- ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- 2. MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- 7. ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES
 NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS. HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL W/SCREW IN COUPLING FOR COMPLETE WATER PROOF INSTALLATION
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORF AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.
- 29. The conduit utilized for this project shall be 1-1/2" min. or larger as indicated. The liquid tight utilized for the kiosk shall be 1-1/2" from the entry to the 8x8 junction box, then 1" from the junction box to the quads. All boxes used in or on the kiosk shall be

ARREVIATIONS

<u>ADD</u>	REVIATIONS		
A, AMP	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCA	MINIMUM CIRCUIT AMPERE
AEMS	AUTOMATED ENERGY MANAGEMENT SYSTEM	MCB	MAIN CIRCUIT BREAKER
AF	AMPERE FRAME	MEZZ	MEZZANINE
AFC	AUTOMATED FARE	MIN	MINIMUM
	COLLECTION SYSTEM	MLO	MAIN LUGS ONLY
NFF	ABOVE FINISHED FLOOR	MTD	MOUNTED OR MOUNTING
AIC .	AMPERE INTERRUPTING CAPACITY	NEC	NATIONAL ELECTRIC CODE
AT	AMPERE TRIP	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
ATS	AUTOMATIC TRANSFER SWITCH	Р	POLE
BATT	BATTERY	PH	PHASE
3KR	BREAKER	PNL	PANELBOARD
<u>E</u>	BASELINE	PRI	PRIMARY
C OD	CONDUIT	PROP	PROPOSED
CB CCT	CIRCUIT BREAKER CIRCUIT	RGS	RIGID GALVANIZED STEEL
Ç	CENTER LINE	SEC	SECONDARY
CLG	CEILING	SHT	SHEET
CONST	CONSTRUCTION	STA	STATION
DC	DIRECT CURRENT	STD	STANDARD
DISC	DISCONNECT	SW	SWITCH
E	ELECTRICAL	SWBD	SWITCHBOARD
FLUOR.	FLUORESCENT	TYP	TYPICAL
GND	GROUND	U/G	UNDER GROUND
GPR	GROUND PENETRATING RADAR	U.L.	UNDERWRITERS LABORATORIE
IG	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	VOLT	VOLTAGE
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	W	WATT
KCMIL	THOUSAND CIRCULAR MILL	WMAIA	WASHINGTON METROPOLITIAN AREA TRANSIT AUTHORITY
KVA	KILOVOLT AMPERE	WP	WEATHERPROOF

DRAWING INDEX

F02-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

F02-E-101 ARCHIVES - MEZZANINE KIOSK - POWER

F02-E-102 ARCHIVES - PANEL SCHEDULE

F02-E-301 ARCHIVES - PANELBOARD IMAGE

MM-F-E06 ARCHIVES - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET- 20A, 125V WALL MOUNTED. J JUNCTION BOX - SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.

ILL #10-3/4 HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

I - INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

REFERENCE DRAWINGS REVISIONS DESIGNED C. NGO DESCRIPTION DESCRIPTION C. NGO DRAWN CHECKED B. IDILBI APPROVED N/A

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SUBMITTED

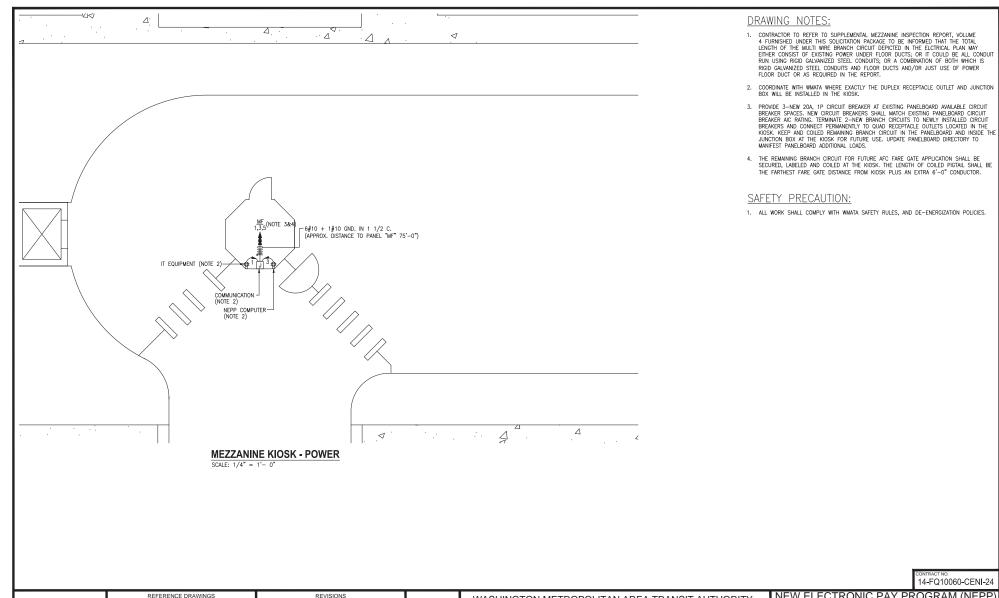
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF MFRASTRUCTURE RENEWAL PROGRAM



PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

NOT TO SCALE F02-E-001



14-FQ10060-CENI-24

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY DESIGNED C. NGO 08-14 DATE AND ENGINEERING SERVICES CHECKED B. IDILBI OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM APPROVED N/A DATE APPROVED

A Gannett Fleming/Parsons
JOINT VENTURE AS SHOWN SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS **ARCHIVES**

F02-E-101

MEZZANINE KIOSK - POWER

		E	XIS.	TING	G PA	NEL	"MF	."			
AMPERES: 225	VOLTS:	120/208		MOUNTING: SURFACE							
MAINS: 225AMCB	PHASE:	3		LOCA	TION:	ELECT	RICAL E	EQUIPME	NT RM. 2	203	
RATING: 10K AIC	ATING: 10K AIC WIRE: 4 SECTION: 1 OF 1										
		CKT B	KRS	CKT.		CKT.	CKT	BKRS			
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION	
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	1	A	2	1	20	0.8	EXIST ING VENDOR	
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	3	- B -	4	1	20	0.0	SPARE	
FUTURE AFC FARE GATE	0.0	20	1	5	C	6	1	20	0.8	EXIST ING VENDOR	
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXIST ING VENDOR	
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.0	SPARE	
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOR	
SPARE	0.0	20	1	21	- B -	22	1	20	0.8	EXISTING VENDOR	
SPARE	0.0	20	1	23	C	24	1	20	0.8	EXISTING VENDOR	
SPACE	0.0	-	-	25	A	26	1	20	0.8	EXISTING VENDOR	
SPACE	0.0	-	-	27	- B -	28	-	-	0.0	SPACE	
SPARE	0.0	20	1	29	C	30	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDOR EXISTING VENDOR	
EXISTING VENDOR EXISTING VENDOR	0.8	20	1	35	- B -	36	1	20	0.0	SPARE	
EXISTING VENDOR	0.8	20	1	37	A	38	1	20	0.0	EXISTING VENDOR	
SPARE	0.0	20	1	39	- B -	40	1	20	0.0	SPARE SPARE	
SPACE	0.0	- 20	-	41	C	40	-	- 20	0.0	SPACE	
			LC	DAD	SUN	1MA	RY				
LIGHTS		0.0	x 125%	6					0.0	KVA	
RECEPTACLES, FIRST 10 KVA			x 1009	6						KVA	
RECEPTACLES			x 50%								
MISC. APPLIANCES			x 1009	-					0.0	KVA	
LARGEST MOTOR			x 125%						0.0	KVA	
MOTORS			x 1009	-					0.0	KVA	
HEAT		0.0	x 125%	6					0.0	KVA	
AC		0.0	x 1009	6					0.0	KVA	
WATER HEATING		0.0	x 125%	6					0.0	KVA	
TOTAL CONNECTED LOAD		21.6	KVA		TOT	AL DEN	IAND K	VA	15.8	KVA	
CONNECTED LOAD PHASE SUMM.	ARY				тот	AL DEN	IAND A	MPS	43.9	AMPS	
PHASE A:		10.4	KVA								
PHASE B:		6.4	KVA								
PHASE C:		5.6	KVA								

CONTRACT	NO.
14-FO	10060-CENI-2

		REFERENCE DRAWINGS		REVISIONS				
DESIGNED C. NGO 08-		DESCRIPTION	DATE	BY	DESCRIPTION			
DRAWN C. NGO 08-								
DRAWN C. NGO 08-								
CHECKED B. IDILBI 08=								
DATI								
APPROVED_N/A	. —		_					
DATI	-		_	-				

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY DEPARTMENT OF TRANSIT NIFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED GARAGETT Fleming/Parsons
JOINT VENTURE

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
ARCHIVES
PANEL SCHEDULE

F02-E-102

SCALE NOT TO SCALE SUBMITTED PROJECT MANAGER

- 1. ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- 2. MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- 4. MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- 7. ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN CABLE.
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- 9. OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS WORK.
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING CLEARANCES.
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW. UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT MANAGER.
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL THREADED COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC., SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE JUNCTION BOX.
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY WALLS.
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR AFC".
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.

ABBREVIATIONS

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
AC	ALTERNATING CURRENT	Р	POLE
AF	AMPERE FRAME	PH	PHASE
AFC	AUTOMATED FARE COLLECTION SYSTEM	PNL	PANELBOARD
AFF	ABOVE FINISHED FLOOR	PRI	PRIMARY
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
BKR	BREAKER	SEC	SECONDARY
C	CONDUIT	SHT	SHEET
СВ	CIRCUIT BREAKER	SW	SWITCH
		SWBD	SWITCHBOARD
CCT	CIRCUIT	TYP	TYPICAL
Ę	CENTER LINE	U/G	UNDER GROUND
CLG	CEILING	U.L.	UNDERWRITERS LABORATORIES
CONST	CONSTRUCTION	UON	UNLESS OTHERWISE NOTED
DISC	DISCONNECT	VOLT	VOLTAGE
Е	ELECTRICAL	W	WATT
GND	GROUND		WASHINGTON METROPOLITIAN
JB	JUNCTION BOX	WIVIATA	AREA TRANSIT AUTHORITY
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	WP	WEATHERPROOF

DRAWING INDEX

F03-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST F03-E-101 L'ENFANT PLAZA - NORTH - MEZZANINE KIOSK - POWER

F03-E-102 L'ENFANT PLAZA - NORTH - PANEL SCHEDULE

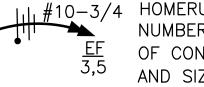
F03-E-301 L'ENFANT PLAZA - NORTH - PANELBOARD IMAGE

MM-F-E08 L'ENFANT PLAZA - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET- 20A, 125V WALL MOUNTED. JUNCTION BOX — SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.



III #10-3/4 HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

> I - INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

 INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

		R	EFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	<u>08-14</u> DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN <u>C. NGO</u>	08-14 DATE					
CHECKED B. IDILBI	08-14					
APPROVED N/A	DATE 					
un 117° non un'igne a national. The 110° franche nergy to mill planete des A disconserver on a rich suit de richt	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED



PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

DRAWING NO. SCALE NOT TO SCALE F03-E-001

NEPP COMPUTER (NOTE 2) -COMMUNICATION (NOTE 2) -IT EQUIPMENT (NOTE 2) -6-1/C #8 + 1#10 GND. IN -1 1/2" C. (APPROX. DISTANCE TO PANEL "NF" 161'-0")

NORTH MEZZANINE KIOSK - POWER

REVISIONS

DESCRIPTION

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

REFERENCE DRAWINGS

DESCRIPTION

DESIGNED C. NGC

DRAWN C. NGC

CHECKED B. IDILBI

PPROVED N/A

08-14

TMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES



14-FQ10060-CENI-24

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS L'ENFANT PLAZA - NORTH MEZZANINE KIOSK - POWER

AS SHOWN F03-E-101

DRAWING NOTES:

1. CONTRACTOR TO REFER TO SUPPLEMENTAL MEZZANINE INSPECTION REPORT, VOLUME
4 FURNISHED UNDER THIS SOLICITATION PACKAGE TO BE INFORMED THAT THE TOTAL
LENGTH OF THE MULTI WIRE BRANCH CIRCUIT DEPICTED IN THE ELGITICAL PLAN MAY
EITHER CONSIST OF EXISTING POWER UNDER FLOOR DUCTS; OR IT COULD BE ALL
COMDUT RON USING RIGIO GALVANIZED STEEL CONDUITS; OR A COMBINATION OF BOTH
WHICH IS RIGID GALVANIZED STEEL CONDUITS AND FLOOR DUCTS AND/OR JUST USE
OF POWER FLOOR DUCT OR AS REGULERED IN THE REPORT.

2. COORDINATE WITH WMATA WHERE EXACTLY THE DUPLEX RECEPTACLE OUTLET AND

3. PROVIDE 3—NEW 20A, 1P CIRCUIT BREAKER AT EXISTING PANELBOARD AVAILABLE CIRCUIT BREAKER SPACES. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANELBOARD CIRCUIT BREAKER AND RATING. TERMINATE 2—NEW BREAKEY CIRCUITS TO NEWLY INSTALLED CIRCUIT GREAKERS AND CONNECT FERMANENTLY TO QUAD RECEPTACLE OUTLETS LOCATED IN THE WISS.K. KEEP AND COILCE TRANSING BRANCH CIRCUIT IN THE FAMELBOARD AND INSIDE THE JUNCTION BOX AT THE WISS.K FOR FOURTH STATES UPPAILED AND INSIDE THE JUNCTION BOX AT THE WISS.K FOR FOURTH STATES (PANELBOARD DIRECTORY TO MAINTEST PANELBOARD DATE OF THE TRANSPERS OF THE PANELBOARD DIRECTORY TO MAINTEST PANELBOARD DATE OF THE MEDIT OF THE PANELBOARD DIRECTORY TO MAINTEST PANELBOARD DATE OF THE PANELB

4. THE REMAINING BRANCH CIRCUIT FOR FUTURE AFC FARE GATE APPLICATION SHALL BE SECURED, LABELED AND COILED AT THE KIOSK. THE LENGTH OF COILED PIGTAIL SHALL BE THE FARTHEST FARE GATE DISTANCE FROM KIOSK PLUS AN EXTRA 6"-0" CONDUCTOR.

ALL WORK SHALL COMPLY WITH WMATA SAFETY RULES, AND DE-ENERGIZATION POLICIES.

OF POWER FLOOR DUCT OR AS REQUIRED IN THE REPORT.

JUNCTION BOX WILL BE INSTALLED IN THE KIOSK.

SAFETY PRECAUTION:

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM APPROVED

	Е	XIS	TING	G PA	NEL	"NF	."			
VOLTS:	120/208		NOUN	ITING:	SURFA	CE				
MAINS: 400A MLO PHASE: 3 LOCATION: AC SWBD ROOM N104										
WIRE:	4		SECT	ION:	1 OF 1					
	CKT E	KRS	CKT.		CKT.	CKT	BKRS			
KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION	
0.8	20	1	1	A	2	3	30	1.5	EXIST ING CONDSING UNIT	
0.8	20	1	3	- B -	4	-	-	1.5		
0.8	20	1	5	C	6	-	-	1.5		
0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR	
0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VENDOR	
0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR	
0.8			13	A	14	1		0.8	EXISTING VENDOR	
0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR	
0.8	20	1	17	C	18	1	20	8.0	EXISTING VENDOR	
0.8		-	19			-		0.8	EXISTING VENDOR	
		1				1		0.8	EXISTING VENDOR	
	-	-				-	-		SPACE	
		-				_			SPARE	
		_		_						
		_		_		_			SPARE	
		_		_		_			SPARE	
		_		_		_			SPARE	
		_		_		-			EXISTING LOAD CENTER "KES	
0.0	20	1	43	A	44	-	-	2.5		
		LC	DAD	SUN	ИΜΑ	RY				
	0.0	x 1259	6					0.0	KVA	
				10.0 KVA						
	9.2	x 50%		4.6 KVA						
			6	0.0 KVA						
		-	0.0 KVA							
MOTORS 0.0 x 100%			0.0 KVA							
		HEAT 3.0 x 125%			3.8 KVA					
		-						3.8	ΚVΔ	
	3.0	x 1259	6							
	3.0	x 1259 x 1009	6					9.0	KVA	
	9.0 0.0	x 1259 x 1009 x 1259	6	TOT	AL DEN	IAND 14	\/A	9.0 0.0	KVA KVA	
	9.0 0.0	x 1259 x 1009	6		AL DEN			9.0 0.0 27.4	KVA	
ARY	3.0 9.0 0.0 31.2	x 1259 x 1009 x 1259	6					9.0 0.0 27.4	KVA KVA KVA	
	PHASE: WIRE: KVA 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8	VOLTS: 120/208 PHASE: 3 WIRE: 4 WIRE:	VOLTS 120/208 PHASE 3	VOLTS: 120/208 MOUNT	VOLTS: 120/208	VOLTS: 120/208 MOUNTING: SURFA MOUNTING: SURFA MOUNTING: AC SW WRE: 4 SECTION: 1 OF 1	VOLTS: 120/208	PHASE: 3	VOLTS: 120/208	

١	CONTRACT NO.
ı	14-FQ10060-CENI-

	REFERENCE DRAWINGS		REVISIONS				
DESIGNED C. NGO 08-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION		
DRAWN C. NGO 08-14							
DRAWN C. NGO 08-14 DATE							
CHECKED B. IDILBI 08-14			_				
DATE			-				
APPROVED N/A DATE							
DATE							

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

APPROVED

PHASE B:

PHASE C:

SUBMITTED PROJECT MANAGER

11.2 KVA

9.6 KVA

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
L'ENFANT PLAZA - NORTH
PANEL SCHEDULE
SCALE
DRAWING NO.

CALE	DRAWING NO.
NOT TO SCALE	F03-E-10

- . ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- 2. MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- 4. MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- 7. ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- 9. OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING CLEARANCES.
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW. UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT MANAGER.
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL THREADED COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA. TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE JUNCTION BOX.
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY WALLS.
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13: WMATA SPECIFICATION SECTION 16120. 16130, AND 16125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.

