED CONDENSATE
RCP	RADIANT CEILING PANEL
RF	RETURN FAN
RG	RETURN GRILLE
RR	REGISTER
RTU	ROOFTOP UNIT
SD	SUCTION DIFFUSER
SF	SUPPLY FAN
SG	SUPPLY GRILLE
SR	SUPPLY REGISTER
SS	SPLIT SYSTEM
ST	STEAM TRAP
SUH	STEAM UNIT HEATER
TCP	TEMPERATURE CONTROL PANEL
TG	TRANSFER GRILLE
UH	UNIT HEATER
UV	UNIT VENTILATOR
VAV	VARIABLE AIR VOLUME BOX
VD	VOLUME DAMPER
VFD	VARIABLE FREQUENCY DRIVE

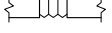
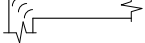
GENERAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
AP	ACCESS PANEL
BOD	BOTTOM OF DUCT
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
CFM	CUBIC FEET PER MINUTE
CLG	CEILING
COND	CONDENSATE
DAT	DISCHARGE AIR TEMPERATURE
DB	DRY BULB TEMPERATURE
DDC	DIRECT DIGITAL CONTROL
DG	DOOR GRILLE
DX	DIRECT EXPANSION
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EL	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FC	FAIL CLOSED
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FO	FAIL OPEN
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FT	FEET
FVNR	FULL VOLTAGE NON REVERSING
GA	GAUGE
GPM	GALLONS PER MINUTE
HHW	HEATING HOT WATER
IPLV	INTEGRATED PART LOAD VALVE
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU PER HOUR
MC	MECHANICAL CONTRACTOR
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NPT	NATIONAL PIPE THREAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OC	ON CENTER
ODP	OPEN DRIP PROOF
OV	OUTLET VELOCITY
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SP	STATIC PRESSURE
TEFC	TOTALLY ENCLOSED FAN COOLED
WB	WET BULB

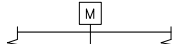
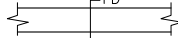
EQUIPMENT SYMBOLS

	EQUIPMENT TAG
	CONNECT TO EXISTING (TIE-IN NUMBER)
	BASE MOUNTED PUMP
	INLINE PUMP
	UNIT HEATER
	ROOF EXHAUST FAN
	AIR FLOW DIRECTION
	CEILING DIFFUSER WITH FLEXIBLE DUCT
	VARIABLE AIR VOLUME (VAV) BOX WITH HEATING HOT WATER REHEAT COIL
	VARIABLE AIR VOLUME (VAV) BOX WITH ELECTRIC REHEAT COIL
	DUCT BOOST COIL

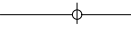
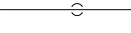
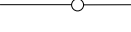
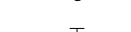
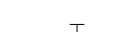
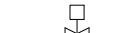
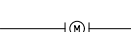
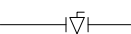
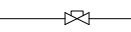
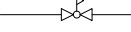
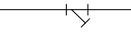
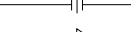
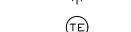
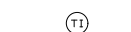
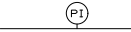
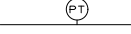
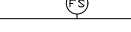
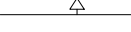
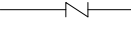
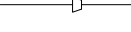
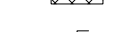
DUCTWORK SYMBOLS

	SUPPLY DUCT (UP OR SECTION)
	SUPPLY OR OUTSIDE AIR DUCT (DOWN/OR AWAY)
	EXHAUST OR RETURN DUCT (UP OR SECTION)
	EXHAUST OR RETURN DUCT (DOWN/OR AWAY)
	ROUND DUCTWORK UP
	ROUND DUCTWORK DOWN
	FLEXIBLE CANVAS CONNECTION
	TURNING VANES

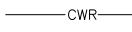
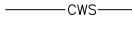
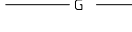
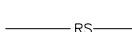
DAMPER SYMBOLS

	MANUAL VOLUME DAMPER
	AUTOMATIC DAMPER
	BACKDRAFT DAMPER
	1-1/2 HR. FIRE DAMPER

PIPING SYMBOLS

	BALL VALVE
	TEE DOWN
	TEE UP
	ELBOW DOWN
	ELBOW UP
	GATE VALVE
	GLOBE VALVE
	3-WAY VALVE
	METER
	GAS SHUTOFF PLUG VALVE
	BALANCING VALVE
	PRESSURE REDUCING VALVE
	STRAINER
	UNION
	GAS PRESSURE REGULATOR
	BUTTERFLY VALVE
	TEMPERATURE ELEMENT
	TEMPERATURE INDICATOR
	TEMPERATURE TRANSMITTER
	PRESSURE INDICATOR
	PRESSURE TRANSMITTER
	FLOW SWITCH
	MANUAL AIR VENT
	CHECK VALVE
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	FLEXIBLE CONNECTOR
	TRIPLE DUTY VALVE
	FLOOR DRAIN

PIPING DESIGNATIONS

	CWR	CHILLED WATER RETURN
	CWS	CHILLED WATER SUPPLY
	G	GAS PIPING
	HHWR	HEATING HOT WATER RETURN
	HHWS	HEATING HOT WATER SUPPLY
	LPC	LOW PRESSURE CONDENSATE
	LPS	LOW PRESSURE STEAM
	RL	REFRIGERANT LIQUID
	RS	REFRIGERANT SUCTION

FIELD MOUNTED CONTROLS

	T	THERMOSTAT
	H	ROOM HUMIDISTAT
	P	PRESSURE SENSOR
	S	ROOM SENSOR
	@	DUCT SMOKE DETECTOR

ACTUATORS

	M	MOTOR (ELECTRIC)
	P	PNEUMATIC
	S	SOLENOID

HVAC SYMBOLS AND ABBREVIATIONS
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

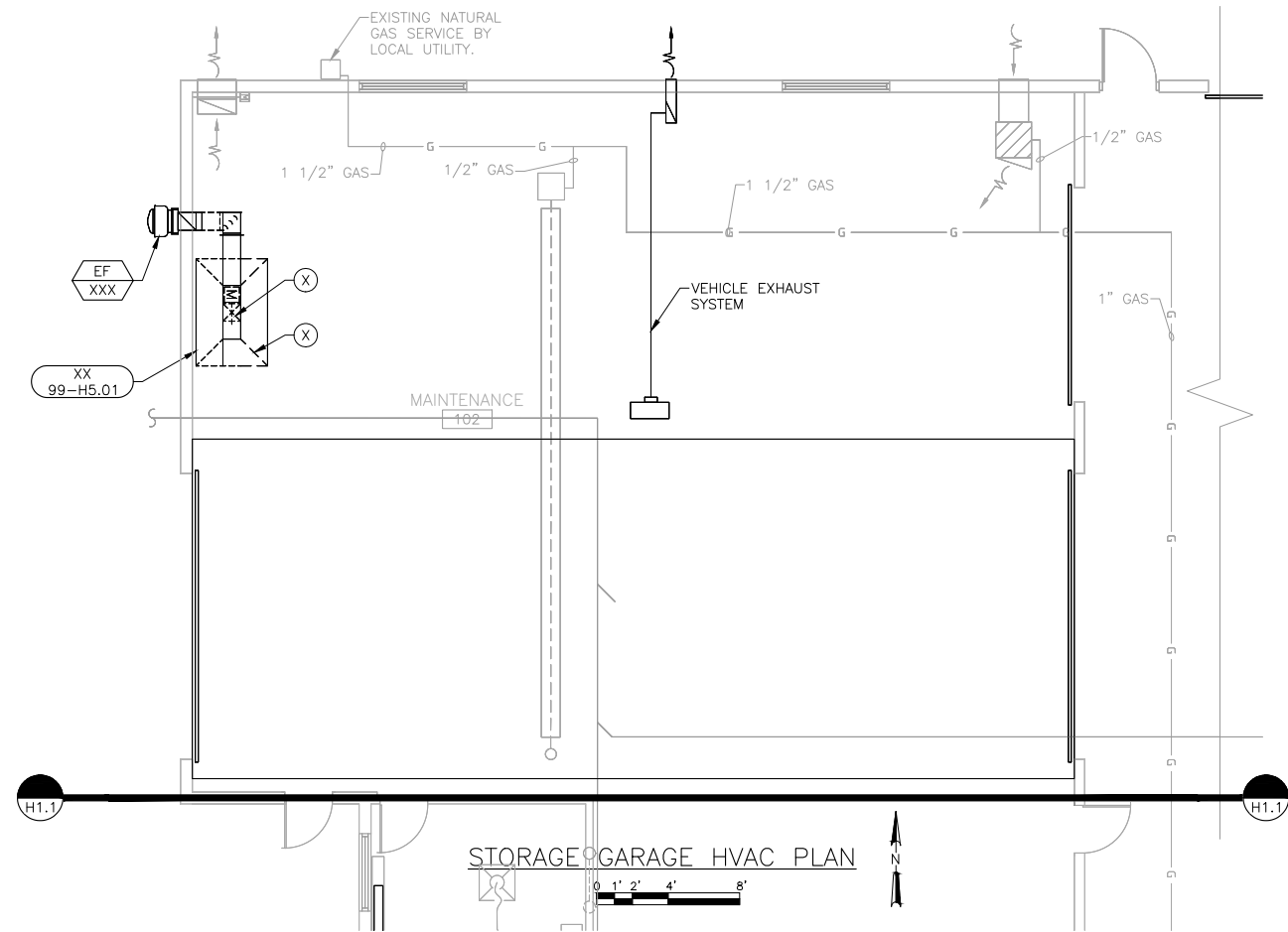
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1426.004

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DATE:	3/9/20								
REVISIONS	PUBLIC WORKS COMMITTEE REVIEW								
NO.	1								



- GENERAL NOTES:
1. CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
 2. COORDINATE WITH OTHER TRADES TO ELIMINATE CONFLICTS BETWEEN PIPING, DUCTWORK, ELECTRICAL WORK, ETC.
 3. CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
 4. ALL DUCT AND PIPE LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND NEW PIPE ROUTING AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.
 5. COORDINATE AND PROVIDE ALL DUCTWORK TRANSITIONS REQUIRED FOR FINAL EQUIPMENT CONNECTIONS. FIELD VERIFY AND COORDINATE ALL DUCTWORK AND PIPING DIMENSIONS PRIOR TO FABRICATION.
 6. ROUTE DUCTWORK TIGHT TO STRUCTURE UNLESS OTHERWISE NOTED. SUPPLY DUCTWORK SHALL BE ROUTED BELOW RETURN AND EXHAUST DUCTWORK UNLESS OTHERWISE NOTED.

KEY NOTES:
① .

DATE:		3/9/20							
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NO.	1								

STORAGE GARAGE HVAC PLAN
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004
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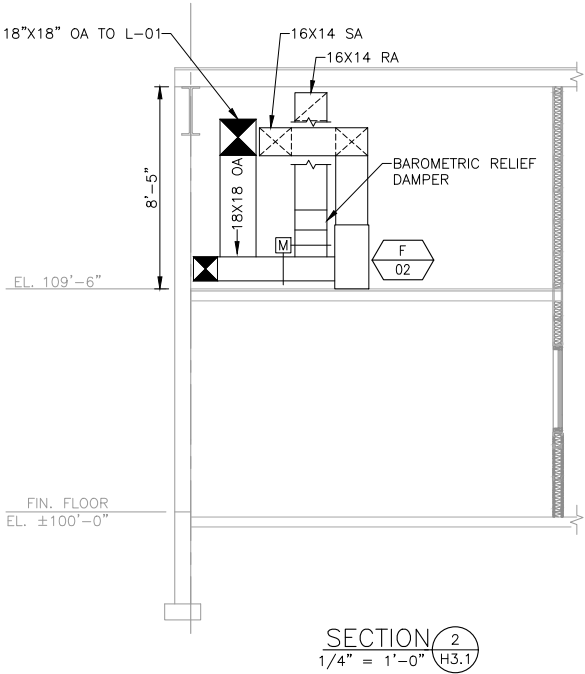
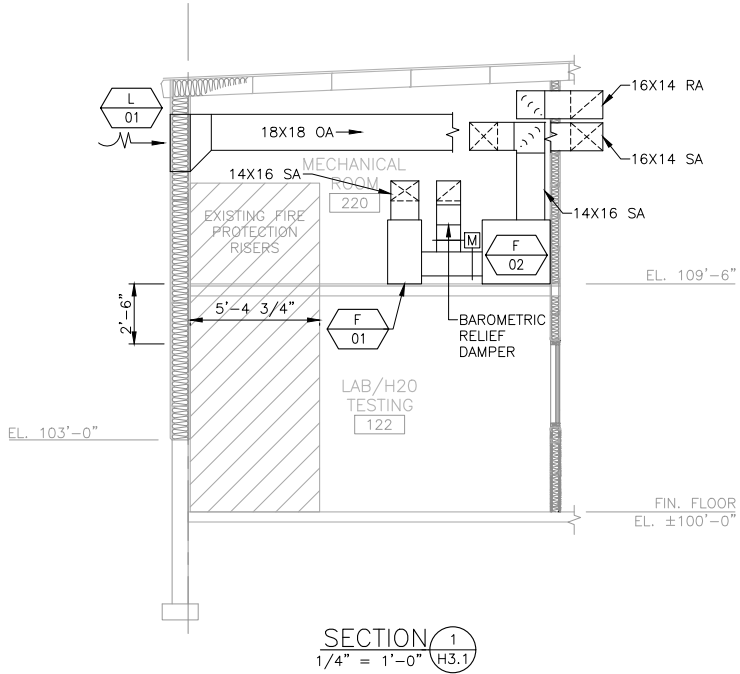
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GENERAL NOTES:

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KEY NOTES:

① .

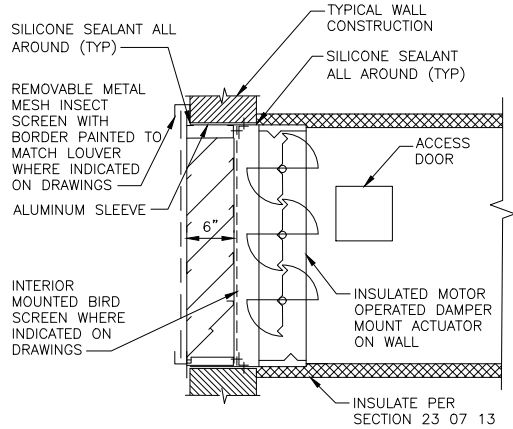


HVAC SECTIONS
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

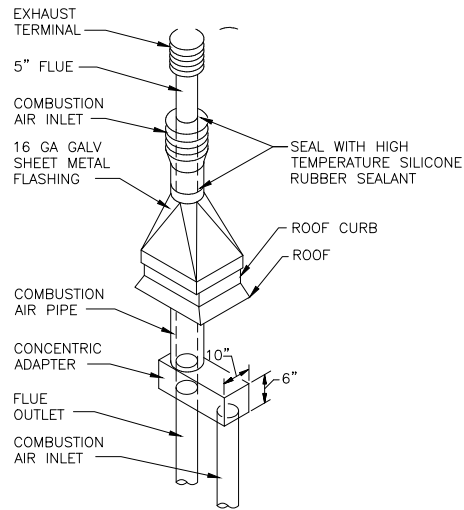
JOB NO.
1426.004
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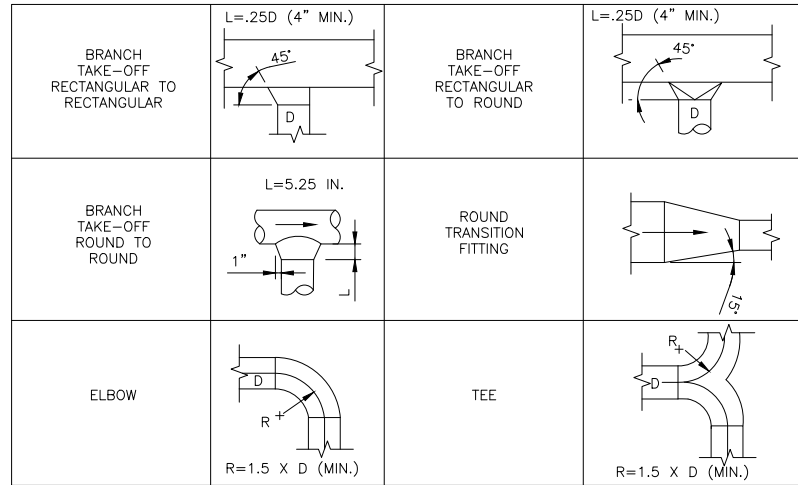
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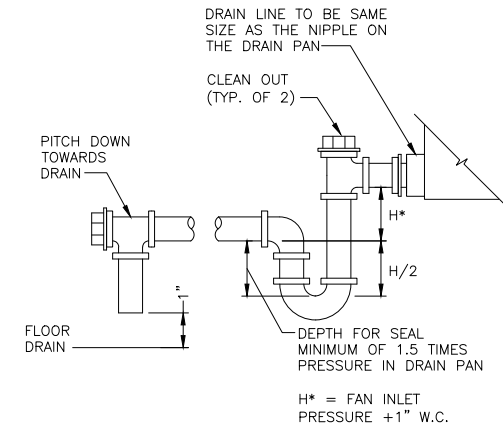
A WALL, LOUVER, DAMPER, AND DUCTWORK
H5.1 NO SCALE



