Streets West Facility HVAC and Lighting Upgrade (BPW)

	Sheetlist
Sheet Number	Sheet Name
G 01	Cover
A 100	Site Plan
A 110	Exterior Elevations
A 200	Architectural
M 001	General HVAC
M 200	Garage
M 210	3D Garage
M 300	Schedules and Details
E 001	General Electrical
EL 001	General Lighting
EL 002	Demolition
EL 200	Garage
EL 210	Shops - Level 1
EL 220	Shops - Level 2
EL 300	Schedules and Details
EP 200	Power
EP 300	Schedules

A. General Conditions: All scheduled numbers and amounts of material and equipment are for contractor's convenience only. Contractor shall count and measure independently for bidding and ordering purposes. All scheduled numbers, lengths and other amounts may be incorrect and owner is not liable for mismatch. Notes applied to single items may apply to all like items on view. Before bidding, contractor shall familiarize with existing conditions, scope of work and means and methods required. Contractor shall inquire about any missing or apparently incomplete details and specifications 3. before bidding. Entire contract includes all specifications, plan sheets and other documents issued by owner. Bid documents don't intend to detail which subcontractor is responsible for what type of work. Any trade shall be 4. familiar with the entire contract. Division of work is responsibility of contractor. UTILITY CONNECTIONS: where work indicated includes installation of utilities (Gas, Power, Water, Sewer, Phone etc.) provide all the required work that normally is not done by the Utility. Contractor shall inquire with Utilities to learn about the Scope of the Utility's work. Drawing Conventions В. To be demolished items are shown in dashed line and/or colored. Some items necessary for removal may not be shown and removal is part of the contract. Count of devices. lengths, areas and volumes are given for convenience only. Actually required numbers may be different and contractor is responsible to determine the actual need prior bidding. Details will require items that will not be shown for every instance in the model. For example, a shut-off valve may be shown for a specific detail but the plans don't show this valve for every single instance - this valve will be required for each such device.

PROJECT DESCRIPTION: Α.

1. NA

F. EXISTING CONDITIONS:

G. EXISTING EQUIPMENT:

H. SPECIAL WARRANTIES:

1. NA

1. NA

1. NA O. ALTERNATES: 1. NA

NA

sensors.

PERMIT REQUIREMENTS:

CONTINUITY OF SERVICE:

NA N. SEQUENCING REQUIREMENTS:

PROVISIONS FOR FUTURE WORK

1. NA

1.

1

L. UTILITIES:

D.

Ε.

Ι.

J.

K.

М.

В.

SPECIAL SITE CONDITIONS

unless approved otherwise.

coordination and installation.

PROVISIONS FOR RETROFIT INSTALLATIONS

1. Contractor may use owner's power and water at no cost.

WORK PROVIDED BY OWNER (DON'T INCLUDE IN BID PRICE):

C. WORK HOURS Meet requirements of local ordinances, rules and laws.

Contractor is responsible to obtain all permits. See specifications for details.

Garage CO and NOx sensors already exist. Contractor can use XTG sensors and does not need to provide new

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Streets shop will fabricate and provide brackets for wall-fixture mounting. Contractor is responsible for Panel HD and HE (inc.luding feeders) will be provided and installed by owner

XTG conduit near new intake louver will be relocated by owner. EQUIPMENT PROVIDED BY OWNER (DON'T INCLUDE IN BID PRICE):

Hours of operation are limited to 7 a.m. to 7 p.m. Monday through Saturday and Sunday 10 a.m. through 7 p.m.



Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

Revisions

No. Description

_____ _____

_____ _____





G 01 Print Date: 1/4/2024 12:16:01 Print in color on 36" x 48"



1/4" = 1'-0"



Designed by: City of Madison Facilites Management City-County Building, Room 115 210 Martin Luther King Jr. Boulevard Madison, WI 53703

Client:

Streets Department

Location: 1501 W Badger Rd. WI 53713



Site Plan

A 100 Print Date: 1/4/2024 12:16:03 Print in color on 36" x 48"



	Keynote Legend
Key Value	Keynote Text
1	Demolish XTG Louver. Close opening with like material. Make watertight and paint to match surrounding.
2	Install new louvers weather-tight. Modify structure according to Structural Plans. Louver color shall match XTG wall.

	Louvers (08 91 00 - Louvers)														
	System	-								Free Air					
Mark	Name	Description	Manufacturer	Model	URL	Airflow	Depth	Height	Width	Velocity	Type Remark	Specific Remark			
EL-1	EF 1	Exhaust Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	0 CFM	0' - 6"	3'-0"	4'-0"	0 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall			
EL-2	EF 2	Exhaust Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	17550 CFM	0' - 6"	7'-6"	6'-6"	590 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall			
EL-3	EF 3	Exhaust Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	17550 CFM	0' - 6"	7'-6"	6'-6"	590 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall			
IL-1	MUA 1	Intake Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	35300 CFM	0' - 6"	16'-0"	13'-10"	228 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall			

1" = 20'-0"

FFFT

1" = 30'-0"



Client: Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)



Revisions

No. Description

Exterior Elevations





Bollards (3)	2 39 13 - Manufactured Met	al Bollards)		Keynote Legend
			Key Value	Keynote Text
Type Mark	Description	Count	1	Demolish Ceiling. Keep fans, sprinkler and other devices in place. Re-
B-8	Concrete-filled Steel bollard, yellow	8	0	function of those devices.
			2	location with staff on site. Repair slab.

General Notes: General Notes:
 Repair all openings and damages caused by removal of existing lighting fixtures, controls and wireways
 Cover all openings and repair wall and ceiling. Match texture to adjacent texture and paint type. Make the repair not obvious.
 Paint entire ceiling and wall that required above repair. Match the paint color of existing paint.
 New wire raceway (e.g. conduit) shall be painted to match surface color.
 Protect all surfaces and equipment.

