

PLAN NOTES:

- ① CHILLER VFD/DISCONNECT SUPPLIED WITH CHILLER, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
- ② PROVIDE AND INSTALL VFD/DISCONNECT FOR CHILLED WATER AND CONDENSER WATER PUMPS. PROVIDE AND INSTALL WIRING FROM MOTOR TO VFD AND FROM VFD TO MCC.
- ③ PROVIDE AND INSTALL VFD/DISCONNECT FOR COOLING TOWER MOTOR. PROVIDE AND INSTALL WIRING FROM MOTOR TO VFD AND FROM VFD TO MCC.
- ④ PROVIDE AND INSTALL DISCONNECT SWITCH FOR FCU-1. PROVIDE AND INSTALL WIRING FROM FAN COIL UNIT TO DISCONNECT AND DISCONNECT TO MCC.

SHEET NOTES:

1. PROVIDE FILTERS FOR VFD'S AS REQUIRED.
2. ALL WIRING FOR VFD'S SHALL BE VFD RATED CABLES.

CHILLER PLANT - FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

CHILLER PLANT - PARTIAL SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

CONTRACT NO.
FQ17162

DESIGNED	C. HILL	DATE	REFERENCE DRAWINGS		REVISIONS	
			NUMBER	DESCRIPTION	DATE	BY
DRAWN	C. HILL	05/17				
CHECKED	B. DILL	05/17				
APPROVED	D. KIRBY	05/17				



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

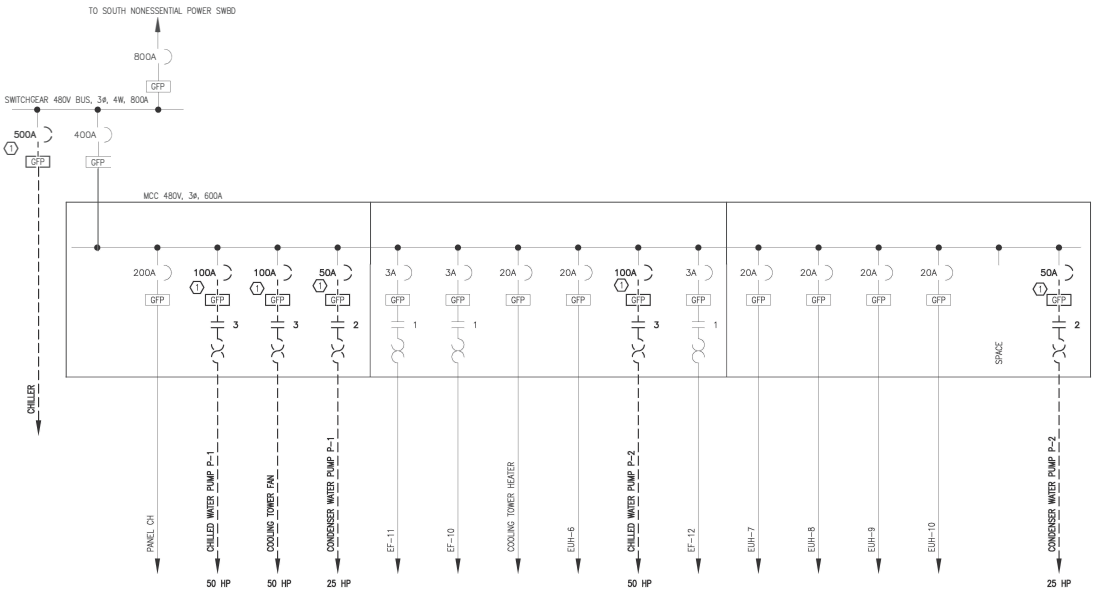
GFP A GARRETT FLEMING/PATTON JOINT VENTURE

APPROVED: *Frank H. [Signature]*
SUBMITTED: *[Signature]*
PROJECT MANAGER

REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS
CWPE05 - GEORGIA AVE - PETWORTH
ELECTRICAL PLANS - NEW WORK

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

DRAWING NO.
CWPE05-E-101 M1299-040



PLAN NOTE:

- Ⓢ EXISTING CIRCUIT BREAKER TO BE REMOVED.

SHEET NOTE:

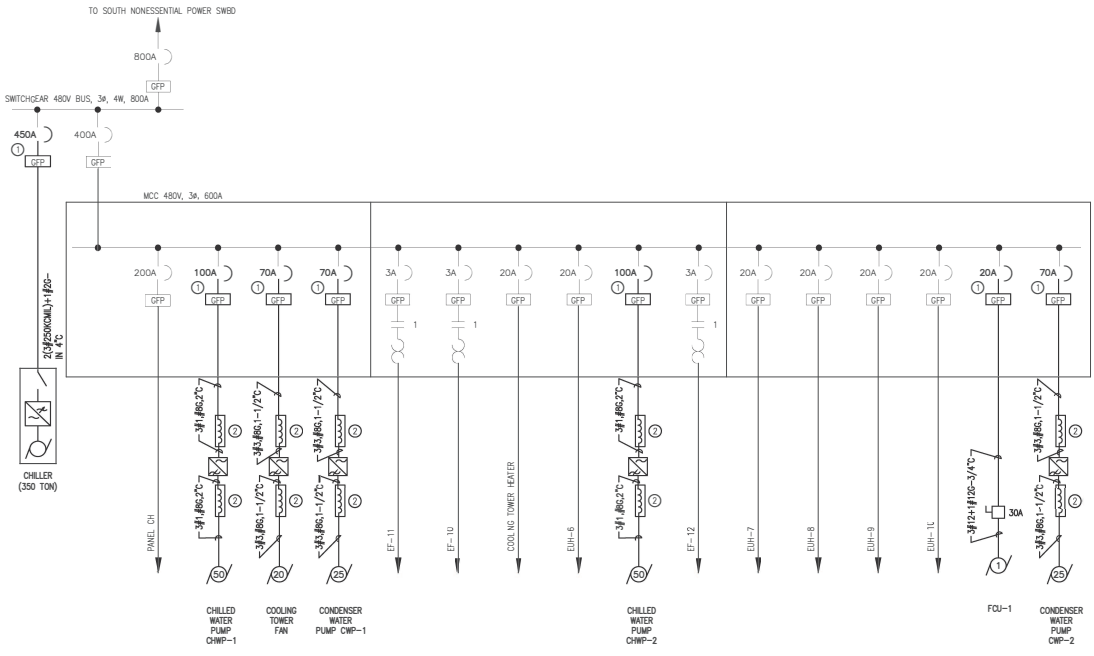
- FOR EQUIPMENT TO BE DEMOLISHED, ALL EXISTING CONDUIT AND WIRING SHALL BE REMOVED. PERMISSION TO USE EXISTING CONDUIT (WIRES REMOVED) SHALL BE REQUESTED FROM AR.

		CONTRACT NO. FQ17162				REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS CWPE05 - GEORGIA AVE - PETWORTH ELECTRICAL SINGLE LINE DIAGRAM - DEMOLITION	
DESIGNED C. HILL 05/17				WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM APPROVED <i>Mark H. Kappan</i>	GFP A GARRETT FIRMING/PICUS JOINT VENTURE SUBMITTED <i>[Signature]</i> PROJECT MANAGER		
DRAWN C. HILL 05/17							
CHECKED B. SULLS 05/17							
APPROVED D. KHAN 05/17							



REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY

SCALE: NONE DRAWING NO: CWPE05-E-600 M1299-041



PLAN NOTES:

- ① PROVIDE NEW CIRCUIT BREAKER WITH GROUND FAULT PROTECTION IN EXISTING SWITCHGEAR. CONNECT NEW WIRING AS SHOWN ON CWPE05-E-101.
- ② LINE AND LOAD REACTORS FOR EACH VFD SHALL BE MOUNTED IN A SINGLE NEMA 4X ENCLOSURE.

SHEET NOTES:

- 1. PROVIDE FILTERS FOR VFD'S AS REQUIRED.
- 2. ALL WIRING FOR VFD'S SHALL BE VFD RATED CABLES.

		CONTRACT NO. FQ17162		WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY		REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS	
				DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM		A GARRETT FIRMING/PRIORS JOINT VENTURE	
DESIGNED C. HILL	DATE 05/17			APPROVED <i>Mark H. [Signature]</i>			
DRAWN C. HILL	DATE 05/17			SUBMITTED <i>[Signature]</i>			
CHECKED S. SULLS	DATE 05/17			PROJECT MANAGER			
APPROVED D. KHAN	DATE 05/17					SCALE NONE	DRAWING NO. CWPE05-E-601 M1299-042

ELECTRICAL EQUIPMENT SCHEDULE

ITEM	QTY	DESCRIPTION
1	2	MCC BUCKET TO MATCH EXISTING WITH 100AT/100AF BREAKER
2	3	MCC BUCKET TO MATCH EXISTING WITH 70AT/100AF BREAKER
3	1	MCC BUCKET TO MATCH EXISTING WITH 20AT/100AF BREAKER
4	2	REACTOR/FILTER 480V, 3PH, 31A, 20HP, 60HZ, NEMA 4X ENCLOSURE
5	4	REACTOR/FILTER 480V, 3PH, 38A, 25HP, 60HZ, NEMA 4X ENCLOSURE
6	4	REACTOR/FILTER 480V, 3PH, 72A, 50HP, 60HZ, NEMA 4X ENCLOSURE
7	1	VFD 480V, 3PH, 31A, 20HP, NEMA 4X ENCLOSURE
8	2	VFD 480V, 3PH, 38A, 25HP, NEMA 4X ENCLOSURE
9	2	VFD 480V, 3PH, 72A, 50HP, NEMA 4X ENCLOSURE
10	LOT	2" GRS CONDUIT
11	LOT	1-1/2" GRS CONDUIT
12	LOT	#12 AWG RHW-2 WIRE
13	LOT	#3 AWG RHW-2 WIRE (VFD RATED)
14	LOT	#1 AWG RHW-2 WIRE (VFD RATED)
15	LOT	1-1/2" LFIC
16	LOT	2" LFIC
17	1	SWGR BREAKER TO MATCH EXISTING WITH 450AT/450AF BREAKER
18	1	SAFETY NON-FUSED DISCONNECT SWITCH, 30A
19	LOT	#250KCMIL RHW-2 WIRE (VFD RATED)
20	LOT	4" GRS CONDUIT
21	LOT	#8 AWG RHW-2 WIRE (CND)
22	LOT	#2 AWG RHW-2 WIRE (CND)

