- 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
- 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.
- . 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 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 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 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

A, AMP	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCA	MINIMUM CIRCUIT AMPERE
AEMS	AUTOMATED ENERGY	MCB	MAIN CIRCUIT BREAKER
	MANAGEMENT SYSTEM	MEZZ	MEZZANINE
AF AFC	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 MANUFACTURER ASSOCIATION
ATS	AUTOMATIC TRANSFER SWITCH	Р	POLE
BATT	BATTERY		
BKR	BREAKER	PH	PHASE
BL.	BASELINE	PNL	PANELBOARD
С	CONDUIT	PRI	PRIMARY
СВ	CIRCUIT BREAKER	PROP	PROPOSED
CCT	CIRCUIT	RGS	RIGID GALVANIZED STEEL
Ĺ	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 LABORATORIES
IG	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	VOLT	VOLTAGE
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	W WMATA	WASHINGTON METROPOLITIAN
KCMIL	THOUSAND CIRCULAR MILL	WWATA	AREA TRANSIT AUTHORITY
KVA	KILOVOLT AMPERE	WP	WEATHERPROOF

DRAWING INDEX

D11-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

D11-E-101 CHEVERLY - KIOSK - POWER

D11-E-102 CHEVERLY - PANEL SCHEDULE

D11-E-301 CHEVERLY - PANELBOARD IMAGE

MM-D-E24 CHEVERLY - 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.

LIL #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

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

NOT TO SCALE

D11-E-001

-MULTI BRANCH CIRCUIT IN RACEWAYS. 6-1/C #8 + 1#10G IN 1 1/2" WHEN NEEDED. APPROX. DISTANCE FROM PANEL "F" IS 170'-0". SEE NOTE #1 NEPP COMPUTER (NOTE 2) (NOTE 3&4) $\frac{F}{7.9.11}$ COMMUNICATION (NOTE 2) 9 IT EQUIPMENT (NOTE 2) **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 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	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	DATE 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 INFRASTRAJCTURE RENEWAL PROGRAM

APPROVED



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

SCALE DRAWING NO.
D11-E-101

		E	EXIS	M <u>T</u>	IG PA	ME	L <u>"</u> F	"		
AMPERES: 225	VOLTS:	120/208		NOU	NTING:	SURF	ACE			
MAINS: 225A MCB	PHASE:	3		LOCA	TION:	ELEC.	EQUIP	MENT RO	OM C205	
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT B	KRS	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 VEND
EXIST ING VENDOR	0.8	20	1	3	- B -	4	1	20	8.0	EXISTING VEND
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	EXISTING VEND
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	7	A	8	1	20	0.0	SPA
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	9	- B -	10	1	20	0.8	EXIST ING VEND
FUTURE AFC FARE GATE	0.0	20	1	11	C	12	1	20	0.0	SPA
SPARE	0.0	20	1	13	A	14	1	20	0.0	SPA
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	8.0	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	8.0	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXIST ING VEND
SPARE	0.0	20	1	21	- B -	22	1	20	0.0	SPA
SPACE	0.0	-	-	23	C	24	1	20	0.0	SPA
SPACE	0.0	-	-	25	A	26	-	-	0.0	SPA
SPACE	0.0	-	-	27	- B -	28	-	-	0.0	SPA
SPARE	0.0	20	1	29	C	30	1	20	0.0	SPA
SPARE	0.0	20	1	31	A	32	1	20	0.0	SPA
SPARE	0.0	20	1	33	- B -	34	1	20	0.0	SPA
SPACE	0.0	-	-	35	C	36	1	20	0.0	SPA
SPACE	0.0	-	-	37	A	38	-	-	0.0	SPA
SPACE	0.0	-	-	39	- B -	40	-		0.0	SPA
SPACE SPACE	0.0	-	-	41	C	42 44	3	30	0.0	SPA
SPACE	0.0	-	-		A		-		2.9	EXIST. LOAD CENTER "K
	0.0	-	-	45	_	46	-	-	2.5	
SPACE	0.0	-	-	47	C	48	-	-	2.5	
			LC	DAD	SUN	1MA	RY			
LIGHTS		0.0	x 125%	6					0.0 k	(VA
RECEPTACLES, FIRST 10 KVA		10.0	x 100%	6					10.0 k	(VA
RECEPTACLES		1.6	x 50%	0.8 KVA						
MISC. APPLIANCES		0.0	x 100%	6					0.0	(VA
LARGEST MOTOR		0.0	x 125%	6					0.0	(VA
MOTORS 0.0 x 100									0.0 k	(VA
MOTORS										
MOTORS HEAT		0.0	x 125%	6					0.0 k	(VA
			x 125% x 100%						0.0 k 4.5 k	
HEAT		4.5		6						(VA

CONNECTED LOAD PHASE SUMMARY PHASE A: 6.9 KVA PHASE B: 7.3 KVA 5.7 KVA PHASE C:

TOTAL DEMAND AMPS

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 08-14						
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 (I	NEPH
IN METRORAIL STATIONS `	
CHEVERLY	
PANEL SCHEDULE	

DRAWING NO. D11-E-102 SCALE NOT TO SCALE

52.9 AMPS

- 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 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.