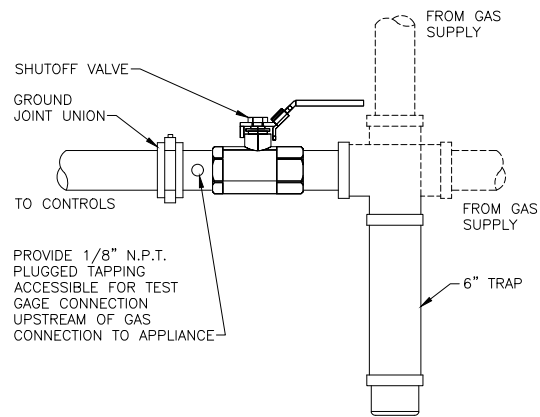
B VERTICAL VENT ASSEMBLY
H5.1 NO SCALE



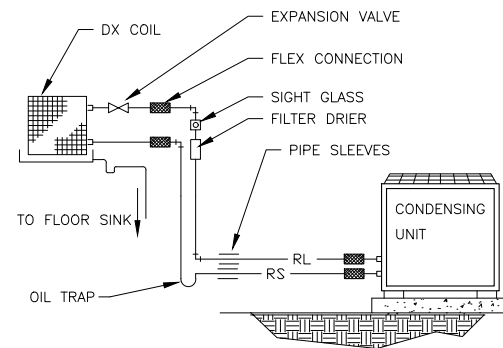
C TYPICAL DUCT TAKE-OFF DETAIL
H5.1 NO SCALE



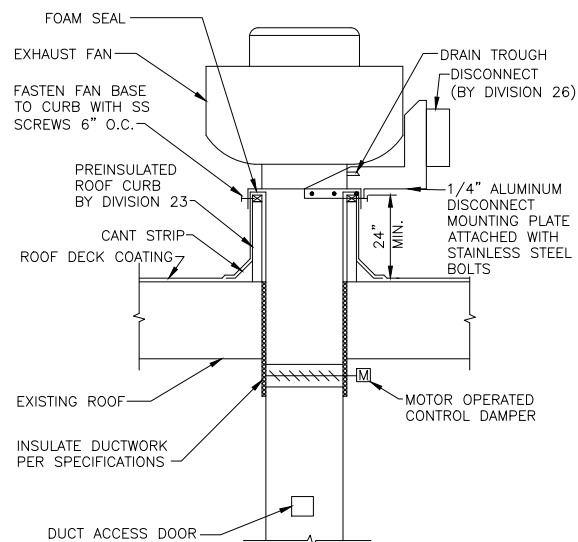
D CONDENSATE DRAIN
H5.1 NO SCALE



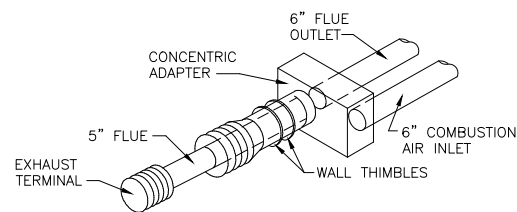
E NATURAL GAS CONNECTION
H5.1 NO SCALE



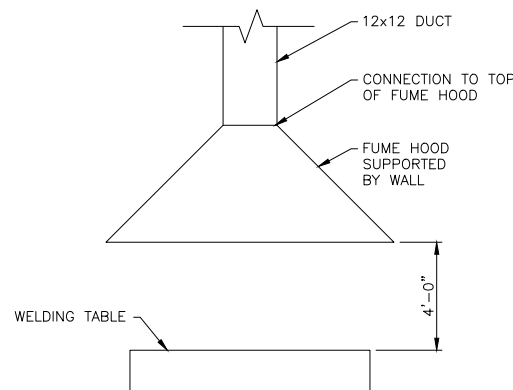
F DX COOLING SCHEMATIC
H5.1 NO SCALE



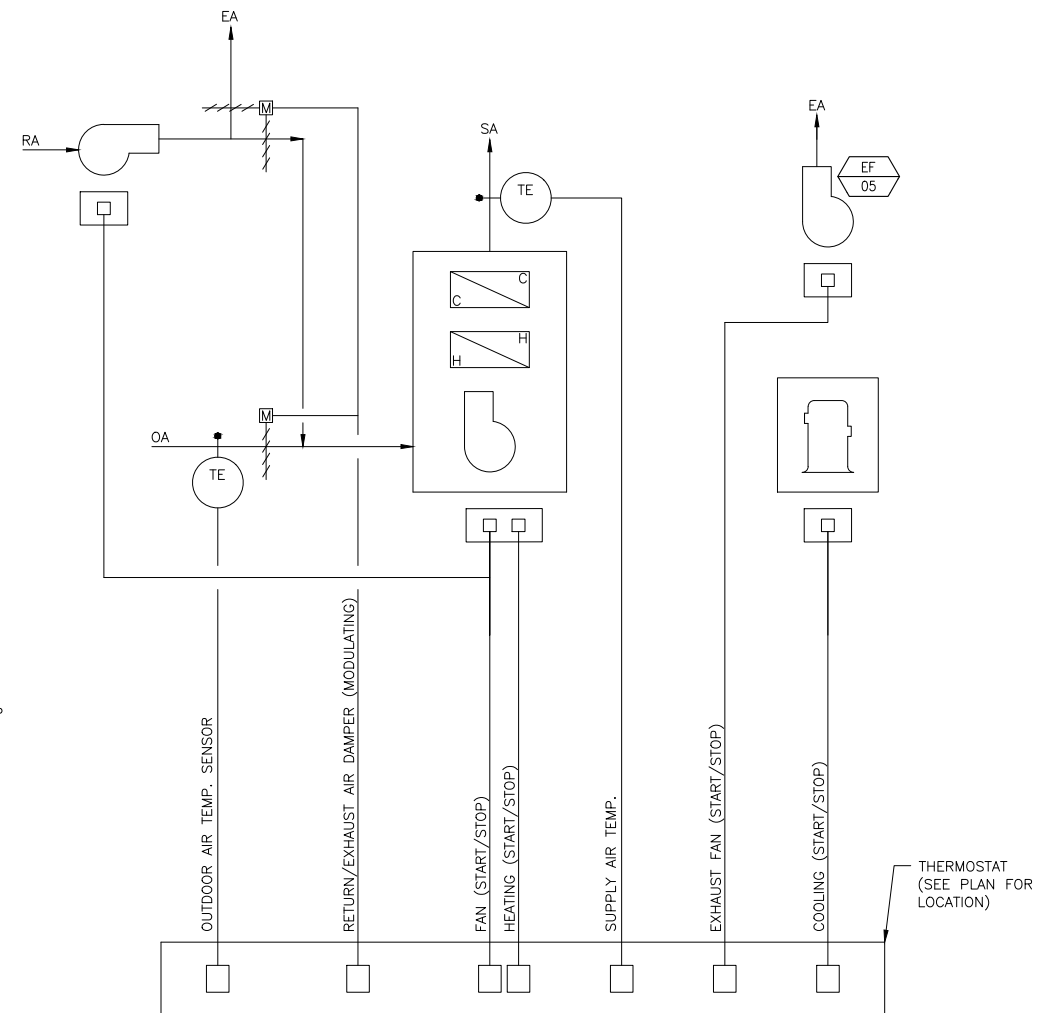
G UPBLAST EXHAUST FAN
H5.1 NO SCALE



H HORIZONTAL VENT ASSEMBLY
H5.1 NO SCALE



K WELDING HOOD
H5.1 NO SCALE



J FURNACE CONTROLS
H5.1 NO SCALE

NO.	REVISIONS	DATE
1	PUBLIC WORKS COMMITTEE REVIEW	3/9/20

HVAC DETAILS
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
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FURNACE SCHEDULE																									
UNIT NO. F—	LOCATION	SERVICE	RUUD MODEL NO.	FAN SECTION				FILTER TYPE	HEATING SECTION					COOLING COIL SECTION						ELECTRICAL				OPERATING WEIGHT (LBS.)	REMARKS
				AIRFLOW (CFM)	MINIMUM OUTSIDE AIR (CFM)	EXTERNAL STATIC PRESS. (IN. OF W. C.)	SUPPLY FAN MOTOR SIZE (HP)		HEATING TYPE	GAS INPUT (MBH)/EFF.	EAT (°F)	LAT (°F)	GAS TRAIN PRESSURE (IN W.C.)	RUUD INDOOR MODEL NO.	EAT DB/WB (°F)	LAT DB/WB (°F)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	REFRIGERANT	VOLTS	PHASE	FLA	DISCONNECT BY		
01	MECH. RM 220	OFFICE BUILDING	R96TA0402317MSA	1,150	524	0.9	1/2	MERV 8	NATURAL GAS	42/96%	26	90	5 TO 10.5"	RCFL—HM4821CC	81/69	55/55	42.5	56.9	R—410A	115	1	6.4	DIV. 26	200	①
02	MECH. RM 220	OFFICE BUILDING	R96TA0602317MSA	1,200	113	0.9	1/2	MERV 8	NATURAL GAS	56/96%	57	90	5 TO 10.5"	RCFL—HM4821CC	77/64.4	55/55	42.5	56.9	R—410A	115	1	6.4	DIV. 26	200	①

①

FAN SCHEDULE																
UNIT NO.	LOCATION	SERVICE	GREENHECK MODEL NO.	AIRFLOW (CFM)	EXT. S.P. (IN. W.C.)	MOTOR SIZE (HP)	FAN TYPE	MOTOR TYPE	DRIVE	SOUND POWER (SONES)	ELECTRICAL				OPERATING WEIGHT (LBS.)	REMARKS
											VOLTAGE	PHASE	STARTER BY	DISCONNECT BY		
EF-01	ROOF	RESTROOMS	CW-161-VG	775	0.5	0.15	CENTRIFUGAL EXHAUST	ECM	DIRECT	10.4	115	1	MANUFACTURER	MANUFACTURER	38	

AIR COOLED CONDENSING UNIT SCHEDULE																	
UNIT NO. ACCU—	LOCATION	SERVICE	RUUD MODEL NO.	NOMINAL CAPACITY (TONS)	COMPRESSORS		REFRIGERANT			ELECTRICAL					SEER	OPERATING WEIGHT (LBS.)	REMARKS
					NO. OF COMPRESSORS	COMPRESSOR TYPE	REFRIGERANT	SUCTION LINE SIZE (IN.)	LIQUID LINE SIZE (IN.)	VOLTAGE	PHASE	MCA	BREAKER SIZE	DISCONNECT BY			
01	EXTERIOR	F—01	RA1748AJ2NB	4	1	SCROLL	R—410A	0.875	0.375	208	3	32	50	DIV. 26	17	290	
02	EXTERIOR	F—02	RA1748AJ2NB	4	1	SCROLL	R—410A	0.875	0.375	208	3	32	50	DIV. 26	17	290	

SPLIT SYSTEM SCHEDULE																
UNIT NO. SS—	LOCATION	SERVICE	DAIKIN MODEL NO.		FAN SECTION			COOLING COIL SECTION			ELECTRICAL			OUTDOOR/INDOOR OPERATING UNIT WEIGHT (LBS.)	REMARKS	
			(INDOOR UNIT)	(OUTDOOR UNIT)	SUPPLY AIR (CFM)	QUANTITY	MOTOR SIZE (HP)	SENSIBLE CAPACITY (MBH)	TOTAL CAPACITY (MBH)	EAT DB/WB (°F)	VOLTAGE	PHASE	MCA			
01	UTILITY ROOM 111	ELECTRICAL ROOM	FTKB12AXVJU	RKB12AXVJU	360	1	0.17	8.2	11	85	208	1	7.7	60/20	①	

① PROVIDE PRECHARGED REFRIGERANT PIPING KIT, SIZE AND LENGTH AS REQUIRED.

WALL LOUVER SCHEDULE													
UNIT NO. L—	LOCATION	SERVICE	GREENHECK MODEL NO.	AIRFLOW (CFM)	WIDTH (IN)	HEIGHT (IN)	BLADE DEPTH (IN)	MAX. APD (IN WG)	FACE VEL. (FPM)	FREE AREA (SQ. FT.)	SCREEN		REMARKS
											TYPE	LOCATION	
01	MECH. RM. 220	F-01/F-02	ESD-635	2,350	36	30	6	0.06	611	3.84	INSECT	EXTERIOR	

ELECTRIC BASEBOARD HEATER SCHEDULE								
UNIT NO. EBB—	LOCATION	Q—MARK MODEL NO.	CAPACITY (WATTS)	LENGTH OF UNIT	ELECTRICAL			REMARKS
					VOLTAGE	PHASE	FLA	
01	OFFICE 103	2513W	750	3'	120	1	6.3	MANUFACTURER
02	BREAK ROOM 104	2516W	1,500	6'	120	1	12.6	MANUFACTURER
03	BREAK ROOM 104	2516W	1,500	6'	120	1	12.6	MANUFACTURER
04	OFFICE / WORK AREA 121	2514W	1,000	4'	120	1	8.4	MANUFACTURER
05	OFFICE 114	2515W	1,250	5'	120	1	10.5	MANUFACTURER
06	OFFICE 115	2515W	1,250	5'	120	1	10.5	MANUFACTURER
07	LAB/H2O TESTING 122	2515W	1,250	5'	120	1	10.5	MANUFACTURER
08	SUP. OFFICE 105	2515W	1,250	5'	120	1	10.5	MANUFACTURER

DESIGN CONDITIONS				
APPLICABLE BUILDING CODE: WISCONSIN SPS 364		SUMMER EXTERIOR: 87°F DB / 75°F WB WINTER EXTERIOR: —15°F DB		
OCCUPANCY TYPE	VENTILATION	SUMMER INTERIOR (DB/WB)	WINTER INTERIOR (DB)	REMARKS
OFFICE BUILDING	7.5 CFM / PERSON	75/62.5	70	
LOCKERROOM	0.5 CFM / SF	75/62.5	70	
RESTROOMS	75 CFM / FIXTURE	75/62.5	70	
MAINT. 102	0.75 CFM/ SF 5 HRS PER DAY	AMBIENT	65	

DATE:	3/9/20						
REVISIONS	PUBLIC WORKS COMMITTEE REVIEW						
NO.	1						

HVAC SCHEDULES

PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
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1. CONTRACT DOCUMENT DRAWINGS ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY.
2. ALL PIPE LOCATIONS AND ELEVATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING AND NEW PIPE ROUTING AND ELEVATIONS PRIOR TO FABRICATION AND INSTALLATION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PIPING OFFSETS REQUIRED FOR COMPLETE SYSTEM INSTALLATION.
4. PIPE AND EQUIPMENT PENETRATIONS SHALL BE COORDINATED AS TO NOT INTERFERE WITH ROOF STRUCTURE. ALL PENETRATIONS SHALL BE FIELD COORDINATED WITH GENERAL CONTRACTOR.
5. PLUMBING CONTRACTOR SHALL PROVIDE ACCESSIBILITY TO ALL VALVES AND CONTROL DEVICES. FURNISH ACCESS PANELS WHERE SHOWN OR REQUIRED FOR ACCESS TO ALL CONCEALED VALVES OR OTHER EQUIPMENT FURNISHED UNDER THIS CONTRACT WHERE NO OTHER MEANS IS PROVIDED.

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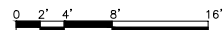
**PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN**

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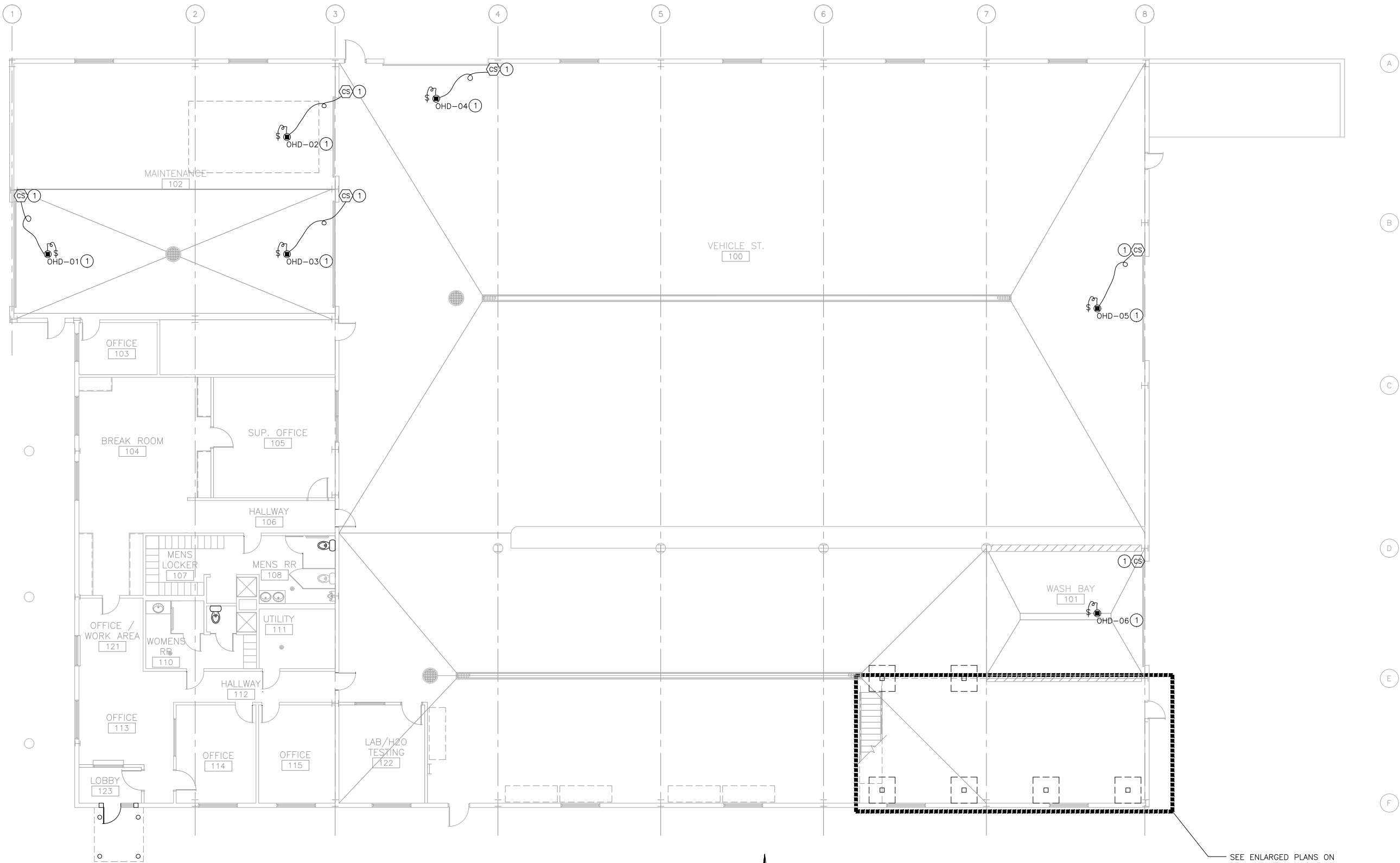
- [A] REMOVE EXISTING DATA/TELEPHONE JACK AND ALL ASSOCIATED CABLING.**
- [B] REMOVE EXISTING LIGHT FIXTURE. EXISTING RECESSED BOX, CONDUIT, AND WIRING TO REMAIN FOR INSTALLATION OF NEW LED FIXTURES ON DRAWINGS E1.2 AND E4.2.**
- [C] REMOVE EXISTING LIGHT FIXTURE AND ALL ASSOCIATED CONDUIT AND WIRE.**
- [D] SALVAGE SECURITY DEVICE FOR RELOCATIONS SHOWN ON POWER PLANS.**



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[illegible]

KEY NOTES:
① OVERHEAD GARAGE DOOR CONTROLS FURNISHED AS SPECIFIED IN DIVISION 8 AND INSTALLED BY DIVISION 26. REFER TO DIVISION 8 OF SPECIFICATIONS FOR OPERATING DESCRIPTION AND ADDITIONAL CONTROLS TO BE WIRED BY DIVISION 26. MOTOR DISCONNECT SHALL BE MOUNTED ON CEILING ADJACENT TO MOTOR.