ABBREVIATIONS

THOUSAND AMPERE

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

	<u> </u>		
A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
AC	ALTERNATING CURRENT	Р	POLE
AF	AMPERE FRAME	PH	PHASE
AFC	AUTOMATED FARE COLLECTION SYSTEM	PNL	PANELBOARD
AFF	ABOVE FINISHED FLOOR	PRI	PRIMARY
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
BKR	BREAKER	SEC	SECONDARY
C	CONDUIT	SHT	SHEET
СВ	CIRCUIT BREAKER	SW	SWITCH
CCT	CIRCUIT	SWBD	SWITCHBOARD
Q	CENTER LINE	TYP	TYPICAL
CLG	CEILING	U/G	UNDER GROUND
CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATORIE
DISC	DISCONNECT	UON	UNLESS OTHERWISE NOTED
E	ELECTRICAL	VOLT	VOLTAGE
		W	WATT
GND	GROUND	WMATA	WASHINGTON METROPOLITIAN
JB	JUNCTION BOX		AREA TRANSIT AUTHORITY

WEATHERPROOF

DRAWING INDEX

F04-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST F04-E-101 WATERFRONT - MEZZANINE KIOSK - POWER

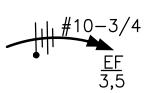
F04-E-102 WATERFRONT - PANEL SCHEDULE

F04-E-301 WATERFRONT - PANELBOARD IMAGE

MM-F-E10 WATERFRONT - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET— 20A, 125V WALL MOUNTED. JUNCTION BOX — SURFACE MOUNTED ON UNISTRUT CHANNEL CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.



III #10-3/4 HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

I - INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

		RE	FERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	08-14 N	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	08-14					
CHECKED B. IDILBI	DATE					
- CITEORES	DATE					
APPROVED N/A	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

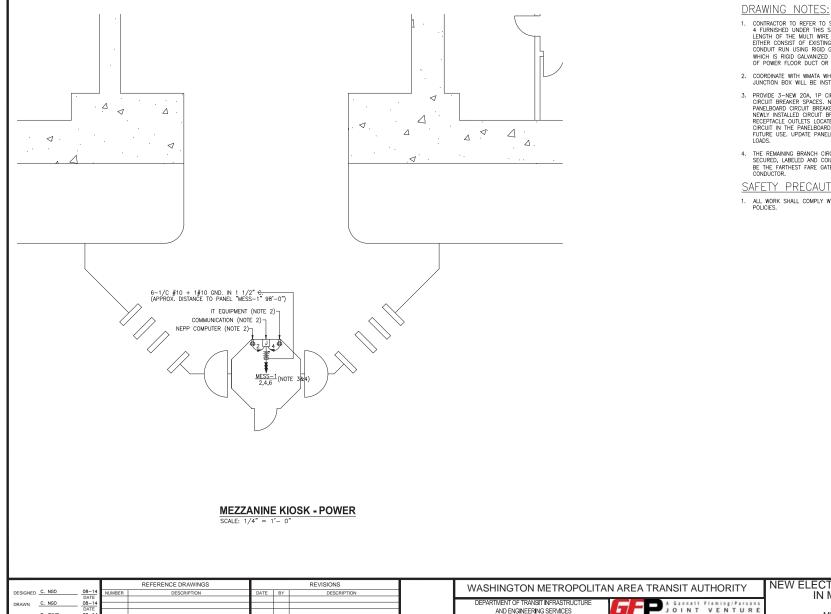
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

DRAWING NO. SCALE NOT TO SCALE F04-E-001



OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

SUBMITTED PROJECT MANAGER

CHECKED B. IDILBI

APPROVED N/A

- 1. CONTRACTOR TO REFER TO SUPPLEMENTAL MEZZANINE INSPECTION REPORT, VOLUME
 4 FURNISHED UNDER THIS SOLICITATION PACKAGE TO BE INFORMED THAT THE TOTAL
 LENGTH OF THE MULTI WIRE BRANCH CIRCUIT DEPICTED IN THE ELGITICAL PLAN MAY
 EITHER CONSIST OF EXISTING POWER UNDER FLOOR DUCTS; OR IT COULD BE ALL
 COMDUT RON USING RIGIO GALVANIZED STEEL CONDUITS; OR A COMBINATION OF BOTH
 WHICH IS RIGID GALVANIZED STEEL CONDUITS AND FLOOR DUCTS AND/OR JUST USE
 OF POWER FLOOR DUCT OR AS REGULERED IN THE REPORT. OF POWER FLOOR DUCT OR AS REQUIRED IN THE REPORT.
- 2. COORDINATE WITH WMATA WHERE EXACTLY THE DUPLEX RECEPTACLE OUTLET AND JUNCTION BOX WILL BE INSTALLED IN THE KIOSK.
- 3. PROVIDE 3—NEW 20A, 1P CIRCUIT BREAKER AT EXISTING PANELBOARD AVAILABLE CIRCUIT BREAKER SPACES. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANELBOARD CIRCUIT BREAKER AND RATING. TERMINATE 2—NEW BREAKEY CIRCUITS TO NEWLY INSTALLED CIRCUIT GREAKERS AND CONNECT PERMANENTLY TO QUAD RECEPTACLE OUTLETS LOCATED IN THE MOSK. KEEP AND COILCD REMAINING BRANCH CIRCUIT IN THE PANELBOARD AND INSIDE THE JUNCTION BOX AT THE MOSK FOR FUTURE USE. UPDATE PANELBOARD DIRECTORY TO MAINTEST PANELBOARD DATE OF THE TOTAL TOTAL CONTROL OF THE PANELBOARD DIRECTORY TO MAINTEST PANELBOARD DATE OF THE TOTAL CONTROL OF THE TOTAL CONTROL OF THE OWNER OF THE TOTAL CONTROL OF THE OWNER OWNER
- 4. THE REMAINING BRANCH CIRCUIT FOR FUTURE AFC FARE GATE APPLICATION SHALL BE SECURED, LABELED AND COILED AT THE KIOSK. THE LENGTH OF COILED PIGTAIL SHALL BE THE FARTHEST FARE GATE DISTANCE FROM KIOSK PLUS AN EXTRA 6"-0" CONDUCTOR.

SAFETY PRECAUTION:

1. ALL WORK SHALL COMPLY WITH WMATA SAFETY RULES, AND DE-ENERGIZATION POLICIES.

14-FQ10060-CENI-24

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS WATERFRONT MEZZANINE KIOSK - POWER

> AS SHOWN F04-E-101

		EXI	STII	NG I	PANE	L "I	MES	S-1"				
AMPERES: 250	VOLTS:	120/208		MOUN	ITING:	SURF/	VCE					
MAINS: 250A MCB	PHASE:	3		LOCA	TION:	MECH	EQUIP	MENT RO	OM C20	6		
RATING: 10K AIC	WIRE:	4		SECT	ION: 1	OF 1						
		CKT E	BKRS	CKT.		CKT.	СКТ	BKRS				
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION		
EXISTING VENDOR	0.8	20	1	1	A	2	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)		
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SOC)		
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.0	FUTURE AFC FARE GATE		
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR		
SPARE	0.0	20	1	9	- B -	10	1	20	0.8	EXISTING VENDOR		
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR		
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.0	SPARE		
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.0	SPARE		
SPARE	0.0	20	1	17	C	18	1	20	0.0	SPARE		
SPARE	0.0	20	1	19	A	20	1	20	0.0	SPARE		
SPARE	0.0	20	1	21	- B -	22	1	20	0.8	EXISTING VENDOR		
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXISTING VENDOR		
SPARE	0.0	20	1	25	A	26	1	20	0.8	EXISTING VENDOR		
SPARE	0.0	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR		
SPARE	0.0	20	1	29	C	30	1	20	0.8	EXISTING VENDOR		
SPARE	0.0	20	1	31	A	32	1	20	0.8	EXISTING VENDOR		
SPARE	0.0	20	1	33	- B -	34	1	20	0.8	EXISTING VENDOR		
EXIST. LOAD CENTER "KES"	2.9	30	3	35	C	36	1	20	0.8	EXISTING VENDOR		
	2.5	-	-	37	A	38	-	-	0.0	SPACE		
	2.5	-	-	39	- B -	40	-	-	0.0	SPACE		
SPACE	0.0	-	-	41	C	42	-	-	0.0	SPACE		
			L	DAC	SUN	ИΜА	RY					
LIGHTS		0.0	x 1259	%					0.0	KVA		
RECEPT ACLES, FIRST 10 KVA			x 1009									
RECEPTACLES			x 50%									
MISC. APPLIANCES			x 100%									
LARGEST MOTOR												
MOTORS												
HEAT	3.0 x 100								3.8 KVA			
HEAT AC			x 125%							KVA		
WATER HEATING			x 100%							KVA		
			_	/o								
TOTAL CONNECTED LOAD		24.7	KVA			AL DEN				KVA		
00MMEGTED 0 4D DILAGE 0::	and a DV				IOT	AL DEN	IAND A	MPS	60.7	AMPS		
CONNECTED LOAD PHASE SUN	IMARY		10.0									
	8.1 KVA											
			1/3/4									
PHASE A: PHASE B: PHASE C:			KVA KVA									

- 1			
- 1	CONTRACT	NO.	
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			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	08-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	DATE 08-14					
DRAWN C. NGO	DATE					
CHECKED B. IDILBI	08-14					
	DATE				_	
APPROVED_N/A				_		
	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE

AND ENGINEERING SERVICES

OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

SUBMITTED

PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEP
IN METRORAIL STATIONS	`
WATERFRONT	
PANEL SCHEDULE	

	PAINE	L SCHEDULE	
-	SCALE NOT TO SCALE	F04-E-102	50

- 1. ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
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- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- 9. OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS WORK.
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- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT MANAGER.
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL THREADED COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE JUNCTION BOX.
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY WALLS.
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR AFC."
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.

ABBREVIATIONS

GROUND

MAXIMUM

MEZZANINE

MAX

JUNCTION BOX

THOUSAND AMPERE

KILOVOLT AMPERE

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
AC	ALTERNATING CURRENT	Р	POLE
AF	AMPERE FRAME	PH	PHASE
AFC	AUTOMATED FARE COLLECTION SYSTEM	PNL	PANELBOARD
AFF	ABOVE FINISHED FLOOR	PRI	PRIMARY
\IC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
Δ Τ	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
3KR	BREAKER	SEC	SECONDARY
C	CONDUIT	SHT	SHEET
CB	CIRCUIT BREAKER	SW	SWITCH
CCT	CIRCUIT	SWBD	SWITCHBOARD
₽	CENTER LINE	TYP	TYPICAL
CLG	CEILING	U/G	UNDER GROUND
CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATORIES
DISC		UON	UNLESS OTHERWISE NOTED
	DISCONNECT	VOLT	VOLTAGE
E	ELECTRICAL	W	WATT

DRAWING INDEX

F05-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST
F05-E-101 NAVY YARD EAST & WEST - MEZZANINE KIOSK - POWER
F05-E-102 NAVY YARD EAST & WEST - PANEL SCHEDULES

MM-F-E12 NAVY YARD - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET— 20A, 125V WALL MOUNTED.

JUNCTION BOX — SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.

HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

Indicates grounding wire to grounding bus at the panelboard

EF - INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

CONTRACT NO. 14-FQ10060-CENI-24

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
ABBREVIATIONS, DRAWING INDEX,
SPECIFICATIONS & SYMBOL LIST

SCALE DRAWING NO. F05-E-001

N MINIMUM LO MAIN LUGS ONLY

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

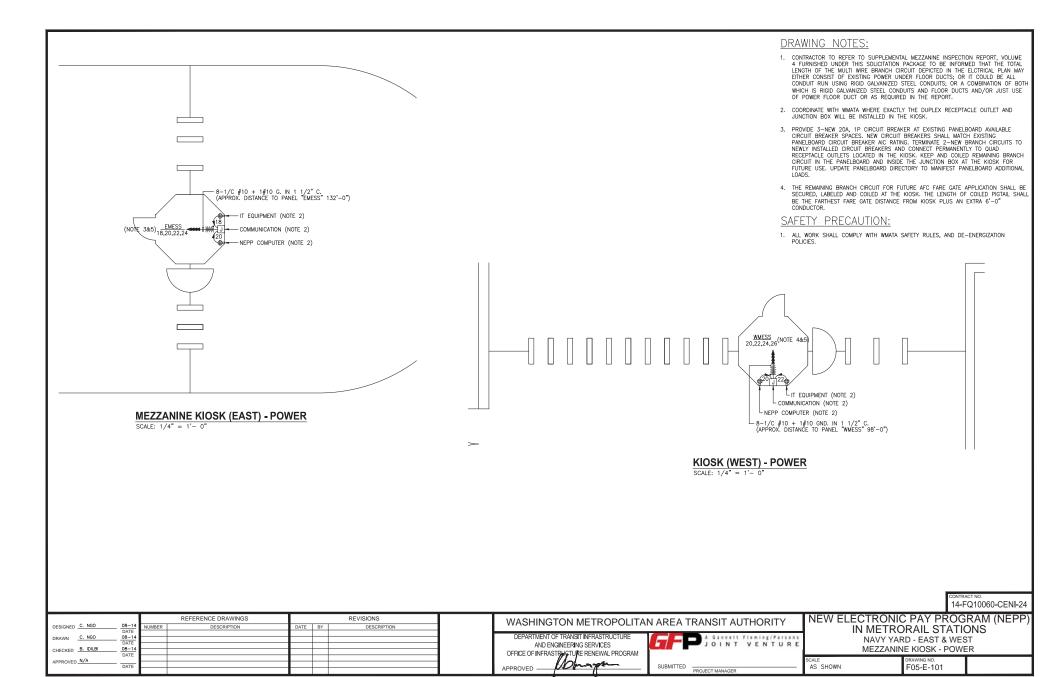
A Gannett Fleming/Parsons
JOINT VENTURE

SUBMITTED PROJECT MANAGER

WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY



	Е	XIST	ING	PAI	NEL '	'EM	ESS	" (Ea	st)	
AMPERES: 150	VOLTS:				NTING:			,	,	
MAINS: 150A MCB	PHASE:	3		LOCA	TION:	ELEC.	EQUIPN	MENT RO	OM 204	
RATING: 10K AIC	WIRE:	4		SECT	ION: 1	OF 1				
		CKT E	BKRS	CKT.		CKT.	СКТ	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXISTING VENDOR	0.8	20	1	1	A	2	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR
SPARE	0.0	20	1	17	C	18	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)
SPARE	0.0	20	1	19	A	20	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SOC)
EXISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.0	FUTURE AFC FARE GATE
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.0	SPARE (KIOSK)
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	29	C	30	1	20	0.0	SPARE
SPARE	0.0	20	1	31	A	32	1	20	0.0	SPARE
SPARE	0.0	20	1	33	- B -	34	1	20	0.0	SPARE
SPARE	0.0	20	1	35	C	36	1	20	0.0	SPARE
SPARE	0.0	20	1	37	A	38	3	30	2.9	EXIST. LOAD CENTER "KES"
SPARE	0.0	20	1	39	- B -	40	-	-	2.5	
SPARE	0.0	20	1	41	C	42	-	-	2.5	
			1.0	חאר	SUN	лма	DV			
LIGHTS		0.0	x 1259		301	/IIVI/	1 1		0.0) KVA
			x 125%							
RECEPTACLES, FIRST 10 KVA			-	'o) KVA
RECEPTACLES			x 50%	,						KVA
MISC. APPLIANCES			x 1009) KVA
LARGEST MOTOR			x 1259	-) KVA
MOTORS			x 100%) KVA
HEAT			x 1259							3 KVA
AC			x 1009	-					4.5	5 KVA
WATER HEATING			x 125%	6					0.0) KVA
TOTAL CONNECTED LOAD		26.3	KVA		TOT	AL DEN	IAND K	VA	22.7	' KVA

TOTAL DEMAND AMPS

62.9 AMPS

	E	XISTI	NG I	PAN	EL"	WM	ESS'	" (We	st)	
AMPERES: 225		120/208			ITING:					
MAINS: 225A MCB	PHASE:	3		LOCA	FION:	ELEC.	ROOM 4	101		
RAT ING: 10K AIC	WIRE:	4		SECT	ON: 1	OF 1				
		CKT E	KRS	CKT.		CKT.	CKT	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXISTING VENDOR	0.8	20	1	1	A	2	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)
EXIST ING VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SOC)
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.0	FUTURE AFC FARE GATE
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.0	SPARE (KIOSK)
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR
EXIST ING VENDOR	0.8	20	1	29	C	30	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	35	C	36	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	37	A	38	3	40	2.9	EXIST. LOAD CENTER "KES"
EXISTING VENDOR	0.8	20	1	39	- B -	40	-	-	2.5	
SPACE	0.0	-	-	41	C	42	- 1	-	2.5	
			LO	DAD	SUN	ЛΜΑ	RY			
LIGHTS		0.0	x 1259		3011				0.0) KVA
RECEPT ACLES, FIRST 10 KVA			x 100%) KVA
RECEPT ACLES			x 50%	0						S KVA
VISC. APPLIANCES			x 100% x 100%	,						
				-) KVA
ARGEST MOTOR			x 125%) KVA
WOTORS			x 100%) KVA
HEAT			x 125%							B KVA
AC .		4.5	x 100%	6					4.5	5 KVA

TOTAL DEMAND KVA

TOTAL DEMAND AMPS

0.0 x 125%

36.7 KVA

12.5 KVA

12.9 KVA

10.5 KVA

CONTRACT NO.
14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	08-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	DATE 08-14					
DRAWN ST 1100	DATE					
CHECKED B. IDILBI	08-14					
APPROVED_N/A	DATE					
	DATE					

9.3 KVA

8.9 KVA

8.1 KVA

CONNECTED LOAD PHASE SUMMARY

PHASE A:

PHASE B:

PHASE C:

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED

WE NOT URE
SUBMITTED
PROJECT MANAGER

WATER HEATING

PHASE A:

PHASE B:

PHASE C:

TOTAL CONNECTED LOAD

CONNECTED LOAD PHASE SUMMARY

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS NAVY YARD - EAST & WEST PANEL SCHEDULES

17412	_ 0011200220	
	DRAWING NO.	•
NOT TO SCALE	F05-E-102	

27.9 KVA

77.4 AMPS

- ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- 4. MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN CARI F.
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS WORK
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK. PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL COST.
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING CLEARANCES.
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT MANAGER
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL W/SCREW IN COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA,
 TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION.
 WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK
 AREAS, ETC... SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE JUNCTION BOX.
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY WALLS
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR AFC".
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.
- 29. The conduit utilized for this project shall be 1-1/2" min. or larger as indicated. The liquid tight utilized for the kiosk shall be 1-1/2" from the entry to the 8x8 junction box, then 1" from the junction box to the quads. All boxes used in or on the kiosk shall be

ARRREVIATIONS

A, AMP	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCA	MINIMUM CIRCUIT AMPERE
AEMS	AUTOMATED ENERGY MANAGEMENT SYSTEM	MCB	MAIN CIRCUIT BREAKER
AF	AMPERE FRAME	MEZZ	MEZZANINE
AFC	AUTOMATED FARE	MIN	MINIMUM
	COLLECTION SYSTEM	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	MTD	MOUNTED OR MOUNTING
AIC	AMPERE INTERRUPTING CAPACITY	NEC	NATIONAL ELECTRIC CODE
ATC	AMPERE TRIP	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
ATS	AUTOMATIC TRANSFER SWITCH	Р	POLE
BATT	BATTERY	PH	PHASE
BKR	BREAKER	PNL	PANELBOARD
B .	BASELINE	PRI	PRIMARY
C	CONDUIT	PROP	PROPOSED
CB CCT	CIRCUIT BREAKER CIRCUIT	RGS	RIGID GALVANIZED STEEL
		SEC	SECONDARY
€ alo	CENTER LINE	SHT	SHEET
CLG	CEILING	STA	STATION
CONST	CONSTRUCTION	STD	STANDARD
DC	DIRECT CURRENT	SW	SWITCH
DISC	DISCONNECT	SWBD	SWITCHBOARD
E	ELECTRICAL	TYP	TYPICAL
FLUOR.	FLUORESCENT	U/G	UNDER GROUND
GND	GROUND	U.L.	UNDERWRITERS LABORATOR
GPR	GROUND PENETRATING RADAR	UON	UNLESS OTHERWISE NOTED
IG 	ISOLATED GROUND	VOLT	VOLTAGE
JB	JUNCTION BOX	w	WATT
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	••	WASHINGTON METROPOLITIA
KCMIL	THOUSAND CIRCULAR MILL	***MAIA	AREA TRANSIT AUTHORITY
KVA	KILOVOLT AMPERE	WP	WEATHERPROOF

DRAWING INDEX

F06-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST
F06-E-101 ANACOSTIA NORTH & SOUTH - KIOSK - POWER
F06-E-102 ANACOSTIA NORTH & SOUTH - PANEL SCHEDULES
F06-E-301 ANACOSTIA NORTH & SOUTH - PANELBOARD IMAGE
F06-E-302 ANACOSTIA NORTH & SOUTH - PANELBOARD IMAGE

MM-F-E14 ANACOSTIA - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET— 20A, 125V WALL MOUNTED.

JUNCTION BOX — SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.

HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

| - INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

EF - INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SUBMITTED

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

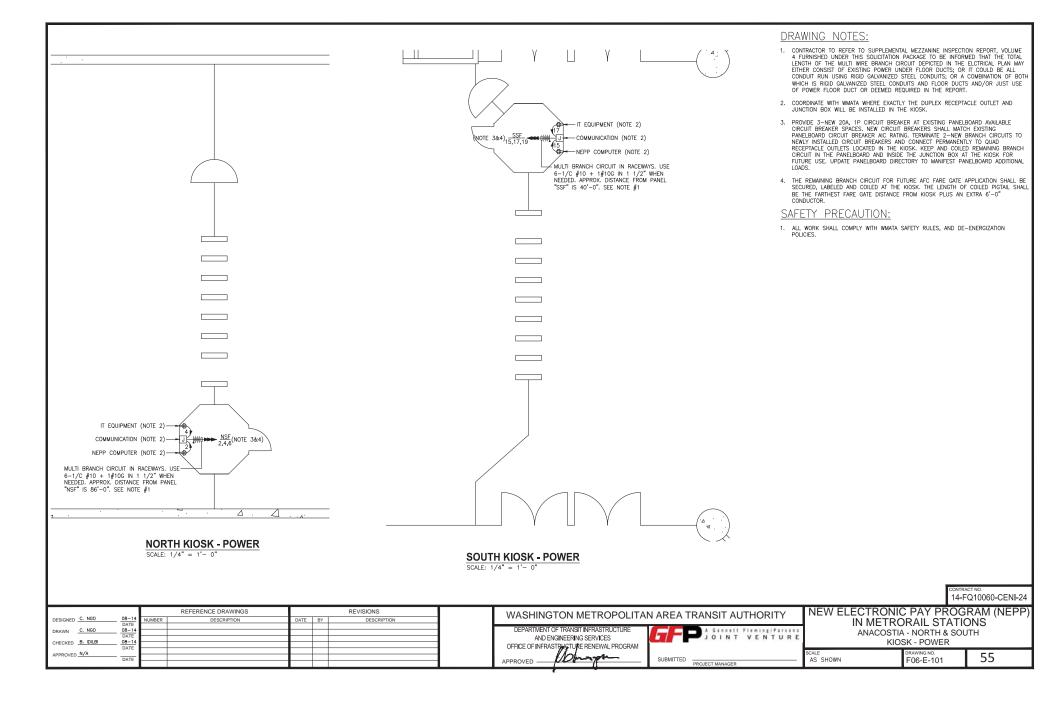


PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)

IN METRORAIL STATIONS
ABBREVIATIONS, DRAWING INDEX,
SPECIFICATIONS & SYMBOL LIST

DRAWING NO. F06-E-001



			AIO I		PAN			<u>' </u>			
AMPERES: 175	VOLTS:				MOUNTING: SURFACE						
MAINS: 175A MCB	PHASE:						MENT RM	. 301			
RATING: 10K AIC	WIRE:	4			ON: 1						
		CKT E		CKT.		CKT.		BKRS			
LOAD DESCRIPTION	KVA	AMP	POLE			NO.	POLE	AMP	KVA	LOAD DESCRIPTION	
EXISTING VENDOR	0.8	20	1	1	A	2	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)	
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SOC)	
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.0	FUTURE AFC FARE GATE	
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	8.0	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.0	SPARE	
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	19	Α	20	1	20	0.0	SPARE	
SPARE	0.0	20	1	21	- B -	22	1	20	8.0	EXISTING VENDOR	
SPARE	0.0	20	1	23	C	24	-	-	0.0	SPACE	
EXISTING VENDOR	0.8	20	1	25	A	26	-	-	0.0	SPACE	
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR	
SPARE	0.0	20	1	29	C	30	1	20	0.0	SPARE	
SPARE	0.0	20	1	31	A	32	3	50	2.9	EXIST. LOAD CENTER "KES"	
EXISTING VENDOR	0.8	20	1	33	- B -	34	-	-	2.5		
EXISTING VENDOR	0.8	20	1	35	C	36	-	-	2.5		
			L	DAD	SUN	/IMA	RY				
LIGHTS		0.0	L(SUN	1MA	RY		0.0	KVA	
				6	SUN	ΊΜΑ	RY			KVA KVA	
RECEPTACLES, FIRST 10 KVA		10.0	x 125%	6	SUN	ΊΜΑ	RY		10.0		
RECEPTACLES, FIRST 10 KVA RECEPTACLES		10.0	x 125% x 100%	6	SUN	ИΜΑ	RY		10.0	KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES		10.0 8.0 0.0	x 125% x 100% x 50%	6	SUM	1MA	RY		10.0 4.0 0.0	KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR		10.0 8.0 0.0 0.0	x 125% x 100% x 50% x 100%	6 6 6	SUM	ИΜΑ	RY		10.0 4.0 0.0 0.0	KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS		10.0 8.0 0.0 0.0	x 125% x 100% x 50% x 100% x 125%	6 6 6 6 6	SUM	1MA	RY		10.0 4.0 0.0 0.0 0.0	KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT		10.0 8.0 0.0 0.0 0.0 3.0	x 125% x 100% x 50% x 100% x 125% x 100% x 125%	6 6 6 6 6	SUM	ИΜΑ	RY		10.0 4.0 0.0 0.0 0.0 3.8	KVA KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC		10.0 8.0 0.0 0.0 0.0 3.0 4.5	x 125% x 100% x 50% x 100% x 125% x 100% x 125% x 100%	6 6 6 6 6 6	SUN	ИΜΑ	RY		10.0 4.0 0.0 0.0 0.0 3.8 4.5	KVA KVA KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING		10.0 8.0 0.0 0.0 0.0 3.0 4.5	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259	6 6 6 6 6 6				WA	10.0 4.0 0.0 0.0 0.0 3.8 4.5	KVA KVA KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING		10.0 8.0 0.0 0.0 0.0 3.0 4.5	x 125% x 100% x 50% x 100% x 125% x 100% x 125% x 100%	6 6 6 6 6 6	тотл	AL DEM	AND K		10.0 4.0 0.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD	MADV	10.0 8.0 0.0 0.0 0.0 3.0 4.5	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259	6 6 6 6 6 6	тотл	AL DEM			10.0 4.0 0.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA	
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SUM	MARY	10.0 8.0 0.0 0.0 0.0 3.0 4.5 0.0 25.5	x 125% x 100% x 50% x 100% x 125% x 100% x 125% x 100% x 125% KVA	6 6 6 6 6 6	тотл	AL DEM	AND K		10.0 4.0 0.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD	MARY	10.0 8.0 0.0 0.0 0.0 3.0 4.5 0.0 25.5	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259	6 6 6 6 6 6	тотл	AL DEM	AND K		10.0 4.0 0.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA KVA	

AMPERES: 175	VOLTS:	120/208		NOUN	MOUNTING: SURFACE						
MAINS: 175AMCB	PHASE:	3	3 LOCATION: ELEC. EQUIPMENT ROOM 302								
RATING: 10K AIC	WIRE:	4		SECT	ION: 1	OF 1					
		CKT E	BKRS	CKT.		CKT.	СКТ	BKRS			
LOAD DESCRIPTION	KVA	AMP	POLE			NO.	POLE	AMP	KVA	LOAD DESCRIPTION	
EXISTING VENDOR	0.8	20	1	1	A	2	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR	
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR	
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOR	
FUTURE AFC FARE GATE	0.0	20	1	19	A	20	1	20	0.8	EXISTING VENDOR	
SPARE	0.0	20	1	21	- B -	22	1	20	0.0	SPARE	
SPARE	0.0	20	1	23	C	24	1	20	0.0	SPARE	
EXISTING VENDOR	0.8	20	1	25	A	26	3	50	2.9	EXISTING LOAD CENTER "KES"	
SPARE .	0.0	20	1	27	- B -	28	-	-	2.5	ENGLING EGY D' GENT EN TREG	
EXISTING VENDOR	0.8	20	1	29	C	30	-	-	2.5		
SPARE SPARE	0.0	20	1	31	A	32			0.0	SPACE	
SPARE	0.0	20	1	33	- B -	34	-	-	0.0	SPACE	
SPACE	0.0	- 20		35	C	36	-		0.0	SPACE	
SPACE	0.0	-	-	37	A	38	-		0.0	SPACE	
SPACE	0.0	-	-	39	- B -	40	-	-	0.0	SPACE	
SPACE	0.0	-	-	41	C	40	-	-	0.0	SPACE	
			1.0	חאר	CIII	лвл А	DV				
LIGHTO		0.0			SUN	ИΜА	RY			. IOA	
			x 1259	6	SUN	ИΜА	RY			KVA	
LIGHTS RECEPTACLES, FIRST 10 KVA		10.0	x 125% x 100%	6	SUN	ИΜА	RY		10.0	KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES		10.0	x 125% x 100% x 50%	6	SUN	ИΜА	RY		10.0	KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES		10.0 6.4 0.0	x 125% x 100% x 50% x 100%	6	SUN	ИΜΑ	RY		10.0 3.2 0.0	KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR		10.0 6.4 0.0	x 125% x 100% x 50% x 100% x 125%	6 6 6 6	SUM	ИΜΑ	RY		10.0 3.2 0.0 0.0	KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS		10.0 6.4 0.0 0.0	x 125% x 100% x 50% x 100% x 125% x 100%	6 6 6 6	SUN	ИΜΑ	RY		10.0 3.2 0.0 0.0	KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR		10.0 6.4 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009	6 6 6 6 6	SUN	ИΜΑ	RY		10.0 3.2 0.0 0.0	KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC		10.0 6.4 0.0 0.0 0.0 3.0 4.5	x 125% x 100% x 50% x 100% x 125% x 100% x 125%	6 6 6 6 6	SUN	ИΜΑ	RY		10.0 3.2 0.0 0.0 0.0 3.8	KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC		10.0 6.4 0.0 0.0 0.0 3.0 4.5	x 1259 x 1009 x 50% x 1009 x 1259 x 1009	6 6 6 6 6	SUN	ИΜΑ	RY		10.0 3.2 0.0 0.0 0.0 3.8 4.5	KVA KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING		10.0 6.4 0.0 0.0 0.0 3.0 4.5	x 125% x 100% x 50% x 100% x 125% x 100% x 125%	6 6 6 6 6	тотл	AL DEM	RY		10.0 3.2 0.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT	ARY	10.0 6.4 0.0 0.0 0.0 3.0 4.5	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009	6 6 6 6 6	тотл	AL DEM	IAND K		10.0 3.2 0.0 0.0 0.0 3.8 4.5 0.0	KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD	ARY	10.0 6.4 0.0 0.0 0.0 3.0 4.5 0.0 23.9	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009	6 6 6 6 6	тотл	AL DEM	IAND K		10.0 3.2 0.0 0.0 0.0 3.8 4.5 0.0	KVA	
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SUMM	ARY	10.0 6.4 0.0 0.0 0.0 3.0 4.5 0.0 23.9	x 125% x 100% x 50% x 100% x 125% x 100% x 125% x 100% x 125% KVA	6 6 6 6 6	тотл	AL DEM	IAND K		10.0 3.2 0.0 0.0 0.0 3.8 4.5 0.0	KVA	

		REFERENCE DRAWINGS	REVISIONS			
DESIGNED C. NGO 08-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	
DATE						
DRAWN C. NGO 08-14 DATE						
CHECKED B. IDILBI 08-14 DATE						
APPROVED N/A						
DATE						

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

SUBMITTED
PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ANACOSTIA - NORTH & SOUTH PANEL SCHEDULES

SCALE			DRAWING NO.
NOT	ТО	SCALE	F06-E-102

- ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- 4. MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2
 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS
 OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
 CARI F.
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS WORK
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK. PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL COST.
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING CLEARANCES.
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT MANAGER.
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL W/SCREW IN COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC... SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE JUNCTION BOX.
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY WALLS
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR AFC".
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.
- 29. The conduit utilized for this project shall be 1-1/2" min. or larger as indicated. The liquid tight utilized for the kiosk shall be 1-1/2" from the entry to the 8x8 junction box, then 1" from the junction box to the quads. All boxes used in or on the kiosk shall be NEMA 4x.

ARRREVIATIONS

A, AMP	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCA	MINIMUM CIRCUIT AMPERE
AEMS	AUTOMATED ENERGY MANAGEMENT SYSTEM	MCB	MAIN CIRCUIT BREAKER
AF	AMPERE FRAME	MEZZ	MEZZANINE
AFC	AUTOMATED FARE	MIN	MINIMUM
	COLLECTION SYSTEM	MLO	MAIN LUGS ONLY
\FF	ABOVE FINISHED FLOOR	MTD	MOUNTED OR MOUNTING
AIC	AMPERE INTERRUPTING CAPACITY	NEC	NATIONAL ELECTRIC CODE
AT	AMPERE TRIP	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
ATS	AUTOMATIC TRANSFER SWITCH	P	POLE
BATT	BATTERY	PH	PHASE
BKR -	BREAKER	PNL	PANELBOARD
B .	BASELINE	PRI	PRIMARY
C 	CONDUIT	PROP	PROPOSED
CB	CIRCUIT BREAKER	RGS	RIGID GALVANIZED STEEL
CCT	CIRCUIT	SEC	SECONDARY
È	CENTER LINE	SHT	SHEET
CLG	CEILING	STA	STATION
CONST	CONSTRUCTION		
DC	DIRECT CURRENT	STD	STANDARD
DISC	DISCONNECT	SW	SWITCH
Ε	ELECTRICAL	SWBD	SWITCHBOARD
FLUOR.	FLUORESCENT	TYP	TYPICAL
GND	GROUND	U/G	UNDER GROUND
GPR	GROUND PENETRATING RADAR	U.L.	UNDERWRITERS LABORATORI
IG	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	VOLT	VOLTAGE
KAIC	THOUSAND AMPERE	W	WATT
KCMIL	INTERRUPTING CAPACITY THOUSAND CIRCULAR MILL	WMATA	WASHINGTON METROPOLITIAN AREA TRANSIT AUTHORITY
NOMIL	THOUSAND CINCULAR MILL	WP	WEATHERPROOF

DRAWING INDEX

F07-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST
F07-E-101 CONGRESS HEIGHTS - MEZZANINE KIOSK - POWER

F07-E-102 CONGRESS HEIGHTS - PANEL SCHEDULE

F07-E-301 CONGRESS HEIGHTS - PANELBOARD IMAGE

MA-OF-SLD-E5 CONGRESS HEIGHTS - SOUTH AC SWITCHBOARD ROOM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET— 20A, 125V WALL MOUNTED.

JUNCTION BOX — SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.

HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

I - INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

EE - INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

CONTRACT NO.
14-FQ10060-CENI-24

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SUBMITTED

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INTRASTRUCTURE RENEWAL PROGRAM
APPROVED



PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
ABBREVIATIONS, DRAWING INDEX,
SPECIFICATIONS & SYMBOL LIST

F07-E-001

NOT TO SCALE

-IT EQUIPMENT (NOTE 2) NOTE 3&4) MESSB COMMUNICATION (NOTE 2) - NEPP COMPUTER (NOTE 2) MULTI BRANCH CIRCUIT IN RACEWAYS. USE 6-1/C #10 + 1#10G IN 1 1/2" WHEN NEEDED. APPROX. DISTANCE FROM PANEL "MESSB" IS 66'-0". SEE NOTE #1 **MEZZANINE KIOSK - POWER** SCALE: 1/4" = 1'- 0"

DRAWING NOTES:

- 1. CONTRACTOR TO REFER TO SUPPLEMENTAL MEZZANINE INSPECTION REPORT, VOLUME
 4 FURNISHED UNDER THIS SOLICITATION PACKAGE TO BE INFORMED THAT THE TOTAL
 LENGTH OF THE MULTI WIRE BRANCH CIRCUIT DEPICTED IN THE ELOTRICAL PLAN MAY
 EITHER CONSIST OF EXISTING POWER UNDER FLOOR DUCTS; OR IT COULD BE ALL
 COMDUT RIVU ISING RIGIO GALVANUED STEEL CONDUITS; OR A COMBINATION OF BOTH
 WHICH IS RIGID GALVANUED STEEL CONDUITS AND FLOOR DUCTS AND/OR JUST USE
 OF DOWNER FLOOR DUCT OR DEFELIE OF DEFILIED IN THE PERDORT OF POWER FLOOR DUCT OR DEEMED REQUIRED IN THE REPORT.
- COORDINATE WITH WMATA WHERE EXACTLY THE DUPLEX RECEPTACLE OUTLET AND JUNCTION BOX WILL BE INSTALLED IN THE KIOSK.
- 3. PROVIDE 3-NEW 20A, 1P CIRCUIT BREAKER AT EXISTING PANELBOARD AVAILABLE CIRCUIT BREAKER SPACES. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANELBOARD CIRCUIT BREAKERS ATTING. TERMINATE 2-NEW BRANCH CIRCUITS TO NEWLY INSTALLED CIRCUIT BREAKERS AND CONNECT PERMANENTLY TO QUAD RECEPTACLE OUTLETS LOCATED IN 1THE KIOSK. KEPF AND COLIED REMAINING BRANCH CIRCUIT IN THE PANELBOARD AND INSIDE THE JUNCTION BOX AT THE KIOSK FOR PUTURE USE. UPDATE PANELBOARD DIRECTORY TO MAINTEST PANELBOARD ADDITIONAL
- 4. THE REMAINING BRANCH CIRCUIT FOR FUTURE AFC FARE CATE APPLICATION SHALL BE SECURED, LABELED AND COILED AT THE KIOSK. THE LENGTH OF COILED PIGTAIL SHALL BE THE FARTHEST FARE GATE DISTANCE FROM KIOSK PLUS AN EXTRA 6"-0" CONDUCTOR.

SAFETY PRECAUTION:

ALL WORK SHALL COMPLY WITH WMATA SAFETY RULES, AND DE-ENERGIZATION POLICIES.

14-FQ10060-CENI-24

REFERENCE DE	AWINGS	REVISIONS			
DESIGNED C. NGO 08-14 NUMBER DESCR	IPTION DATE	BY	DESCRIPTION		
DRAWN C. NGO 08-14					
CHECKED B. IDILBI 08-14					
APPROVED N/A					
DATE	_				

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY TMENT OF TRANSIT INFRASTRUCTURE A Gannett Fleming/Parsons
JOINT VENTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM SUBMITTED PROJECT MANAGER APPROVED

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS CONGRESS HEIGHTS MEZZANINE KIOSK - POWER

SCALE	DRAWING NO.
AS SHOWN	F07-E-101

		Ε¥	TPI	ING	PAN	FI '	MES	25"		
AMPERES: 250	MOLTS:	120/208	101			SURF/				
MAINS: 250A MCB	PHASE:			LOCA				C205		
RATING: 10K AIC	PHASE: 3 LOCATION: ELEC. ROOM C205 WIRE: 4 SECTION: 1 OF 1					0203				
1011110	VIII (L.	CKT E	RKRS	CKT.	I	СКТ.	Скт	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE			NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXIST. LOAD CENTER "KES"	2.9	30	3	1	A	2	3	30	0.0	SPARE .
EXIOT. EGAD GENT EN TREG	2.5	-	-	3	- B -	4	-	-	0.0	OF FACE
	2.5		١.	5	C	6	-	-	0.0	
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	SPARE
SPARE	0.0	20	1	19	A	20	3	30	1.0	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	21	- B -	22	-	-	1.0	
EXISTING VENDOR	0.8	20	1	23	C	24	-	-	1.0	
EXISTING VENDOR	0.8	20	1	25	A	26	3	30	1.0	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	27	- B -	28	-	-	1.0	
EXISTING VENDOR	0.8	20	1	29	C	30	-	-	1.0	
EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.0	SPARE
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	35	C	36	1	20	0.0	SPARE
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	37	A	38	1	20	0.0	SPARE
FUTURE AFC FARE GATE	0.0	20	1	39	- B -	40	1	20	0.0	SPARE
SPARE	0.0	20	1	41	C	42	1	20	0.0	SPARE
			L	DAD	SUN	ИΜА	RY			
LIGHTS		0.0	x 1259	6					0.0	I KVA
RECEPTACLES, FIRST 10 KVA		10.0	x 1009	6 10.0 KVA						
RECEPTACLES		13.2	x 50%	6.6 KVA						
MISC. APPLIANCES		0.0	x 1009	% 0.0 KVA						
LARGEST MOTOR		0.0	x 1259							KVA
MOTORS			x 1009							KVA
HEAT			x 1259							KVA
AC .			x 1009							i KVA
WATER HEATING			x 1259							KVA
TOTAL CONNECTED LOAD			KVA	•	TOT	∆I DEM	IAND K	VΔ		KVA
TOTAL COMMENTED LOAD		00.1					IAND A			AMPS
CONNECTED LOAD PHASE SUMMA	ARY							•	55.0	
PHASE A:		11.3	KVA							
PHASE B:			KVA							
PHASE C:			KVA							

		REFERENCE DRAWINGS	REVISIONS			
DESIGNED C. NGO 08-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	
DATE DRAWN C. NGO 08-14						
DRAWN C. NGO 08-14 DATE						
CHECKED B. IDILBI 08-14			_			
DATE			_			
APPROVED_N/A	_		_	_		
DATE				\vdash		

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

SUBMITTED
PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NI	EΡ
IN METRORAIL STATIONS `	
CONGRESS HEIGHTS	
PANEL SCHEDULE	

SCALE	DRAWING NO.
NOT TO SCALE	F07-E-102

- 1. ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- 2. MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- 4. MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- 7. ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- 9. OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS. TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING CLEARANCES.
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

NUMBER

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT MANAGER.
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL THREADED COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE JUNCTION BOX.
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY WALLS.
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.

REVISIONS

DESCRIPTION

DATE BY

- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125, ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.

ABBREVIATIONS

THOUSAND AMPERE

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
AC	ALTERNATING CURRENT	Р	POLE
AF	AMPERE FRAME	PH	PHASE
AFC	AUTOMATED FARE COLLECTION SYSTEM	PNL	PANELBOARD
AFF	ABOVE FINISHED FLOOR	PRI	PRIMARY
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
BKR	BREAKER	SEC	SECONDARY
		SHT	SHEET
C CB	CONDUIT CIRCUIT BREAKER	SW	SWITCH
CCT	CIRCUIT	SWBD	SWITCHBOARD
Ç	CENTER LINE	TYP	TYPICAL
CLG	CEILING	U/G	UNDER GROUND
CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATORIES
		UON	UNLESS OTHERWISE NOTED
DISC	DISCONNECT	VOLT	VOLTAGE
E	ELECTRICAL	W	WATT
GND	GROUND	WMATA	WASHINGTON METROPOLITIAN
JB	JUNCTION BOX	** *	AREA TRANSIT AUTHORITY

DRAWING INDEX

F08-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

F08-E-101 SOUTHERN AVENUE - MEZZANINE KIOSK - POWER

F08-E-102 SOUTHERN AVENUE - PANEL SCHEDULE

MA-OF-SLD-E7 SOUTHERN AVENUE - SWITCHGEAR/SWITCHBOARD ES-1

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET- 20A, 125V WALL MOUNTED. JUNCTION BOX - SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.

III #10-3/4 HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

 INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

DRAWING NO. F08-E-001

PROJECT MANAGER

WEATHERPROOF

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

APPROVED

A Gannett Fleming/Parsons
JOINT VENTURE

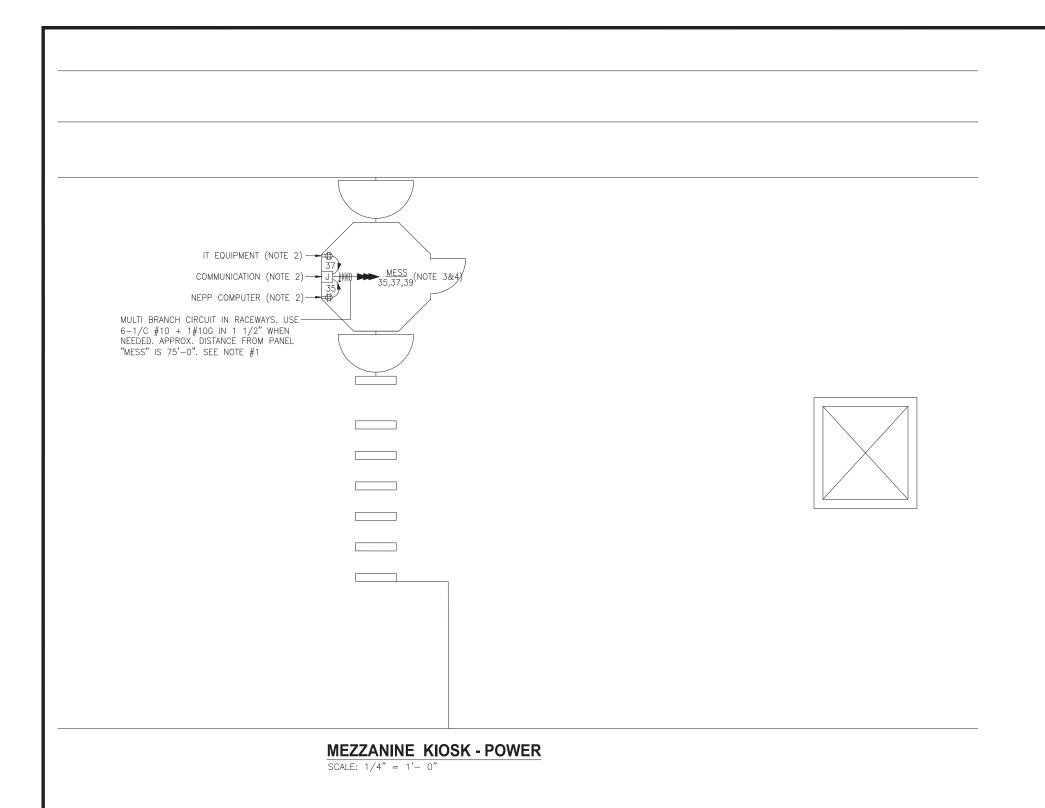
DRAWN C. NGO DATE CHECKED B. IDILBI APPROVED N/A DATE

DESCRIPTION

REFERENCE DRAWINGS

NOT TO SCALE

DESIGNED C. NGO



REVISIONS REFERENCE DRAWINGS DESIGNED C. NGO NUMBER DATE DESCRIPTION DRAWN C. NGO CHECKED B. IDILBI 08-14 DATE APPROVED N/A DATE

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS SOUTHERN AVENUE **MEZZANINE KIOSK - POWER**

AS SHOWN F08-E-101

DRAWING NOTES:

1. CONTRACTOR TO REFER TO SUPPLEMENTAL MEZZANINE INSPECTION REPORT, VOLUME 4 FURNISHED UNDER THIS SOLICITATION PACKAGE TO BE INFORMED THAT THE TOTAL LENGTH OF THE MULTI WIRE BRANCH CIRCUIT DEPICTED IN THE ELCTRICAL PLAN MAY EITHER CONSIST OF EXISTING POWER UNDER FLOOR DUCTS; OR IT COULD BE ALL CONDUIT RUN USING RIGID GALVANIZED STEEL CONDUITS; OR A COMBINATION OF BOTH WHICH IS RIGID GALVANIZED STEEL CONDUITS AND FLOOR DUCTS AND/OR JUST USE

2. COORDINATE WITH WMATA WHERE EXACTLY THE DUPLEX RECEPTACLE OUTLET AND

3. PROVIDE 3-NEW 20A, 1P CIRCUIT BREAKER AT EXISTING PANELBOARD AVAILABLE CIRCUIT BREAKER SPACES. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANELBOARD CIRCUIT BREAKER AIC RATING. TERMINATE 2—NEW BRANCH CIRCUITS TO NEWLY INSTALLED CIRCUIT BREAKERS AND CONNECT PERMANENTLY TO QUAD RECEPTACLE OUTLETS LOCATED IN THE KIOSK. KEEP AND COILED REMAINING BRANCH CIRCUIT IN THE PANELBOARD AND INSIDE THE JUNCTION BOX AT THE KIOSK FOR FUTURE USE. UPDATE PANELBOARD DIRECTORY TO MANIFEST PANELBOARD ADDITIONAL

4. THE REMAINING BRANCH CIRCUIT FOR FUTURE AFC FARE GATE APPLICATION SHALL BE SECURED, LABELED AND COILED AT THE KIOSK. THE LENGTH OF COILED PIGTAIL SHALL

BE THE FARTHEST FARE GATE DISTANCE FROM KIOSK PLUS AN EXTRA 6'-0"

1. ALL WORK SHALL COMPLY WITH WMATA SAFETY RULES, AND DE-ENERGIZATION

OF POWER FLOOR DUCT OR DEEMED REQUIRED IN THE REPORT.

JUNCTION BOX WILL BE INSTALLED IN THE KIOSK.

SAFETY PRECAUTION:

14-FQ10060-CENI-24

		EX	IST	ING	PAN	EL '	'MES	SS"		
AMPERES: 250	VOLTS:	120/208		MOUN	NTING:	SURF/	CE			
MAINS: 250A MCB	PHASE:	3		LOCA	TION:	ELEC.	ROOM	C205		
RATING: 10K AIC	WIRE:	4		SECT	ION: 1	OF 1				
	<u> </u>	CKT E	KRS	CKT.		CKT.	CKT	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXIST. LOAD CENTER "KES"	2.9	30	3	1	A	2	3	30	0.0	SPARE
	2.5	-	-	3	- B -	4	-	-	0.0	
	2.5	-	-	5	C	6	-	-	0.0	
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	SPARE
SPARE	0.0	20	1	19	A	20	3	30	1.0	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	21	- B -	22	-	-	1.0	
EXISTING VENDOR	0.8	20	1	23	C	24	-	-	1.0	
EXISTING VENDOR	0.8	20	1	25	A	26	3	30	1.0	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	27	- B -	28	-	-	1.0	
EXISTING VENDOR	0.8	20	1	29	C	30	-	-	1.0	EV/OTING VENDOR
EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.0	SPARE
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	35	C	36	1	20	0.0	SPARE
NEW KIOSK RECEPT. (NEPP/SOC) FUTURE AFC FARE GATE	0.0	20	1	37	A	38 40	1	20	0.0	SPARE SPARE
SPARE SPARE	0.0	20	1	41	C	40	1	20	0.0	SPARE
			L	DAD	SUN	/MA	RY			
LIGHTS		0.0	x 125%	6					0.0) KVA
RECEPTACLES, FIRST 10 KVA		10.0	x 100%	6					10.0) KVA
RECEPTACLES		13.2	x 50%						6.6	S KVA
MISC. APPLIANCES		0.0	x 100%	6					0.0) KVA
LARGEST MOTOR		0.0	x 125%	6					0.0) KVA
MOTORS		0.0	x 100%	6					0.0) KVA
HEAT			- x 125%							3 KVA
AC			x 100%							5 KVA
WATER HEATING			x 125%) KVA
TOTAL CONNECTED LOAD			KVA		TOTA	AL DEN	AND K	VA) KVA
							AND A			AMPS
CONNECTED LOAD PHASE SUMM	ARY									
PHASE A:		11.3	KVA							
PHASE B:			KVA							
PHASE C:		10.1	KVA							

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	08-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	DATE 08-14					
CHECKED B. IDILBI	DATE 08-14					
CHECKED	DATE					
APPROVED N/A	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTBAIC TURE RENEWAL PROGRAM

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
SOUTHERN AVENUE
PANEL SCHEDULE

SCALE DRAWING NO. F08-E-102

- 1. ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
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- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- 4. MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- 7. ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- 9. OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING CLEARANCES.
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

NUMBER

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT MANAGER.
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL THREADED COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK. ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE JUNCTION BOX.
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY WALLS.
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.

REVISIONS

DESCRIPTION

DATE BY

- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125, ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.