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

GROUND

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

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
\FF	ABOVE FINISHED FLOOR	PRI	PRIMARY
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
SKR	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 LABORATORI
DISC	DISCONNECT	UON	UNLESS OTHERWISE NOTED
=	ELECTRICAL	VOLT	VOLTAGE
-			1444

WATT

WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY

DRAWING INDEX

D12-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

D12-E-101 LANDOVER - KIOSK - POWER

D12-E-102 LANDOVER - PANEL SCHEDULE

MM-D-E25 LANDOVER - 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.

H10-3/4 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

14-FQ10060-CENI-24

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS

ABBREVIATIONS, DRAWING INDEX,
SPECIFICATIONS & SYMBOL LIST

NOT TO SCALE

D12-E-001

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE

AND ENGINEERING SERVICES

OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

JOINT VENTURE

PROGRAM

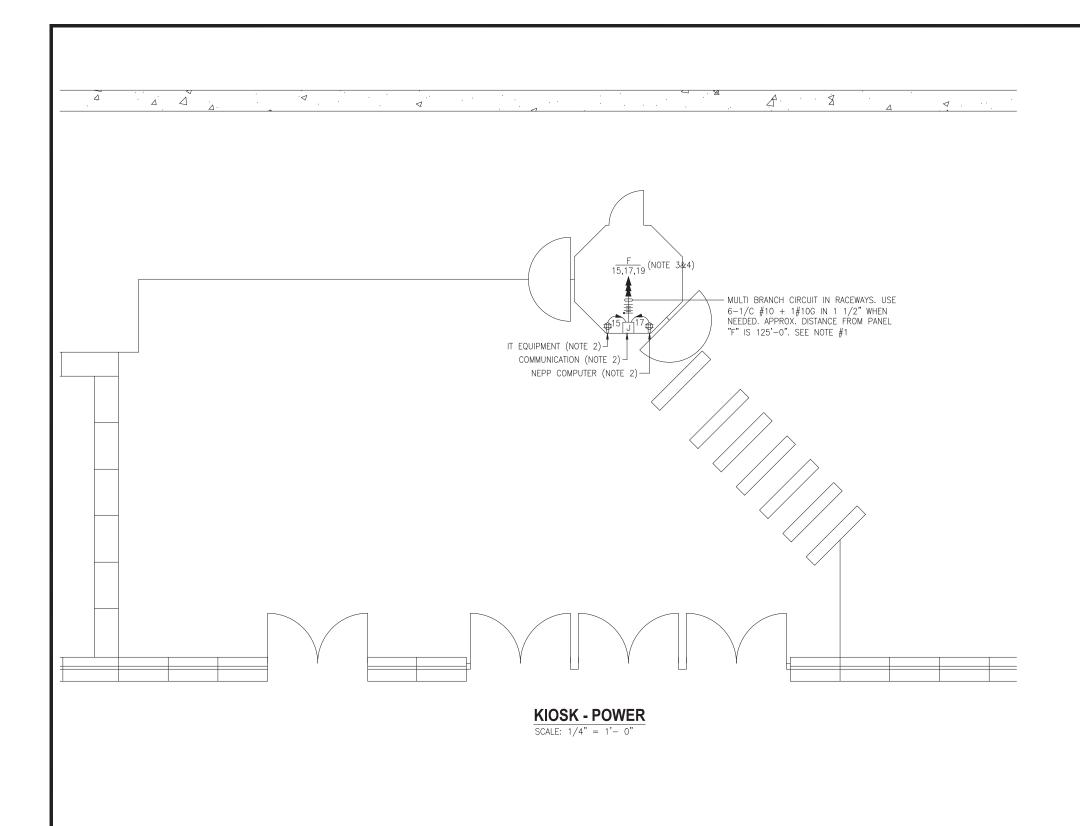
PROJECT MANAGER

DRAWN C. NGO 08-14
DATE
CHECKED B. IDILBI 08-14
DATE
APPROVED N/A
DATE
DATE

REFERENCE DRAWINGS

DESCRIPTION

DESIGNED C. NGO



- 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:

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

14-FQ10060-CENI-24

			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					
NI /A	DATE					
APPROVED N/A	DATE					
	5,					