0 2 4 6 8 10 2 0 2 4 6 8 10 12 14 5 1/4" = 1'-0" FEET

3/16" = 1'-0"

FEET

1/8" = 1'-0"

10 15 FEET

3/32" = 1'-0"

Re-attach to structure as required to ensure continued d replacement of all equipment. Coordiante exact

FEET

1/16" = 1'-0" FEET

1" = 20'-0"

30 35 40 45 20

20 FEET

1" = 30'-0"

FEET



Client: Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)



Revisions

No. Description

_____ _____

_____ _____

Architectural

A 200 Print Date: 1/4/2024 12:16:08 Print in color on 36" x 48"









2	MD -	Dem

C	lule										
		Exhai	ust								
	Fixtures req. Exhaust	Exhaust per Fixture	EA accumulated	Addl. Exhaust	EA Total	EA Garage Minimum	EA Garage excl. Minimum	Code Comment	Comment	Space Type	Include Space in Analysis
	·										· ·
										<building></building>	
										<building></building>	
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			0 CFM 0 CFM		0 CFM 0 CFM	0 CFM 0 CFM					
	0	0 CFM	37576 CFM	0 CFM	37576 CFM	2505 CFM	35071 CFM	Provide min. ventilation		<building></building>	Yes

37576 CFM 37576 CFM 2505 CFM 37576 CFM 37576 CFM
 37576 CFM
 2505 CFM

 37576 CFM
 2505 CFM

 37576 CFM
 2505 CFM

1" = 20'-0"

					8	7 6			
		Remove all MUA, fans, mot Remove louvers that are in Blank off XTG louvers. A Roof vent penetration will bu	tors and associated ductwork. way of new louvers.		 []			 	
[-]				= @;:	 		 	 	
<u> </u>				C _	 []			 	
Remove radiant hear supply to make roor Re-install combustion nearby location.	ater combustion air m for new louver. on air supply at								

nolition Level 1 - Garage 1/16" = 1'-0"

30 60 Review Set - Not for Construction M 01 FFT FT FT Price Set - Not for Construction Of the Set - Not for



Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

Project North TRUE

Revisions

No. Description

_____ _____

_____ _____ _____ _____ _____

General HVAC



1 M Ceiling - Level 1 - Garage 1" = 10'-0"



2 M Section - MUA 1 Discharge 1" = 10'-0" - M 200

4 6 8 10

FEET

1/4" = 1'-0"

2 0 2

3/16" = 1'-0"







All diffusers in 45°

_ L<u>eve</u>l 1<u>- Grade</u> +0"

FFFT

1/16" = 1'-0"

FEET

4 6 8 10 12 14

FEET

3/32" = 1'-0"





1" = 20'-0"



___Lev<u>el 1 - Grade</u>____

40

FEET

30

1" = 30'-0"



____Review Set - Not for Construction



Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

Revisions

No. Description

Project North TRUE

Garage

M 200 Print Date: 1/4/2024 12:16:12

Print in color on 36" x 48"

Keynote Legend
 Le
 Keynote Text

 Exhaust opening shall be 10' away from openings and 10' above grade.
 Insulate up to AHU/Fan/Control Damper.

 No insulation required.
 Bellmouth/Pyramidal Fitting into Plenum. Plenum in louver size.



1/4" = 1'-0"

3/16" = 1'-0"

1/8" = 1'-0"

3/32" = 1'-0'

1" = 20'-0"

1" = 30'-0"

	Direct-Fired Make Up Air Units (23 73 39 – Indoor Direct Gas-Fired Heating And Ventilation Units)																													
	System	1				Room					Burn	ner		External Static	Fan		Design Fan			Motor (each)		Brake		Ele	ctrical		Electrical Circuit	Weight	and Dimension	IS
Mark MUA 1	Name MUA 1	Manufacturer Greenheck www.gr	URL eenheck.com	Model DGX-P227-H	Room N H42 Garaç	ame Number ge 100	Filter 4in./MERV 8	Special no d	l Features Jamper	Fuel Natural 2,88 Gas	Input 4,300 Btu/h 2,	Output Efficiency 653,600 Btu/h 92%	Airflow 35100 CFM	Pressure (ESP) 0.75 in-wg	Fan 2x27" Plenum	FEI 1.18	RPM 1,831	Motor Ty TEFC, NEMA Efficiency, VFD	ype Premium) approved	Nomina 15	l Power hp	Horsepower 13.56 hp	Voltage 480 V	Poles 3	MCA 53.4 A	MOP F 60 A	PanelNumberHB2,4,6	Weight H 3,782 lbm	eight Width 5'-8" 8'-5"	Length 15'-11"
Type Mark BM D-D-15x36		Diffusers, F	Register	rs and (Grilles eck Size varies> 2"x15"	(23 37 0(Manufactur Price Indust	0 - Air (rer	URL WWW.priceindustr	I Inlets)	Model	Est. Count 3 8				directarive															
												Fans (23	3 34 0	0 - HVAC	C Fans)															
Mark System	Name	Description R	oom Name	Room Number	Manufacture	er URL		Model	Model adder	Airflow	Static Pressure	Fan Type	F	Fan Design Fan	n RPM Hor	Brake	FEI	Motor Type	r Nominal Power	Voltage Pole	Electr s Fi	ical	Apparent Power	Ci Panel Nu	rcuit mber W	/eight	Type Remar	c Sp	ecific Remark	
EF-1 EF	1 Ax	xial Fan w/ Vane Section xial Fan w/ Vane	Garage	100	Greenheck	www.greenh	heck.com	AXV-72	190-0405-A10 275-0615-C30	2600 CFM	0.50 in-wg	Direct Drive Axial w	/Vanes	871	0	.28 hp	2.12	TEFC	C 1 hp	480 V 3	2.	1 A	1746 VA	HA 6,	8,10 35 9.11 1.2	8 lbm		B	ellmouth Inlet	
EF-3 EF	3 Ax	Section xial Fan w/ Vane Section	Garage	100	Greenheck	www.greenh	heck.com	AXV-113	275-0615-C30	17550 CFM	0.50 in-wg	Direct Drive Axial w	Vanes	871	2	.13 hp	1.95	TEFC	C 3 hp	480 V 3	2.0	B A	2328 VA	HA 12,	14,16 1,2	24 lbm		B	ellmouth Inlet	
		Codaon																												
							(00	04.00																						
	Svetem				1	Louve	ers (08	91 00 - LOU	lvers)	Free Air																				
Mark EL-1	Name EF 1	Description Exhaust Louver, Rain	Mar proof Gr	nufacturer eenheck	Model ESD 635	URL www.greenhed	A ck.com 0	irflow Depth CFM 0' - 6"	Height Width 3'-0" 4'-0"	Velocity 0 FPM	T 3/4 in Aluminur	ype Remark m Screen exterior mounte	d Color	Specific Remark r Match White Wa	all															
EL-2 EL-3	EF 2 EF 3 MUA 1	Exhaust Louver, Rain Exhaust Louver, Rain	proof Groof Groof Groof Groof	eenheck eenheck eenbeck	ESD 635 ESD 635 ESD 635	www.greenhed	ck.com 175 ck.com 175 ck.com 353	50 CFM 0' - 6" 50 CFM 0' - 6"	7'-6" 6'-6" 7'-6" 6'-6" 16'-0" 13'-10"	590 FPM 590 FPM 228 FPM	3/4 in Aluminur 3/4 in Aluminur 3/4 in Aluminur	m Screen exterior mountee m Screen exterior mountee m Screen exterior mountee	d Color d Color d Color	r Match White Wa r Match White Wa r Match White Wa	all all															
					202 000						<u>, , , , , , , , , , , , , , , , , , , </u>			<u></u>																
		Air Flow M	eters (2	23 09 0	00 - Ins	trumenta	ation Ar	nd Control I	For HVAC)																					
Mark AFM-EF 1	A	Description Air Flow Meter - Round	System EF 1	Width 22"	Height 22"	Enclosure NEMA 1	e T	ype Remark	Spe	cific Remark		_																		
AFM-EF 2 AFM-EF 3	A	Air Flow Meter - Round Air Flow Meter - Round	EF 2 EF 3	44" 44"	44" 44"	NEMA 1 NEMA 1																								
AFM-MUA 1	Air F	Flow Meter - Rectangular	MUA 1	99"	66"	NEMA 1		Alte	ernatively use therma	al dispersion fan	-inlet flowstatio	ons																		
	Acces	s Doors (23 3	1 00 - I	HVAC I	Duct A	nd Casin	igs)																							
Type Mark		Descrip	tion		Width	Height	Est	Count																						
ADRE-24x24 ADRO-24x18	Re	ectangular Hinged Access Oval Access Door for	Door for Rect Round/Oval I	angular Duct Ducts	24"	24" 18"		4 4																						
Control	Cabir	nets (23 09 00	- Instru	umenta	ation Ar	nd Contro	ol For H	IVAC)																						
Roo Mark Num	om	Room Name		Type R	emark		Specit	fic Remark																						
CC-1 10 CC-2 10	0	Garage Garage	Provid Provid	le space for o le space for o	one spare cor	troller troller																								
CC-3 10 CC-4 10	0	Garage Garage	Provid Provid	le space for o le space for o	one spare cor one spare cor	troller troller																								
Co	ntrol I	Dampers (23	31 00 -	HVAC	Duct A	And Casir	ngs)																							
Mark CD-EF 2	System N EF 2	Name 2 Rectar	Descri gular Control	ption Damper - Ins	sulated	Width 44"	Heig 44	ght "																						
CD-EF 3	EF 3	3 Rectar	gular Control	Damper - Ins	sulated	44"	44																							
VFDs (23 09	00 - Instrume	entatior	And C	Control	For HVA	C)																							
Mark		Room Number Room	Name	D	Description	Encl	losure																							
VFD-MUA VFD-EF	1	100 Gara 100 Gara 100 Gara	ige ige	Variable Variable	e Frequency [e Frequency] e Frequency [Drive NEM Drive NEM Drive NEM	MA 4X MA 4X MA 4X																							
VFD-EF	2	100 Gara	ige	Variable	e Frequency [Drive NEW	MA 4X																							
							ars (NR	91 00 <u>- I o</u> u	Ivers)																					