OVERALL ELECTRICAL FLOOR PLAN

SEE ENLARGED PLANS ON DRAWINGS E4.1 AND E4.2

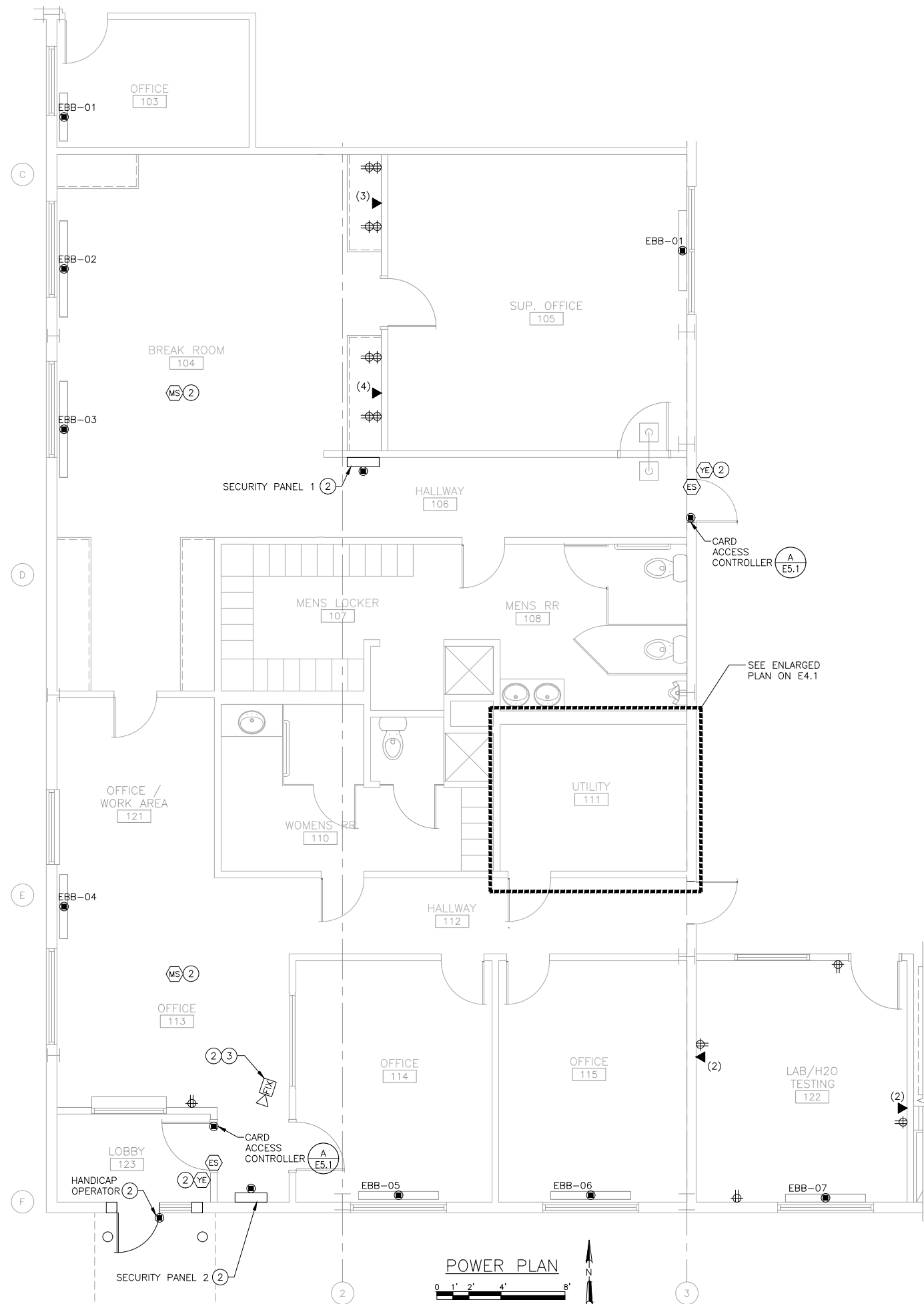
NO.	REVISIONS	DATE:	
		3/9/20	
1	PUBLIC WORKS COMMITTEE REVIEW		

OVERALL ELECTRICAL FLOOR PLAN
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004
PROJECT MGR.
SCOTT HERKERT



SHEET
29
E1.1



KEY NOTES:

- ① MOTION SENSOR SHALL BE WIRED TO MAIN SECURITY PANEL IN HALLWAY 106. PROVIDE CONDUIT AND WIRING AS REQUIRED BY MANUFACTURER.
- ② RELOCATED DEVICE SHALL HAVE EXTENDED CONDUIT AND WIRING AS REQUIRED.
- ③ ROUTE NEW CAT 6 FROM CAMERA TO UTILITY ROOM. SHOW ON RISER DIAGRAM.

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POWER PLAN
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004
PROJECT MGR.
SCOTT HERKERT



SHEET
30
E1.2



- KEY NOTES:
- ① MOTION SENSOR SHALL BE WIRED TO MAIN SECURITY PANEL IN HALLWAY 106. PROVIDE CONDUIT AND WIRING AS REQUIRED BY MANUFACTURER.

NO.	REVISIONS	DATE:
1	PUBLIC WORKS COMMITTEE REVIEW	3/9/20

LIGHTING PLAN

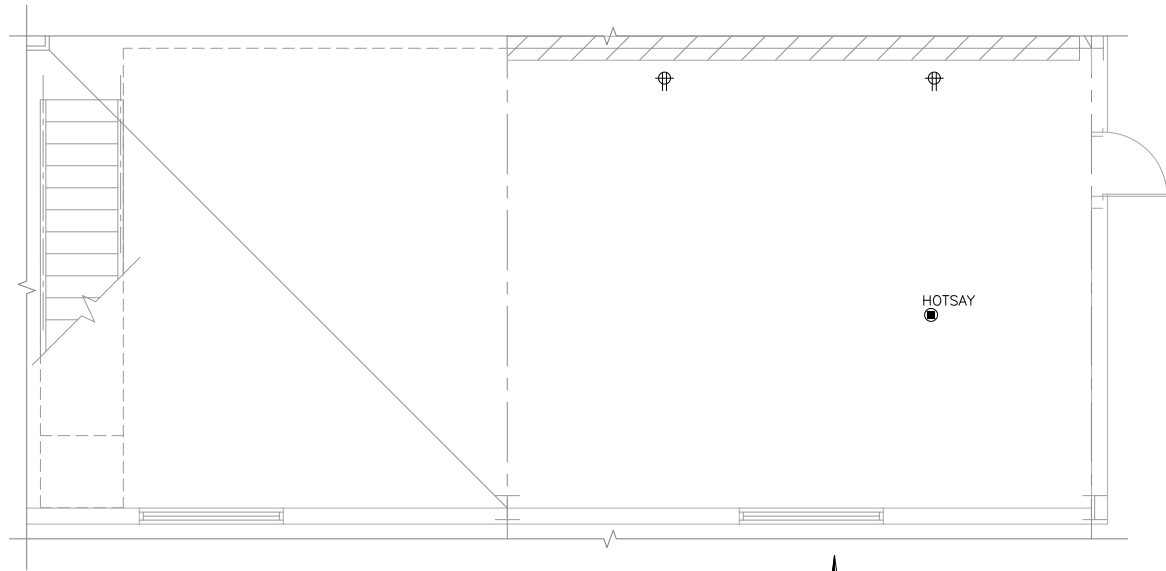
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

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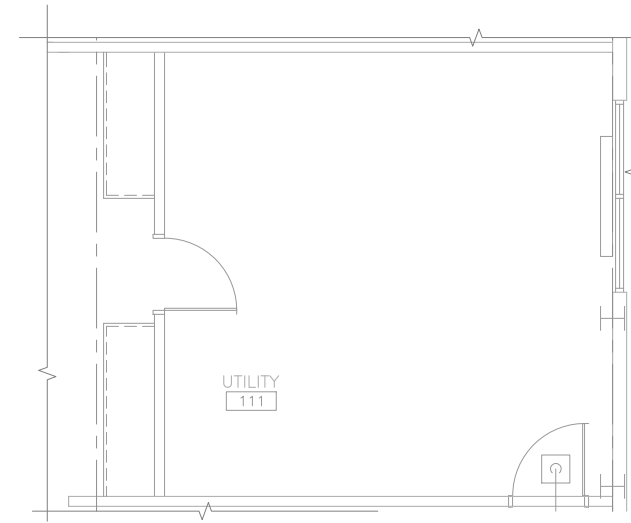


SHEET
31
E1.3



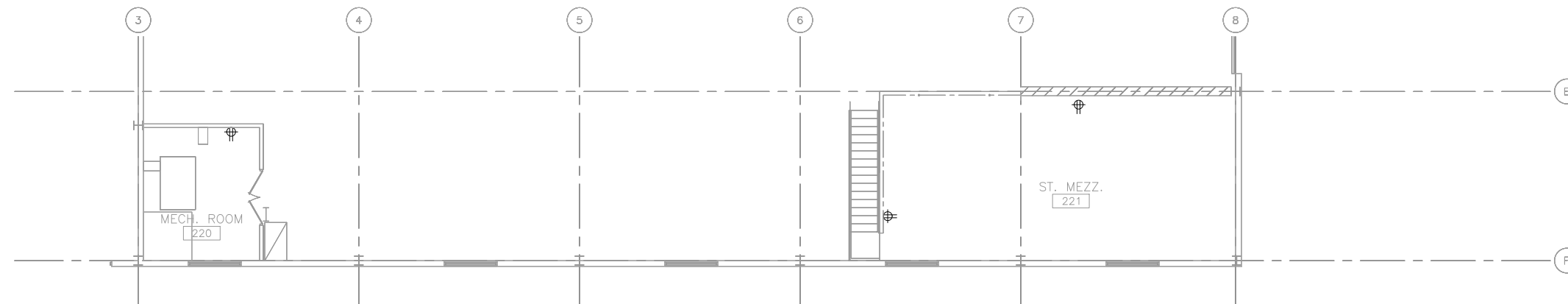
LOWER LEVEL MEZZANINE POWER PLAN

0 1' 2' 4' 8'



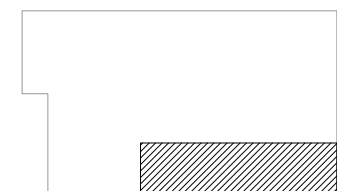
UTILITY POWER PLAN

0 1' 2' 4' 8'



UPPER LEVEL MEZZANINE POWER PLAN

0 2' 4' 8' 16'



KEY PLAN
NO SCALE

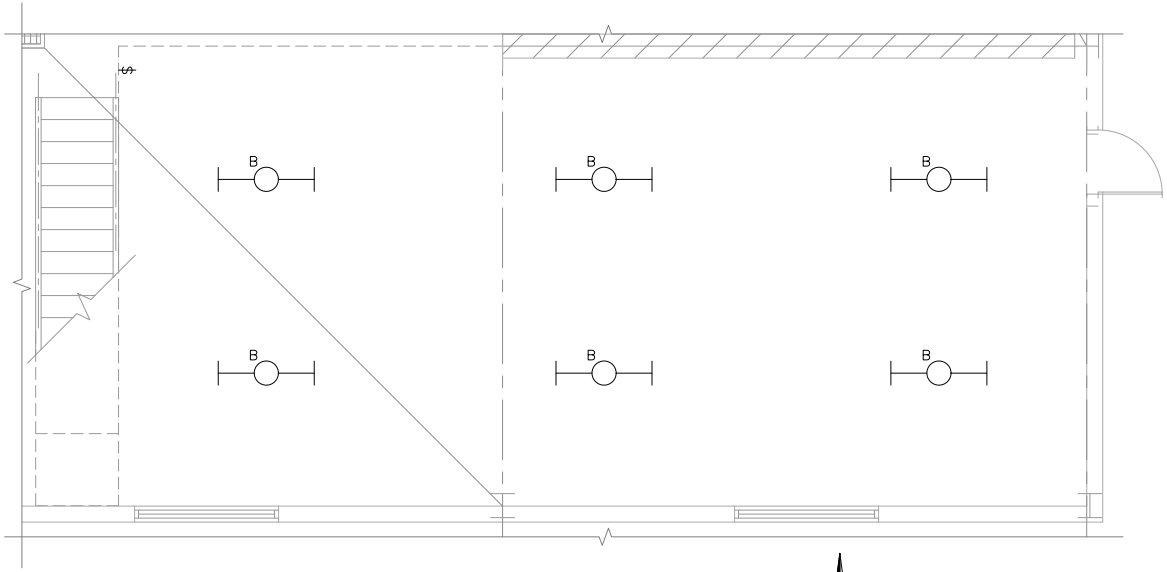
NO.	REVISIONS	DATE
1	PUBLIC WORKS COMMITTEE REVIEW	3/9/20

UPPER AND LOWER LEVEL MEZZANINE POWER PLANS
PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

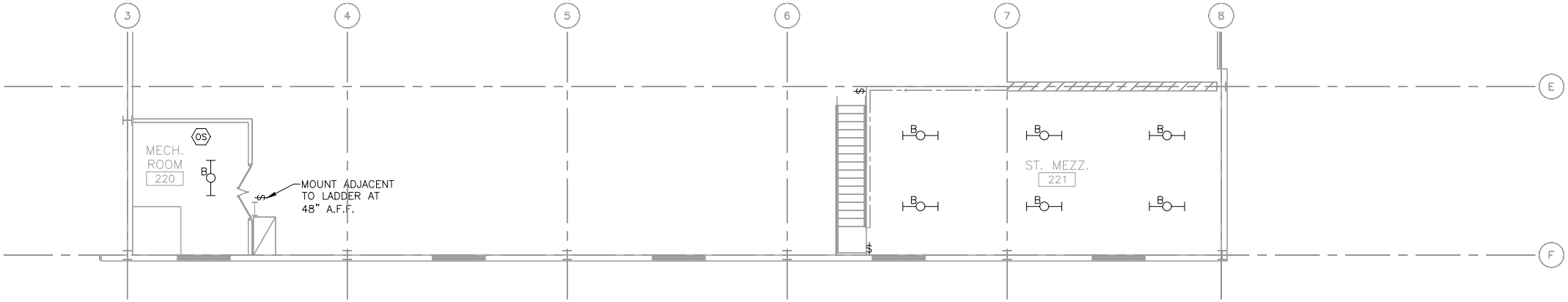
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E4.1



LOWER LEVEL MEZZANINE LIGHTING PLAN



UPPER LEVEL MEZZANINE LIGHTING PLAN



KEY PLAN
NO SCALE

NO.	REVISIONS	DATE:	
		NO.	DATE
1	PUBLIC WORKS COMMITTEE REVIEW		3/9/20

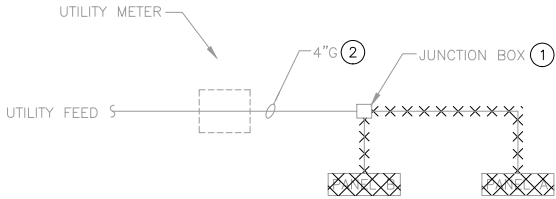
UPPER AND LOWER LEVEL MEZZANINE LIGHTING PLANS

PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

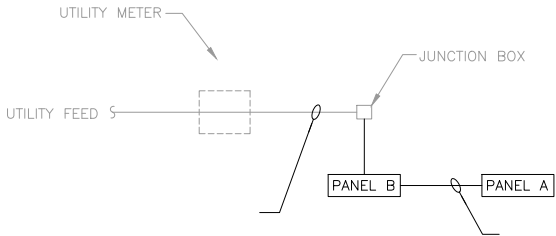
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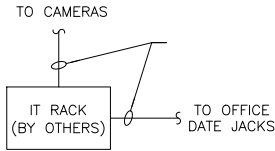
SHEET
33
E4.2



EXISTING ONE-LINE DIAGRAM
NO SCALE



ONE-LINE DIAGRAM
NO SCALE



NETWORK RISER DIAGRAM
NO SCALE

- KEY NOTES:
- 1 REMOVE CABLING IN JUNCTION BOX TO PANEL A AND PANEL B.
 - 2 REMOVE EXISTING CABLING.
 - 3 PROVIDE THROUGH FEED LUGS TO POWER PANEL A.
 - 4 PANEL SHALL BE SERVICE ENTRANCE RATED.