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
LANDOVER
KIOSK - POWER

SCALE DRAWING NO.
AS SHOWN D12-E-101

AMPERES: 225	VOLTS:	120/208		MOUN	ITING:					
MAINS: 225A MLO	PHASE:	3		LOCA	TION:	ELEC.	EQUIP	VIENT RO	OM C108	
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1	-			
		CKT E	KRS	СКТ.		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 VENDO
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXIST ING VEND
SPARE	0.0	20	1	9	- B -	10	1	20	0.8	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDO
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDO
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDO
FUTURE AFC FARE GATE	0.0	20	1	19	A	20	1	20	0.0	SPA
SPACE	0.0	-	-	21	- B -	22	1	20	0.0	SPA
SPACE	0.0	-	-	23	C	24	1	20	0.0	SPA
SPARE	0.0	20	1	25	A	26	1	20	0.0	SPA
SPARE	0.0	20	1	27	- B -	28	1	20	0.8	EXIST ING VENDO
SPARE	0.0	20	1	29	C	30	1	20	0.8	EXISTING VENDO
SPARE	0.0	20	1	31	A	32	1	20	0.8	EXISTING VENDO
SPARE	0.0	20	1	33	- B -	34	-	-	0.0	SPA
SPARE	0.0	20	1	35	C	36	-	-	0.0	SPA
SPARE	0.0	20	1	37	A	38	-	-	0.0	SPA
SPACE	0.0	-	-	39	- B -	40	3	30	2.9	EXIST. LOAD CENTER "KE
SPACE	0.0	-	-	41	C	42	-	-	2.5	
SPACE	0.0	-	-	43	A	44	-	-	2.5	
			1.0) A D	CLIM	льл А	DV			
					SUN	IIVIA	K I			
LIGHTS			x 125%						0.0	
RECEPTACLES, FIRST 10 KVA			x 100%	10.0 KVA						
RECEPTACLES			x 50%		2.8 KVA					
MISC. APPLIANCES		0.0	x 1009	6	0.0 KVA					
LARGEST MOTOR		0.0	x 125%	6					0.0	KVA
MOTORS 0.0 x 100%			6					0.0	KVA	
MOTORS		0.0	HEAT 0.0 x 125%						0.0	KVA
MOTORS HEAT			x 125%	6						
		0.0	x 125% x 100%						4.5	KVA
HEAT AC		0.0	-	6					4.5 3.8	
HEAT AC WATER HEATING		0.0 4.5 3.0	x 100%	6			IAND K		3.8 21.1	KVA KVA
HEAT AC WATER HEATING TOTAL CONNECTED LOAD	ARY	0.0 4.5 3.0	x 100% x 125%	6			IAND K		3.8 21.1	KVA
HEAT	ARY	0.0 4.5 3.0 23.1	x 100% x 125%	6					3.8 21.1	KVA KVA
HEAT AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SUMM.	ARY	0.0 4.5 3.0 23.1	x 100% x 125% KVA	6					3.8 21.1	KVA KVA

14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
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	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 -



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

ALE	DRAWING NO.
· 	
NOT TO SCALE	D12-E-102
VOI TO SOMEL	D12-L-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.

- 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

MAX

MEZZ

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			
A C C		PRI	PRIMARY			
AFF	ABOVE FINISHED FLOOR	PROP	PROPOSED			
AIC	AMPERE INTERRUPTING CAPACITY	RGS	RIGID GALVANIZED STEEL			
AT	AMPERE TRIP	SEC	SECONDARY			
BKR	BREAKER	SHT	SHEET			
С	CONDUIT	SW	SWITCH			
CB	CIRCUIT BREAKER	SWBD	SWITCHBOARD			
CCT	CIRCUIT	TYP	TYPICAL			
Q.	CENTER LINE					
CLG	CEILING	U/G	UNDER GROUND			
CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATORIE			
DISC	DISCONNECT	UON	UNLESS OTHERWISE NOTED			
E	ELECTRICAL	VOLT	VOLTAGE			
GND	GROUND	W	WATT			
JB	JUNCTION BOX	WMATA	WASHINGTON METROPOLITIAN AREA TRANSIT AUTHORITY			

DRAWING INDEX

D13-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

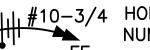
D13-E-101 NEW CARROLLTON - KIOSK - POWER

D13-E-102 NEW CARROLLTON - PANEL SCHEDULE

MM-D-E27 NEW CARROLLTON - 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.



11 #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

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS ABBREVIATIONS, DRAWING INDEX. SPECIFICATIONS & SYMBOL LIST DRAWING NO. D13-E-001 NOT TO SCALE

14-FQ10060-CENI-24

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

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

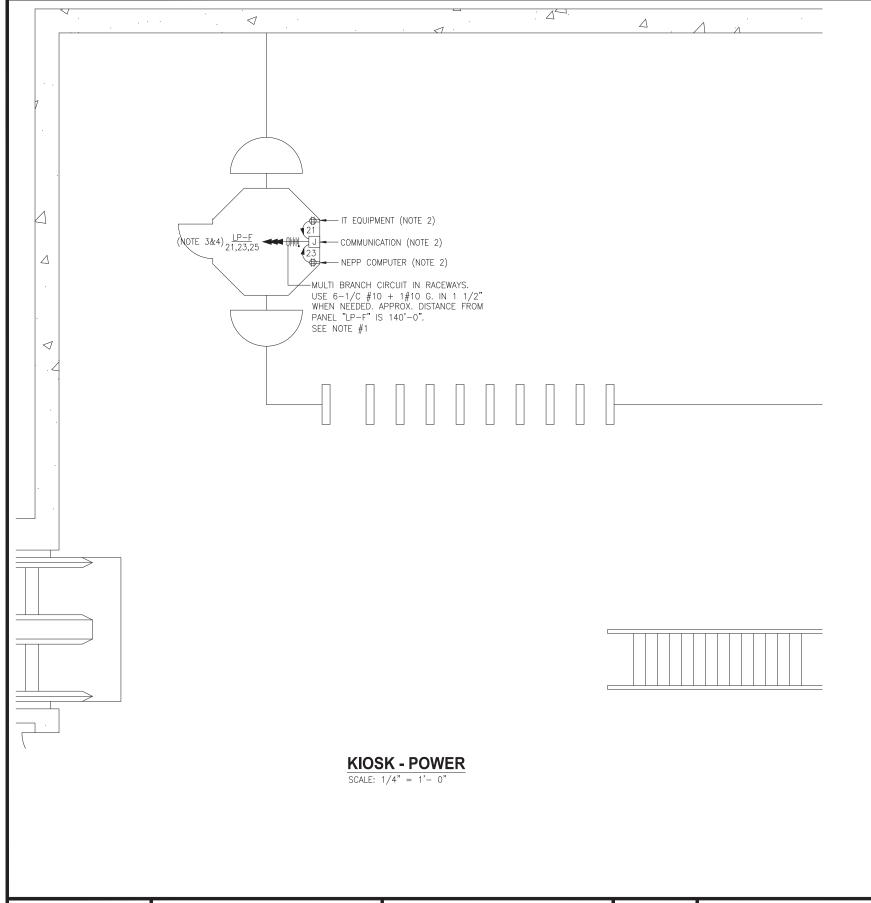
DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED

A Gannett Fleming/Parsons
JOINT VENTURE

PROJECT MANAGER

WEATHERPROOF



- 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.
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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	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION			
	DATE								
DRAWN C. NGO	08-14								
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APPROVED_N/A									
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	5/112								

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



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

AS SHOWN D13-E-101

AMPERES: 225	VOLTS:	120/208		MOUN	NTING:	SURF	ACE			
MAINS: 225A MCB	PHASE:	PHASE: 3		LOCA	TION:	ELEC EQUIPMENT ROOM C106				
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT	BKRS	СКТ.		CKT.	СКТ	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXISTING VENDOR	0.8	20	1	1	A	2	3	30	2.9	EXIST. LOAD CENTER "KES
EXISTING VENDOR	0.8	20	1	3	- B -	4	-	-	2.5	
EXISTING VENDOR	0.8	20	1	5	C	6	-	-	2.5	
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDO
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
SPARE	0.0	20	1	13	A	14	1	20	0.8	EXISTING VENDOR
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SPARE	0.0	20	1	35	C	36	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	37	A	38	1	20	0.8	EXISTING VENDOR
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	0.8	EXISTING VENDOR
			L	DAD	SUN	ΙΜΑ	RY			
LIGHTS		0.0	x 1259						0.0	KVA
RECEPTACLES, FIRST 10 KVA			x 1009						10.0	
RECEPTACLES			x 50%						8.8	
MISC. APPLIANCES			x 100%							KVA
LARGEST MOTOR			x 100°						0.0	
			x 1259 x 1009							
MOTORS			_							KVA
HEAT			x 1259							KVA
AC			x 1009						4.5	
WATER HEATING			x 1259	%					0.0	
TOTAL CONNECTED LOAD		35.1	KVA				IAND K IAND A		27.1 75.1	KVA AMPS
CONNECTED LOAD PHASE SUMM.	ARY									
PHASE A:		11.7	' KVA							
PHASE B:		12.1	KVA							
PHASE C:		12.1	KVA							

			REFERENCE DRAWINGS	REVISIONS				
DESIGNED C. NGO	08-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION		
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CHECKED B. IDILBI	DATE 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 `	•
NEW CARROLLTON	
PANEL SCHEDULE	

CALE	DRAWING NO.	C (
NOT TO SCALE	D13-E-102	60

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- 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
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- 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.
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- 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 guads. All boxes used in or on the kiosk shall be

	ALADEDEC	1417	
A, AMP	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCA	MINIMUM CIRCUIT AMPERE
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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
AT	AMPERE TRIP	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
ATS	AUTOMATIC TRANSFER SWITCH	Р	POLE
BATT	BATTERY	PH	PHASE
BKR	BREAKER	PNL	PANELBOARD
B <u>.</u>	BASELINE	PRI	PRIMARY
C CB	CONDUIT CIRCUIT BREAKER	PROP	PROPOSED
CCT	CIRCUIT	RGS	RIGID GALVANIZED STEEL
Ç	CENTER LINE	SEC	SECONDARY
۳ 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 LABORATORI
IG	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	VOLT	VOLTAGE
KAIC	THOUSAND AMPERE	W	WATT
	INTERRUPTING CAPACITY	WMATA	WASHINGTON METROPOLITIAN

DRAWING INDEX

G01-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

G01-E-101 BENNING ROAD - MEZZANINE KIOSK - POWER

GO1-E-102 BENNING ROAD - PANEL SCHEDULE

G01-E-301 BENNING ROAD - PANELBOARD IMAGE

MM-G-E06 BENNING ROAD - 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.

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

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

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

THOUSAND CIRCULAR MILL

KILOVOLT AMPERE

AND ENGINEERING SERVICES
OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM APPROVED