	System									Free Air		
Mark	Name	Description	Manufacturer	Model	URL	Airflow	Depth	Height	Width	Velocity	Type Remark	Specific Remark
EL-1	EF 1	Exhaust Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	0 CFM	0' - 6"	3'-0"	4'-0"	0 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall
EL-2	EF 2	Exhaust Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	17550 CFM	0' - 6"	7'-6"	6'-6"	590 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall
EL-3	EF 3	Exhaust Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	17550 CFM	0' - 6"	7'-6"	6'-6"	590 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall
IL-1	MUA 1	Intake Louver, Rainproof	Greenheck	ESD 635	www.greenheck.com	35300 CFM	0' - 6"	16'-0"	13'-10"	228 FPM	3/4 in Aluminum Screen exterior mounted	Color Match White Wall
						~ ~ ~ ~ ~ ~		,				
					Louvers (08 91 00) - Lo	uvers)			
	System									Eroo Air		

 System
 System
 Manufacturer
 Model
 URL
 Airflow
 Depth
 Height
 Width
 Velocity
 Type Remark
 Specific Remark

 EL-1
 EF 1
 Exhaust Louver, Rainproof
 Greenheck
 ESD 635
 www.greenheck.com
 0 CFM
 0'-6"
 3'-0"
 4'-0"
 0 FPM
 3/4 in Aluminum Screen exterior mounted
 Color Match White Wall

 EL-2
 EF 2
 Exhaust Louver, Rainproof
 Greenheck
 ESD 635
 www.greenheck.com
 17550 CFM
 0'-6"
 7'-6"
 6'-6"
 590 FPM
 3/4 in Aluminum Screen exterior mounted
 Color Match White Wall

 EL-3
 EF 3
 Exhaust Louver, Rainproof
 Greenheck
 ESD 635
 www.greenheck.com
 17550 CFM
 0'-6"
 7'-6"
 6'-6"
 590 FPM
 3/4 in Aluminum Screen exterior mounted
 Color Match White Wall

 EL-3
 EF 3
 Exhaust Louver, Rainproof
 Greenheck
 ESD 635
 www.greenheck.com
 17550 CFM
 0'-6"
 7'-6"
 6'-6"
 590 FPM
 3/4 in Aluminum Screen exterior mounted
 Color Match White Wall

 IL-1
 MUA 1
 Intake Louver, Rainproof
 Greenheck
 ESD 635
 www.greenheck.com
 35300 CFM



(5) M Standard Control - Not to Scale

1/4" = 1'-0" FEET 3/16" = 1'-0" FEET 1/8" = 1'-0"

FEET

1/16" = 1'-0"

Ī



1" = 20'-0"

FEET

FEET

1" = 30'-0"