FIXTURE SCHEDULE					
Fixture Type	Manufacturer(s)	Model Number	Lamp Type	Mounting	Remarks
A	LITHONIA	2BLT4-30L-ADP-E21-LP840	31W LED	TROFFER	
B	LITHONIA	ZL1D-L48-5000-FST-MVOLT-40K-80CRI	41W LED	SURFACE	
C	RP LIGHTING	8763-3K	10W LED	RECESSED	

PANEL B 4													
Service:		120/208V, 3ø, 4W		Enclosure: NEMA 1		Mounting:		Surface					
Main Breaker:		400A				Main Bus:		Copper					
Location:		UTILITY ROOM 111				SCIC:		42 KAIC					
Room Number/Description	Amps	Poles	Cct. #	Phase A	Phase B	Phase C	Phase A	Phase B	Phase C	Cct. #	Poles	Amps	Room Number/Description
EXISTING LOAD	20	1	1							2	1	20	PANEL GFI OUTLET
EXISTING LOAD	20	2	3							4	1	20	EXISTING LOAD
			5							6	1	20	SMALL OFFICE
ENTRY DOOR OPENER	20	1	7							8	1	20	BASEBOARD HEAT
FIRE ALARM PANEL	20	1	9							10	1	15	CONTROL PANEL
MECHANIC'S ROOM LIGHTS	20	1	11							12	1	20	BATHROOM GFI OUTLET
MECHANIC'S RM GFI OUTLETS	20	1	13							14	1	20	KITCHEN GFI OUTLET
MECHANIC'S RM GFI OUTLETS	20	1	15							16	1	20	LUNCHROOM OUTLET
MECHANIC'S RM GFI OUTLETS	20	1	17							18	1	20	OUTLETS-PARTS STORAGE & SMALL OFFICE
MECHANIC'S RM GFI OUTLETS	20	1	19							20			
HOT WATER HEATER	30	2	21							22	2	40	RANGE
			23							24	1	20	FAX
WASH BAY OUTLETS & LIGHTS	20	1	25							26	1	20	COPIER
WASH BAY HEAT & GARAGE DR	20	1	27							28	1	20	SOFTENER
			29							30			
PRESSURE WASHER WASH BAY	3	30	31							32	3	100	EXISTING LOAD
			33							34			
			35							36	1	20	PHONE BOARD
EXISTING LOAD	20	3	37							38	1	20	PHONE BOARD
			39							40	1	15	EXISTING LOAD
EXISTING LOAD	20	1	41							42	1	15	EXISTING LOAD
F-01	20	1	43	1200			500			44	1	20	EF-01
F-02	20	1	45		1200			1000		46	1	20	RECEPTACLE - H2O TESTING LAB
	20	1	47						1000	48	1	20	RECEPTACLE - H2O TESTING LAB
			49	3850			3850			50			
ACCU-01	50	3	51		3850			3850		52	3	50	ACCU-02
			53			3850			3850	54			
EBB-01	20	1	55	750			1250			56	1	20	EBB-05
EBB-02	20	1	57		1500			1250		58	1	20	EBB-06
EBB-03	20	1	59			1500			1250	60	1	20	EBB-07
EBB-04	20	1	61	1000			1000			62	1	20	RECEPTACLES - BREAKROOM 104
	20	1	63					1000		64	1	20	RECEPTACLES - BREAKROOM 104
RECEPTACLES - OFFICE 113	20	1	65			180			1000	66	1	20	RECEPTACLES - BREAKROOM 104
RECEPTACLES - MEZZANINE	20	1	67	500			1000			68	1	20	RECEPTACLES - BREAKROOM 104
RECEPTACLES - MEZZANINE	20	1	69		500			1000		70	1	20	CARD ACCESS CONTROLLERS
RECEPTACLES - MEZZANINE	20	1	71			500			700	72	1	20	LIGHTING - MEZZANINE
SS-01	20	1	73	1600			1000			74	1	20	RECEPTACLES - SUP. OFFICE 105
			75							76	1	20	RECEPTACLES - OFFICE 113
			77							78			
			79							80			
			81							82	3	80	SPACE FOR FUTURE SOLAR
			83							84			
Total Load per Phase per Side (VA)				8900	7050	6030	8600	8290	7800				
Total Load Phase A (VA)				17500	VA	+ NEW LOAD				Total Connected Load (A)			
Total Load Phase B (VA)				15330	VA	NOTE: THROUGH FED LUGS TO PANEL A.				Total Connected Load + 25%			
Total Load Phase C (VA)				13630	VA					Spare 25%			
Total Connected Load (VA)				46660	VA					Feeder Load			

ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES

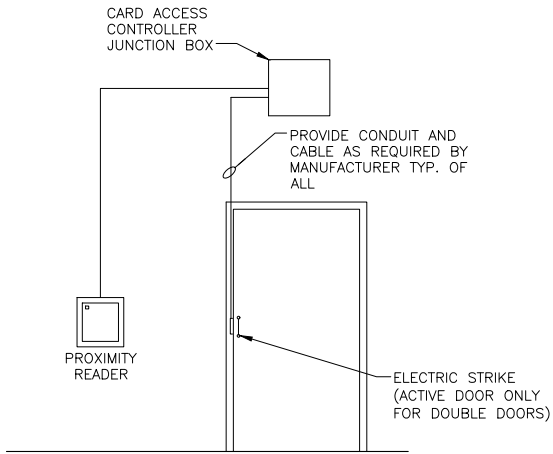
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VILLAGE OF MCFARLAND
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SCOTT HERKERT



SHEET
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E5.1



- NOTES:
1. ALL CABLES SHALL BE INSTALLED IN CONDUIT TO CARD ACCESS CONTROLLER ABOVE DOOR.
 2. CONTRACTOR SHALL USE MANUFACTURER'S RECOMMENDED CONDUCTORS AND QUANTITIES TO EACH DEVICE.

A ACCESS CONTROL INSTALLATION DIAGRAM
E5.2 NO SCALE

REVISIONS		DATE
NO.	1	3/9/20
PUBLIC WORKS COMMITTEE REVIEW		

**ELECTRICAL
DETAILS**

PUBLIC WORKS BUILDING RENOVATION
VILLAGE OF MCFARLAND
MCFARLAND, WISCONSIN

JOB NO.
1426.004

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STRAND
ASSOCIATES®

SHEET
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E5.2

McFarland DPW Evaluation

Preliminary Project Budget - DPW

Date: 03/05/2020 (PW Committee)



Project Square Footage = 19,385

Cost Estimate (Hard Costs)

Note: Cost primarily derived from RSMeans Cost Guides + recent project cost comparisons

System / Component	Qty	Unit	Unit \$	SD Budget	Notes
Site Repairs/Development					
Repave East Lot, Within Fence	1	LS		\$112,600	Bid Alternate
		Subtotal		\$112,600	
Exterior and Interior Improvements					
Roof Replacement - Roof Hugger System	19,385	sf	\$7	\$135,695	
Demolition	1	LS	\$20,000	\$20,000	
Ancillary Structure Panel Replacement and Bollards (16)	1	LS	\$20,000	\$20,000	
Maintenance Room (102) Concrete Floor and Drain	1	LS	\$7,500	\$7,500	Demo by Owner
Office (103) Water Damage Repairs (Drywall, Flooring, etc.)	1	LS	\$2,500	\$2,500	
St. Mezz. (221) Railing	89	LF	\$70	\$6,230	
St. Mezz. (221) Stairs	17	RI	\$300	\$5,100	
St. Mezz. (221) Framing and Floor System	1	LS	\$32,000	\$32,000	
Interior Stud Walls	350	SF	\$7	\$2,450	
Lab/H2O Testing (122) Framing and Floor System	211	SF	\$15	\$3,165	
Lab/H2O Testing (122)/Mech. Mezz. (221) Stud Wall System	366	SF	\$7	\$2,562	
Mech Mezz. (221) Ladder	14	LF	\$150	\$2,100	
Sup. Office (105) Stud Wall Infill	35	SF	\$8	\$280	
Office (121) CMU/Stud Wall Infill	11	SF	\$50	\$550	
Break Room (104) Standing Workstations	2	EA	\$500	\$1,000	
Clean Floor Tile in Locker/Restrooms	1	LS	\$500	\$500	
Women's RR (110) Partition Wall	1	LS	\$500	\$500	
Office (114) Additional Insulation	123	SF	\$7	\$861	
Office (115) Additional Insulation	120	SF	\$7	\$840	
Office Area Carpet Floor Finish	1,229	SF	\$10	\$12,290	
Office Area Wall Painting	7,136	SF	\$2	\$14,272	
Office Area Acoustical Ceiling Tile	2,547	SF	\$6	\$15,282	
Steel Doors	2	EA	\$2,250	\$4,500	
Wood Doors	4	EA	\$1,500	\$6,000	
Aluminum Door and Entrance Relocation	1	EA	\$1,000	\$1,000	
Entrance Canopy and Foundation	1	EA	\$10,000	\$10,000	
Exterior Window	20	SF	\$65	\$1,300	
Interior Window	81	SF	\$40	\$3,240	
Mechanical/Plumbing Items	1	LS	\$145,000	\$145,000	
Electrical Items	1	LS	\$75,000	\$75,000	
Maintenance Room (102) Waste Oil Heater	1	LS	\$15,000	\$15,000	Bid Alternate
Interior Garage Doors and Operators (1~16'x16', 1~12'x12')	2	EA	\$7,000	\$14,000	Bid Alternate
Exterior Garage Door Operator	1	EA	\$2,000	\$2,000	Bid Alternate
Exterior Garage Doors and Operators (1~16'x16', 2~16'x14')	3	EA	\$8,000	\$24,000	Bid Alternate
		Subtotal		\$586,717	
Sub-Total Component Costs				\$699,317	

McFarland DPW Evaluation

Preliminary Project Budget - DPW

Date: 03/05/2020 (PW Committee)



General Requirements	10%	\$69,932
Contractor Overhead and Profit	15%	\$104,898
Estimating Contingency	10%	\$69,932
Estimated Construction Total		\$944,078

Owner FF&E Costs (NIC by owner)

FF&E Budget	2,955 sf	\$10.00	\$29,550	Office Area Only
Total			\$29,550	

Project Soft Costs

A/E Fee Budget	\$113,289	
Plan Review Fees	\$2,500	
Site Survey and Geotech	\$0	Not Req'd
Legal, Insurance, Testing	\$5,000	
Construction Contingency @ 5%	\$47,204	
	Total	\$167,993

Total Project Cost Summary

Construction Total	\$944,078
FF&E Total	\$29,550
Soft Cost Total	\$167,993
	\$1,141,621

Notes:



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, March 10, 2020

SECTION: Business

DEPARTMENT: Administration

CONTACT:

AGENDA ITEM: Discussion regarding a proposal for solar panels on the Public Works Center.

PREVIOUS ACTION:

ISSUE SUMMARY:

Included in your packet for discussion is a proposal to install solar on the Public Works Center after the roof has been replaced through the building project. We want to add this as part of the improvement to replace what is there as well as upgrade it to power the facility throughout the year without relying on the electric utility. This is something that can be done within the project to be bid or outside of that as a standalone project. Given that the ability to add solar to the project will not come till later in the year after the roof is replaced, Staff is recommending we pursue this as a standalone project. Staff will work with Strand to solicit proposals (at least two additional) and necessary services from them as the design to coordinate the project when the time is appropriate. We'll bring back the proposals once received and make a decision at that point to line up this portion of the project when its appropriate for installation. The proposal included within your packet is provided as background to help demonstrate the viability for the project and receive support to continue to pursue it as part of the project.

FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

ATTACHMENTS:

1. 31.45KW DC Installation Proposal



2. Heliene72M_IFD_1707_1000V



Performance & Financial Analysis

31.45KW DC Solar Electric Installation Proposal

Prepared February 26, 2020 for

Matthew Careros (Strand Associates)

c/o McFarland Public Works
5115 Terminal Dr.
McFarland, WI 53558
Phone: 608-251-4843
Email: Matthew.Carreros@strand.com

Prepared by Mike Joyce

Project Engineer
Full Spectrum Solar
1240 E. Washington Ave.
Madison, WI 53703
Phone: 608-284-9495 Ext: 202 | Email: mikej@fullspectrumssolar.com

- 1) Costs for roof reinforcements or additional racking materials is not included. In the event the roof analysis shows this is required, these costs will be reevaluated.
- 2) Cost for flashing mounting posts, if necessary, are not included. The roofer on record will be consulted on best technique to maintain warranty and bids taken at that time.
- 3) Assumes the system can tie into the existing electrical infrastructure. Added cost may be incurred if the utility and/or local authority having jurisdiction require changes.

Executive Summary

31.45KW DC Solar Electric Installation Proposal

Electric Utility Savings: Anticipate a savings of approximately \$4,515 in electric bills (78%) at current utility rates in the first year. Savings will grow as electric utility rates are expected to rise 3.00% a year. The purchase of electric energy (kWh) from your utility is expected to be reduced by 78%.

Over 30 years, annual utility savings are anticipated to average \$7,237, for a total utility savings of \$217,103. After tax effects are applied, savings average \$4,849 annually or \$145,456 over the system life.

Performance Summary

Solar Electric (PV) System: 31.45 kW DC producing 39,602 kWh/Year.

Purchase Price & Net Cost

Contract Price: \$79,802

Incentives to Customer: (\$4,000)

Net Purchase Cost: \$75,802

Financial Ratios

Cashflow Payback: 21.4 years

Internal Rate of Return (IRR): 3.5%

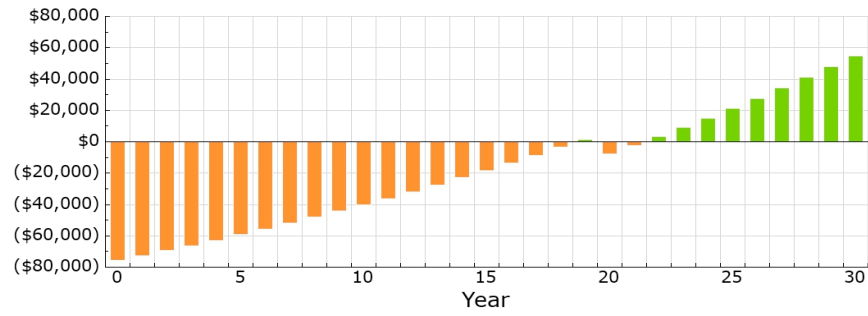
Net Present Value (NPV): (\$5,295)

Cash Gained over Life: \$55,011

- CO2 Saved over System Life: 974 tons. Equivalent to driving 1,948,000 auto miles

Finance: Cash

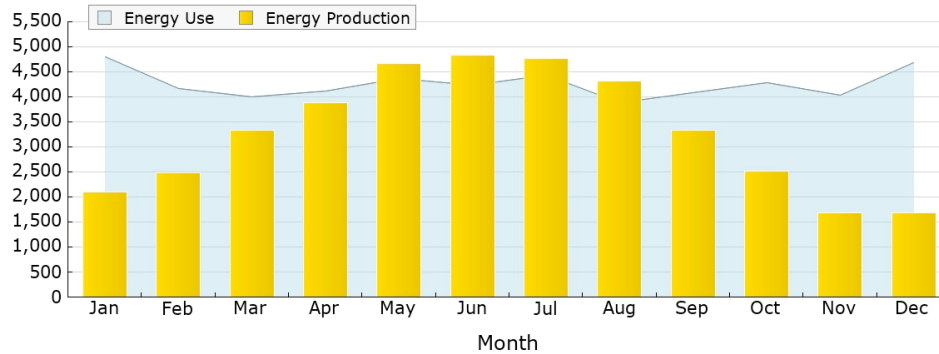
Cumulative Cash Flow





Solar Electric (PV) System Summary

Solar Electric (PV) kWh Production by Month (typical)



Array #1

Tilt: 10° Azimuth: 180° 3" Air Gap
Shade reduces production: 0%

PV Panels: 33 x Heliene, Model: 72M370

Inverters: 1 x SolarEdge Technologies, Model: SE9K

Total Panel Area: 1,740 sq-ft

System Peak Power: 31.45 kW DC

Annual Production: 39,602 kWh. Supplying 78% of annual electric use

Array #2

Tilt: 10° Azimuth: 180° 3" Air Gap
Shade reduces production: 0%

52 x Heliene, Model: 72M370

1 x SolarEdge Technologies, Model: SE14.4KUS

Contract Price Summary: Solar Electric (PV) System

Contract Amount: \$79,802 (\$2.54 per watt DC)