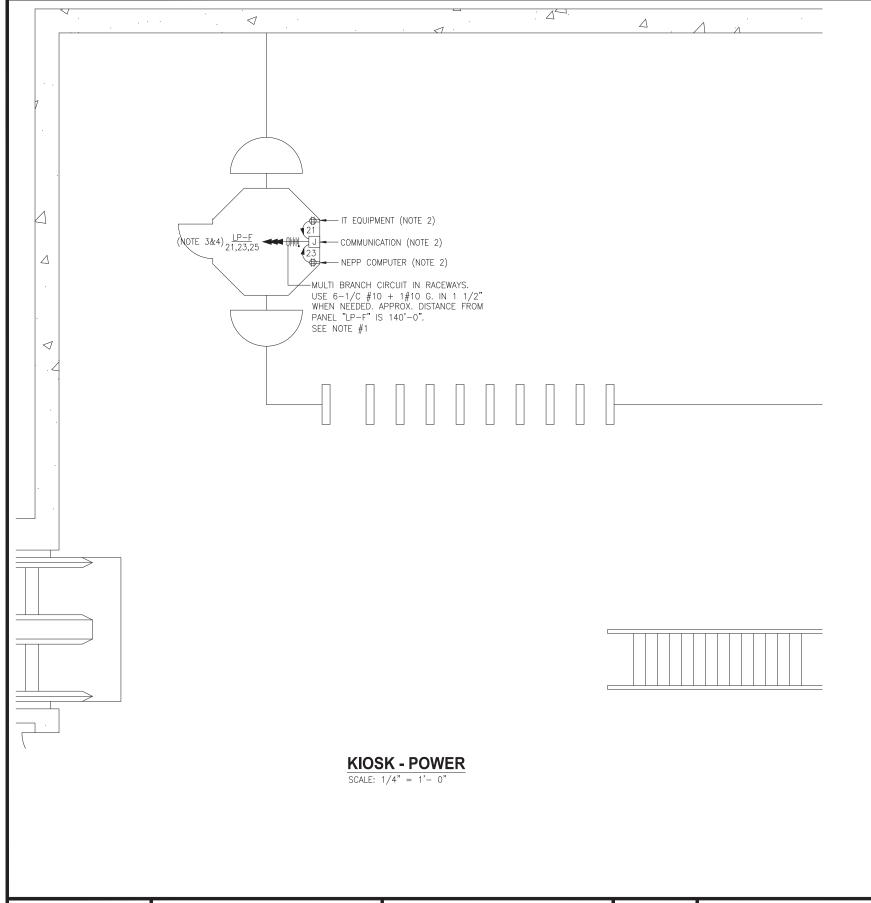
PROJECT MANAGER

AREA TRANSIT AUTHORITY

WEATHERPROOF

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

NOT TO SCALE G01-E-001



- 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"

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	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION			
	DATE								
DRAWN C. NGO	08-14								
	DATE								
CHECKED B. IDILBI	08-14								
	DATE								
APPROVED_N/A									
APPROVED N/ //	DATE								
	5/112								

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



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

AS SHOWN D13-E-101

AMPERES: 225			(101		PAN			<u> </u>		
		120/208		MOUNTING: SURFACE						
MAINS: 225A MCB	PHASE:			LOCA		ELEC EQUIPMENT ROOM C106				
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT E		СКТ.		CKT.		BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE			NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXISTING VENDOR	0.8	20	1	1	A	2	3	30	2.9	EXIST. LOAD CENTER "KE
EXISTING VENDOR	0.8	20	1	3	- B -	4	-	-	2.5	
EXISTING VENDOR	0.8	20	1	5	C	6	-	-	2.5	
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDO
SPARE	0.0	20	1	9	- B -	10	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDO
SPARE	0.0	20	1	13	A	14	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDO
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VENDO
NEW KIOSK RECEPT. (NEPP/S	-	20	1	23	C	24	1	20	0.8	EXISTING VENDO
FUTURE AFC FARE GATE	0.0	20	1	25	A	26	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	29	C	30	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.8	EXISTING VENDO
SPARE	0.0	20	1	35	C	36	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	37	A	38	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	39	- B -	40	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	41	C	42	1	20	0.8	EXISTING VENDO
			LO	DAD	SUN	ИМА	RY			
LIGHTS		0.0	L(SUN	ИΜΑ	RY		0.0	KVA
				6	SUN	ИΜΑ	RY		0.0	
RECEPTACLES, FIRST 10 KVA		10.0	x 125%	6 6	SUN	ИΜА	RY		10.0	KVA
LIGHTS RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES		10.0 17.6	x 125%	6	SUN	<u>////////////////////////////////////</u>	RY		10.0 8.8	
RECEPTACLES, FIRST 10 KVA RECEPTACLES		10.0 17.6 0.0	x 125% x 100% x 50%	66	SUN	/МА	RY		10.0 8.8 0.0	KVA KVA
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES		10.0 17.6 0.0 0.0	x 125% x 100% x 50% x 100%	6 6 6	SUN	ИΜΑ	RY		10.0 8.8 0.0 0.0	KVA KVA KVA
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS		10.0 17.6 0.0 0.0	x 125% x 100% x 50% x 100% x 125% x 100%	6 6 6 6	SUN	<u>////////////////////////////////////</u>	RY		10.0 8.8 0.0 0.0 0.0	KVA KVA KVA KVA KVA
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT		10.0 17.6 0.0 0.0 0.0 3.0	x 125% x 100% x 50% x 100% x 125% x 125% x 125%	66 66 66 66	SUN	ИМА	RY		10.0 8.8 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 17.6 0.0 0.0 0.0 3.0 4.5	x 125% x 100% x 50% x 100% x 100% x 125% x 125% x 125% x 100%	66666666666666666666666666666666666666	SUN	/IMA	RY		10.0 8.8 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 17.6 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 x 1009	66666666666666666666666666666666666666				VA	10.0 8.8 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 AC WATER HEATING		10.0 17.6 0.0 0.0 0.0 3.0 4.5	x 125% x 100% x 50% x 100% x 100% x 125% x 125% x 125% x 100%	66666666666666666666666666666666666666	тот	AL DEN	IAND K		10.0 8.8 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	MMARY	10.0 17.6 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 x 1009	66666666666666666666666666666666666666	тот	AL DEN			10.0 8.8 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 AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SU	MMARY	10.0 17.6 0.0 0.0 0.0 3.0 4.5 0.0 35.1	x 125% x 100% x 50% x 100% x 125% x 100% x 125% x 100% x 125% x 100% x 125% x 100%	66666666666666666666666666666666666666	тот	AL DEN	IAND K		10.0 8.8 0.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA KVA
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	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						
APPROVED N/A DATE						
DATE						