FEET



Designed by: City of Madison

Review Set - Not for Construction E 01 ^{1/2024 12:16:15}

	IECC 2015 Lighting Levels													
Space Number	Space Name	Area	Space Type	Workplane Height	Min. Required Avgerage Illumination	Actual Average Illumination	Illumination Goal	Max. Allowed Power Density IECC 2015	Actual Power Density	Actual Power Density compared to Code	Allowed Lighting Load	Actual Lighting Load	Space Lighting Load Contributing to Total Building Lighting Load	
100	Garage	50,101 ft ²	Parking Garage	0' - 0"	10 fc	14.9 fc	149%	0.21 W/ft ²	0.12 W/ft ²	57%	10,521 VA	5,961 VA	0.09 VA/ft ²	
101	Washbay	1,733 ft ²	Vehicular Maintenance	2' - 6"	30 fc	37.8 fc	126%	0.67 W/ft ²	0.57 W/ft ²	85%	1,161 VA	982 VA	0.01 VA/ft ²	
102	Fleet Shop	2,777 ft ²	Workshop	2' - 6"	40 fc	73.7 fc	184%	1.59 W/ft ²	0.75 W/ft ²	47%	4,415 VA	2,088 VA	0.03 VA/ft ²	
103	Storage	297 ft ²	Warehouse - small Items hand-carried	2' - 6"	30 fc	70.8 fc	236%	0.95 W/ft ²	1.18 W/ft ²	124%	282 VA	351 VA	0.01 VA/ft ²	
106	Storage	495 ft ²	Workshop	2' - 6"	40 fc	41.8 fc	105%	1.59 W/ft ²	0.48 W/ft ²	30%	787 VA	236 VA	0 VA/ft ²	
107	Fleet Office	186 ft ²	Office - enclosed	2' - 6"	40 fc	48.4 fc	121%	1.11 W/ft ²	0.55 W/ft ²	49%	207 VA	102 VA	0 VA/ft ²	
108	Bathroom	69 ft ²	Restroom - otherwise	2' - 6"	20 fc	33.4 fc	167%	0.98 W/ft ²	0.69 W/ft ²	71%	67 VA	48 VA	0 VA/ft ²	
109	Corridor	60 ft ²	Corridor - otherwise	1' - 0"	10 fc	14.7 fc	147%	0.66 W/ft ²	0.45 W/ft ²	68%	39 VA	27 VA	0 VA/ft ²	
110	Streets Office	363 ft ²	Office - enclosed	2' - 6"	40 fc	45.3 fc	113%	1.11 W/ft ²	0.43 W/ft ²	39%	403 VA	157 VA	0 VA/ft ²	
111	Streets Shop	4,010 ft ²	Workshop	2' - 6"	40 fc	54.9 fc	137%	1.59 W/ft ²	0.62 W/ft ²	39%	6,376 VA	2,471 VA	0.04 VA/ft ²	
112	Streets Storage	2,522 ft ²	Warehouse - small Items hand-carried	2' - 6"	30 fc	44.5 fc	148%	0.95 W/ft ²	0.54 W/ft ²	57%	2,396 VA	1,368 VA	0.02 VA/ft ²	
113	Stair	90 ft ²	Stairwell	0' - 0"	10 fc	14.3 fc	143%	0.69 W/ft ²	0.44 W/ft ²	64%	62 VA	40 VA	0 VA/ft ²	
200	Storage	2,653 ft ²	Warehouse - small Items hand-carried	2' - 6"	30 fc	32.8 fc	109%	0.95 W/ft ²	0.34 W/ft ²	36%	2,520 VA	909 VA	0.01 VA/ft ²	
201	Mechancial	140 ft ²	Electrical / Mechanical	2' - 6"	30 fc	36.1 fc	120%	0.95 W/ft ²	0.76 W/ft ²	80%	133 VA	107 VA	0 VA/ft ²	
202	Mezzanine	1,333 ft ²	Warehouse - small Items hand-carried	2' - 6"	30 fc	31.2 fc	104%	0.95 W/ft ²	0.33 W/ft ²	35%	1,266 VA	442 VA	0.01 VA/ft ²	
		66,828 ft ²									30,637 VA	15,288 VA	0.23 VA/ft ²	

(12)	(11)(10.9)	10	9	8	
 			Emergency Avg: 1 fc Emergency Min: 0.03 fc		
•					
[
•					•
•					•
				Emergency Avg: 2.1 fc Emergency Min: 0.13 fc	
		_→ c)•
I					
•					•
•			•		
•	•	••••			•
				Emergency Avg: 4.8 fc	
	Emergency Avg: 14.6 fc Emergency Min: 2.55 fc			Emergency Min: 4]25 fc	
	24 8 16				
	rgency Min.4				
+ ¥	Ë ٿ				
Emergency Avg: 13 Emergency Min: 0.3	3.2 fc 32 fc				
=					
U					
Emergency Avg: 9. Emergency Min: 0.5	Gency Arg				
	hergency Avg: 9.8 fc ergency Min: 3.57 fc				

1" = 20'-0"

1" = 30'-0"

Type Mark	Count	Emergency Luminaire	Real Power	Relays require
EC-2.1K-B	1	Yes	15 W	1
EW-1.2K-B	9	Yes	81 W	9
EX-AC	8	Yes	8 W	0
EX-AC-2	13	Yes	46 W	0
EX-AC-WL	2	Yes	5 W	0
P-2x2-2.0K	1	Yes	14 W	1
P-2x2-4.0K	1	Yes	28 W	1
SVT-2-2.0K-W	2	Yes	27 W	2
SVT-2-3.0K-P	1	Yes	20 W	1
SVT-4-4.0K-W	7	Yes	167 W	7
SVT-4-6.0K-M	1	Yes	38 W	1
SVT-8-9.0K-M	11	Yes	587 W	11
SVT-8-9.0K-W	8	Yes	427 W	8
SVT-8-12.0K-M	8	Yes	604 W	8
SVT-8-12.0K-W	6	Yes	453 W	6

Designed by: City of Madison

Facilites Management City-County Building, Room 115 210 Martin Luther King Jr. Boulevard Madison, WI 53703

Client

Location:

WI 53713

Contract: 9497

Project: 14121

Streets West

Facility HVAC and

Lighting Upgrade

(BPW)

Streets Department

1501 W Badger Rd.

(2) EL Level 2 - Emergency Lighting 3/32" = 1'-0"

Revisions

No. Description

_____ _____

_____ _____

General Lighting

EL 001 Print Date: 1/4/2024 12:16:16 Print in color on 36" x 48"

1) ED - Level 1 - Demolition 1/16" = 1'-0"

0	9	8		3	5	4	3
				E3			
 	- <u>E</u> 3		<u></u>		<u> </u>		
	E 3				23		
						E3	

1" = 20'-0"

(2)

30 60 FEET Review Set - Not for Construction Laboration FEET Review Set - Not for Construction I FEET Review Set - Not

Client: Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

Project North TRUE

Revisions

No. Description

_____ _____

Demolition

1 SUL - 2006 1/8" = 1'-0" HC - 10

(2) EL Elevation - Garage facing South 3/16" = 1'-0" - EL 200

0	2	4	6	8	10	2	0	2	4	6	8	10	12	14	5	0	5	10	15	20	5	0	5
4" = 1'-0"			F	EET		3/1	6" = 1	'-0"				FEE	T		1/8"	= 1'-0"			FEET		3/3	2" = 1'-0)"