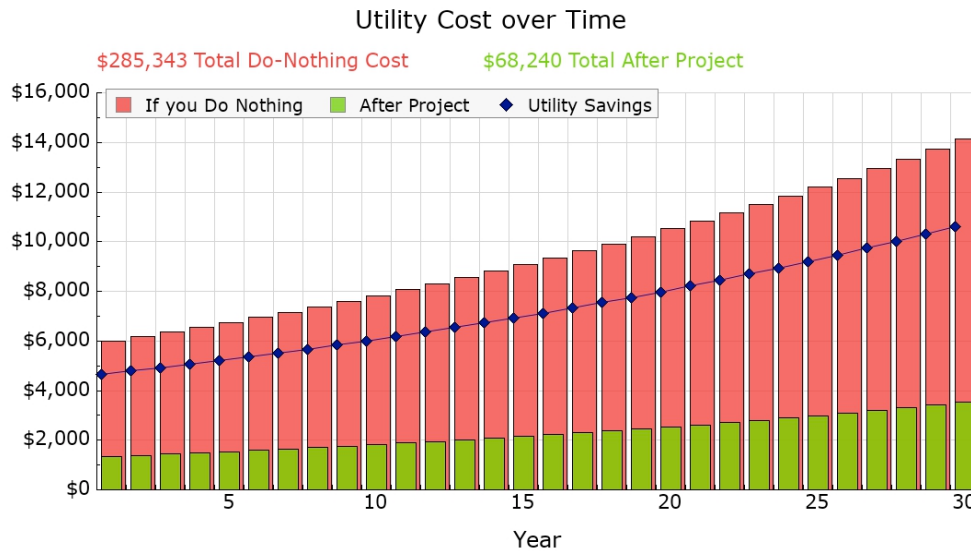
Incentives available to Customer in 1st Year

Estimated Focus on Energy - 2020 Business PV Incentive: (\$4,000)

Net Cost at Install (after incentives): \$75,802

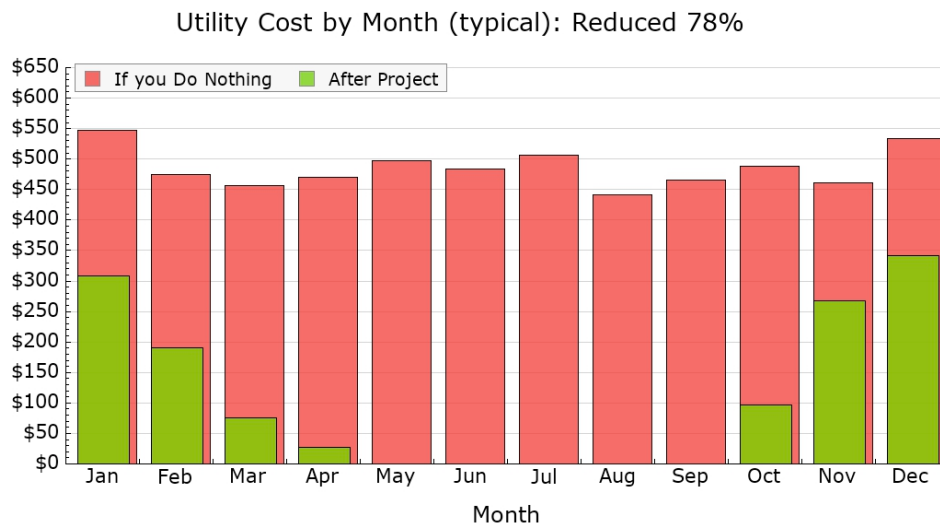
Net Installed Price per Watt: \$2.41 per watt DC

The Cost of Doing Nothing



Your Hedge Against Utility Inflation: Your investment in this project will protect you from utility rate inflation.

Utility Cost by Month



Includes monthly Net-Metering "True-Up" to reconcile any net-meter credits accumulated in prior month(s).

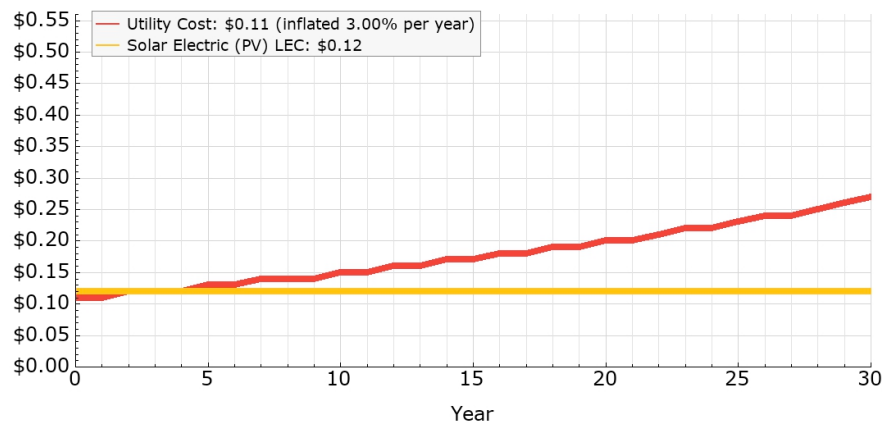


Levelized Energy Cost (LEC)

Your Hedge Against Utility Inflation: Your investment in this project will protect you from utility rate inflation. Levelized Energy Cost (LEC) analysis provides us with a "hurdle rate" (the levelized energy cost) which can be compared to the expected change in utility rates (by way of utility rate inflation). LEC is the average lifetime cost of energy produced by a particular system. We can compare the LEC to the current utility rate and its expected change in price as time goes on. In this manner one can judge the investment as a "better bet" than utility rates to contain energy costs. Represented below is the average cost of utility energy versus the cost of energy produced (LEC) by your system over time.

Electric: Levelized Energy Cost (LEC)

\$/kWh: Utility vs. System Levelized Energy Cost (LEC)





Carbon Footprint

Over the life of your system 974 tons of carbon dioxide (CO₂) will be eliminated from your footprint. Equivalent to:



Planting 22,694 trees.



Driving reduced by 1,948,000 auto miles, or 99,348 gallons of gasoline.



Recycling 3,078 tons of waste instead of sending it to landfill.



Displacing CO₂ emissions from the annual electric use of 110 homes.



949,086 pounds (474.5 tons) of coal burned.



and you will help avoid the use of up to
**23,761,800 gallons of water by Thermoelectric
Powerplants.**



Sensitivity Analysis: Utility Rate Inflation Scenarios

Sensitivity Analysis is a process of analyzing possible future events by considering alternative possible outcomes. The average change in utility rates (inflation) over the system life is perhaps the variable which may most affect the return on your investment. The following table summarizes how utility rate inflation may impact your investment. The project, as quoted, is compared to utility rate inflation that averages -5%, 0% and +5% over the system life.

	<u>As Quoted</u>	<u>-5% Inflation</u>	<u>0% Inflation</u>	<u>+5% Inflation</u>
Total Utility Savings:	\$217,103	\$66,553	\$133,245	\$308,592
Cash Gained over Life:	\$55,011	none	none	\$116,309
Return on Initial Cash Invested (IRR):	3.5%	0%	0%	5.8%
Wealth Created Over System Life (NPV):	(\$5,295)	(\$52,949)	(\$30,858)	\$21,332

Utility Inflation, as Quoted: Electric Rates: 3.00%



How to Interpret Financial Ratios and Measures

A Measure of Security: Cashflow Payback: 21.4 years - 21.4 years (modified)

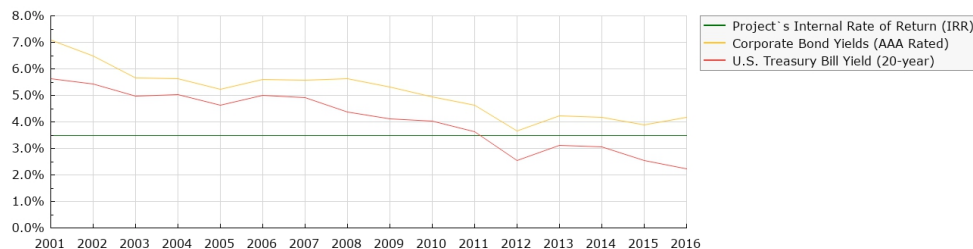
The most common measure of the security of a proposed investment is its payback, defined as the length of time until one gets one's money back. Cashflow Payback is when cumulative cash flow stays positive for good. Modified Cashflow Payback is when the cumulative cash in-flows exceed the total of all cash out-flows over the system life; future maintenance expenses are accommodated.

Net Present Value (NPV): (\$5,295).

What NPV Means: NPV is an indicator of how much value (wealth) an investment adds to the customer. If NPV is positive then the investment would add value. If NPV is zero or negative then other "qualitative" factors may be of adequate value to justify the project (for example, lengthening a swimming pool season). *Net Present Value (NPV)* is one way to account for the time value of money. NPV calculates the current value of each future cash flow. For example, \$1.00 received two years from now is equivalent to something less today, if it can be invested now at some interest rate. This allows us to "discount" the cash flows (whether positive or negative) that the proposed investment is expected to generate at various times in the future back to their equivalent value today (that is, their "present value"). If one then subtracts the cost of the proposed investment from the sum of the present values of the ongoing cash inflows, one obtains the net present value (NPV) of the investment.

Internal Rate of Return (IRR): 3.5%

Internal Rate of Return (IRR) is a common measure of investment efficiency. Equivalent to the yield to maturity of a bond. The



internal rate of return (IRR) is the annualized effective compounded rate of return earned on the invested capital.



Measures of Predictability: Using "hurdle rates" Levelized Energy Cost (LEC)

Solar Electric (PV): \$0.12 per kWh

Another dimension of concern about a proposed investment is the predictability of its anticipated costs and returns, which requires measures of the uncertainty associated with them. Levelized Energy Cost (LEC) analysis provides us with a "hurdle rate" (the levelized energy cost). LEC is the average lifetime cost of energy produced by a particular system. We can compare LEC to the current utility rate and its expected change in price as time goes on. In this manner one can judge the investment as a "better bet" than utility rates to contain energy costs.

Assessing Option Value: The option value of a proposed investment represents the value of future opportunities that would be made available only if the investment were made. Like the ante in a poker game, the investment may promise no return other than the opportunity to look at the cards being dealt, at which point one can either fold or "exercise the option" by making additional investments in an attempt to win the pot. To realize future value here new investments are not necessarily required to "exercise the options" - ownership is enough. In the case of renewable energy systems in general, there are primarily two opportunities, or options, which may have future value: Property value appreciation, and Renewable energy certificates (RECs or SRECs):

Renewable Energy and/or Carbon Credits or Certificate (REC or SREC): Renewable Energy Certificates (sometimes called "solar renewable energy credits/certificates" - SRECs, S-RECs, or simply RECs) are a new and evolving method to ascribe future financial value to a renewable energy system. RECs represent the bundle of legal rights to the "green" part of each unit of energy produced by a renewable energy system. This green part can be sold for a value, which generates additional revenue for the seller. These certificates can be sold and traded or bartered and the owner of the REC can claim to have purchased renewable energy.



Utility Energy Summary: Electric

Electric Utility Rates													
Current Rate							Post Project Rate						
Fixed Price per unit \$0.1140/kWh							Fixed Price per unit						
Average Cost: \$0.114 per kWh							Average Cost: \$0.114 per kWh						
Tiered Rate: No							Tiered Rate: No						
Time-of-Use Rate: No							Time-of-Use Rate: No						
Demand Charges: No							Demand Charges: No						
Summary of Utility & New Source Electricity													
Electric by Month (kWh)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
<u>Entered into Software (historical)</u>													
Monthly Use	4,800	4,160	4,000	4,120	4,360	4,240	4,440	3,880	4,080	4,280	4,040	4,680	51,080
Historical Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<u>Estimated by Software at Current Rates</u>													
Estimated Use	4,800	4,160	4,000	4,120	4,360	4,240	4,440	3,880	4,080	4,280	4,040	4,680	51,080
Current Cost	\$547	\$474	\$456	\$470	\$497	\$483	\$506	\$442	\$465	\$488	\$461	\$534	\$5,823
PV Production	(2,097)	(2,487)	(3,332)	(3,882)	(4,669)	(4,836)	(4,765)	(4,313)	(3,333)	(2,516)	(1,687)	(1,686)	
Post Project Use	2,703	1,673	668	238	(309)	(596)	(325)	(433)	747	1,764	2,353	2,994	11,477
Post Project Cost	\$308	\$191	\$76	\$27	\$0	\$0	\$0	\$0	\$0	\$97	\$268	\$341	\$1,308
Production Self-Consumption Percent:													
	38%	30%	25%	26%	24%	24%	25%	22%	27%	32%	40%	45%	
<u>Net-Meter Credit Values: Amounts Accrued and Applied to Post-Project Cost</u>													
Value Accrued in Month at Utility Retail Rate:													
	\$0	\$0	\$0	\$0	\$(35)	\$(68)	\$(37)	\$(49)	\$0	\$0	\$0	\$0	\$(189)
Value Applied	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$(85)	\$(104)	\$0	\$0	\$(189)

Minimum monthly meter fees may apply and are not included in this analysis.



Cash Flow Details for the System

Cash Flows in Year	0	1	2	3	4
Gross Cost: PV	(79,802)				
<u>Reference:</u> Utility Bill Savings with Inflation Applied	0	4,651	4,785	4,923	5,065
Utility Bill Net Cash Savings after Tax Effects	0	3,116	3,206	3,298	3,394
<u>Solar Electric (PV) Incentives</u>					
Estimated Focus on Energy - 2020 Business PV Incentive	4,000	0	0	0	0
Total Incentives	4,000	0	0	0	0
Net Annual Cash Flow	(75,802)	3,116	3,206	3,298	3,394
Cumulative Cash Flow	(75,802)	(72,686)	(69,480)	(66,182)	(62,788)

Net Annual Cash Flow is the sum of values in gray lines.

Cash Flows in Year	5	6	7	8	9
<u>Reference:</u> Utility Bill Savings with Inflation Applied	5,210	5,361	5,516	5,674	5,838
Utility Bill Net Cash Savings after Tax Effects	3,491	3,592	3,696	3,802	3,911
Net Annual Cash Flow	3,491	3,592	3,696	3,802	3,911
Cumulative Cash Flow	(59,297)	(55,705)	(52,009)	(48,207)	(44,296)
Cash Flows in Year	10	11	12	13	14
<u>Reference:</u> Utility Bill Savings with Inflation Applied	6,007	6,179	6,358	6,541	6,730
Utility Bill Net Cash Savings after Tax Effects	4,025	4,140	4,260	4,382	4,509
Net Annual Cash Flow	4,025	4,140	4,260	4,382	4,509
Cumulative Cash Flow	(40,271)	(36,131)	(31,871)	(27,489)	(22,980)
Cash Flows in Year	15	16	17	18	19
<u>Reference:</u> Utility Bill Savings with Inflation Applied	6,924	7,123	7,329	7,539	7,757
Utility Bill Net Cash Savings after Tax Effects	4,639	4,772	4,910	5,051	5,197
Net Annual Cash Flow	4,639	4,772	4,910	5,051	5,197
Cumulative Cash Flow	(18,341)	(13,569)	(8,659)	(3,608)	1,589
Cash Flows in Year	20	21	22	23	24
O&M Cost: PV	(21,855)	0	0	0	0
<u>Reference:</u> Utility Bill Savings with Inflation Applied	7,981	8,210	8,447	8,690	8,941
Utility Bill Net Cash Savings after Tax Effects	5,347	5,501	5,659	5,822	5,990
Tax Savings from O&M Expense Deduction	7,212	0	0	0	0
Net Annual Cash Flow	(9,296)	5,501	5,659	5,822	5,990
Cumulative Cash Flow	(7,707)	(2,206)	3,453	9,275	15,265



Cash Flow Details for the System

Cash Flows in Year	<u>25</u>	<u>26</u>	<u>27</u>	<u>28</u>	<u>29</u>
Reference: Utility Bill Savings with Inflation Applied	9,199	9,464	9,737	10,017	10,305
Utility Bill Net Cash Savings after Tax Effects	6,163	6,341	6,524	6,711	6,904
Net Annual Cash Flow	6,163	6,341	6,524	6,711	6,904
Cumulative Cash Flow	21,428	27,769	34,293	41,004	47,908
Cash Flows in Year	<u>30</u>	<u>31</u>	<u>32</u>	<u>33</u>	<u>34</u>
Reference: Utility Bill Savings with Inflation Applied	10,602	0	0	0	0
Utility Bill Net Cash Savings after Tax Effects	7,103	0	0	0	0
Net Annual Cash Flow	7,103	0	0	0	0
Cumulative Cash Flow	55,011	0	0	0	0



Other Assumptions Used in this Analysis

Customer Type: Government/Municipal.

Tax Effects Applied to Utility Savings:

As a business customer, utility savings will result in lower business expenses (a tax deduction or "write off") for utility services. Therefore we have reduced utility savings by your effective income tax rate (28.00% federal and 5.00% state).

System Life: PV System: 30 years. Inverters: 20 years.

PV System Modeling Variables (PVWatts references): Array 1: System Losses: 9.5%, DC-to-AC Ratio: 1.36, Module Type: Standard, Inverter Efficiency: 96.50%. Array 2: System Losses: 9.5%, DC-to-AC Ratio: 1.33, Module Type: Standard, Inverter Efficiency: 97.00%. Software's suggested production adjusted by 97% for this estimate.

Performance Degradation and O&M Costs: We have assumed performance will degrade by 0.50% per year due to soiling and general wear. Annual operating and maintenance (O&M) costs are inflated 2.80% per year, and are estimated as a percent of gross system price, as follows: Solar Electric (PV): 0.00%.

Income Tax Rates: Federal: 28.00%, State: 5.00%

Annual Inflation Rates: Consumer price index: 2.80%, Electric Rates: 3.00%

Energy Metering Type: Net Metering

Net Excess Generation (NEG): Monthly NEG credited at Utility Rate. Monthly NEG may be carried forward to the next month for application to future utility bills. Annual NEG Not sold.

Discount Rate: 4.00%. Used to estimate net present value of future cash flows.