ADDDEN/IATIONS

GROUND

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

JUNCTION BOX

THOUSAND AMPERE

KILOVOLT AMPERE

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

<u>ARRI</u>	REVIATIONS		_
A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
AC	ALTERNATING CURRENT	Р	POLE
AF	AMPERE FRAME	PH	PHASE
AFC	AUTOMATED FARE COLLECTION SYSTEM	PNL	PANELBOARD
AFF	ABOVE FINISHED FLOOR	PRI	PRIMARY
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
BKR	BREAKER	SEC	SECONDARY
C	CONDUIT	SHT	SHEET
СВ	CIRCUIT BREAKER	SW	SWITCH
CCT	CIRCUIT	SWBD	SWITCHBOARD
Ç	CENTER LINE	TYP	TYPICAL
CLG	CEILING	U/G	UNDER GROUND
CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATOR
DISC	DISCONNECT	UON	UNLESS OTHERWISE NOTED
E	ELECTRICAL	VOLT	VOLTAGE

ELECTRICAL SYMBOL LIST

F09-E-101 NAYLOR ROAD - KIOSK - POWER

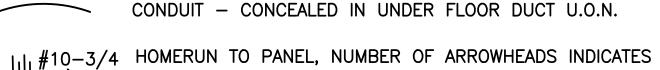
F09-E-102 NAYLOR ROAD - PANEL SCHEDULE

DRAWING INDEX

QUADRUPLEX RECEPTACLE OUTLET- 20A, 125V WALL MOUNTED. JUNCTION BOX - SURFACE MOUNTED ON UNISTRUT CHANNEL

F09-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

MA-OF-SLD-E10 NAYLOR ROAD - SWITCHGEAR/SWITCHBOARD ES-1



NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

 INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

WATT

WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX,

SPECIFICATIONS & SYMBOL LIST DRAWING NO. F09-E-001

14-FQ10060-CENI-24

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

A Gannett Fleming/Parsons
JOINT VENTURE PROJECT MANAGER

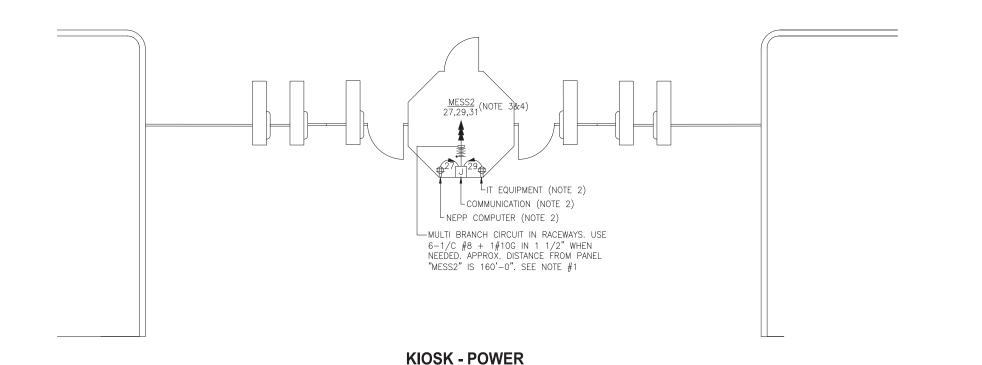
DRAWN C. NGO DATE CHECKED B. IDILBI APPROVED N/A DATE

REFERENCE DRAWINGS

DESCRIPTION

NOT TO SCALE

DESIGNED C. NGO



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

DRAWING NOTES:

- 1. CONTRACTOR TO REFER TO SUPPLEMENTAL MEZZANINE INSPECTION REPORT, VOLUME 4 FURNISHED UNDER THIS SOLICITATION PACKAGE TO BE INFORMED THAT THE TOTAL LENGTH OF THE MULTI WIRE BRANCH CIRCUIT DEPICTED IN THE ELCTRICAL PLAN MAY EITHER CONSIST OF EXISTING POWER UNDER FLOOR DUCTS; OR IT COULD BE ALL CONDUIT RUN USING RIGID GALVANIZED STEEL CONDUITS; OR A COMBINATION OF BOTH WHICH IS RIGID GALVANIZED STEEL CONDUITS AND FLOOR DUCTS AND/OR JUST USE OF POWER FLOOR DUCT OR DEEMED REQUIRED IN THE REPORT.
- 2. COORDINATE WITH WMATA WHERE EXACTLY THE DUPLEX RECEPTACLE OUTLET AND JUNCTION BOX WILL BE INSTALLED IN THE KIOSK.
- 3. PROVIDE 3-NEW 20A, 1P CIRCUIT BREAKER AT EXISTING PANELBOARD AVAILABLE CIRCUIT BREAKER SPACES. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING PANELBOARD CIRCUIT BREAKER AIC RATING. TERMINATE 2-NEW BRANCH CIRCUITS TO NEWLY INSTALLED CIRCUIT BREAKERS AND CONNECT PERMANENTLY TO QUAD RECEPTACLE OUTLETS LOCATED IN THE KIOSK. KEEP AND COILED REMAINING BRANCH CIRCUIT IN THE PANELBOARD AND INSIDE THE JUNCTION BOX AT THE KIOSK FOR FUTURE USE. UPDATE PANELBOARD DIRECTORY TO MANIFEST PANELBOARD ADDITIONAL LOADS.
- 4. THE REMAINING BRANCH CIRCUIT FOR FUTURE AFC FARE GATE APPLICATION SHALL BE SECURED, LABELED AND COILED AT THE KIOSK. THE LENGTH OF COILED PIGTAIL SHALL BE THE FARTHEST FARE GATE DISTANCE FROM KIOSK PLUS AN EXTRA 6'-0" CONDUCTOR

SAFETY PRECAUTION:

 ALL WORK SHALL COMPLY WITH WMATA SAFETY RULES, AND DE-ENERGIZATION POLICIES.

> CONTRACT NO. 14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	08-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	08-14					
CHECKED B. IDILBI	DATE 08-14					
OHEORED	DATE			_		
APPROVED N/A	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
NAYLOR ROAD
KIOSK - POWER

SCALE DRAWING NO. F09-E-101

AMPERES: 250	VOLTS:	120/208		MOUN	ITING:	SURFA	CE			
MAINS: 250A MCB	PHASE:	3		LOCA	TION:	ELEC. I	EQUIPM	IENT RM	. 126	
RATING: 10K AIC	WIRE:	4		SECT	ION: 1	OF 1				
	•	CKT E	BKRS	CKT.		CKT.	CKT	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXIST. LOAD CENTER "KES"	2.9	30	3	1	A	2	1	20	0.8	EXISTING VENDOR
	2.5	-	-	3	- B -	4	1	20	0.8	EXISTING VENDOR
	2.5	-	-	5	C	6	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR
EXIST ING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR
EXIST ING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR
EXIST ING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.0	SPARE
EXIST ING VENDOR	0.8	20	1	23	C	24	1	20	0.0	SPARE
EXIST ING VENDOR	0.8	20	1	25	A	26	1	20	0.0	SPARE
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	27	- B -	28	1	20	0.0	SPARE
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	29	C	30	1	20	0.0	SPARE
FUTURE AFC FARE GATE	0.0	20	1	31	A	32	1	20	0.0	SPARE
SPARE	0.0	20	1	33	- B -	34	1	20	0.0	SPARE
SPARE	0.0	20	1	35	C	36	1	20	0.0	SPARE
SPARE	0.0	20	1	37	A	38	1	20	0.0	SPARE
SPARE	0.0	20	1	39	- B -	40	1	20	0.0	SPARE
SPACE	0.0	-	-	41	C	42	1	20	0.0	SPARE

	LOAI	SUMMARY		
LIGHTS	0.0 x 125%		0.0 KVA	
RECEPTACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA	
RECEPTACLES	5.6 x 50%		2.8 KVA	
MISC. APPLIANCES	0.0 x 100%		0.0 KVA	
LARGEST MOTOR	0.0 x 125%		0.0 KVA	
MOTORS	0.0 x 100%		0.0 KVA	
HEAT	3.0 x 125%		3.8 KVA	
AC	4.5 x 100%		4.5 KVA	
WATER HEATING	0.0 x 125%		0.0 KVA	
TOTAL CONNECTED LOAD	23.1 KVA	TOTAL DEMAND KVA	21.1 KVA	
		TOTAL DEMAND AMPS	58.5 AMPS	
CONNECTED LOAD PHASE SUMMARY				
PHASE A:	8.5 KVA			
PHASE B:	7.3 KVA			
PHASE C:	8.1 KVA			

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED -



NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
NAYLOR ROAD
PANEL SCHEDULE

SCALE DRA
NOT TO SCALE F(

DRAWING NO. F09-E-102

65

- 1. ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- 2. MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- 7. ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS. TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WMATA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF EACH OTHER.

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVIĆES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL W/SCREW IN COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WIRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC..TO INDICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK, ALL DEVICES SHALL BE IDENTIFIED EITHER ON THE FACE OF THE COVERPLATE OR INSIDE PER WMATA PREFERENCE. ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO NCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 16130, AND 16125, ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.
- 29. The conduit utilized for this project shall be 1-1/2" min, or larger as indicated. The liquid tight utilized for the kiosk shall be 1-1/2" from the entry to the 8x8 junction box, then 1" from the junction box to the quads. All boxes used in or on the kiosk shall be

ADDDEVIATIONS

A. AMP	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCA	MINIMUM CIRCUIT AMPERE
		MCB	MAIN CIRCUIT BREAKER
AEMS	AUTOMATED ENERGY MANAGEMENT SYSTEM	MEZZ	MEZZANINE
AF	AMPERE FRAME	MIN	MINIMUM
AFC	AUTOMATED FARE COLLECTION SYSTEM	MLO	MAIN LUGS ONLY
AFF	ABOVE FINISHED FLOOR	MTD	MOUNTED OR MOUNTING
AIC	AMPERE INTERRUPTING CAPACITY	NEC	NATIONAL ELECTRIC CODE
AT	AMPERE TRIP	NEMA	NATIONAL ELECTRICAL
ATS	AUTOMATIC TRANSFER SWITCH		MANUFACTURER ASSOCIATION
BATT	BATTERY	Р	POLE
3KR	BREAKER	PH	PHASE
<u>B</u>	BASELINE	PNL	PANELBOARD
	CONDUIT	PRI	PRIMARY
СВ	CIRCUIT BREAKER	PROP	PROPOSED
ССТ	CIRCUIT	RGS	RIGID GALVANIZED STEEL
:	CENTER LINE	SEC	SECONDARY
CLG	CEILING	SHT	SHEET
CONST	CONSTRUCTION	STA	STATION
DC	DIRECT CURRENT	STD	STANDARD
DISC	DISCONNECT	SW	SWITCH
Ε	ELECTRICAL	SWBD	SWITCHBOARD
FLUOR.	FLUORESCENT	TYP	TYPICAL
GND	GROUND	U/G	UNDER GROUND
SPR	GROUND PENETRATING RADAR	U.L.	UNDERWRITERS LABORATORIE
G	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	VOLT	VOLTAGE
KAIC	THOUSAND AMPERE	W	WATT
KCMIL	INTERRUPTING CAPACITY THOUSAND CIRCULAR MILL	WMATA	WASHINGTON METROPOLITIAN AREA TRANSIT AUTHORITY

DRAWING INDEX

F11-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

F11-E-101 BRANCH AVENUE - MEZZANINE KIOSK - POWER

F11-E-102 BRANCH AVENUE - PANEL SCHEDULE

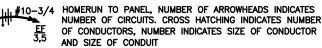
F11-E-301 BRANCH AVENUE - PANELBOARD IMAGE

MA-OF-SLD-E16 BRANCH AVENUE - SWITCHGEAR/SWITCHBOARD ES-1

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET- 20A, 125V WALL MOUNTED. J JUNCTION BOX - SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.



- INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

REFERENCE DRAWINGS REVISIONS DESIGNED C. NGO DESCRIPTION DESCRIPTION C. NGO DRAWN CHECKED B. IDILBI APPROVED N/A

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SUBMITTED

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF AFRASTRUCTURE RENDANDE PROGRAM APPROVE

KILOVOLT AMPERE



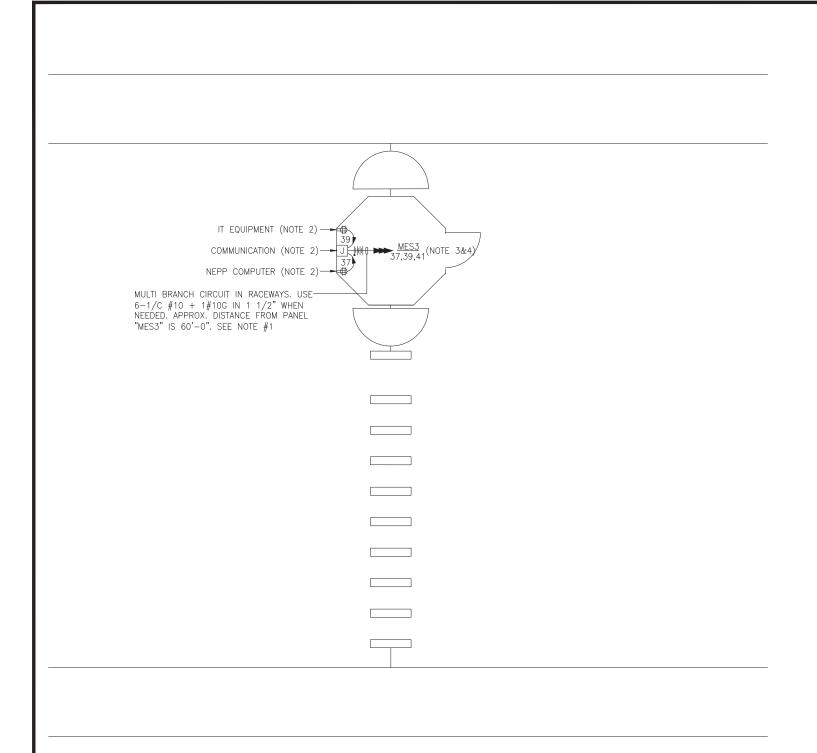
PROJECT MANAGER

WEATHERPROOF

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

NOT TO SCALE

RAWING NO F11-E-001



MEZZANINE KIOSK - POWER

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

CONTRACT NO. 14-FQ10060-CENI-24

			REFERENCE DRAWINGS	REVISIONS				
DESIGNED C. NGO	08-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION		
	DATE							
DRAWN C. NGO	08-14							
	DATE							
CHECKED B. IDILBI	08-14							
N. /2	DATE							
APPROVED N/A	DATE							
	DATE							
	DATE							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
BRANCH AVENUE
MEZZANINE KIOSK - POWER

CALE DRAWING NO.
AS SHOWN F11-E-101

DRAWING NOTES:

1. CONTRACTOR TO REFER TO SUPPLEMENTAL MEZZANINE INSPECTION REPORT, VOLUME 4 FURNISHED UNDER THIS SOLICITATION PACKAGE TO BE INFORMED THAT THE TOTAL LENGTH OF THE MULTI WIRE BRANCH CIRCUIT DEPICTED IN THE ELCTRICAL PLAN MAY EITHER CONSIST OF EXISTING POWER UNDER FLOOR DUCTS; OR IT COULD BE ALL CONDUIT RUN USING RIGID GALVANIZED STEEL CONDUITS; OR A COMBINATION OF BOTH WHICH IS RIGID GALVANIZED STEEL CONDUITS AND FLOOR DUCTS AND/OR JUST USE

2. COORDINATE WITH WMATA WHERE EXACTLY THE DUPLEX RECEPTACLE OUTLET AND

3. PROVIDE 3-NEW 20A, 1P CIRCUIT BREAKER AT EXISTING PANELBOARD AVAILABLE

CIRCUIT BREAKER SPACES. NEW CIRCUIT BREAKERS SHALL MATCH EXISTING
PANELBOARD CIRCUIT BREAKER AIC RATING. TERMINATE 2—NEW BRANCH CIRCUITS TO
NEWLY INSTALLED CIRCUIT BREAKERS AND CONNECT PERMANENTLY TO QUAD
RECEPTACLE OUTLETS LOCATED IN THE KIOSK. KEEP AND COILED REMAINING BRANCH
CIRCUIT IN THE PANELBOARD AND INSIDE THE JUNCTION BOX AT THE KIOSK FOR

FUTURE USE. UPDATE PANELBOARD DIRECTORY TO MANIFEST PANELBOARD ADDITIONAL

4. THE REMAINING BRANCH CIRCUIT FOR FUTURE AFC FARE GATE APPLICATION SHALL BE SECURED, LABELED AND COILED AT THE KIOSK. THE LENGTH OF COILED PIGTAIL SHALL

BE THE FARTHEST FARE GATE DISTANCE FROM KIOSK PLUS AN EXTRA 6'-0" CONDUCTOR.

1. ALL WORK SHALL COMPLY WITH WMATA SAFETY RULES, AND DE-ENERGIZATION

OF POWER FLOOR DUCT OR DEEMED REQUIRED IN THE REPORT.

JUNCTION BOX WILL BE INSTALLED IN THE KIOSK.

SAFETY PRECAUTION:

POLICIES.