0 SVT-8-9.0K-W	W-1.2K-B SVT-8- <u>9.0K-W</u>)				SVT-8 EX-AC-2
5 EL 200 SVT-8-12.0K-M HA - 3 FM-MH	EX-AC-2 ELI-1 ELI-1 ELI-1	SVT-8-12.0K-M HA-3 FM-MH	SVT-8-12.0K-M HA - 3 FM-MH	SVT-8-12.0K-M HA - 2 FM-MH	SVT-8-12.0K-M HA - 2 FM-MH	SVT-8-12.0K-M HA - 2 FM-MH
SVT-8-9.0K-M HA - 1 FM-MH	<u>SVT-8-9.0K-M</u> HA-3 FM-MH	SVT-8-9.0K-M HA - 3 FM-MH			SVT-8-9.0K-M HA-2 FM-MH	SVT-8-9.0K-M HA - 2FM-MH
SVT-8-9.0K-M HA - 1 FM-MH	SVT-8-9.0K-M HA - 3 FM-MH	SVT-8-9.0K-M HA-3 FM-MH	SVT-8-9.0K-M HA - 3 FM-MH	SVT-8-9.0K-M HA - 2 FM-MH	SVT-8-9.0K-M HA - 2 FM-MH	SVT-8-9.0K-M HA - 2 FM-MH
SVT-8-9.0K-M HA-1 FM-MH	Garage 100 50,101 ft² 0.12 W/ft² Illuminance: 15 fc	O SVT-8-9.0K-M	SVT-8-9.0K-M HA - 3 FM-MH	SVT-8-9.0K-M HA - 2 FM-MH	SVT-8-9.0K-M FM-MH	SVT-8-9.0K-M HA - 2 FM-MH
SVT-8-9.0K-M HB-3 FM-MH	SVT-8-9.0K-M HA-3 FM-MH	SVT-8-9.0K-M HA-4 FM-MH	SVT-8-9.0K-M HA - 4 FM-MH	SVT-8-9.0K-M HA - 4 FM-MH	SVT-8-9.0K-M HA - 4 FM-MH	SVT-8-9.0K-M HA-4
SVT-8-9.0K-M HB - 3 FM-MH	SVT-8-9.0K-M HA - 3 FM-MH	SVT-8-9.0K-M HA - 4 FM-MH	SVT-8-9.0K-M HA - 4 FM-MH	SVT-8-9.0K-M FM-MH	SVT-8-9.0K-M HA - 4 FM-MH	SVT-8-9.0K-M HA - 4 FM-MH
SVT-8-12.0K-M HB - 3 FM-MH	SVT-8-12.0K-M HA-3 FM-MH	SVT-8-12.0K-M FM-MH	SVT-8-12.0K-M HA - 4 FM-MH	SVT-8-12.0K-M HA - 4 FM-MH	SVT-8-12.0K-M HA - 4 FM-MH	SVT-8-12.0K-M HA - 4 FM-MH
	Э Э					

3 EL Elevation - Garage facing West 3/16" = 1'-0" - EL 200

FEET

1/16" = 1'-0"

1" = 20'-0"

FEET

40 30 1" = 30'-0"

<u>Beview Set - Not for Construction</u>

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

INO.	Description
I	

Revisions

Project North TRUE \bigcirc

Garage

EL 200 Print Date: 1/4/2024 12:16:19 Print in color on 36" x 48"

1/8" = 1'-0" 3/16" = 1'-0" 3/32" = 1'-0" 1/4" = 1'-0" FEET FEET FEET

FEET

1/16" = 1'-0" FEET

1" = 20'-0"

FEET

1" = 30'-0"

(2) EL Elevation - Fleet Shop facing East 3/16" = 1'-0"

 $\overline{(\mathbf{3})}$ EL Elevation - Fleet Shop facing North 3/16" = 1'-0" - EL 210

SVT-8-9.0K-W HE - 2

<u>Beview Set - Not for Construction</u>

Client: Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

	Revisions
No.	Description

Project North TRUE

Shops -Level 1

EL 210 Print Date: 1/4/2024 12:16:21 Print in color on 36" x 48"

2 El Elevation - Storage facing North 3/16" = 1'-0" - EL 210

3 EL Elevation - Storage facing West 3/16" = 1'-0" - EL 210

1/4" = 1'-0" FEET

3/16" = 1'-0"

1/8" = 1'-0"

3/32" = 1'-0'

1" = 20'-0"

FEET

40 30 1" = 30'-0"

 Key Value
 Keynote Text

 1
 Install all suspended fixtures at XTG height unless a different height is noted.

Keynote Legend

5 EL Elevation - Mezzanine facing East 3/16" = 1'-0"

Client: Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

Project North TRUE	
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Revisions

No. Description

_____ _____ _____

_____ _____

Shops -Level 2

					5 5		(5	57						
														Unified Glare	
		Est.			Apparent			Luminous	Color					Rating (highest	T D 1
l ype Mark	Description	Count	Model	URL	Power	Apparent Load	Real Power	Flux	Temperature	Luminous Flux	Efficacy	Lumen Maintenance	Environemntal Rating	value)	lype Remark
EC-2.1K-B	Exterior Canopy surface-mounted, Bronze	1	RAB VANLED-10-F	www.rablighting.com	16 VA	16 VA	15 W	2120 lm	5000 K	2120 lm	145 lm/W	L70 @ 100K hours	IP 66		Add Swivel Photocell (PCS/PCS2) if no other lighting control is scheduled
EW-1.2K-B	Exterior Wall, Bronze	9	RAB BRISK-S11L	www.rablighting.com	10 VA	9 VA	9 W	1212 lm	5000 K	1154 lm	128 lm/W	L80 @ 60K hours	IP 66		Add Photocell (PCU) If no other lighting control is scheduled
EX-AC	Exit Sign, no Battery	8	Lithonia LQM-S-W-3-G-120/277	www.acuitybrandslighting.com	1 VA	1 VA	1 W						Damp Location		
EX-AC-2	Exit Sign Triangular, 2-Face, no Battery	13	Big Beam TRXL-AC/LED-2-G-W	www.bigbeam.com	4 VA	4 VA	4 W								
EX-AC-WL	Exit Sign, no Battery, Wet Location	2	Lithonia WLTE-W-G	www.acuitybrandslighting.com	3 VA	3 VA	3 W						Wet Location		Select # of faces as required for location
P-2x2-2.0K	Panel 2x2	3	Lithonia SPX-2x2-2000LM-80CRI-40K-BFR-LUGR-ZT-MVOLT-WH	www.acuitybrands.com	16 VA	0 VA	14 W	2111 lm	4000 K	2111 lm	151 lm/W	L90 @ 50K hours	IPX5; NSF Splash Zone	16.1	
P-2x2-3.4K	Panel 2x2	7	Lithonia SPX-2x2-3400LM-80CRI-40K-BFR-LUGR-ZT-MVOLT-WH	www.acuitybrands.com	26 VA	0 VA	23 W	3438 lm	4000 K	3438 lm	149 lm/W	L90 @ 50K hours	IPX5; NSF Splash Zone	17.8	
P-2x2-4.0K	Panel 2x2	2	Lithonia SPX-2x2-4000LM-80CRI-40K-BFR-LUGR-ZT-MVOLT-WH	www.acuitybrands.com	31 VA	0 VA	28 W	4080 lm	4000 K	4080 lm	146 lm/W	L90 @ 50K hours	IPX5; NSF Splash Zone	18.4	
SVT-2-2.0K-W	Strip Light, Vapor-Tight, Wide Distribution	3	Lithonia FEM-L24-2000LM-LPACL-WD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	15 VA	0 VA	13 W	2251 lm	4000 K	2251 lm	168 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-2-3.0K-M	Strip Light, Vapor-Tight, Medium Distribution	1	Lithonia FEM-L24-3000LM-LPACL-MD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	22 VA	0 VA	20 W	2251 lm	4000 K	3327 lm	167 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-2-3.0K-P	Strip Light, Vapor-Tight, Parking Distribution	1	Lithonia FEM-L24-3000LM-LPACL-PGD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	22 VA	0 VA	20 W	2251 lm	4000 K	3327 lm	167 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-4-4.0K-W	Strip Light, Vapor-Tight, Wide Distribution	8	Lithonia FEM-L48-4000LM-LPACL-WD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	26 VA	0 VA	24 W	2251 lm	4000 K	4109 lm	173 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-4-6.0K-M	Strip Light, Vapor-Tight, Medium Distribution	4	Lithonia FEM-L48-6000LM-LPACL-MD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	42 VA	0 VA	38 W	2251 lm	4000 K	6127 lm	162 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-4-6.0K-W	Strip Light, Vapor-Tight, Wide Distribution	16	Lithonia FEM-L48-6000LM-LPACL-WD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	42 VA	0 VA	38 W	2251 lm	4000 K	6127 lm	162 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-8-9.0K-M	Strip Light, Vapor-Tight, Medium Distribution	79	Lithonia FEM-L96-9000LM-LPACL-MD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	59 VA	0 VA	53 W	2251 lm	4000 K	9232 lm	173 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-8-9.0K-W	Strip Light, Vapor-Tight, Wide Distribution	39	Lithonia FEM-L96-9000LM-LPACL-WD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	59 VA	0 VA	53 W	2251 lm	4000 K	9232 lm	173 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-8-12.0K-M	Strip Light, Vapor-Tight, Medium Distribution	73	Lithonia FEM-L96-12000LM-LPACL-MD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	84 VA	0 VA	76 W	2251 lm	4000 K	12257 lm	162 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and similar
SVT-8-12.0K-W	Strip Light, Vapor-Tight, Wide Distribution	29	Lithonia FEM-L96-12000LM-LPACL-WD-MVOLT-GZ10-40K-80CRI	www.acuitybrands.com	84 VA	0 VA	76 W	2251 lm	4000 K	12257 lm	162 lm/W	L80 @ 100K hours	IP66, NEMA 4X, NSF Splash Zone 2	0	Use STSL stainless latch and wet location fittings in wet environment like washbays and simila
·		298											· · ·		