Costs for roof reinforcements or additional racking materials is not included. In the event the roof analysis shows this is required, these costs will be reevaluated.

Cost for flashing mounting posts not included. The roofer on record will be consulted on best technique to maintain warranty and bids taken at that time.

Assumes the system can tie into the existing electrical infrastructure. Added cost may be incurred if the utility and/or local authority having jurisdiction require changes.



Renewable Resources

The following renewable resource assumptions were used to develop estimates for the project location. These are typical values based upon observed data over several decades. Actual values (and system performance) will vary from month to month, and from year to year, in accordance to weather and climate pattern changes.

Weather station referenced: "MADISON DANE CO REGIONAL ARPT [ISIS]" (Wisconsin)

Solar Resources: Flat-Plate, South-facing Tilted at Latitude

Month	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
kWh/m2/day	3.225	3.884	4.263	4.835	5.416	5.662	5.574	5.372	4.822	3.84	2.828	2.682


HELIENE
72^M

72-CELL MONOCRYSTALLINE MODULE

370 Wp

MAX POWER OUTPUT

19.3%

MAX EFFICIENCY

10 YEAR

PRODUCT WARRANTY

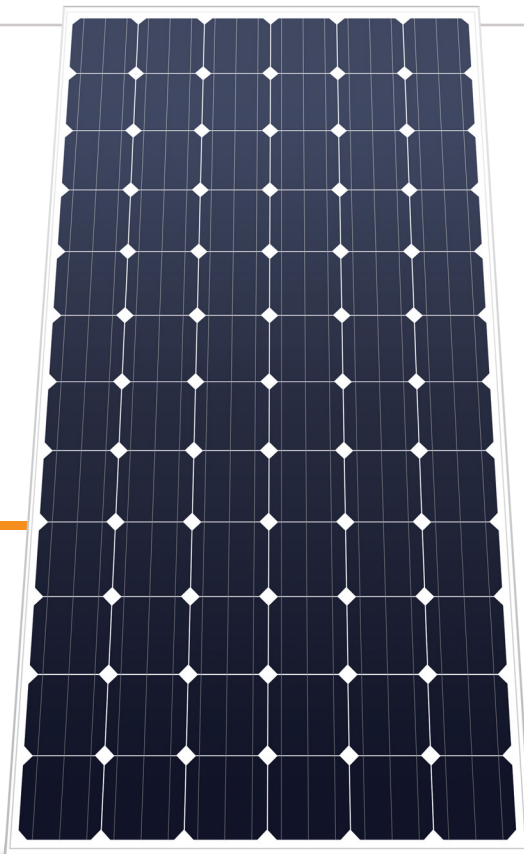
25 YEAR

LINEAR PERFORMANCE GUARANTEE

HELIENE INC. IS A PREMIER SOLAR MODULE MANUFACTURER, SERVICING THE GROWING SOLAR ENERGY MARKETS OF NORTH AMERICA.

COMBINING PROVEN EUROPEAN TECHNOLOGY WITH NORTH AMERICAN INGENUITY ALLOWS HELIENE TO MAKE A REAL COMMITMENT IN PROVIDING SMARTER ENERGY CHOICES FOR THE FUTURE.

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GUARANTEED POSITIVE POWER SORTING: [-0 : +4.99 WP]



AVAILABLE IN 1000V OR 1500V SYSTEM VOLTAGE RATING



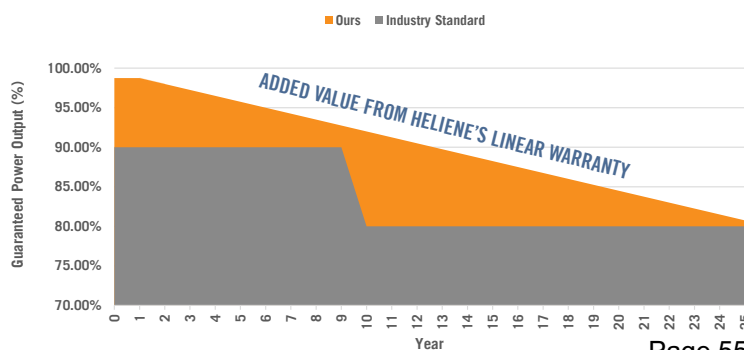
MANUFACTURED ACCORDING TO INTERNATIONAL QUALITY SYSTEM STANDARDS: ISO9001



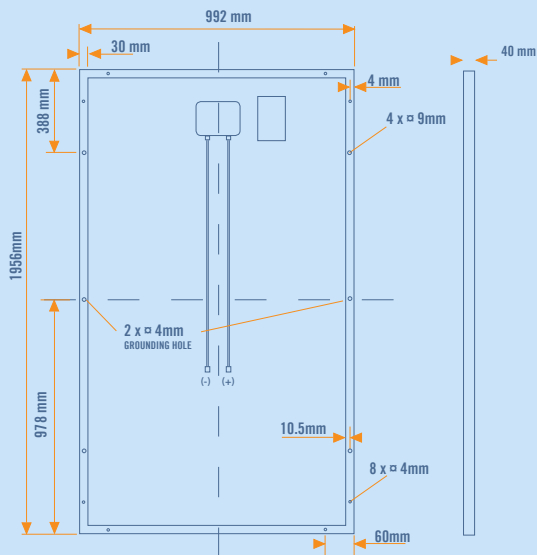
H-BLACK INTEGRATION AVAILABLE (ALL-BLACK MODULE)

LINEAR PERFORMANCE GUARANTEE

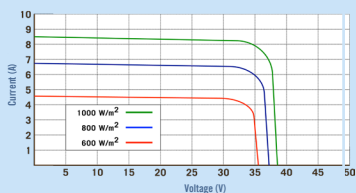
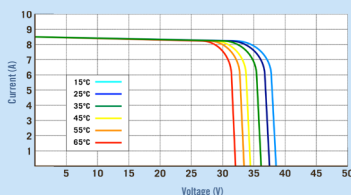
10 YEAR WORKMANSHIP WARRANTY • 25 YEAR LINEAR PERFORMANCE GUARANTEE



DIMENSIONS FOR HELIENE 72M SERIES MODULES



I-V CURVE FOR HELIENE 72M SERIES



CERTIFICATIONS



ELECTRICAL DATA (STC)

Peak Rated Power	P_{mpp} (W)	370	360	350	340	335
Maximum Power Voltage	V_{mpp} (V)	40.153	39.713	39.133	38.503	38.213
Maximum Power Current	I_{mpp} (A)	9.28	9.13	9.01	8.89	8.83
Open Circuit Voltage	V_{oc} (V)	48.81	48.19	47.57	46.95	46.64
Short Circuit Current	I_{sc} (A)	9.97	9.81	9.65	9.49	9.41
Module Efficiency *	Eff (%)	19.3	18.8	18.3	17.8	17.5
Power Output Tolerance	[- 0 , + 4.99] Wp					

STC - Standard Test Conditions: Irradiation 1000 W/m² - Air mass AM 1.5 - Cell temperature 25 °C

* Calculated using maximum power based on full positive output tolerance [-0 , +4.99] Wp

MECHANICAL DATA

Dimensions (L x W x D)	1956 x 992 x 40 mm (77 x 39 x 1.6 inch)
Weight	23.6 kg (52.4 lbs)
Output Cables	1.1 m (43.3 inch) symmetrical cables with MC4 type connectors
Junction Box	IP-67 rated with 3 bypass diodes
Frame	Double webbed 15 micron anodized aluminum alloy
Front Glass	Low-iron content, high-transmission PV solar glass
Solar Cells	72 Monocrystalline cells (156 x 156 mm)

CERTIFICATIONS

UL Listed	ULC/ORD-C1703-1 , UL1703, UL1703 Fire Classification Type 1
IEC Listed	IEC 61215, IEC 61730

All Helene modules are certified under the California Energy Commission (CEC) Listing Report

TEMPERATURE RATINGS

Nominal Operating Cell Temperature (NOCT)	+45°C (±2°C)
Temperature Coefficient of P_{max}	-0.39%/°C
Temperature Coefficient of V_{oc}	-0.31%/°C
Temperature Coefficient of I_{sc}	0.045%/°C

MAXIMUM RATINGS

Operational Temperature	-40°C - +85°C
Max System Voltage	1000V / 1500V (UL / IEC)
Max Series Fuse Rating	15 A

WARRANTY

10 Year Manufacturer's Workmanship Warranty

25 Year Linear Power Guarantee

(Refer to product warranty page for details)

PACKAGING CONFIGURATION

Modules per box:	26 pieces
Modules per 53' trailer:	780 pieces

HELIENE72M_IFD_1701



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, March 10, 2020

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Jim Hessling, Public Works Director

AGENDA ITEM: Discussion and action to make a recommendation to the Village Board regarding replacement of air conditioning units at the Municipal Center.

PREVIOUS ACTION:

ISSUE SUMMARY:

The current roof top air conditioning units at the Municipal Center are 20 years in age and are getting harder to repair because of their age and older technology. Several units have failed over the past couple of years and one of the roof top units was replaced in 2019 as it stopped working completely. The current units run on R22 Freon which is becoming difficult to obtain and will no longer be produced or imported starting in 2020. If Freon is required, it will have to be a reclaimed product, which in turn will be expensive and difficult to obtain. New units operate on a newer, more environmentally sound type of Freon. A/C units of this nature have an average lifespan of fifteen years.

The attached proposals are from All Comfort and Harker Heating and Cooling. Both of these contractors are local and specify the replacement of the five remaining units, out of the six, that are currently in place.



FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

ATTACHMENTS:

1. Harker
2. 2020 Trane RTU replacements at 5915 Milwaukee St McFarland WI 53558 (002)
3. All Comfort
4. All Comfort 5 rooftop units Revised 2 25 2020

Jim Hessling

Subject: FW: 2020 Trane RTU replacements at 5915 Milwaukee St, McFarland, WI 53558

From: Brian Hoffman <brianh@harkerheating.com>
Sent: Monday, February 10, 2020 10:30 AM
To: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Subject: RE: 2020 Trane RTU replacements at 5915 Milwaukee St, McFarland, WI 53558

You are welcome!

Have a great week!

Brian Hoffman • Director of Commercial Service Accounts
t. 608.255.6902 f. 608.255.2001
w. www.harkerheating.com
87 W Beltline Hwy • Madison, WI 53713

From: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Sent: Monday, February 10, 2020 10:27 AM
To: Brian Hoffman <brianh@harkerheating.com>
Cc: Tina McGaw <tinam@harkerheating.com>; Cheryl Kruger <cherylk@harkerheating.com>; Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Subject: RE: 2020 Trane RTU replacements at 5915 Milwaukee St, McFarland, WI 53558

Thank you for the extension.

Jim Hessling | Director of Public Works | Village of McFarland | 5115 Terminal Drive | McFarland, WI 53558 |
| 608-838-7287 | jim.hessling@mcfarland.wi.us | Proud member of the WI American Public Works Association

From: Brian Hoffman <brianh@harkerheating.com>
Sent: Monday, February 10, 2020 10:10 AM
To: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Cc: Tina McGaw <tinam@harkerheating.com>; Cheryl Kruger <cherylk@harkerheating.com>
Subject: RE: 2020 Trane RTU replacements at 5915 Milwaukee St, McFarland, WI 53558

Hello Jim,

Attached is the proposal with the price being valid till March 30th.

Please let me know if you have any other questions.

Regards,

Brian Hoffman • Director of Commercial Service Accounts
t. 608.255.6902 f. 608.255.2001
w. www.harkerheating.com
87 W Beltline Hwy • Madison, WI 53713

From: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Sent: Monday, February 10, 2020 9:18 AM
To: Brian Hoffman <brianh@harkerheating.com>
Cc: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Subject: FW: 2020 Trane RTU replacements at 5915 Milwaukee St, McFarland, WI 53558

Hi Brian,

Thanks for the proposal. Our February meeting to discuss this proposal was cancelled. At this time we are scheduled to meet March 10th. After that meeting the proposal has to go to the Village Board for final approval which is on March 23. We will hopefully have approval at that meeting. In the proposal it states that the pricing is good for 30 days. Will you extend this until March 30th and if so can we get that extension in writing? Hope to hear from you soon,

Jim

Jim Hessling | Director of Public Works | Village of McFarland | 5115 Terminal Drive | McFarland, WI 53558 |
| 608-838-7287 | jim.hessling@mcfarland.wi.us | Proud member of the WI American Public Works Association

From: Brian Hoffman <brianh@harkerheating.com>
Sent: Thursday, January 16, 2020 11:35 AM
To: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Cc: Tina McGaw <tinam@harkerheating.com>; Cheryl Kruger <cherylk@harkerheating.com>
Subject: 2020 Trane RTU replacements at 5915 Milwaukee St, McFarland, WI 53558

Hello Jim,

Attached is our proposal for the replacement of the remaining (5) Trane package roof top units for the Municipal building.

Please review and let me know if you have any questions or need any modifications.

Regards,

Brian Hoffman • Director of Commercial Service Accounts
t. [608.255.6902](tel:608.255.6902) f. [608.255.2001](tel:608.255.2001)
w. www.harkerheating.com
87 W Beltline Hwy • Madison, WI 53713

From: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Sent: Thursday, January 16, 2020 8:58 AM
To: Brian Hoffman <brianh@harkerheating.com>
Cc: Jim Hessling <Jim.Hessling@mcfarland.wi.us>
Subject: Proposals

Hi Brian,

Hope your day is going well.

Can you send over the quote for the maintenance program for our buildings. We would like to get going on that and need the proposal.

Also do you have pricing on replacing the rooftop A/C units?

Thanks and I hope to hear from you soon,

Jim

Jim Hessling | Director of Public Works | Village of McFarland | 5115 Terminal Drive | McFarland, WI 53558 |
| 608-838-7287 | jim.hessling@mcfarland.wi.us | Proud member of the WI American Public Works Association



Heating & Cooling, Inc.

87 W. Beltline Hwy. • Madison, WI 53713
(608) 255-6902 • Fax (608) 255-2001

January 16, 2020

Mr. Jim Hessling
Village of McFarland
5115 Terminal Dr.
McFarland, WI 53558
PH: 608-838-2383
Email: jim.hessling@mcfarland.wi.us

Project Description: Replacement of (5) Trane roof top units.

Project Address: 5915 Milwaukee St, McFarland, WI 53558

Replacement of package roof top unit #2:

- Remove & properly dispose of existing equipment & refrigerant.
- Install (5) new Trane R410a package roof top units.
 - Unit numbers #1 - #3 - #4 - #5 - #6
- Install (5) factory directed CDI curb adapters.
- Install Trane manufacture Hail guards on each of the new units.
- Install (1) manufacture power exhaust on unit #6.
- Install (1) new Semco ERV on unit #5.
 - New unit will be set on proper roof supports for a rubber roof.
 - Ductwork will be manufactured & installed to go from the unit to the RTU.
- Install new condensate trap.
- Reconnect Carriers controls onto the new package roof top units.
- Startup and verify proper operation of the unit.
- Installation labor
- Crane rental & city permits.
- HVAC permit fees
- One year parts and labor warranty
- Manufactures warranty

COST OF INSTALLATION \$59,799.00 *

***Terms & Conditions:**

- **This price does NOT include: Electrical.**
- **For the multi- unit bundle we will replace the unit in two crane picks**
 - **Pick #1 would be the replacing of all (3) units on the upper roof.**
 - **Pick #2 would be the replacing of the remaining (3) units on the lower roof.**
- Work to be performed during normal business hours of Monday-Friday 7:30am to 4:00pm
- The pricing provided is valid for 30 Days.
- Terms are net 30 days.
 - After which finance charges will be applied.
- According to the state of Wisconsin statutes, chapter 779.01 we retain the right to file a lien if payment is not received as noted above.
- This price reflects the Harker cash or check discount.
 - If credit card is to be used add 3.5% on to cost.

Authorization Signature

Date

Brian Hoffman Director of Commercial Service Accounts

Trane:

Performance Features

- Gas efficiencies up to 82%
- Innovative non-corrosive composite condensate pan
- Solid-state control for on-board diagnostics with LED error code
- Burner control logic and energy saving indoor fan motor delay
- Tubular heat exchanger with stainless steel burners
- Pre-painted exterior panels and primer-coated interior panels

Maintenance Features

- Control terminal board facilitating simple safety circuit troubleshooting
- Access panels with easy grip handles
- Two-inch disposable return air filters
- Scroll compressors with internal line-break overload protection
- 24-volt control circuit protected with resettable circuit breaker
- Low pressure and high-pressure switch protection
- Anti-cycle protection for gas heat operation
- Solid-state electronic direct spark ignition system and flame roll-out safety protector

Standard Limited Warranty

- 5 years parts only heat exchanger - aluminized
- 5 years parts only compressor
- 1 year parts only on all other parts





Heating & Cooling, Inc.

87 W. Beltline Hwy. • Madison, WI 53713
(608) 255-6902 • Fax (608) 255-2001

WHEN SHOULD YOU PLAN FOR YOUR REPLACEMENT COSTS?