IPTION	LOAD DESCRIPTIO EXISTING VENDOR EXISTING VENDOR SPARE	KVA 0.8 0.8	BKRS		SUKFA	ITING:	NUON				AMPERES: 400
IPTION	EXISTING VENDOR EXISTING VENDOR SPARE	8.0	BKRS	ROOM (EL EO	FION	1.0047			VOLTS:	
IPTION	EXISTING VENDOR EXISTING VENDOR SPARE	8.0		DCATION: ELEC. ROOM C203 ECTION: 1 OF 1							MAINS: 250A MCB
IPTION	EXISTING VENDOR EXISTING VENDOR SPARE	8.0				ON: 1 (4	WIRE:	RATING: 10K AIC
IPTION	EXISTING VENDOR EXISTING VENDOR SPARE	8.0			CKT.		CKT.		CKT B		
	EXISTING VENDOR SPARE		AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
	SPARE	0.8	20	1	2	A	1	3	30	2.9	EXIST. LOAD CENTER "KES"
			20	1	4	- B -	3	-	-	2.5	
		0.0	20	1	6	C	5	-	-	2.5	
	SPARE	0.0	20	1	8	A	7	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	10	- B -	9	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	12	C	11	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	14	A	13	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	16	- B -	15	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	18	C	17	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	20	A	19	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	22	- B -	21	1	20	0.8	EXISTING VENDOR
		8.0	20	1		C	23	3	30		SPARE
		8.0	20	1		A	25	-	-	0.0	
	SPARE	0.0	20	1	28	- B -	27	-	-	0.0	
	SPARE	0.0	20	1	30	C	29	1	1	0.0	SPARE
	EXISTING VENDOR	8.0	20	1	32	A	31	1		0.8	
	EXISTING VENDOR	8.0	20	1	34	- B -	33	1	20	0.8	EXISTING VENDOR
	EXISTING VENDOR	8.0	20	1	36	C	35	1	20	0.8	EXISTING VENDOR
	SPARE	0.0	20	1	38	A	37	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)
	SPARE	0.0	20	1	40	- B -	39	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SOC)
	EXISTING VENDOR	8.0	20	1	42	C	41	1	20	0.0	FUTURE AFC FARE GATE
	EXIST ING VENDOR EXIST ING VENDOR SPARE SPARE EXIST ING VENDOR EXIST ING VENDOR EXIST ING VENDOR SPARE SPARE	0.8 0.8 0.0 0.0 0.0 0.8 0.8 0.8	20 20 20 20 20 20 20 20 20 20 20 20	1 1 1 1 1 1 1 1 1	24 26 28 30 32 34 36 38 40	C A B B C A C A B C A B -	23 25 27 29 31 33 35 37	3 - - 1 1 1 1 1	30 - - 20 20 20 20 20 20 20	0.0 0.0 0.0 0.0 0.8 0.8 0.8 0.8	SPARE SPARE EXIST ING VENDOR EXIST ING VENDOR EXIST ING VENDOR NEW KIOSK RECEPT. (IT/NCS) NEW KIOSK RECEPT. (NEPP/SOC)

ECEPT ACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA	
ECEPTACLES	12.0 x 50%		6.0 KVA	
IISC. APPLIANCES	0.0 x 100%		0.0 KVA	
ARGEST MOTOR	0.0 x 125%		0.0 KVA	
IOTORS	0.0 x 100%		0.0 KVA	
EAT	3.0 x 125%		3.8 KVA	
C	4.5 x 100%		4.5 KVA	
/ATER HEATING	0.0 x 125%		0.0 KVA	
OTAL CONNECTED LOAD	29.5 KVA	TOTAL DEMAND KVA	24.3 KVA	
		TOTAL DEMAND AMPS	67.4 AMPS	
ONNECTED LOAD PHASE SUMMARY				
HASE A:	10.9 KVA			
HASE B:	10.5 KVA			

14-FQ10060-CENI-24

			REFERENCE DRAWINGS	REVISIONS				
DESIGNED C. NGO	08-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION		
DRAWN C. NGO	08-14 DATE							
CHECKED B. IDILBI	08-14 DATE							
APPROVED N/A	DATE							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED -

PHASE C:



8.9 KVA

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
BRANCH AVENUE
PANEL SCHEDULE

DRAWING NO. F11-E-102 SCALE NOT TO SCALE

- ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTED OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
- MAINTAIN GROUNDING CONTINUITY TO ALL DEVICES AND EQUIPMENT IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
- 5. WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- 7. ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2 OR RHW-2 INSULATIONS. PROVIDE \$12 WIRE MINIMUM, UNLESS OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER
- 11. IT IS THE INTENT OF THESE PRAININGS AND OTHER RELATED DOCUMENTS OF PROPRIET A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN THE PRAYS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONFLICT RELATIVE TO THE PLANS AND SPECIFICATIONS, THE INE COR OTHER REPUGABLE CODES AND COVERNING BOCUMENTS, HE SHALL NOTHEY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK, ANY WORK INSTALLED IN VOLCHOON OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING
- 14. CIRCUIT NUMBERS ARE FOR IDENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASING THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING CONDITIONS. PROVIDE TYPEWRITTEN PANELBOARD RIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT. ON 120/208V CIRCUITS
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS, ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WHATA PROJECT MANAGER PRIOR TO PERFORMING ALL THE WORK. THE TIME OF DAY OR EVENING SHALL BE DESIGNATED BY THE WHATA PROJECT
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL THREADED COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WAMATA,
 TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION.
 WIRNOS SHALL BE TESTED FOR COMMINITY, SHORTS, ETC... ALL WORK
 AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELBOARDS, JUNCTION BOXES, ETC.. TO INDICATE THE MAME, VOLTAGE, SERVING EQUIPMENT AND ITEM SERVED ETC... LABELS FOR EMERGENCY CIRCUITS SHALL BE IN RED, NORMAL CIRCUITS SHALL BE IN BLACK, ALL DEVICES SHALL BE INDEPTIONED ENTER OF HE FACE OF THE COMERPLATE OR INSIDE PER MAIL PREPERINCE, ALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CRICINITS CONTRAINED BY THE
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120. 16130, AND 16125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC, WMATA DESIGN CRITERIA, AND SPECIFICATIONS.
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS RASED ON RECORD DRAWINGS AND CASIAL FIELD SURVEY CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.
- liquid tight utilized for the kiosk shall be 1-1/2" from the entry to the 8x8 junction box then 1" from the junction box to the quads. All boxes used in or on the kiosk shall be NEMA 4x.

ABBREVIATIONS

A, AMP AMPERES NEC NATIONAL ELECTRIC CODE AC ALTERNATING CURRENT POLE AF AMPERE FRAME PHASE

PROP PROPOSED

SHT SHEET

SW SWITCH

TYP TYPICAL

VOLT VOLTAGE

SWBD SWITCHBOARD

U/G UNDER GROUND

WP WEATHERPROOF

U.L. UNDERWRITERS LABORATORIES

UON UNLESS OTHERWISE NOTED

WMATA WASHINGTON METROPOLITIAN AREA TRANSIT AUTHORITY

RGS RIGID GALVANIZED STEEL

AUTOMATED FARE COLLECTION SYSTEM PNL PANELBOARD PRI PRIMARY

AIC AMPERE INTERRUPTING CAPACITY AT AMPERE TRIP

> С CONDUIT

ABOVE FINISHED FLOOR

CB CIRCUIT BREAKER CCT CIRCUIT CENTER LINE

CLG CEILING CONST CONSTRUCTION DISCONNECT

ELECTRICAL GROUND

GND

THOUSAND AMPERE INTERRUPTING CAPACITY KAIC

KCMIL THOUSAND CIRCULAR MILL

KVA KILOVOLT AMPERE

MAX MAXIMUM

MCA MINIMUM CIRCUIT AMPERE MCB MAIN CIRCUIT BREAKER

MEZZ MEZZANINE

MLO MAIN LUGS ONLY

DRAWING INDEX

AD1-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST AD1-E-101 METRO CENTER - EAST & WEST - MEZZANINE KIOSK - POWER

A01-E-102 METRO CENTER - EAST & WEST - PANEL SCHEDULES

A01-E-301 METRO CENTER - EAST & WEST - PANELBOARD IMAGE A01-E-302 METRO CENTER - EAST & WEST - PANELBOARD IMAGE

MM-A-E05 METRO CENTER - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET- 20A, 125V WALL MOUNTED. J JUNCTION BOX - SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT - CONCEALED IN UNDER FLOOR DUCT U.O.N.

HMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUCTOR AND SIZE OF CONDUCTOR AND SIZE OF CONDUIT

1 - INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

FF 1,3 - INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

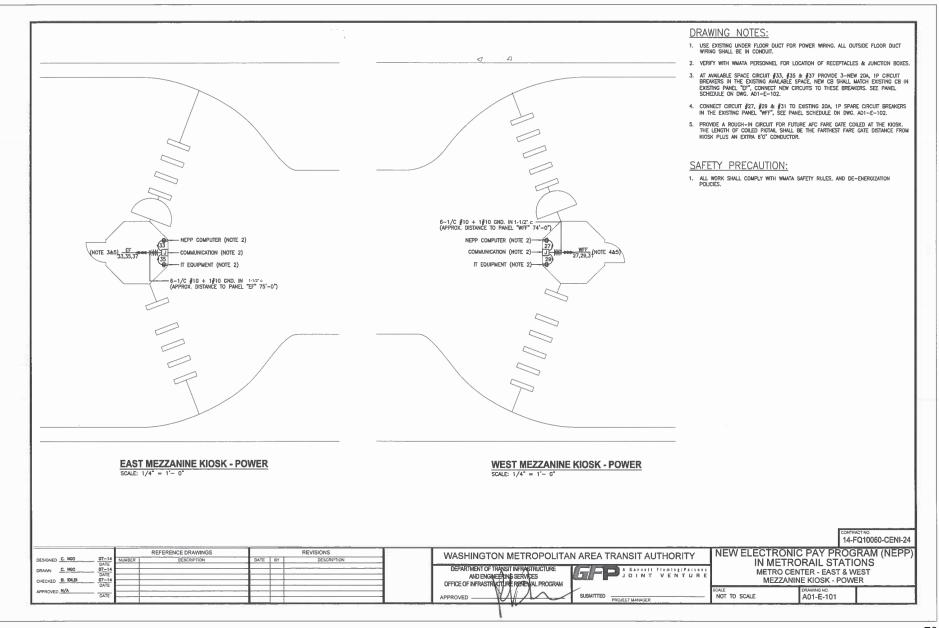
		R	EFERENCE DRAWINGS			REVISIONS	
DESIGNED C. NGO	<u>07-14</u>	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	
DRAWN C. NGO	DATE 07-14			_			_
CHECKED B. IDILBI	DATE 07-14						
APPROVED N/A	DATE	-					
APPROVED N/A	DATE						_

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY RANSTHINFRASTRUCTURE AND ENGIN ERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

NOT TO SCALE A01-E-001



AMPERES: 225	VOLTS:	120/208		MOU	TING:	SURF	ACE			
MAINS: 225A MLO	PHASE:	3		LOCA	TION:	ROOM	1 E200			
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT E	SKRS	CKT.		CKT.	СКТ	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
SPACE	0.0	-	-	1	Α	2	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	3	В	4	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	5	1	C 6	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	8.0	20	1	7	Α	В	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	8.0	20	1	9	В	10	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	8.0	20	1	11	-	12	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	13	Α	14	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	15	В	16	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	17		18	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOR
SPACE	0.0	-	T-	21	В	22	-	-	0.0	SPACE
EXISTING VENDOR	0.8	20	1	23	(24	1	20	0.8	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	25	Α	26	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	27	В	28	1	30	1.0	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	29	-	30	1	30	1.0	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	31	Α	32	2	30	1.6	EXISTING VENDOR
NEW KIOSK RECEPT. (IT & NCS)	0.8	20	1	33	В	34	-	-	1.6	
NEW KIOSK RECEPT. (NEPP&SOC)	0.8	20	1	35	(36	-	-	0.0	SPACE
FUTURE AFC FARE GATE	0.0	20	1	37	Α	38	-	-	0.0	SPACE
SPACE	0.0			39	В	40	-	-	0.0	SPACE
SPACE	0.0	· ·		41		42			0.0	SPACE
			LC	AD	SU	MMA	RY			
LIGHTS		0.0	x 125%	5					0.0	KVA
RECEPTACLES, FIRST 10 KVA		10.0	x 100%	5					10.0	KVA
RECEPTACLES		16.8	x 50%						8.4	KVA
MISC. APPLIANCES		0.0	x 100%	5					0.0	KVA
LARGEST MOTOR		0.0	x 125%						0.0	KVA
MOTORS		0.0	x 100%						0.0	KVA
HEAT		0.0	x 125%							KVA
AC			x 100%	-						KVA
WATER HEATING			x 125%							KVA ·
TOTAL CONNECTED LOAD			KVA		TO	TAL DEN	IAND K	VA		KVA
		20.0				TAL DEN				AMPS
CONNECTED LOAD PHASE SUMMA	ARY					THE DEI			91.1	rimi v
PHASE A:	****	9.0	KVA							
PHASE B:			KVA							
PHASE C:		3.0	****							
		0.0	KVA							

EXISTING PANEL "EF"

NOTES: A EXISTING PANEL "EF" IS FED FROM 277/480V, 30, 4W EXISTING SWBD. "EGB" LOCATED IN AC SWBD ROOM E102, CIRCUIT (A01-EGB-02) ∮2-100/3P VIA 75KVA TRANSFORMER (SEE ATTACHED DWG. MM-A-E05).

B. EXISTING WIRING FED FROM TOP OF PANEL BY:

* 3-3/4" C. (WIRING FILL >40%). EXISTING WIRING FED FROM BOTTOM OF PANEL BY: * 2-1 1/2" C. (WIRING FILL >40%).

VOLTS: PHASE: WIRE: KVA	3 4 CKT B			ITING:	SURFA				
MRE:	4 CKT B				COLLIS	CE			
KVA	CKT B		LOCA	TION:	ROOM	W200			
			SECT	ION:	1 OF 1				
		KRS	CKT.		CKT.	СКТ	BKRS		
0.8	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
0.0	20	1	1	A	2	1	20	0.8	EXISTING VENDOR
0.8	20	1	3	- B -	4	1	20	0.8	EXISTING VENDOR
0.8	20	1	5	C	6	1	20	0.8	EXISTING VENDOR
0.8	20	1	7	A	8	1	20	8.0	EXISTING VENDOR
0.0	20	1	9	- B -	10	1	20	8.0	EXISTING VENDOR
0.8	20	1	11	C	12	1	20	8.0	EXISTING VENDOR
0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR
8.0	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR
8.0	20	1	17	C	18	1	20	0.0	SPARE
8.0	20	1	19	A	20	1	20	0.8	EXISTING VENDOR
0.0	-	-	21	- B -	22	-	-	0.0	SPACE
8.0	20	1	23	C	24	1	20	0.8	EXISTING VENDOR
8.0	20	1	25	A	26	1	20	0.8	EXISTING VENDOR
8.0	20	1	27	- B -	28	1	20	0.0	SPARE
0.8	20	1	29	C	30	1	20	8.0	EXISTING VENDOR
0.0	20	1	31	A	32	1	20	8.0	EXISTING VENDOR
0.0	20	1	33	- B -	34	- 1	-	0.0	SPACE
0.0	-	-	35	C	36		-	0.0	SPACE
0.0	-	-	37	A	38	-	-	0.0	SPACE
0.0	-	-	39	- B -	40	-	-	0.0	SPACE
0.0		-	41	C	42	-		0.0	SPACE
	0.8 0.0 0.8 0.8 0.8 0.8 0.0 0.8 0.8	0.8 20 0.0 20 0.8 20 0.8 20 0.8 20 0.8 20 0.8 20 0.8 20 0.8 20 0.0 - 0.0 - 0.8 20 0.8 20 0.0 20 0.0 20 0.0 20 0.0 - 0.0 -	0.8 20 1 0.0 20 1 0.8 20 1 0.8 20 1 0.8 20 1 0.8 20 1 0.8 20 1 0.8 20 1 0.8 20 1 0.8 20 1 0.0 0.8 20 1 0.0 20 1 0.0 20 1 0.0 20 1 0.0 20 1 0.0 20 1 0.0 20 1 0.0 20 1	0.8 20 1 7 0.0 20 1 9 0.8 20 1 11 0.8 20 1 15 0.8 20 1 15 0.8 20 1 17 0.8 20 1 19 0.0 - - 21 0.8 20 1 23 0.8 20 1 25 0.8 20 1 27 0.8 20 1 27 0.8 20 1 31 0.0 20 1 31 0.0 20 1 33 0.0 20 1 33 0.0 - - 35 0.0 - - 37 0.0 - - 39	0.8 20 1 7 A 0.0 20 1 9 - 8 - 0.8 20 1 11 - 0 C 0.8 20 1 15 - 8 - 0 3 A C 0.8 20 1 17 C C 0.8 20 1 19 A C 0.8 20 1 23 - C 0.8 20 1 27 - B - 0.8 2 1 29 - C 0.8 2 1 29 - C 0.9 - C 0.0 2 1 29 - C 0.0 2 1 1 3 - 3 - 2	0.8 20 1 7 A 8 0.0 20 1 9 - B - 10 0.8 20 1 11 - C 12 0.8 20 1 13 A - 14 0.8 20 1 15 - B - 16 0.8 20 1 17 - C 18 0.8 20 1 19 A - 20 0.0 21 - B - 20 2 0.8 20 1 23 - C 24 0.8 20 1 23 - C 24 0.8 20 1 25 A - 28 0.8 20 1 27 - B - 32 0.0 20 1 33 - B - 34 0.0 20 1	0.8 20 1 7 A 8 1 0.0 20 1 9 - B - 10 1 0.8 20 1 11 - C - 12 1 0.8 20 1 13 A 14 1 0.8 20 1 15 - B - 16 1 0.8 20 1 17 - C - 18 1 0.8 20 1 19 A 20 1 0.0 2 21 B - 22 - 0.8 20 1 23 - C 24 1 0.8 20 1 23 - C 24 1 0.8 20 1 27 - B - 26 1 0.8 20 1 27 - B - 26 1 0.8 20 1 29 - C	0.8 20 1 7 A	0.8 20 1 7 A 8 1 20 0.8 0.0 20 1 9 - B - 10 1 20 0.8 0.8 20 1 11 - C 12 1 20 0.8 0.8 20 1 13 A - 16 1 20 0.8 0.8 20 1 15 - B - 16 1 20 0.8 0.8 20 1 17 - C 18 1 20 0.8 0.0 - 21 1.9 A - 20 1 20 0.8 0.0 - 21 1.9 A - 20 1 20 0.8 0.0 - 21 1.8 B - 20 1 20 0.8 0.8 20 1 23 - C 24 1 20 0.8 0.8 20 1 25 A - 26 1 20

	LOAL	2 OOMINAAN I		
LIGHTS	0.0 x 125%		0.0 KVA	
RECEPT ACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA	
RECEPTACLES	10.8 x 50%		5.4 KVA	
MISC. APPLIANCES	0.0 x 100%		0.0 KVA	
LARGEST MOTOR	0.0 x 125%		0.0 KVA	
MOTORS	0.0 x 100%		0.0 KVA	
HEAT	0.0 x 125%		0.0 KVA	
AC	0.0 x 100%		0.0 KVA	
WATER HEATING	0.0 x 125%		0.0 KVA	
TOTAL CONNECTED LOAD	20.B KVA	TOTAL DEMAND KVA	15.4 KVA	
		TOTAL DEMAND AMPS	42.8 AMPS	
CONNECTED LOAD PHASE SUMMARY				
PHASE A:	8.8 KVA			
PHASE B:	4.8 KVA			
PHASE C:	7.2 KVA			

NOTES: A EXISTING PANEL "WFF" IS FED FROM 277/480V, 3#, 4W EXISTING SWBD. "WGB" LOCATED IN AC SWBD ROOM W107, CIRCUIT (A01-WGB-10) #10-70A/3P VIA 45KVA TRANSFORMER (SEE ATTACHED DWG. MM-A-E0S).