Type Remark

Specific Remark

Type Mark	Description	Est. Count	Model	URL	Environmental Rating	Type Remark
FM-MH	Fixture-mount Motion Sensor, 28' range at 30' heigh	t 109	Sensorswitch LSXR-6-ADC-VLP	www.acuitybrands.com		Select Bracket Option to be compatible with Light Fixture
FM-MH-W	Fixture-mount Motion Sensor, 28' range at 30' heigh	t 5	Sensorswitch SBOR-6-ODP-VLP-EB3-WH	www.acuitybrands.com	IP 66 Outdoor	Select Bracket Option to be compatible with Light Fixture
FM-MW	Fixture-mount Motion Sensor, 28' range at 9' height	35	Sensorswitch LSXR-10-ADC-VLP	www.acuitybrands.com		Select Bracket Option to be compatible with Light Fixture
FM-MW-W	Fixture-mount Motion Sensor, 28' range at 9' height	3	Sensorswitch SBOR-10-ODP-VLP-EB3-WH	www.acuitybrands.com	IP 66 Outdoor	Select Bracket Option to be compatible with Light Fixture
MS	Motion Sensor short Range	4	Sensorswitch CMR-9-PDT-ADC-VLP	www.acuitybrands.com		
MW	Motion Sensor wide Range	1	Sensorswitch CMR-10-PDT-ADC-VLP	www.acuitybrands.com		
S-1	Single Switch	8				
SD 10	Switch w/ 0-10V Dimmer	4	Wattstopper RH4FBL3PW	www.legrand.us		
T-2H	Timer 2 Hours	10	Intermatic FF2H	www.intermatic.com		
T-4H	Timer 4 Hours	8	Intermatic FF4H	www.intermatic.com		
	Emerc		Lighting Inverters (26.33.23	13 - Central Batter	ny Equipment for E	mergency Lighting)

 Mark
 Space Number
 Space Name
 Description
 Manufacturer
 Model
 URL
 Input Rating
 Voltage
 Weight

 ELI-1
 100
 Garage
 Emergency Lighting Battery Inverter
 Myers
 I-10-S-B-T-M(BBM)-I
 www.myerseps.com
 13573 VA
 277 V
 2404.00 lbm

In / Out

(1) EL Lighting Control Zone - Not to Scale

nting)

Center fixture above mirror

Mirror

Suspended Strip Fixture w/ Sensor

mounting to optimize motion detection of people coming from up-- and downstairs.

Multiple Suspended Strip Fixtures in a Row

Please

 Caulk to seal to wall Sheetmetal roof extending 4" beyond equipment footprint on all 3 sides

- Electrical Equipment

Any electrical equipment installed under a water pipe and other water sources, inc. condensate, shall be protected by a roof deflecting water Install roof high enough to maintain all required clearances

Protection of Inverters and other Electrical Lighting Equipment

(2) EL Typical Installation Details - Not to Scale

Wall fixture in stair case

1-70 **Turn off lights** when leaving room empty. Some spaces don't employ automatic lighting Α.

- control and use manual switches only. These include but are not limited to mechanical, electrical, or crawl spaces. B. In these spaces, adhere a sign to the exit door
- indicating that lights shall be shut off upon leaving the space. Above sign is an example and similar signs can C. be used upon approval. Minimum size 8"x 8" D. For spaces with no door by exit, install similar label on wall next to exit. Consult with designer

on specifics.