Equipment Type	Years	Equipment Type	Years
Air Conditioning Units		Coils	
Window Units	10	DX, Water, or Steam	20
Residential Units	15	Electric	15
Commercial Through the Wall	15	Heat Exchangers	
Computer Room Units	15	Shell-and-Tube	24
Water-Cooled Package	15	Reciprocating Compressors	20
Heat Pumps		Package Chillers	
Residential Air-to-Air	10	Reciprocating	20
Commercial Air-to-Air	15	Centrifugal	23
Commercial Water-to-Air	19	Absorption	23
Rooftop Air Conditioners		Cooling Towers	
Single-zone	15	Galvanized Metal	20
Multi-zone	15	Wood	20
Boilers, Hot Water (Steam)		Ceramic	34
Steel Water-Tube	24(30)	Air-Cooled Condensers	20
Steel Fire-Tube	25(25)	Evaporative Condensers	20
Cast Iron	35(30)	Insulation	
Electric	15	Molded	20
Burners	21	Blanket	24
Furnaces		Pumps	
Gas or Oil-Fired	18	Base-Mounted	20
Unit Heaters		Pipe-Mounted	10
Gas or Electric	13	Sump and Well	10
Hot Water or Steam	20	Condensate	15
Radiant Heaters		Reciprocating Engines	20
Electric	10	Steam Turbines	30
Hot Water or Steam	25	Electric Motors	18
Air Terminals		Motor Starters	17
Diffusers, Grills, and Registers	27	Electric Transformers	30
Induction and Fan-coil units	20	Controls	
Air-Washers	17	Pneumatic	20
Duct Work	30	Electric, or Electronic	15

Please Note:

Per the U.S. Environmental Protection Agency, R22 refrigerant will no longer be manufactured or imported into the United States on January 1, 2020.

Government regulations have also restricted the amount of R22 refrigerant that can be produced until the deadline.

Why is the price of R-22 increasing?

In short, R-22 is becoming scarce because the U.S. has agreed to phase out the production, import, and use of this refrigerant because of its damaging effect on the ozone layer. This has driven up the price and will continue to do so. By the year 2020, this refrigerant will no longer be imported or produced.

Why should you care?

If your air conditioner uses R-22 refrigerant and the refrigerant leaks, it will be expensive to recharge the system. In the very near future, it will likely become either cost-prohibitive or downright impossible. Manufacturers are also rationing the amount of R-22 refrigerant being sold to HVAC contractors.

R22 vs. R410a Refrigerant: Which is Better?

So, the government wants us to shift away from R22 refrigerant. But laws aside, which of the two refrigerant options is a better option?

R22 refrigerant:

- As of 2010 is no longer allowed to be used in newly-manufactured air conditioners.
- Contributes to the depletion of the ozone layer.
- Is less capable of absorbing and releasing heat than R410a refrigerant, making it less energy efficient.
- Is becoming more and more expensive as its use is phased out.

R410a refrigerant:

- Is approved for use in all newly-manufactured air conditioners.
- Does not contribute to the depletion of the ozone layer.

Jim Hessling

Subject: FW: revised quote
Attachments: Village of McFarland replacement of 5 rooftop units Revised 2 25 2020.doc

From: Debbie Wuksinich <DWuksinich@allcomfortservices.com>

Sent: Monday, February 24, 2020 3:29 PM

To: Jim Hessling <Jim.Hessling@mcfarland.wi.us>

Subject: RE: revised quote

Jim,

Attached is a two page proposal with the addition of the SEMCO for unit #5.

Also, included are options of adding the power exhaust for unit #3 and hail guards for all 5 units.

Feel free to contact me with any questions that you may have.

Best regards,

Debbie Wuksinich

System Consultant

All Comfort Services

Tel: 608.838.7300

Fax: 608.838 4312

www.allcomfortservices.com

From: Jim Hessling [<mailto:Jim.Hessling@mcfarland.wi.us>]

Sent: Monday, February 24, 2020 12:52 PM

To: Debbie Wuksinich

Subject: RE: 1 of 5

Debbie,

Thanks for the reply.

Yes please add the power exhaust as an option along with hail gaurds.

Jim

Jim Hessling | Director of Public Works | Village of McFarland | 5115 Terminal Drive | McFarland, WI 53558 |
| 608-838-7287 | jim.hessling@mcfarland.wi.us | Proud member of the WI American Public Works Association

From: Debbie Wuksinich <DWuksinich@allcomfortservices.com>

Sent: Monday, February 24, 2020 12:43 PM

To: Jim Hessling <Jim.Hessling@mcfarland.wi.us>

Subject: RE: 1 of 5

Hi Jim,

I did receive the email.

I will send you an updated quote with the addition of the SEMCO unit for RTU # 5 along with options to add the hail guards.

On unit #3, you had asked about the additional hood. This is a power exhaust which Jim Brander said has not worked in years. Do you want me to include an option to add that as well?

The new rooftop units would be adaptable to have the controls but would be set up by whoever your EMBASSY control company is.

Best regards,

Debbie Wuksinich

System Consultant

All Comfort Services

Tel: 608.838.7300
Fax: 608.838.4312
www.allcomfortservices.com

From: Jim Hessling [<mailto:Jim.Hessling@mcfarland.wi.us>]

Sent: Monday, February 24, 2020 12:39 PM

To: Debbie Wuksinich

Subject: 1 of 5

Hi Debbie,

Checking in to see if you received this e-mail. I will send additional pic under separate e-mails so they go thru.

1 of 5

Thanks and I look forward to your reply.

Jim

Jim Hessling | Director of Public Works | Village of McFarland | 5115 Terminal Drive | McFarland, WI 53558 |
608-838-7287 | jim.hessling@mcfarland.wi.us | Proud member of the WI American Public Works Association

From: Jim Hessling

Sent: Monday, February 17, 2020 2:13 PM

To: Debbie Wuksinich <DWuksinich@allcomfortservices.com>

Cc: Jim Hessling <Jim.Hessling@mcfarland.wi.us>

Subject: RE: per your request

Hi Debbie,

Thanks for the quote.

I'm surprised with the increase in the cost per unit as All Comfort is our primary heating/cooling contractor. Other vendors honor the original quote unless the scope of work has changed.

On the proposal I'm wondering about the following-

Are hail guards included with all of the units

Are new condensate traps include with all of the units

What does it mean "Connecting of the controls is not included; to be done by others"? How would the units operation be verified and tested if the controls are not hooked up by All Comfort?

On the attached photo does replacement unit #5 include the SEMCO unit and additional hoods/tin work as shown?

On the attached photo does replacement unit #3 include the additional hoods/tin work as shown?

Thanks for help with this matter. I hope to hear from you soon,

Jim

Jim Hessling | Director of Public Works | Village of McFarland | 5115 Terminal Drive | McFarland, WI 53558 |
608-838-7287 | jim.hessling@mcfarland.wi.us | Proud member of the WI American Public Works Association

From: Debbie Wuksinich <DWuksinich@allcomfortservices.com>

Sent: Tuesday, February 11, 2020 11:20 AM

To: Jim Hessling <Jim.Hessling@mcfarland.wi.us>

Subject: RE: per your request

Hello Jim,

Thank you for the update.

The previous quote was a very competitive to keep our guys busy during the slow time of the year. Under the circumstances, we would not be able to order the RTU's until the end of March. With the 4 week lead time, the units would not arrive until the end of April.

However we value your business, so wanted to give you the best price possible. Attached is a revised quote with only \$200.00 more per rooftop unit which is still competitive for this time of year.

Also, keep in mind that the process will be over a 2 day period. You will be without heating/cooling during the install. We would replace 3 units first, then if all goes according to plan, the other 2 units the next day.

At your convenience look over the paperwork and feel free to contact me with any questions that you may have.

Best regards,
Debbie Wuksinich
System Consultant
All Comfort Services
Tel: 608.838.7300
Fax: 608.838 4312
www.allcomfortservices.com

From: Jim Hessling [<mailto:Jim.Hessling@mcfarland.wi.us>]

Sent: Monday, February 10, 2020 9:28 AM

To: Debbie Wuksinich

Cc: Jim Hessling

Subject: RE: per your request

Hi Debbie,

Thanks for the proposal. Our February meeting to discuss this proposal was cancelled. At this time we are scheduled to meet March 10Th. After that meeting the proposal has to go to the Village Board for final approval which is on March 23. We will have hopefully have approval at that meeting. In the proposal it states that the work is anticipated to be completed in March. Does this affect any pricing and such? Will you extend this pricing until March 30th and if so can we get that extension in writing?

Hope to hear from you soon,

Jim

Jim Hessling | Director of Public Works | Village of McFarland | 5115 Terminal Drive | McFarland, WI 53558 |
| 608-838-7287 | jim.hessling@mcfarland.wi.us | Proud member of the WI American Public Works Association

From: Debbie Wuksinich <DWuksinich@allcomfortservices.com>

Sent: Tuesday, January 28, 2020 10:04 AM

To: Jim Hessling <Jim.Hessling@mcfarland.wi.us>

Subject: per your request

Good morning Jim,

Per your request, attached is a quote to replace 5 rooftop units.

At your convenience look over the quote and if satisfactory, sign, date, and return to me. As soon as we receive written authorization with ½ down, we will order the equipment.

Please keep in mind that it takes up to 4 weeks delivery time of the rooftop units.

Feel free to contact me with any questions that you may have.

Best regards,

Debbie Wuksinich
System Consultant
All Comfort Services
Tel: 608.838.7300
Fax: 608.838 4312



PROPOSAL SUBMITTED TO: VILLAGE OF MCFARLAND MUNICIPAL BLDG	PHONE: 608-838-7287	Page 1 of 2 2/25/2020
STREET 5915 MILWAUKEE ST	FAX #:	JOB PHONE:
CITY, STATE, ZIP: MCFARLAND WI	JOB DESCRIPTION: REPLACE 5 ROOFTOP UNITS	
ATTN: JIM HESSLING Jim.hessling@mcfarland.wi.us	JOB LOCATION:	

Purchase and Installation of 5 Rooftop Unit, Economizers, and Curb Adaptors

- 2) Trane 4 ton Cooling Only Rooftop Units
- 2) Trane 5 ton Cooling Only Rooftop Units
- 1) Trane 10 ton Cooling Only Rooftop Unit
- 1) SEMCO unit for Rooftop Unit # 5
- Traps included
- Removal and proper disposal of existing units
- thermostats
- Labor
- Crane rental (1 lift for upper lift units and 1 lift for lower roof units)
- Permit and Applicable tax
- 5 year compressor and 1 year labor warranty
- Includes electrical wiring of rooftop units and new disconnects

	\$74,724.00
All Comfort 5 rooftop units discount	<u>6,000.00</u>
	\$68,724.00

- ❖ Quote does not include code violations from existing installs
- ❖ All Comfort will confirm BACnet or LON communication interface before ordering RTU
- ❖ Connecting of controls is not included; to be done by others
- ❖ Quote does not include changes at electrical panel if needed
- ❖ All 5 rooftop units will be replaced at once; 3 one day and 2 another day
- ❖ Quote contingent on down payment and quote acceptance received by 3/30; so RTU can be ordered and work can be done by May 12th 2020
- ❖ Lead time of RTU is 4 weeks.

OPTIONAL

- ❖ Power Exhaust for RTU # 3.....\$1,879.00
- ❖ Hail Guards for 5 RTU's\$2,680.00



Village of McFarland Replace 5 Rooftop Units Quote

Page 2 of 2

PAYMENT TO BE MADE AS FOLLOWS:

½ down; balance due net 20 days upon receipt of invoice

All material is guaranteed to be as specified. All work is to be completed in a professional manner according to standard practices. Any alteration or deviation from stated specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Worker's Compensation Insurance.

ACCEPTANCE OF PROPOSAL – The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work specified, Payment will be made as outlined above

Date of Acceptance: _____

Authorized **Debbie Wuksinich**
Signature _____

Note: This proposal may be
withdrawn by us if not accepted within ____14____ days.

Signature _____

Signature _____



VILLAGE BOARD SUMMARY SHEET

MEETING DATE: Tuesday, March 10, 2020

SECTION: Business

DEPARTMENT: Public Works

CONTACT: Jim Hessling, Public Works Director

AGENDA ITEM: Discussion and action to make a recommendation to the Village Board regarding the proposal for 2020 Crackseal and Chipseal street maintenance.

PREVIOUS ACTION:

ISSUE SUMMARY:

Annually the Village conducts cracksealing and chipseal work in order to maintain and extend the life of our streets. This type of work is common practice in municipalities. Enclosed in your packet is a proposal from Fahrner Asphalt Sealers for the 2020 work to be conducted on identified streets. Funds for this work have been allocated in the 2020 budget.

Fahrner Asphalt, the proposal provider, has been in business since 1979 and has worked in the village in the past. They are a reputable and well respected company.

FINANCIAL/BUDGET IMPACT:

VILLAGE PLAN REFERENCE:

ORDINANCE REFERENCE:

None.

BOARD, COMMISSION OR COMMITTEE RECOMMENDATION:

Presented for approval.

ATTACHMENTS:

1. Crackseal and Chipseal Proposal 2020 Fahrner

PROPOSAL / CONTRACT

Job. No. _____

Date: March 02, 2020

PLOVER, WI 54467
2800 Mecca Drive
Ph.: 715.341.2868
Fax: 715.341.1054

WAUNAKEE, WI 53597
316 Raemisch Road
Ph.: 608.849.6466
Fax: 608.849.6470

KAUKAUNA, WI 54130
860 Eastline Road
Ph.: 920.759.1008
Fax: 920.759.1019

EAU CLAIRE, WI 54703
6615 U.S. Hwy 12 W
Ph.: 715.874.6070
Fax: 715.874.6717



Pavement Maintenance Contractors

EEO/AA Employer

CORPORATE OFFICE: 1.800.332.3360

FREDERIC, WI 54637
3468 115th Street
Ph.: 715.653.2535
Fax: 715.653.2553

SAGINAW, MI 48601
2224 Veterans Memorial Pkwy
Ph.: 989.752.9200
Fax: 989.752.9205

DUBUQUE, IA 52002
7680 Commerce Park
Section C
Ph.: 563.556.6231
Fax: 563.588.1240

OAKDALE, MN 55128
7500 Hudson Blvd., Ste. 305
Ph.: 651.340.6212
Fax: 651.340.6221

Contact Name: **Jim Hessling**

Contract Price

\$98,356.00

PURCHASER: **VILLAGE OF MCFARLAND**

TELEPHONE: **(608) 838-7287**

ADDRESS: **5115 TERMINAL DR
MC FARLAND, WI 53558**

DESCRIPTION OF PROPERTY:

**2020 Street Maintenance
5155 Terminal Dr.
McFarland, WI 53558**

1. FAHRNER Asphalt Sealers, L.L.C. (CONTRACTOR) and PURCHASER agree that, CONTRACTOR shall furnish the labor and materials to complete certain construction in accordance with the following specifications:

2020 Crackseal & Chipseal Proposal

Rout out cracks to a 3/4 x 3/4 ratio width versus depth. Blow out and clean cracks with compressed air and heat lance. Seal cracks with a rubberized asphalt crack sealant. This material exceeds Fed Spec ASTM D6690 Type II.

Thoroughly clean the existing surface with a self propelled broom. Apply 170 degree emulsified asphalt by full-width spray distributor. Apply cover aggregate and spread uniformly over surface with full-width self propelled chip spreader. Roll with pneumatic-tired roller.

Emulsion - CRS2-P Polymer Modified
Aggregate - FA2 Fractured Granite
Sweeping - Included

****See Attached List of Roads and Specifications**

This proposal may be withdrawn if not accepted and received by CONTRACTOR within 30 days of the date above and/ or at any time before performance of the work hereunder upon CONTRACTOR'S determination that the PURCHASER is not creditworthy.

2. If proposal is accepted please sign, retain one copy and forward a copy to our office.
3. The undersigned ("PURCHASER") agrees to pay CONTRACTOR the total price of **\$98,356.00** and/or the unit prices specified above for the labor and materials specified above which payment shall be due upon completion of each stage of work.
PURCHASER acknowledges that the specifications, conditions and price quotes specified above are satisfactory and hereby accepted.

Acceptance of this Proposal includes acceptance of all the terms and conditions on back.

CONTRACTOR:

Fahrner Asphalt Sealers, LLC:608-280-1452
mike.jenquin@fahrnerasphalt.com

PURCHASER:

I have read and understand the terms and conditions on both sides of this contract.

Mike Jenquin

(PRINT OR TYPE NAME)

By:

M. Jenquin

(CONTRACTOR REPRESENTATIVE)

By:

(PURCHASER AUTHORIZED REPRESENTATIVE)

Date: March 02, 2020

Date of acceptance: _____

TERMS AND CONDITIONS

NOTICE OF LIEN RIGHTS

AS REQUIRED BY THE WISCONSIN CONSTRUCTION LIEN LAWS, CONTRACTOR HEREBY NOTIFIES OWNER THAT PERSONS OR COMPANIES FURNISHING LABOR OR MATERIALS FOR THE CONSTRUCTION ON OWNER'S LAND MAY HAVE LIEN RIGHTS ON OWNER'S LAND AND BUILDING IF NOT PAID. THOSE ENTITLED TO LIEN RIGHTS, IN ADDITION TO THE UNDERSIGNED CONTRACTOR, ARE THOSE WHO CONTRACT DIRECTLY WITH THE OWNER OR THOSE WHO GIVE THE OWNER NOTICE WITHIN SIXTY (60) DAYS AFTER THEY FIRST FURNISH LABOR OR MATERIALS FOR THE CONSTRUCTION. ACCORDINGLY, OWNER PROBABLY WILL RECEIVE NOTICES FROM THOSE WHO FURNISH LABOR OR MATERIALS FOR THE CONSTRUCTION, AND SHOULD GIVE A COPY OF EACH NOTICE RECEIVED TO THE MORTGAGE LENDER, IF ANY. CONTRACTOR AGREES TO COOPERATE WITH THE OWNER AND THE OWNER'S LENDER, IF ANY, TO SEE THAT ALL POTENTIAL LIEN CLAIMS ARE DULY PAID.

ACCEPTANCE OF WORK

All labor and material is conclusively accepted as satisfactory unless excepted to in writing within seven (7) days of performance.

EXTRA WORK

All alterations or deviations from any of the terms of this contract shall be in writing and executed by the parties hereto. Any extra cost involved therein will become an extra charge to be paid by PURCHASER over and above the contract price.