CONTRACT NO.
FQ17162

DESIGNED	C. HILL	05/17
DRAWN	C. HILL	05/17
CHECKED	J. SULLS	05/17
APPROVED	D. KHAN	05/17

REFERENCE DRAWINGS		REVISIONS	
NUMBER	DESCRIPTION	DATE	BY



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
 DEPARTMENT OF TRANSIT INFRASTRUCTURE
 AND ENGINEERING SERVICES
 OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED *Mark H. Kappman*

GFP A GARRETT FLEMING/PALSONS
 JOINT VENTURE

SUBMITTED *[Signature]*
 PROJECT MANAGER

REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS
 CWPE05 - GEORGIA AVE - PETWORTH
 ELECTRICAL EQUIPMENT SCHEDULE

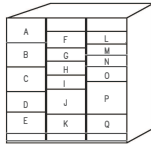
SCALE: NONE

DRAWING NO. **CWPE05-E-602** **M1299-043**

SHEET NOTE:

MOTOR CONTROL CENTER: CHILLER 600 AMPS, 480/277V, 3ø, 4W, GND BUS										LOCATION: CHILLER PLANT AVAILABLE SHORT CIRCUIT: 28,000 AMPS RMS SYM ENCLOSURE TYPE: NEMA 12			
SEC. NO.	ITEM NO.	CIRCUIT BREAKER		MCP CONTIN. RATING AMP.	STARTER		CON- NECTED LOAD KVA	HP OR KW	DESCRIPTION	CONTROL DIAGRAM DWG NO.	ELEVATION		
		POLES	FRAMES AMP.		TRIP AMP.	NEMA SIZE					TYPE	SECTION 1	SECTION 2
1	A	3	-	-	-	-	-	-	MAN LUGS				
	B	3	100	90	-	3	FVNR	54.0	50HP	CHILLED WATER PUMP CWP-1			
	C	3	100	50	-	2	FVNR	22.8	20HP	COOLING TOWER FAN			
	D	3	100	50	-	2	FVNR	28.2	25HP	CONDENSER WATER PUMP CWP-1			
	E	3	225	200	-	-	C/B	15.3		PANEL "CH"			
2	F	3	100	3	-	1	FVNR	1.2	3/4HP	EF-11			
	G	3	100	3	-	1	FVNR	1.5	1HP	EF-10			
	H	3	100	20	-	-	FVNR	7.0	7.0KW	COOLING TOWER HEATER			
	I	3	100	20	-	-	C/B	12.5	12.5KW	ELECTRIC UNIT HTR #6			
	J	3	100	90	-	3	FVNR	54.0	50HP	CHILLED WATER PUMP CWP-2			
3	K	3	100	3	-	1	FVNR	1.2	3/4HP	EF-12			
	L	3	100	20	-	-	C/B	12.5	12.5KW	ELECTRIC UNIT HTR #7			
	M	3	100	20	-	-	C/B	12.5	12.5KW	ELECTRIC UNIT HTR #8			
	N	3	100	20	-	-	C/B	12.5	12.5KW	ELECTRIC UNIT HTR #9			
	O	3	100	20	-	-	C/B	12.5	12.5KW	ELECTRIC UNIT HTR #10			
	P	3	100	20	-	00	FVNR	1.5	1HP	FDU-1			
	Q	3	100	50	-	2	FVNR	28.2	25HP	CONDENSER WATER PUMP CWP-2			

TOTAL CONNECTED LOAD 277.2 KVA-333.82 AMPS			
ESTIMATED DEMAND: KVA			
LOAD	CONNECTED	SUMMER	WINTER
VENTILATION			
COOLING: MOTORS			
HEATING			
TOTAL DEMAND:			



DESIGNED <u>C. HILL</u> 05/17		DATE 05/17		DRAWN <u>C. HILL</u> 05/17		DATE 05/17		CHECKED <u>B. DUB</u> 05/17		DATE 05/17		APPROVED <u>D. KORN</u> 05/17		DATE 05/17									
REFERENCE DRAWINGS				REVISIONS								WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM APPROVED <u>David H. Korman</u>				GFP A GARRETT FLEMING/PALSONS JOINT VENTURE SUBMITTED <u>[Signature]</u> PROJECT MANAGER				CONTRACT NO. FQ17162 REPLACEMENT OF CHILLERS AND COOLING TOWERS AT THREE METRO-RAIL STATIONS CWPE05 - GEORGIA AVE - PETWORTH ELECTRICAL PANEL SCHEDULE SCALE NONE DRAWING NO. CWPE05-E-603 M1299-044			