 $(\mathbf{3})$ EL Egress Lighting Control w/ UPS and Fire Alarm Integration - Not to Scale

____Review Set - Not for Construction

Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

Project North TRUE

Revisions

No. Description

_____ _____ -----

_____ _____ _____

Schedules and Details

EL 300 Print Date: 1/4/2024 12:16:23 Print in color on 36" x 48"

2 EP Level 1 - Shops 3/32" = 1'-0"

2 0 2 4 6 1/4" = 1'-0"

FEET 3/16" = 1'-0"

'-0"

12 14 5 T 1/8"

5 0 5 10 1/8" = 1'-0" FE

15 20 5 FEET 3/

3/32" = 1'-0"

1" = 30'-0"

1" = 20'-0"

____Review Set - Not for Construction

Client: Streets Department

Location: 1501 W Badger Rd. WI 53713

Contract: 9497 Project: 14121

Streets West Facility HVAC and Lighting Upgrade (BPW)

Revisions

Description

Power

EP 200 Print Date: 1/4/2024 12:16:24 Print in color on 36" x 48"

Par	el: HA					2	26 24 00) - Switc	hboards and	d Panelboards		
Notes	: Existing	Panel										
Ма	ain 125 A	Location:	Garage 100		S	upplied I	From:			System Type: 480V / 3		
N	lain: MLO		Ŭ			Enclo	sure: N	NEMA 1		Panel Slots: 30		
Moun	ting: Surface						AIC:			Wires: 4		
Circuit Number	rcuit mber Rating Load Name		ne		4	АВ			c	Load Name	Rating	Circuit Number
1	15 A	Lighting Garac	ge 100	3.4 A	3.7 A					Lighting Garage 100	15 A	2
3	15 A	Lighting Garage	Lighting Garage 100			3.7 A	3.7 A			Lighting Garage 100	15 A	4
5	15 A	ELI-10.0k	ELI-10.0kVA					49 A	2.1 A	Motor - Fan Garage 100	15 A	6,8,10
7,9,11	15 A	Motor/VFD - Fan G	Motor/VFD - Fan Garage 100		2.1 A							
						2.8 A	2.1 A					
								2.8 A	2.8 A	Motor/VFD - Fan Garage 100	15 A	12,14,16
13					2.8 A							
15	20 A	Spare				0 A	2.8 A					
17	20 A	Spare						0 A				18
19	20 A	Spare		0 A								20
21	20 A	Spare				0 A						22
23	20 A	Spare						0 A				24
25	20 A	Spare		0 A								26
27	7 20 A					0 A						28
29	20 A	Spare						0 A				30
				14.	9 A	15.	1 A	56	.7 A			
				4.1	kVA	4.2	kVA	15.7	' kVA			

Par	nel: HD					26 24 00) - Switch	boards and	Panelboards							
Notes	: New Panel															
Ma	ain 125 A	Location:	Mezzanine 202		Supplied	From: H	HC		System Type: 480V / 3							
N	1ain: MLO				Encl	osure: N	NEMA 1		Panel Slots: 30							
Moun	ting: Surface					AIC:	1		Wires: 4							
Circuit Number	cuit nber Rating Load Name		Load Name			Load Name		Load Name			В		;	Load Name	Rating	Circuit Number
1				1.2	4				Lighting Mezzanine 202	15 A	2					
3	15 A	Lighting Mechar	ncial 201		0.4 A	1.4 A			Lighting Storage 200	15 A	4					
5	15 A	Lighting Room 2	200, 112				1.6 A				6					
7											8					
9											10					
11											12					
13											14					
15											16					
17											18					
19											20					
21											22					
23											24					
25											26					
27											28					
29											30					
				1.2 A	1.	9 A	1.7	Α								
				0.3 kVA	0.5	kVA	0.5 k	(VA								

								Circ	uit Sched	lule					
Panel	Circuit Number	Load Name	Voltage	Voltage Drop	Voltage Drop %	Number of Elements	Receptacle Connected	Wire Size	Wire Type	Estimated Longest Length	Apparent Current Phase A	Apparent Current Phase B	t Apparent Current Phase C	Rating	Apparent
HA	1	Lighting Garage 100	277 V	4.1 V	1.5%	14		1-#14, 1-#14, 1-#14	Copper	213 ft	3.4 A	0 A	0 A	15 A	953 V
HA	2	Lighting Garage 100	277 V	5.3 V	1.9%	15		1-#14, 1-#14, 1-#14	Copper	253 ft	3.7 A	0 A	0 A	15 A	1.037
HA	3	Lighting Garage 100	277 V	3.8 V	1.4%	15		1-#14, 1-#14, 1-#14	Copper	184 ft	0 A	3.7 A	0 A	15 A	1.013
HA	4	Lighting Garage 100	277 V	4.4 V	1.6%	15		1-#12, 1-#12, 1-#12	Copper	325 ft	0 A	3.7 A	0 A	15 A	1.037
HA	5	ELI-10.0kVA	277 V	3.6 V	1.3%	1		1-#14, 1-#14, 1-#14	Copper	13 ft	0 A	0 A	49 A	15 A	13,573
HA	6,8,10	Motor - Fan Garage 100	480 V	1 V	0.2%	1		3-#14, 1-#14, 1-#14	Copper	104 ft	2.1 A	2.1 A	2.1 A	15 A	1,746
HA	7,9,11	Motor/VFD - Fan Garage 100	480 V	2 V	0.4%	1		3-#14, 1-#14, 1-#14	Copper	166 ft	2.8 A	2.8 A	2.8 A	15 A	2,328
HA	12,14,16	Motor/VFD - Fan Garage 100	480 V	4.1 V	0.8%	1		3-#14, 1-#14, 1-#14	Copper	334 ft	2.8 A	2.8 A	2.8 A	15 A	2,328
HB	1	Lighting Garage 100	277 \/	17V	0.6%	10		1-#14 1-#14 1-#14	Copper	112 ft	284	0.4	0.4	15 A	765 V
HB	246	Motor Garage 100	480 V	1.7 V	0.3%	1		3-#4 1-#4 1-#10	Copper	61 ft	42.7 A	42.7 A	42.7 A	60 A	35 517
HB	3	Lighting Garage 100	277 V	2.8 V	1%	11		1-#14 1-#14 1-#14	Copper	164 ft	0.A	31A	0 A	15 A	849 V
HC	1	Lighting Bathroom 108	277.\/	0.1 V	0%	2		1.#14 1.#14 1.#14	Copper	63 ft	014	0.0	0.4	15 Δ	41 \//
HC	2	Lighting Storage 103	277 V	0.1 V	0.2%	6		1-#14 1-#14 1-#14	Copper	105 ft	114	0 A	0 A	15 A	304 V
HC	3	Lighting Streets Office 110	277 V	0.0 V	0.1%	7		1-#14 1-#14 1-#14	Copper	71 ft	0.A	0.6 A	0 A	15 A	159 V
HC	4	Lighting Storage 106	277 V	0.6 V	0.2%	4		1-#14, 1-#14, 1-#14	Copper	125 ft	0 A	0.8 A	0 A	15 A	225 V
HC	5	Lighting Fleet Office 107	277 V	0.1 V	0.1%	3		1-#14, 1-#14, 1-#14	Copper	85 ft	0 A	0 A	0.3 A	15 A	82 V
HC	6	Lighting Streets Shop 111	277 V	1.9 V	0.7%	13		1-#14, 1-#14, 1-#14	Copper	103 ft	0 A	0 A	3.2 A	15 A	894 V
HC	7	Lighting Streets Storage 112	277 V	1 V	0.4%	8		1-#14, 1-#14, 1-#14	Copper	75 ft	2.3 A	0 A	0 A	15 A	647 V
HC	9	Lighting Streets Storage 112	277 V	0.3 V	0.1%	5		1-#14, 1-#14, 1-#14	Copper	40 ft	0 A	1.4 A	0 A	15 A	395 V
HC	10	Lighting Streets Shop 111	277 V	1 V	0.4%	10		1-#14, 1-#14, 1-#14	Copper	74 ft	0 A	2.4 A	0 A	15 A	671 V
HC	12,14,16	HE	480 V	0.1 V	0%	1		3-#1/0, 1-#1/0, 1-#6	Copper	114 ft	6 A	3.4 A	5.6 A	125 A	3,972
HC	13,15,17	HD	480 V	0 V	0%	1		3-#1/0, 1-#1/0, 1-#6	Copper	74 ft	1.2 A	1.9 A	1.7 A	125 A	1,314
HD			077.1/	0.414	0.4%	5			0	50.0	101			45.4	8,704
HD	2	Lighting Mezzanine 202	277 V	0.4 V	0.1%	5		1-#14, 1-#14, 1-#14	Copper	52 ft	1.2 A	0 A	0 A	15 A	346 V
HD	3	Lighting Mechancial 201	277 V	0.1 V	0%	2		1-#14, 1-#14, 1-#14	Copper	41 ft	UA	0.4 A	0 A	15 A	119 V
HD	4	Lighting Storage 200	277 V	0.6 V	0.2%	5		1-#14, 1-#14, 1-#14	Copper	// ft	U A	1.4 A	U A	15 A	395 V
HD	5	Lighting Room 200, 112	2// V	0.9 V	0.3%	0		1-#14, 1-#14, 1-#14	Copper	95 11	0 A	UA	1.0 A	15 A	404 V
HE															1,314
HE	1	Lighting Fleet Shop 102	277 V	1.4 V	0.5%	9		1-#14, 1-#14, 1-#14	Copper	131 ft	1.9 A	0 A	0 A	15 A	534 V
HE	2	Lighting Fleet Shop 102	277 V	1.7 V	0.6%	17		1-#14, 1-#14, 1-#14	Copper	88 ft	3.4 A	0 A	0 A	15 A	939 V
HE	3	Lighting Fleet Shop 102	277 V	1.7 V	0.6%	12		1-#14, 1-#14, 1-#14	Copper	127 ft	0 A	2.3 A	0 A	15 A	643 V
HE	4	Lighting Washbay 101	277 V	1.8 V	0.6%	11		1-#14, 1-#14, 1-#14	Copper	93 ft	0 A	3.3 A	0 A	15 A	923 V
HE	5	Lighting Streets Shop 111	277 V	1.3 V	0.5%	14		1-#14, 1-#14, 1-#14	Copper	68 ft	0 A	0 A	3.4 A	15 A	933 V