B. EXISTING WIRING FED FROM TOP OF PANEL BY: • 1-3/4" C. (WIRING FILL >40%). EXISTING WIRING FED FROM BOTTOM OF PANEL BY: * 1-2" C. (WIRING FILL >40%). EXISTING WIRING FED FROM RIGHT SIDE OF PANEL BY:

* 1-2" C. TO TRANSFORMER (WIRING FILL >40%).

14-FQ10060-CENI-24

		i	ļ.	REFERENCE DRAWINGS			REVISIONS
DESIG	NED C. NGO	07-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAW	C. NGO	DATE 07-14			_		
		DATE	-		\vdash	-	
CHECH	ED B. IDILBI	DATE					
APPRO	VED N/A				_	\vdash	
		DATE			\vdash	\vdash	

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
OFFICE OF INFRASTRUKTURE BENERAL PROGRAM
APPROVED

APPROVED

GAP JOINT VENTURE SUBMITTED

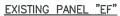
PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS METRO CENTER - EAST & WEST PANEL SCHEDULES

SCALE NOT TO SCALE DRAWING NO.

A01-E-102







EXISTING PANEL "EF"



		REFERENCE DRAWINGS		REVISIONS				
DESIGNED C. NGO 07-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	1		
DRAWN C. NGO 07-14 DATE	- 1					1		
CHECKED B. IDILBI 07-14 DATE	\vdash					1		
APPROVED_N/A DATE						1		
unit.						L		

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY DEPARTMENT OF TRANSIT INFRASTRUCTURE

AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
METRO CENTER - EAST & WEST
PANELBOARD IMAGE

SCALE NOT TO SCALE A01-E-301



EXISTING PANEL "WFF"



EXISTING PANEL "WFF"



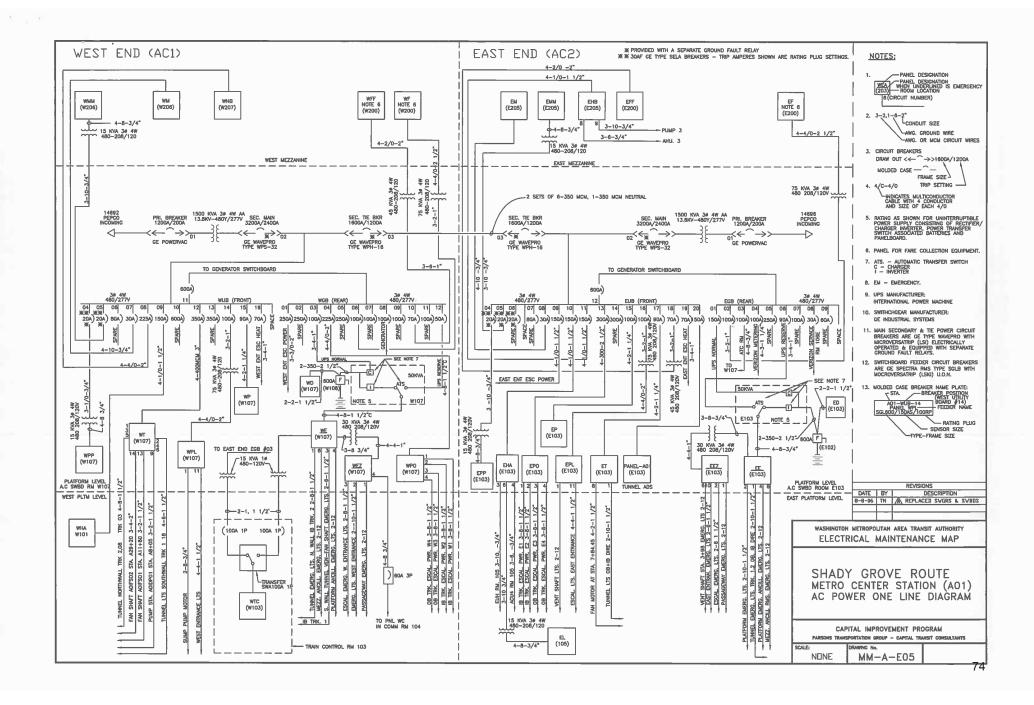
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
METRO CENTER - EAST & WEST
PANELBOARD IMAGE

SCALE DRAWING NO. A01-E-302



- ALL WORK, MATERIAL AND EQUIPMENT SHALL COMPLY WITH THE LATEST NATIONAL ELECTRICAL CODE BEING USED BY THE LOCAL JURISDICTION AND SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES.
- MATERIALS AND EQUIPMENT SHALL BE NEW EXCEPT WHERE INDICATED OTHERWISE. ALL OTHER WIRING DEVICES, CONDUIT, WIRE, ETC. SHALL BE NEW UNLESS NOTEO OTHERWISE.
- 3. ALL MATERIALS AND EQUIPMENT SHALL BEAR U.L. LISTING.
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- WORK NOT SPECIFICALLY SPECIFIED OR INDICATED SHALL CONFORM WITH SPECIFICATIONS.
- 6. ALL CONDUITS SHALL BE RUN CONCEALED IN UNDER FLOOR DUCT.
- ALL WIRE AND CABLE SHALL BE COPPER HAVING 600 VOLTS XHHW-2
 OR RHW-2 INSULATIONS. PROVIDE #12 WIRE MINIMUM, UNLESS
 OTHERWISE NOTED. ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN
 CABLE.
- 8. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE CONDITION OF THE PREMISES AND THE CHARACTER AND EXTENT OF WORK REQUIRED PRIOR TO SUBMISSION OF BIDS.
- OBTAIN ALL PERMITS AND PAY ALL FEES NECESSARY FOR INSPECTIONS, TESTS & OTHER SERVICES REQUIRED FOR THE COMPLETION OF THIS WORK.
- 10. ALL WORK SHALL BE DONE AT SUCH TIMES AND IN SUCH A MANNER THAT WILL LEAST INTERFERE WITH THE MAINTENANCE AND OPERATION OF ALL RELATED OR AFFECTED SYSTEMS. COORDINATE ALL POWER OUTAGES WITH WANTA PROJECT MANAGER.
- 11. IT IS THE INTENT OF THESE DRAWINGS AND OTHER RELATED DOCUMENTS TO PRODUCE A COMPLETE AND FUNCTIONING ELECTRICAL SYSTEM. PROVIDE ALL LABOR, MATERIAL AND OTHER SERVICES NECESSARY TO ACHIEVE THIS PRODUCT. NOTIFY THE KNOINEER OF ANY DISCREPANCIES IN THE PLANS & SPECIFICATIONS THAT WILL AFFECT THE WORK, PRIOR TO SUBMISSION OF THE BID PRICE.
- 12. IF, DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A CONNICT RELATIVE TO THE PLANS AND SPECIFICATIONS. THE NEC OR OTHER APPLICABLE CODES AND GOVERNING DOCUMENTS, HE SHALL NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. ANY WORK INSTALLED IN VIOLATION OF THE CONTRACT DOCUMENT OR APPLICABLE CODES WHICH COULD HAVE BEEN AVOIDED BY CONTACTING THE ENGINEER SHALL BE RECTIFIED AT NO ADDITIONAL COST.
- 13. ELECTRICAL PLANS ARE DIAGRAMMATIC & INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. CHECK DRAWINGS OF OTHER TRADES TO VERIFY SPACE CONDITIONS, ETC. MAINTAIN WORKING CLEARANCES
- 14. CIRCUIT NUMBERS ARE FOR DENTIFICATION PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTLY PHASIGN THE CIRCUITS IN THE PANEL AND SHALL BALANCE THE LOAD ON THE PHASES UNDER NORMAL OPERATING COMMONIONS. PROVIDE TYPEWERITER PANELBAND DIRECTORIES. BALANCE THE PHASE LOADS TO WITHIN 20 PERCENT OF FACH CITHER.

- 15. INCREASE ALL BRANCH CIRCUIT CONDUCTORS TO THE NEXT LARGER SIZE FROM THE PANEL TO THE FIRST OUTLET WHERE THE LENGTH OF THE HOMERUN EXCEEDS 100FT, ON 120/208V CIRCUITS.
- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
- 17. VERIFY WIRE SIZES, CIRCUIT BREAKERS AND FUSES RATINGS FOR ALL EQUIPMENT, AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES AFFECTING THE WORK PRIOR TO PROCEEDING.
- 18. ALL PANELS IMPACTED BY THIS PROJECT SHALL BE PROVIDED WITH NEW, UPDATED TYPEWRITTEN PANEL SCHEDULES (FOR NEW AND EXISTING CIRCUITS) INDICATING THE FINAL ROOM NUMBER AND THE EQUIPMENT OR DEVICES SERVED BY THE CIRCUITS.
- 19. DEMOLITION OF EXISTING WORK SHALL BE PERFORMED AFTER HOURS.
 ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE WMATA
 PROJECT WANAGER PRIOR TO PERFORMING ALL THE WMATA
 OF DAY OR EVENING SHALL BE DESIGNATED BY THE WMATA PROJECT
 MANAGER.
- 20. ALL WIRING SHALL BE IN CONDUIT, MINIMUM SIZE 3/4 INCH WITH LARGER SIZES AS INDICATED OR REQUIRED BY NEC. ALL CONDUITS SHALL BE RIGID GALVANIZED STEEL THREADED COUPLING FOR COMPLETE WATER PROOF INSTALLATION.
- 21. AT JOB COMPLETION, AND BEFORE FINAL ACCEPTANCE BY WMATA, TEST EACH RECEPTACLE AND PANELBOARD FOR PROPER OPERATION. WRING SHALL BE TESTED FOR CONTINUITY, SHORTS, ETC... ALL WORK AREAS, ETC.. SHALL BE CLEANED AT THE COMPLETION OF THIS PROJECT.
- 22. FOR DEVICE IDENTIFICATION, THE ELECTRICAL CONTRACTOR SHALL LIBEL ALL PANELBAGADS, JUNCTION BOXES, ETC., TO NICICATE THE NAME, VOLTAGE, SERVING EQUIPMENT AND TEM SERVED, ETC., LUBELS FOR EMERGENCY CIRCUITS SHALL BE IN REAL OF NORMAL CRICUITS SHALL BE IN BLACK, ALL DEVICES SHALL BE INTERED ETHER ON THE FACE OF THE COMPRISHED OF THE COMPRISHED OF THE SHALL BE ABBIED TO INDICATE THE CIRCUITS CALL JUNCTION BOXES SHALL BE LABELED TO INDICATE THE CIRCUITS CONTAINED BY THE
- 23. THE CONTRACTOR SHALL UPDATE THE SCHEDULES OF ALL PANELBOARDS AFFECTED BY THIS PROJECT TO REFLECT CHANGES DUE TO THE PROJECT WORK. PANEL SCHEDULE LOAD DESCRIPTIONS ARE TO INCLUDE THE FINAL ROOM OR AREA NUMBERS.
- 24. INCLUDE GPR FOR ANY CORE DRILLS OR DRILLED PENETRATIONS IN ANY
- 25. SEAL OFF ALL PENETRATIONS THRU WALLS/FLOORS.
- 26. THE CONTRACTOR SHALL BECOME FAMILIAR WITH WMATA DESIGN CRITERIA SECTION 4 AND SECTION 13; WMATA SPECIFICATION SECTION 16120, 416125. ALL INSTALLATION SHALL BE IN COMPLIANCE WITH THE NEC. WMATA DESIGN CRITERIA AND SPECIFICATIONS:
- 27. THE CONTRACTOR SHALL IDENTIFY SPARE CIRCUIT WITH "RESERVED FOR
- 28. EXISTING SWITCHBOARDS, PANELBOARDS AND EQUIPMENT SHOWN IS BASED ON RECORD DRAWINGS AND CASUAL FIELD SURVEY. CONTRACTOR SHALL VERIFY ALL ELECTRICAL EQUIPMENT IN FIELD.
- 29. The conduit utilized for this project shall be 1-1/2" min. or larger as indicated. The liquid tight utilized for the kiosk shall be 1-1/2" from the entry to the 8x8 junction box, then 1" from the junction box to the quads. All boxes used in or on the kiosk shall be NFMA 4x.

ABBREVIATIONS

JΒ

KAIC

KCMII

KVA

MAX

MCA

MCB

MEZZ

MIN

MLO

APPROVED

JUNCTION BOX

THOUSAND AMPERE INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
AC	ALTERNATING CURRENT	Р	POLE
AF	AMPERE FRAME	PH	PHASE
AFC	AUTOMATED FARE COLLECTION SYSTEM	PNL	PANELBOARD
AFF	ABOVE FINISHED FLOOR	PRI	PRIMARY
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
BKR	BREAKER	SEC	SECONDARY
C	CONDUIT	SHT	SHEET
CB	CIRCUIT BREAKER	S₩	SWITCH
CCT	CIRCUIT	SWBD	SWITCHBOARD
¢	CENTER LINE	TYP	TYPICAL
CLG	CEILING	U/G	UNDER GROUND
CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATORIES
DISC	DISCONNECT	UON	UNLESS OTHERWISE NOTED
E	ELECTRICAL	VOLT	VOLTAGE
GND	GROUND	W	WATT

WEATHERPROOF

DRAWING INDEX

\02-E-101	FARRAGUT NORTH - NORTHEAST, SOUTHEAST & NORTHWEST - MEZZANINE KIOSK - POWER	
NO2-E-102	FARRAGUT NORTH NORTHEAST & SOUTHEAST - PANEL SCHEDULES	
\02~E−103	FARRAGUT NORTH NORTHWEST - PANEL SCHEDULE	
N02-E-301	FARRAGUT NORTH NORTHEAST - PANELBOARD IMAGE	

A02-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

A02-E-302 FARRAGUT NORTH SOUTHEAST - PANELBOARD IMAGE

A02-E-303 FARRAGUT NORTH NORTHWEST - PANELBOARD IMAGE

MM-A-E07 FARRAGUT NORTH - AC POWER ONE LINE DIAGRAM

MM-A-E08 FARRAGUT NORTH - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

QUADRUPLEX RECEPTACLE OUTLET— 20A, 125V WALL MOUNTED.

JUNCTION BOX — SURFACE MOUNTED ON UNISTRUT CHANNEL

CONDUIT — CONCEALED IN UNDER FLOOR DUCT U.O.N.

HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CIRCUITS. CROSS HATCHING INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUCT

| - INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

EF - INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

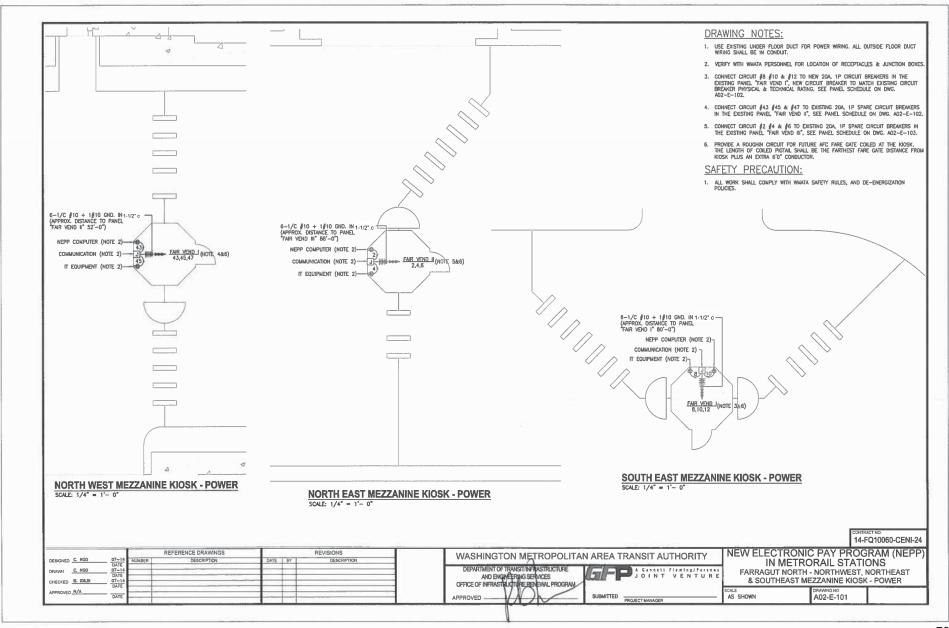
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE SERVICES
OFFICE OF INFRASTRUCTURE
OFFICE OFFICE

SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
ABBREVIATIONS, DRAWING INDEX,
SPECIFICATIONS & SYMBOL LIST

NOT, TO SCALE DRAWING NO. A02-E-001



RATING:	100AMOD	PAROE:			LOUA			DD RM			
RAI ING:	10K AIC	WIRE	4		SECT	ON:	1 OF 1				
			CKT E		CKT.		CKT.		BKRS		
LOA	AD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXISTING \	VENDOR	0.8	20	1	1	A	2	1	20	8.0	EXISTING VENDOR
EXISTING \	VENDOR	8.0	20	1	3	- B -	. 4	1	20	0.8	EXISTING VENDOR
SPARE		0.0	20	1	5	C	6	1	20	8.0	EXISTING VENDOR
EXISTING \	VENDOR	8.0	20	1	7	A	8	1	20	8.0	NEW KIOSK RECEPT. (IT&NCS)
SPACE		0.0		I	9	- B -	10	1	20	8.0	NEW KIOSK RECEPT. (NEPP/SOC)
SPACE		0.0			11	C	12	1	20	0.0	FUTURE AFC FARE GATE
SPACE		0.0			13	A	14			0.0	SPACE
SPACE		0.0			15	- B -	16			0.0	SPACE
EXISTING \	VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	25	A	26	1	20	0.8	EXISTING VENDOR
EXISTING V	VENDOR	0.8	20	1	27	- B -	28	1	20	8.0	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	29	C	30	1	20	0.8	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	31	A	32	1	20	8.0	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	33	- B -	34	1	20	0.0	SPACE
EXISTING \	VENDOR	0.8	20	1	35	C	36	1	20	0.0	SPACE
XISTING \	VENDOR	0.8	20	1	37	A	38	1	20	0.8	EXISTING VENDOR
EXISTING V	VENDOR	0.8	20	1	39	- B -	40	1	20	0.8	EXISTING VENDOR
EXISTING \	VENDOR	0.8	20	1	41	C	42	1	20	0.8	EXISTING VENDOR
SPARE		0.0	20	1	43	A	44	1	20	0.0	SPARE
SPARE		0.0	20	1	45	- B -	46	1	20	0.0	SPARE
SPARE		0.0	20	1	47	C	48	1	20	0.0	SPARE
				1.0) A P	OLUM	1100	737			
				LC)AD	SUN	IMA	RY			
.IGHTS			0.0	LC x 1259		SUN	IMA	RY		0.0	KVA
	CLES, FIRST 10 KVA					SUN	IMA	RY			KVA KVA
RECEPTAC			10.0	x 1259		SUN	IMA	RY		10.0	
RECEPT AC	CLES		10.0	x 1259 x 1009		SUN	IMA	RY		10.0 7.4	KVA
RECEPT AC RECEPT AC WISC. APPL	CLES LIANCES		10.0 14.8 0.0	x 1259 x 1009 x 50%	,	SUN	IMA	RY		10.0 7.4 0.0	KVA KVA
RECEPT AC RECEPT AC MISC. APPL LARGEST M	CLES LIANCES		10.0 14.8 0.0	x 1259 x 1009 x 50% x 1009 x 1259		SUN	IMA	RY		10.0 7.4 0.0 0.0	KVA KVA KVA
RECEPT AC RECEPT AC MISC. APPL ARGEST M MOT ORS	CLES LIANCES		10.0 14.8 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009		SUM	IMA	RY		10.0 7.4 0.0 0.0	KVA KVA KVA KVA
RECEPTAC RECEPTAC MISC. APPL LARGEST M MOTORS HEAT	CLES LIANCES		10.0 14.8 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1259		SUN	IMA	RY		10.0 7.4 0.0 0.0 0.0	KVA KVA KVA KVA KVA
RECEPT AC RECEPT AC MISC. APPL LARGEST M MOTORS HEAT AC	CLES LIANCES MOTOR		10.0 14.8 0.0 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009		SUN	IMA	RY		10.0 7.4 0.0 0.0 0.0 0.0	KVA KVA KVA KVA KVA KVA KVA
RECEPT AC RECEPT AC MISC. APPL LARGEST M MOTORS HEAT AC WATER HE	CLES LIANCES MOTOR EATING		10.0 14.8 0.0 0.0 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259						10.0 7.4 0.0 0.0 0.0 0.0 0.0	KVA KVA KVA KVA KVA KVA KVA
RECEPT AC RECEPT AC MISC. APPL LARGEST M MOTORS HEAT AC WATER HE	CLES LIANCES MOTOR		10.0 14.8 0.0 0.0 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009		тот	AL DEM	AND K		10.0 7.4 0.0 0.0 0.0 0.0 0.0 0.0	KVA
RECEPT AC RECEPT AC MISC. APPL LARGEST M MOTORS HEAT AC WATER HE TOTAL CO.	CLES LIANCES MOTOR EATING	ARY	10.0 14.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 24.8	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259 KVA		тот	AL DEM			10.0 7.4 0.0 0.0 0.0 0.0 0.0 0.0	KVA KVA KVA KVA KVA KVA KVA
RECEPT AC RECEPT AC MISC. APPL LARGEST M MOTORS HEAT AC WATER HE TOTAL CO	CLES LIANCES MOTOR EATING INNECTED LOAD	ARY	10.0 14.8 0.0 0.0 0.0 0.0 0.0 0.0 0.0 24.8	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259		тот	AL DEM	AND K		10.0 7.4 0.0 0.0 0.0 0.0 0.0 0.0	KVA
RECEPTAC MISC. APPL LARGEST M MOTORS HEAT AC WATER HEA TOTAL CO.	CLES LIANCES MOTOR EATING INNECTED LOAD	ARY	10.0 14.8 0.0 0.0 0.0 0.0 0.0 0.0 24.8	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259 KVA		тот	AL DEM	AND K		10.0 7.4 0.0 0.0 0.0 0.0 0.0 0.0	KVA

EXISTING PANEL "FAIR VEND I"

LOCATION: AC SWBD RM 256

VOLTS 120/208 | MOUNTING: SURFACE

PHASE: 3

AMPERES: 225

MAINS: 150AMCB

NOTES: A EXISTING PANEL "FAIR VEND I" IS FED FROM 277/480V, 36, 4W EXISTING SWITCHBOARD "NGB" LOCATED IN AC SWBD. RM. 256, CIRCUIT (A02-NGB-04) #4-100A/3P VA 75KVA TRANSFORMER (SEE ATTACHED DWG. MM-A-E08).

- B. EXISTING WIRING FED FROM TOP OF PANEL BY: ° 6-1" C. (4-WIRING FILL >40%)(2-WIRING FILL >20%). EXISTING WIRING FED FROM LEFT SIDE OF PANEL BY:
 - * 1-3" C. TO TRANSFORMER (WIRING FILL >40%). * 1-3/4" C. (WIRING FILL >40%).

	0.0			15	- B -	16			0.0	SPACE
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	29	C	30	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	35	C	36	1	20	0.0	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	37	A	38	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	39	- B -	40	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	41	C	42	1	20	0.0	SPARE
NEW KIOSK RECEPT. (IT & NCS)	8.0	20	1	43	A	44	1	20	0.0	SPARE
NEW KIOSK RECEPT. (NEPP/SOC)	9.8	20	1	45	• В -	46	1	20	0.8	EXISTING VENDOR
			1	47	C	48	1	20	0.8	EXISTING VENDOR
FUTURE AFC FARE GATE	9,0	20				IMA	DV			
FUTURE AFC FARE GATE	9,0		LC	DAD	SUN	1MA	RY			
LIGHTS	9.0	0.0	L(x 1259	DAD		IMA	RY			D KVÁ
LIGHTS RECEPTACLES, FIRST 10 KVA	9.0	0.0	L(x 1255 x 1009	DAD		IMA	RY		10.) KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES	9.0	0.0 10.0 15.2	L(x 1257 x 1009 x 50%	DAD		IMA	RY		10.5) KVA 5 KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC, APPLIANCES	9.0	0.0 10.0 15.2 0.0	x 1257 x 1009 x 50% x 1009	DAD		1MA	RY		10.6 7.5 0.6	D KVA 6 KVA D KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC APPLIANCES LARGEST MOTOR	9.0	0.0 10.0 15.2 0.0	x 1259 x 1009 x 50% x 1009 x 1259	DAD		IMA	RY		10.1 7.1 0.1) kva 6 kva) kva) kva
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS	9.0	0.0 10.0 15.2 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009	DAD		1MA	RY		10.1 7.1 0.1	D KVA 6 KVA D KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT	9.0	0.0 10.0 15.2 0.0 0.0 0.0	x 1257 x 1009 x 50% x 1009 x 1259 x 1009 x 1259	DAD		IMA	RY		10.1 7.1 0.1 0.1) kva 6 kva) kva) kva
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT	9.0	0.0 10.0 15.2 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009	DAD		1MA	RY		10.1 7.3 0.1 0.1 0.1	o kva 6 kva o kva o kva o kva
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS	9.0	0.0 10.0 15.2 0.0 0.0 0.0 0.0	x 1257 x 1009 x 50% x 1009 x 1259 x 1009 x 1259	DAD		IMA	RY		10.1 7.3 0.1 0.1 0.1) KVA 5 KVA O KVA O KVA O KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLANCES LARGEST MOTOR MOTORS HEAT AC WATER HEAT ING	9.0	0.0 10.0 15.2 0.0 0.0 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009	DAD	SUM	IMA		VA	10.1 7.1 0.1 0.1 0.1 0.1	0 kva 5 kva) kva) kva) kva) kva) kva
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC	9.0	0.0 10.0 15.2 0.0 0.0 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259	DAD	SUM		AND K		10.1 7.1 0.1 0.1 0.1 0.1 0.1 0.1	0 KVA 5 KVA 0 KVA 0 KVA 0 KVA 0 KVA 0 KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD		0.0 10.0 15.2 0.0 0.0 0.0 0.0 0.0	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259	DAD	SUM	AL DEM	AND K		10.1 7.1 0.1 0.1 0.1 0.1 0.1 0.1	O KVA S KVA O KVA O KVA O KVA O KVA S KVA S KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPT ACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SUMMA PHASE A:		0.0 10.0 15.2 0.0 0.0 0.0 0.0 0.0 0.0 25.2	x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259	DAD	SUM	AL DEM	AND K		10.1 7.1 0.1 0.1 0.1 0.1 0.1 0.1	O KVA S KVA O KVA O KVA O KVA O KVA S KVA S KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD		0.0 10.0 15.2 0.0 0.0 0.0 0.0 0.0 25.2	LC x 1259 x 1009 x 50% x 1009 x 1259 x 1009 x 1259 x 1009 x 1259 KVA	DAD	SUM	AL DEM	AND K		10.1 7.1 0.1 0.1 0.1 0.1 0.1 0.1	O KVA S KVA O KVA O KVA O KVA O KVA S KVA S KVA

EXISTING PANEL "FAIR VEND II"

SECTION: 1 OF 1

11 - - C 12 13 A - - 14

15 - B - 16

LOCATION: ROOM 206

CKT. CKT BKRS NO. POLE AMP KVA

0.0 SPACE

0.0 SPACE

0.0 SPACE

VOLTS: 120/208 | MOUNTING: SURFACE

CKT BKRS CKT.

KVA AMP POLE NO.

PHASE: 3

WRE: 4

0.0

0.0

0.0

AMPERES: 225

MAINS: 150A MCB

RATING: 10K AC

EXISTING VENDOR EXISTING VENDOR SPACE EXISTING VENDOR SPACE SPACE SPACE

SPACE

LOAD DESCRIPTION

- B. EXISTING WIRING FED FROM TOP OF PANEL BY:

 ° 6-1" C. (4-WIRING FILL >40%)(2-WIRING FILL >20%).

 EXISTING WIRING FED FROM LEFT SIDE OF PANEL BY:

 ° 1-3" C. TO TRANSFORMER (WIRING FILL >40%).

14-FQ10060-CENI-24

C NCO 57-1	REFERENCE DRAWINGS	REVISIONS	WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY	NEW ELECTRONIC PAY PROGRAM (NEPP)
DESIGNED C. NGO D7-1	NUMBER DESCRIPTION	DATE BY DESCRIPTION		IN METRORAIL STATIONS
DRAWN C. NGO 07-1			DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES A Gaussett Floring / Parsons AND ENGINEERING SERVICES	FARRAGUT NORTH - NORTHEAST & SOUTHEAST
CHECKED 8. IDILBI 07-1			OFFICE OF INFRASTRUCTURE REVIEWAL PROGRAM	PANEL SCHEDULES
APPROVED N/A			\(\(\lambda(\lambda)\)	SCALE DRAWING NO. NOT TO SCALE A02-F-102
			APPROVED SUBMITTED PROJECT MANAGER	NOT TO SCALE A02-E-102

	E	XISTI	NG	PAN	IEL "	FAI	R VE	:ND I	"	
AMPERES: 225	VOLTS:			MOUN	ITING:	SURFA	CE			
MANS: 150AMCB	PHASE:	3		LOCA			ER RO	OM 206		
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT E	KRS	CKT.		CKT.	CKT	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXISTING CIRCUIT	1.0	30	2	1	A	2	1	20	0.8	NEW KIOSK RECEPT. (IT & NCS)
	1.0	-		3	- B -	4	1	20	8.0	NEW KIOSK RECEPT. (NEPP/SOC
SPARE	0.0	20	1	5	C	6	1	20	0.0	FUTURE AFC FARE GATE
SPARE	0.0	20	1	7	A	8	1	20	8.0	EXISTING VENDOR
SPACE	0.0	-		9	- B -	10	1	20	8.0	EXISTING VENDOR
SPACE	0.0	-	-	11	C	12			0.0	SPACE
SPACE	0.0			13	A	14	-	•	0.0	SPACE
SPACE	0.0	-		15	- B -	16	-	•	0.0	SPACE
SPACE	0.0		-	17	C	18	-	-	0.0	SPACE
SPARE	0.0	20	1	19	Α	20	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	8.0	20	1	21	- B -	22	1 .	20	8.0	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	8.0	20	1	25	A	26	1	20	8.0	EXISTING VENDOR
EXISTING VENDOR	8.0	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	8.0	20	11	29	C	30	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	8.0	20	1	31	A	32	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	35	C	36	1	20	0.0	SPARE
SPARE	0.0	20	1	37	A	38	1	20	0.0	SPARE
SPARE	0.0	20	1	39	· B ·	40	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	41	C	42	1	20	0.8	EXISTING VENDOR
SPARE	0.0	20	1	43	A	44	1	20	0.0	SPARE
SPARE	0.0	20	1	45	- B -	46	1	20_	0.0	SPARE
SPARE	0.0	20	1	47	C	48	1	20	0.0	SPARE
			10	DAD	SUM	IMΔ	RY			
LIGHTS		0.0	x 125%		3011	HAIN	X I		0.0	KVA
LIGHTS RECEPTACLES, FIRST 10 KVA			x 100%	-						KVA
RECEPTACLES, FIRST TO KVA			x 100% x 50%	0						KVA KVA
MISC. APPLIANCES		0.0	x 100%	-						KVA
LARGEST MOTOR			x 125%							KVA
MOTORS			x 100%							KVA
HEAT			x 125%							KVA
AC .			x 100%							KVA
WATER HEATING			x 125%	Ď.					0.0	KVA
FOTAL CONNECTED LOAD		18.8	KVA				AND KI	** *		KVA AMPS
CONNECTED LOAD PHASE S	UMMARY									
PHASE A:		6.6	KVA							
PHASE B:		7.4	KVA							

NOTES: A. EUSTING PANEL "FAIR VEND III" IS FED FROM 277/480V, 30, 4W EXISTING SWITCHBOARD "SGB" LOCATED IN AC SWBD. RM. 209, CIRCUIT (A02-SGB-02) #6-125A/3P V/A 75KVA TRANSFORMER (SEE ATTACHED DWG. MM-A-E07).

B. EXISTING WIRRING FED FROM TOP OF PANEL BY:

1-3/4" C. (WIRRING FILL >40%).

EXISTING WIRRING FED FROM LEFT SIDE OF PANEL BY:

1-4" C. TO TRANSFORMER (WIRNIS FILL >40%).

1-12"x 10"0" WIRE TROUGH W/3"x12" OPENING (WIRRING FILL >30%).

14-FQ10060-CENI-24

DESIGNED C. NGO 07-14	REFERENCE DRAWINGS NUMBER DESCRIPTION	REVISIONS DATE BY DESCRIPTION	WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY	NEW ELECTRONIC PAY PROGRAM (NEPP)
DRAWN C. NGO D7-14	TVONSETT BESTER HOTE	DESCRIPTION DESCRIPTION	DEPARTMENT OF TRANSIT INFRASTRUCTURE	
CHECKED B. IDILBI DATE			AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM	PANEL SCHEDULE
APPROVED_N/A DATE			APPROVED SUBMITTED PROJECT MANAGER	SCALE DRAWING NO. A02-E-103 70
				18



EXISTING PANEL "FAIR VEND II"



EXISTING PANEL "FAIR VEND II"



EXISTING PANEL "FAIR VEND II"

		REFERENCE DRAWINGS	RÉVISIONS		
DESIGNED C. NGO 07-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGD 07~14			\vdash	\vdash	
CHECKED B. IOILBI 07-14					
DATE	_		_	-	
APPROVED N/A DATE					

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

SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
FARRAGUT NORTH - SOUTHEAST
PANELBOARD IMAGE

SCALE NOT TO SCALE A02-E-302



EXISTING PANEL "FAIR VEND III"



EXISTING PANEL "FAIR VEND III"



EXISTING PANEL "FAIR VEND III"

| REFERENCE DRAWINGS | REVISIONS | REVISIO

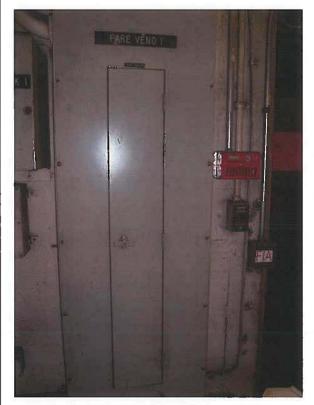
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED.....

SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
FARRAGUT NORTH - NORTHWEST
PANELBOARD IMAGE

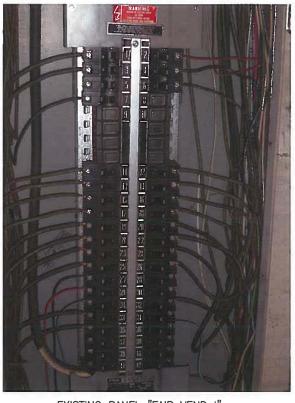
SCALE DRAWING NO.
NOT TO SCALE A02-E-303



EXISTING PANEL "FAIR VEND I"



EXISTING PANEL "FAIR VEND I"



EXISTING PANEL "FAIR VEND I"

	REFERENCE DRAWINGS			REVISIONS		
DESIGNED C. NGD 07-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	
DRAWN C, NGO 07-14	\vdash		\vdash		-	
CHECKED B. IDNLBI 07-14						
DATE			_	-		
APPROVED N/A DATE						

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE
AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM
APPROVED

SUBMITTED
PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
FARRAGUT NORTH - NORTHEAST
PANELBOARD IMAGE

SCALE DRAWING NO. A02-E-301