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED -



NEW ELECTRONIC PAY PROGRAM (N	EPF
IN METRORAIL STATIONS `	
NEW CARROLLTON	
PANEL SCHEDULE	

SCALE DRAWING NO. D13-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.
- 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.
- . 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
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- 16. PROVIDE A PULLWIRE OR FISHTAPE/CORD IN ALL EMPTY CONDUIT RUNS.
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<u> </u>	<u>REVIATIONS</u>		
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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
AT	AMPERE TRIP	NEMA	NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION
ATS	AUTOMATIC TRANSFER SWITCH	Р	POLE
BATT	BATTERY	PH	PHASE
BKR	BREAKER	PNL	PANELBOARD
<u>B</u>	BASELINE	PRI	PRIMARY
С	CONDUIT	PROP	PROPOSED
СВ	CIRCUIT BREAKER	RGS	RIGID GALVANIZED STEEL
CCT	CIRCUIT	SEC	SECONDARY
Ę	CENTER LINE	SHT	SHEET
CLG	CEILING		
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 LABORATO
IG	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTE
JB	JUNCTION BOX	VOLT	VOLTAGE
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	W WMATA	WASHINGTON METROPOLITI
KCMIL	THOUSAND CIRCULAR MILL		AREA TRANSIT AUTHORITY
KVA	KILOVOLT AMPERE	WP	WEATHERPROOF

DRAWING INDEX

G02-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST GO2-E-101 CAPITOL HEIGHTS - MEZZANINE KIOSK - POWER GO2-E-102 CAPITOL HEIGHTS - PANEL SCHEDULE

GO2-E-301 CAPITOL HEIGHTS - PANELBOARD IMAGE

MM-G-E09 CAPITOL HEIGHTS - AC POWER ONE LINE DIAGRAMS

ELECTRICAL SYMBOL LIST

J

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

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

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SUBMITTED

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

APPROVED

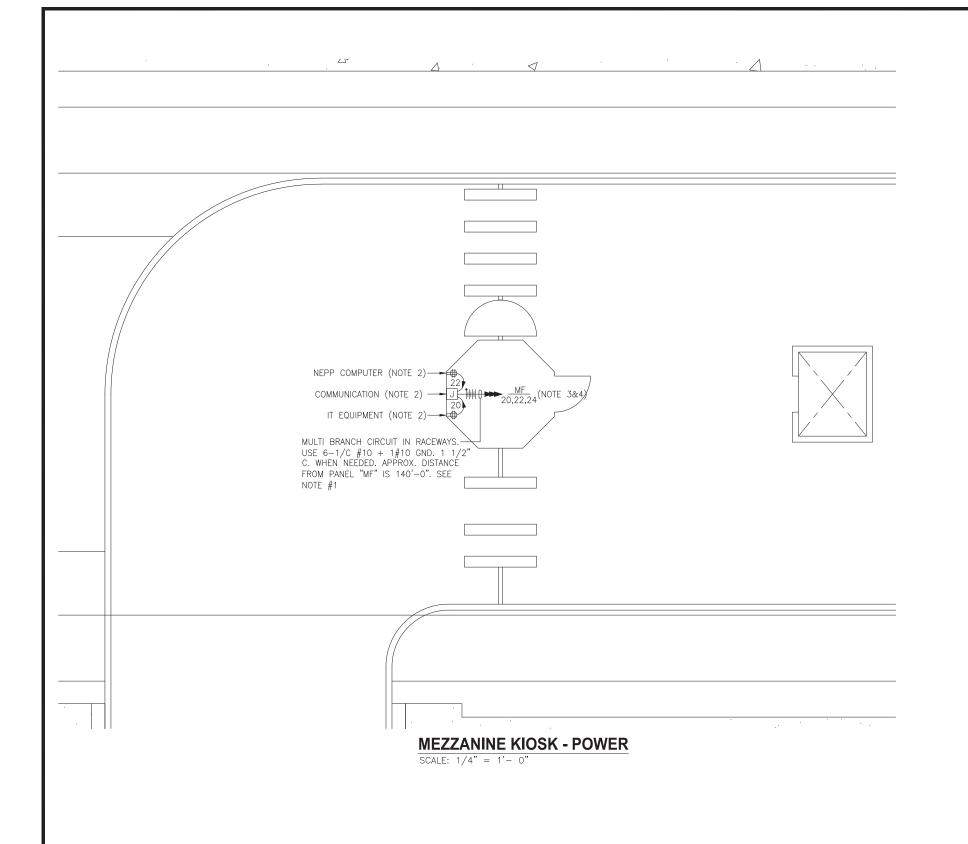


PROJECT MANAGER

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

NOT TO SCALE

G02-E-001



- 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

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

PROJECT MANAGER

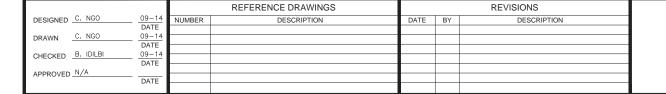
APPROVED

IN METRORAIL STATIONS
CAPITOL HEIGHTS
MEZZANINE KIOSK - POWER

NEW ELECTRONIC PAY PROGRAM (NEPP)