Pan	el: HB					26	5 24 00 ·	- Switchboards and F	Panelboards			
Notes	: XTG Panel v	with pre-installed breake	ers.									
Main 250 A Location: Garage 100					Supplied From:				System Type: 480V / 3	480V / 3		
Main: MLO					Enclos	sure: NE	EMA 1	Panel Slots: 42				
Mounting: Surface						AIC			Wires: 4			
Circuit Number	Rating Load Nar		ne A		L .	В		С	Load Name	Rating	Circuit Number	
1	15 A	Lighting Garage	ge 100	2.8 A	42.7 A				Motor Garage 100	60 A	2,4,6	
3	15 A	Lighting Garage	ge 100			3.1 A 4	42.7 A					
5								42.7 A				
7											8	
9											10	
11											12	
13											14	
15											16	
17											18	
19											20	
21											22	
23											24	
25											26	
27											28	
29											30	
31											32	
33											34	
35											36	
37											38	
39											40	
41											42	
				45.9	A	46.2	Α	42.7 A			4	
				12.6	kVA	12.7 k	κVA	11.8 kVA				
	•			·						·		

Pan	el: HE					2	26 24 0	0 - Switc	hboards and	l Panelboards			
Notes	New Panel												
Main 125 A Location: Streets Shop 111					Supplied From: HC					System Type: 480V / 3			
Main: MLO					Enclosure: NEMA 1					Panel Slots: 30			
Mount	ing: Surface					AIC:				Wires: 4	1		
Circuit Number Rating		Load Nan	Load Name		A		В		c	Load Name	Rating	Circuit Number	
1	15 A	Lighting Fleet S	hop 102	1.9 A	9 A 3.4 A					Lighting Fleet Shop 102	15 A	2	
3	15 A	Lighting Fleet Shop 102				2.3 A	3.3 A			Lighting Washbay 101	15 A	4	
5	15 A	Lighting Streets	Shop 111					3.4 A		<u> </u>		6	
7												8	
9												10	
11												12	
13												14	
15												16	
17												18	
19												20	
21												22	
23												24	
25												26	
27												28	
29												30	
				5.6	A	6	Α	3.	4 A				
				1.5	κVA	1.6	kVA	0.9	kVA]		

						2	26 24 00) - Switc	hboards and	Panelboards			
Notes	: XTG Pa	nel with pre-installed breake	ers.										
Ма	Main 250 A Location: Streets Shop 111				Su	upplied I	From:		System Type: 480V / 3	480V / 3			
Main: MLO					Enclo	sure: N	IEMA 1		Panel Slots: 42	Panel Slots: 42			
Mounting: Surface							AIC:	1		Wires: 4			
Circuit Number	Rating	Load Nam	Load Name			В			c	Load Name	Rating	Circuit Number	
1	15 A	Lighting Bathroo	om 108	0.1 A	1.1 A					Lighting Storage 103	15 A	2	
3	15 A	Lighting Streets C	Lighting Streets Office 110			0.6 A	0.8 A			Lighting Storage 106	15 A	4	
5	15 A	Lighting Fleet Of	fice 107					0.3 A	3.2 A	Lighting Streets Shop 111	15 A	6	
7	15 A	Lighting Streets St	orage 112	2.3 A						v v ·		8	
9	15 A	Lighting Streets St	orage 112			1.4 A	2.4 A			Lighting Streets Shop 111	15 A	10	
11		<u> </u>							5.6 A	HE	125 A	12,14,16	
13,15,17	125 A	HD		1.2 A	6 A								
						1.9 A	3.4 A						
								1.7 A				18	
19												20	
21												22	
23												24	
25												26	
27												28	
29												30	
31												32	
33												34	
35												36	
37												38	
39												40	
41												42	
				10.5	5 A	10.	5 A	10.	5 A			1	
		2.9		2.9 k	VA	2.9	kVA	2.9	kVA				
								•					

Review Set - Not for Construction Int Date: 1/2024 12:16:24 Print or or 0.9" x 48"