PURCHASER'S RESPONSIBILITIES

PURCHASER acknowledges and understands that it shall be responsible for obtaining any and all permits which may be required in connection with performance of this Proposal/Contract. Where applicable, PURCHASER shall also be responsible for backfilling areas that border along the newly paved surface with appropriate material to eliminate potential cracking and uneven surface at the edge of the paved surface and for installing, replacing, maintaining and repairing shoulders. PURCHASER assumes all liability for any damages done to underground utilities and/or structures unless CONTRACTOR has been notified, upon acceptance of this Proposal, as to the specific location and depth of any such buried utility/structures.

Unless exempt, in accepting this Proposal/Contract, PURCHASER acknowledges that it shall comply with the requirements of all applicable federal, state, and local employment laws, executive orders, codes and regulations (the "Requirements") effective where the work and/or services are being performed including, but not limited to, 41 CFR §§ 60-1.4(a)(1)-(8), 60-1.4(b), 60-1.4(c) or their successors effective where this Proposal/Contract is performed. To the extent required by law, all provisions of the Requirements are hereby incorporated into and made a part of this Agreement and any applicable agreements of CONTRACTOR. To the extent applicable, the Requirements include, but are not limited to, (1) prohibition of discrimination because of protected veteran status, disability, race, color, religion, sex, sexual orientation, gender identity, national origin and because of inquiry or discussion about or disclosure of compensation, (2) affirmative action to employ and advance in employment individuals without regard to race, sex, disability, or protected veteran status, (3) compliance with the Employee Notice clause contained in 29 C.F.R. part 471, Appendix A to Subpart A, or its successors, (4) compliance with the EEO-1 and VETS-4212 reports filing requirements in 41 C.F.R. §§ 60-1.7 and 41 C.F.R. §61-300.10, or their successors, (5) compliance with paycheck transparency obligations of 48 C.F.R. § 22.2005, including the contract clause found at 48 C.F.R. § 52.222-60, which is incorporated by reference as if fully set forth herein, (6) other affirmative action in employment, (7) required/certified payrolls, (8) social security acts, (9) unemployment compensation acts, (10) worker's compensation acts, (11) equal employment opportunity acts and (12) the required contract provisions for Federal-Aid Construction Contracts, Form FHWA-1273, if applicable.

When applicable, PURCHASER and CONTRACTOR shall abide by the requirements of 41 CFR 60-300.5(a). This regulation prohibits discrimination against qualified protected veterans, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified protected veterans. When applicable, PURCHASER and CONTRACTOR shall abide by the requirements of 41 CFR 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability, and requires affirmative action covered by prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.

INCLEMENT WEATHER

Inclement weather may alter the completion of the work to be furnished hereunder. Furthermore, special consideration should be given if work is to be performed before May 1 or after October 15 in light of less than desirable weather conditions which could potentially impair the quality of the work performed hereunder.

WARRANTY

All material is guaranteed to be as specified and all work is to be completed in a workmanlike manner according to standard practices. All labor and materials will be guaranteed against defect for one (1) year from date of installation. Due to Wisconsin winters and expansion and contraction of the ground, some cracking of the pavement may be experienced. There are no express or implied warranties of merchantability, quality, quantity or of fitness for any particular purpose, which extend beyond those specifically set out in this document.

All warranties are void if payment is not made as stipulated.

DELINQUENCY CHARGE

Payment is due and payable upon completion of each stage of the work. If PURCHASER defaults on the payment required, PURCHASER will be liable for all costs of collection, including reasonable attorney's fees, and a delinquency charge on the balance at the maximum rates allowed by law. If PURCHASER is an organization as defined by Wis. Statutes, Section 421.301(28), the Delinquency Charge rate shall be 1.5% per month (18% APR) plus all costs of collection, including reasonable attorney's fees. CONTRACTOR retains title to all merchandise covered by this Agreement until full payment is received according to the above terms of sale. PURCHASER consents in any action or legal proceeding relating to this Contract commenced by the CONTRACTOR to the personal jurisdiction of any court that is either a court of record in the State of Wisconsin or a court of the United States located in the State of Wisconsin. It is hereby agreed that no legal action with respect to this contract may be brought by either party later than one (1) year after the cause of action accrues and that the party asserting such a legal action shall be barred from any remedy thereto.

INDIVIDUAL LIABILITY

The undersigned PURCHASER agrees to be individually liable for all terms of the Agreement, regardless of whether he or she signs individually or as an agent for the owner of the property upon which the work is being performed or for any other individual, partnership or corporation.

PRODUCT INFORMATION AND MAINTENANCE

Since the asphalt in blacktop needs time to harden and cure, usually 6-12 months, your asphalt pavement will remain soft and pliable during warm weather. During this time, don't park in the same spot every time and do not turn your steering wheel back and forth when your car is not moving. It is not unusual to experience some cracking over the winter due to the contraction and expansion of the ground, especially over culverts, pipes, electric wires, etc. Avoid gasoline and petroleum product spills as they will destroy your pavement. If spills do occur, immediately flush with lots of soapy water. If you decide to seal coat your pavement, wait until the summer following installation.

BINDING EFFECT

This Agreement shall be binding upon the parties hereto, their heirs, personal representatives, successors and assigns.

ENTIRE AGREEMENT

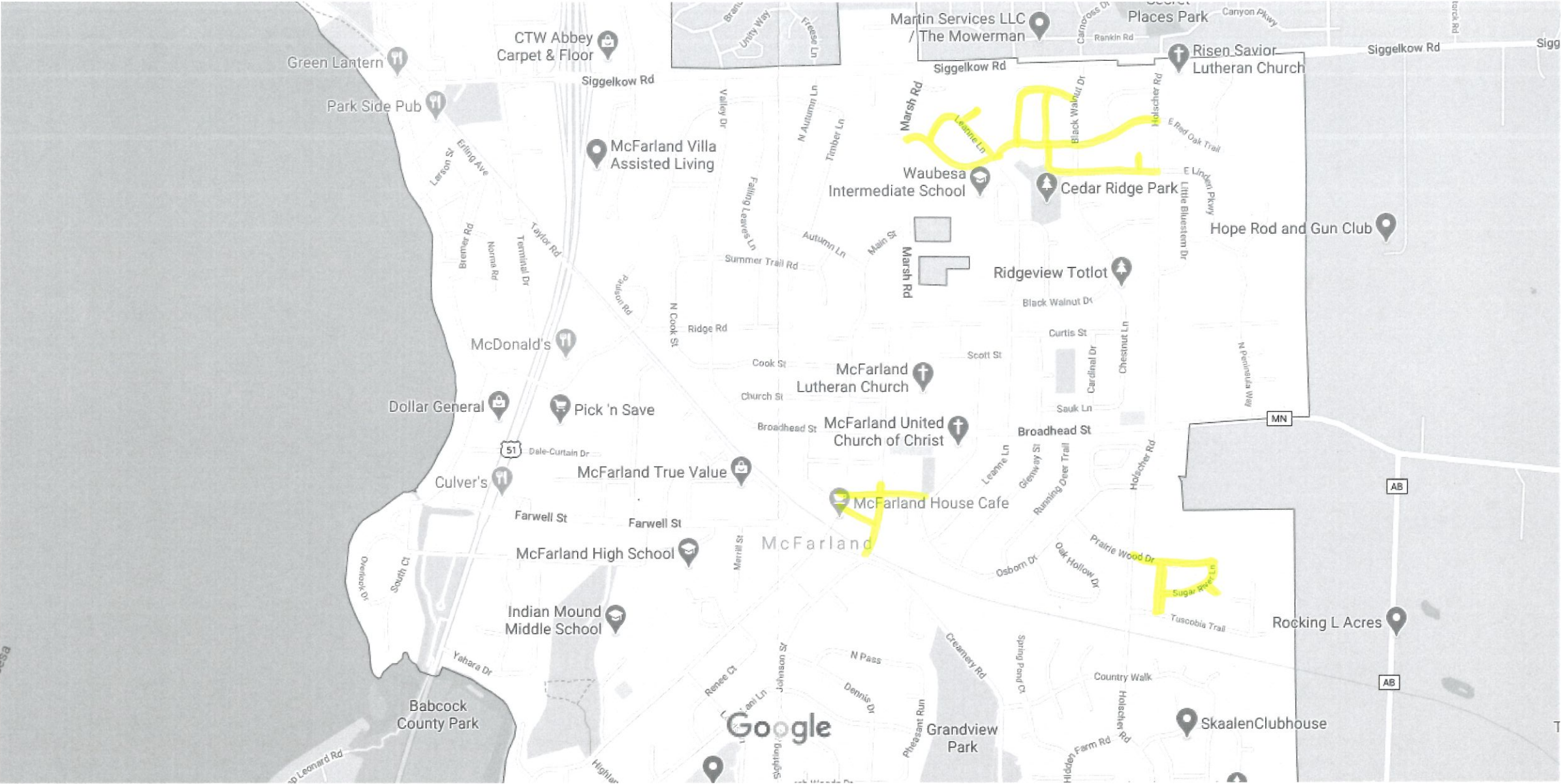
The entire contract is embodied in this writing. This writing constitutes the final expression of the party's agreement, and is a complete and exclusive statement of that agreement. In the event that any term of this contract is unenforceable, the remaining terms of the contract shall still be in full force and effect.

Village of McFarland						
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Road Maintenance 2020 - Specifications Attached

[illegible]

Google Maps McFarland



Map data ©2020 Google 1000 ft

Specifications

Joint and Crack Sealant

Scope of Work

This work shall consist of furnishing all materials, equipment and labor necessary for the application of the Hot Pour Rubberized Joint Sealant as directed.

Description

The work shall consist of routing, cleaning, and sealing of random cracks and existing transverse and longitudinal joints.

Material

A. The material used must be a premium quality Rubber Asphalt joint Sealer. The sealer must **exceed the minimum ASTM D 6690 specification** for Hot Pour Rubber Asphalt Joint Sealants and contain a minimum of 38% rubber content.

B. The Sealant shall be in manufacturer's original sealed containers. Each container shall have the manufacturer's name, batch number, and manufacturer's recommendation for melting and application.

Equipment

A. A minimum of two dustless routers will be required, the routers must be a minimum of 24 H.P. using star wheel carbide tipped router blades attached to a main cutting head. It must have in-line wheels and cutting head capable of following random cracks. It must have an automatic depth control to insure consistent and accurate routing depths.

B. Two (2) air compressors will be required. They must be of sufficient size to maintain air pressure of 120 PSI and provide moisture and oil free compressed air. One (1) compressor shall be used with an air wand to blow out the crack and clean off the road. The second shall be used with the heat lance. Note that one compressor is not of sufficient size to run both air wand and heat lance at the same time.

C. The kettle used for heating the sealant must be an oil jacketed double boiler type melting unit, which is, equipped with both agitation and recirculation systems. It must have separate temperature thermometers for both the oil bath and melting vat to insure proper temperature for the sealant. It must be equipped with a pump to pressure fill cracks with a wand applicator.

Construction Method

All cracks and joints must be routed to a minimum of a $\frac{3}{4}$ " x $\frac{3}{4}$ " width versus depth. Cracks shall be blown out with 120 PSI compressed air. The road surface shall also be blown off at this time to clear it of any routed debris. Using the second compressor the cracks shall be blown out using a heat lance. All cracks shall be pressure filled by a wand applicator from the bottom up. They shall be slightly over-filled and squeegeed to create an overband 1" wide on each side of the routed reservoir. The cracks will then be protected with single ply toilet paper or detach to prevent any material from tracking.

Traffic Control

This project shall be kept open to traffic at all times. The contractor shall conduct his operations in a manner that will cause the least interference to traffic movements. The minimum number of vehicles of the contractor, his suppliers and his employees necessary for the prosecution of the work shall be permitted to park at the various work sites for the minimum time necessary for the performance of the work.

During nighttime hours, no equipment shall be parked or stored with twelve (12) feet of the near edge of the shoulder of the traveled roadway unless approved by the local municipality. Equipment not being used during the actual performance of the work shall not be parked or stored within the right of way unless otherwise approved by the local municipality.

Insurance

No contractor shall commence work under this contract until he has obtained all insurance required under this paragraph.

Worker's Compensation and Employers' Liability

- A. \$100,000 each accident**
- B. \$500,000 Disease-Policy limit**
- C. \$100,000 Disease-each employee**

General Liability

- A. \$2,000,000 General aggregate**
- B. \$2,000,000 Products**
- C. \$1,000,000 Personal and Advertising**
- D. \$1,000,000 Each Occurrence**

Automobile Liability (Any Auto)

- A. \$1,000,000 Combined Single Limit**

Excess Liability

- A. \$4,000,000 Umbrella Form**

SPECIFICATION

BITUMINOUS SEAL COATING WITH FA2 WASHED CHIP COVER AGGREGATE

Scope of Work: This work shall consist of furnishing all materials, equipment, and labor necessary for the application of Bituminous Seal Coating as directed.

Description: The work shall consist of bituminous seal coating with stone cover aggregate. The work shall be done in accordance with Section 475, State of Wisconsin Department of Transportation "2017 Standard Specifications for Highway and Structure Construction" with the special provisions for aggregate below.

Materials: Materials furnished and used in the work shall conform to the requirements of Section 475. Aggregate must be a washed crushed granite stone classified as a Class A aggregate. Aggregate to be medium gray in color. Limestone, pea stone and boiler slag are not permitted.

A. Asphaltic Material Seal Coat.

Asphaltic material to be CRS-2P at the following:

Rate of application: 0.30 +/- .03 gallons/SY

Supplement 455.2.4.3 (1) of the standard specifications with the following:
Furnish material conforming, before dilution, to the following:

- I. Polymer Modified cationic emulsified asphalt..... AASHTO M 316

B. Cover Aggregate: The cover aggregate shall meet the requirements of The sieve specifications, and conform to the following sieve size.

Sieve Size	Percent Passing
½ inch	100 %
3/8 inch	100 %
¼ inch	100 %
No. 4	0- 100 %
No. 8	0 – 45 %
No. 16	0 – 15 %
No. 50	0 – 7 %
No. 100	0 – 4 %
No. 200	0 – 2 %

The aggregate shall be applied at the rate of 20 +/- 3 pounds per square yard. The Contractor shall take all precautions to minimize contamination of the aggregate.

Equipment: The contractor shall have available and maintain in good working order the equipment and tools necessary to perform the work. The requirements for the equipment for heating the asphaltic material and for the distributors shall be as set forth in subsection 475.3.4. The equipment to be used shall include dragging equipment and aggregate spreading equipment that can be adjusted to spread accurately the quantities specified per square yard, and a minimum of two self-propelled, pneumatic-tire rollers meeting the requirements of Subsection 475.3.5.

Construction Methods:

- A. Surface Preparations: Immediately prior to applying the asphaltic materials, the Contractor shall thoroughly clean the existing surface of all loose material, silt spots, vegetation, and other objectionable material. Dust and other loose material in depressions or other places not reached by mechanical sweepers shall be swept with hand brooms or by blowers or flushers. Particular care shall be taken to thoroughly clean the outer edges of the area to be sealed. All costs associated with preparing existing surfaces as described above shall be included in the bid price for Construct Chip Seal Surface.
- B. Applying Asphaltic Materials: A pressure distributor shall be used for applying the asphalt material. It shall have a ground speed control device interconnected with the asphalt emulsion pump such that specified application rate will be supplied at any speed. The pressure distributor shall be capable of maintaining the asphalt emulsion at the specified temperature. The spray bar nozzles shall produce a uniform fan spray, and the shutoff shall be instantaneous, with no dripping. Each pressure distributor shall be capable of maintaining the specified application rate. Means shall be provided for accurately indicating the temperature of the asphalt material at all times. The thermometer well shall not be in contact with a heating tube. Application will be with full width equipment capable of applying 24' without a center seam. A hose and spray nozzle attachment shall be provided for applying asphalt material to patches and areas inaccessible to the spray bar. The distributor shall be provided with heaters that can be used to bring the asphalt material to spray application temperature.
- C. Applying Sealcoat Aggregate: After application of the asphaltic material and when the desired stage of tackiness is attained, aggregate for seal coat cover shall be spread uniformly over the treated surface by approved self-propelled mechanical full width spreader capable of applying aggregate 24' without a seam.
- D. Rolling of Aggregate: Roll surface immediately after spreading the aggregate. Rolling shall start at the edges and continue to the center, lapping one-half the roller width on each successive trip. Rolling shall be accomplished with two pneumatic-tire rollers. The speed and reversing of direction of rollers shall be regulated as to avoid displacement or loosening of the cover material or damage to the asphaltic material. Rolling shall be continued until the aggregate for the seal coat cover is thoroughly embedded and the surface is smooth and uniform in texture.
- E. Loose aggregate to be swept 24 to 48 hours after application.

Traffic Control: The contractor shall proceed in such manner as to interfere with traffic as little as possible. The Contractor shall provide flagmen to direct traffic on streets where travel will be restricted.

Insurance: No Contractor shall commence work under this contract until he has obtained all insurance required under this paragraph.

Worker's Compensation and Employer's Liability

- A. \$100,000 each accident
- B. \$500,000 Disease-Policy limit
- C. \$100,000 Disease-each employee

General Liability

- A. \$2,000,000 General Aggregate
- B. \$2,000,000 Products
- C. \$1,000,000 Personal and Advertising
- D. \$1,000,000 Each Occurrence

Automobile Liability

- A. \$1,000,000 Combined Single Limit

Excess Liability

- A. \$4,000,000 Umbrella Form

Method of Payment: Payment for Construct Chip Seal Surface will be made per accepted square yard in place. The bid price for Constructing Chip Seal Surface shall include all costs associated with furnishing, preparing, hauling, mixing, and applying all materials.