CCALE DRAWING NO G02-E-1

DRAWING NO. G02-E-101



AMPERES: 250	VOLTS:	120/208		MOUN	ITING:	SURFACE					
MAINS: 250A MCB	PHASE:	3		LOCA	TION:	MECHANICAL EQUIP. ROOM C206					
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1					
	<u>'</u>	CKT B	KRS	CKT.		CKT.	CKT	BKRS			
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION	
EXIST . LOAD CENTER "KES"	2.9	20	1	1	A	2	1	20	0.8	EXISTING VENDOI	
	2.5	20	1	3	- B -	4	1	20	0.8	EXISTING VENDOR	
	2.5	20	1	5	C	6	1	20	0.0	SPARI	
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	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	EXISTING VENDOR	
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)	
EXISTING 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	
SPARE	0.0	20	1	25	A	26	1	20	0.0	SPARI	
SPARE	0.0	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR	
SPARE	0.0	20	1	29	C	30	1	20	0.0	SPARI	
SPARE	0.0	20	1	31	A	32	1	20	0.0	SPARI	
SPARE	0.0	20	1	33	- B -	34	1	20	0.0	SPARI	
SPARE	0.0	20	1	35	C	36	1	20	0.0	SPARI	

LOAD SUMMARY									
LIGHTS	0.0 x 125%		0.0 KVA						
RECEPT ACLES, 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:	8.9 KVA								
PHASE C:	6.5 KVA								

CONTRACT NO.

14-FQ10060-CENI-24

			REFERENCE DRAWINGS	REVISIONS					
DESIGNED C. NGO	09-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION			
DRAWN C. NGO	09-14								
CHECKED B. IDILBI	DATE 09-14								
APPROVED_N/A	DATE								
ATTROVED	DATE								

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED -



NEW ELECTRONIC PAY PROGRAM (NEP	Ή
IN METRORAIL STATIONS `	
CAPITOL HEIGHTS	
PANEL SCHEDULE	

SCALE DRAWING NO.

NOT TO SCALE G02-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.
- 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
 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 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.
- 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 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

	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
AFF	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
BKR	BREAKER	PNL	PANELBOARD
B .	BASELINE	PRI	PRIMARY
С	CONDUIT		
СВ	CIRCUIT BREAKER	PROP	PROPOSED
CCT	CIRCUIT	RGS	RIGID GALVANIZED STEEL
È	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 WMATA	WASHINGTON METROPOLITIAN
KCMIL	THOUSAND CIRCULAR MILL	·····	AREA TRANSIT AUTHORITY
KVA	KILOVOLT AMPERE	WP	WEATHERPROOF

DRAWING INDEX

G03-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

G03-E-101 ADDISON ROAD - KIOSK - POWER

GO3-E-102 ADDISON ROAD - PANEL SCHEDULE

GO3-E-301 ADDISON ROAD - PANELBOARD IMAGE

MM-G-E11 ADDISON ROAD - AC POWER ONE LINE DIAGRAM

ELECTRICAL SYMBOL LIST

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

J JUNCTION BOX — SURFACE MOUNTED ON UNISTRUT CHANNEL

CONCION BOX - SOM ACE MODITIES ON CHAIN

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

14-FQ10060-CENI-24

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

SUBMITTED

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

APPROVED

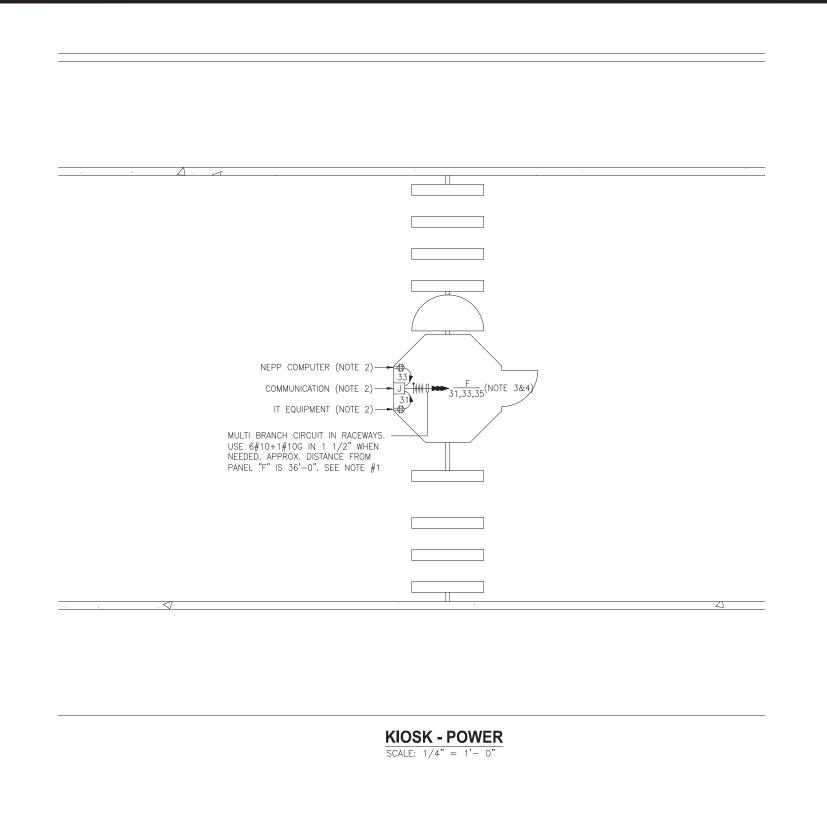


PROJECT MANAGER

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

DRAWING NO.
T TO SCALE G03-E-001

NOT TO SCALE



- 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.
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- 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"

SAFETY PRECAUTION:

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

14-FQ10060-CENI-24

				REFERENCE DRAWINGS			REVISIONS	WASHINGTON ME
DES	IGNED C. NGO		NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION	WASHINGTON ME
DRA	WN C. NGO	DATE 09-14						DEPARTMENT OF TRANSIT INF
DKA		DATE						AND ENGINEERING SER
CHE	CKED B. IDILBI	 						OFFICE OF INFRASTRUCTURE REN
APP	ROVED N/A	DATE						// ₹
7.11		DATE						APPROVED Doma

ETROPOLITAN AREA TRANSIT AUTHORITY

FRASTRUCTURE SERVICES RENEWAL PROGRAM



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

SCALE AS SHOWN G03-E-101

			EXIS	<u>stin</u>	G PA	NE I	<u> "F</u>			
AMPERES: 225	VOLTS:	120/208		MOU	NTING:	SURFA	CE			
MAINS: 225 A MLO	PHASE:			LOCA		ROOM	#207			
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT	BKRS	CKT.		CKT.	CKT	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
EXIST. LOAD CENTER "KES"	2.7	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		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	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	11	C		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		1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOR
SPACE	0.0	-	ļ -	21	- B -	22	-	-	0.0	SPACE
SPACE	0.0	-	ļ -	23	C		-	-	0.0	SPACE
SPACE	0.0	-	-	25	A	26	-	-	0.0	SPACE
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR
EXISTING VENDOR	0.8	20	1	29	C		1	20	0.8	EXISTING VENDOR
NEW KIOSK RECEPT. (IT/NCS)	8.0	20	1	31	A	32	1	20	0.0	SPARE
NEW KIOSK RECEPT. (NEPP/SOC)	8.0	20	1	33	- B -	34	1	20	0.0	SPARE
FUTURE AFC FARE GATE	0.0	20	1	35	C		1	20	0.0	SPARE
SPARE	0.0	20	1	37	A	38	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	39	- B -	40	1	20	0.0	SPARE
SPACE	0.0	-	ļ -	41	C		-	-	0.0	SPACE
SPACE	0.0	-	-	43	A	44	-	-	0.0	SPACE
SPACE	0.0	-	ļ -	45	- B -	46	-	-	0.0	SPACE
SPACE	0.0	-	-	47	C	48	-	-	0.0	SPACE
			LC	DAD	SUN	//МА	RY			
LIGHTS		0.0	0 x 125%	6					0.0) KVA
RECEPTACLES, FIRST 10 KVA		10.0	x 100%	6					10.0) KVA
RECEPTACLES 7.8 x 50%									3.9	9 KVA
MISC. APPLIANCES	6					0.0) KVA			
LARGEST MOTOR										
MOTORS 0.0 x 100%						0.0 KVA				
HEAT			x 125%		3.8 KVA					
AC			5 x 100%		4.5 KVA					
WATER HEATING			0 x 125%		0.0 KVA					
TOTAL CONNECTED LOAD			3 KVA	•	TOT	AL DEM	IAND K	VΔ		2 KVA
CONNECTED LOAD PHASE SUMM	ADV	20.					IAND A			5 AMPS
	AKI	0 1	2 1/1/10							
PHASE A:			3 KVA							
PHASE A:			3 KVA							

14-FQ10060-CENI-22

		REFERENCE DRAWINGS	REVISIONS					
DESIGNED C. NGO 09-	NOWDER	DESCRIPTION	DATE	BY	DESCRIPTION			
DRAWN C. NGO 09-	14							
CHECKED B. IDILBI 09-								
DA	E		-					
APPROVED N/A DAT	E							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

PHASE B:

PHASE C:

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

APPROVED -



9.7 KVA

8.1 KVA

NEW ELECTRONIC PAY PROGRAM ((NEPF
IN METRORAIL STATIONS	
ADDISON ROAD	
PANEL SCHEDULE	

SCALE DRAWING NO. G03-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.

- 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 AMPERE

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

MAX

MEZZ

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

- 10 0 1	<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
	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

GO4-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

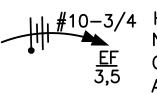
G04-E-101 MORGAN BOULEVARD - KIOSK - POWER

GO4-E-102 MORGAN BOULEVARD - PANEL SCHEDULE

MM-G-E15 MORGAN BOULEVARD - 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.



11 #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	<u>09-14</u> DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION				
DRAWN C. NGO	09-14									
CHECKED B. IDILBI	DATE 09-14									
APPROVED N/A	DATE -									
	DATE -									

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

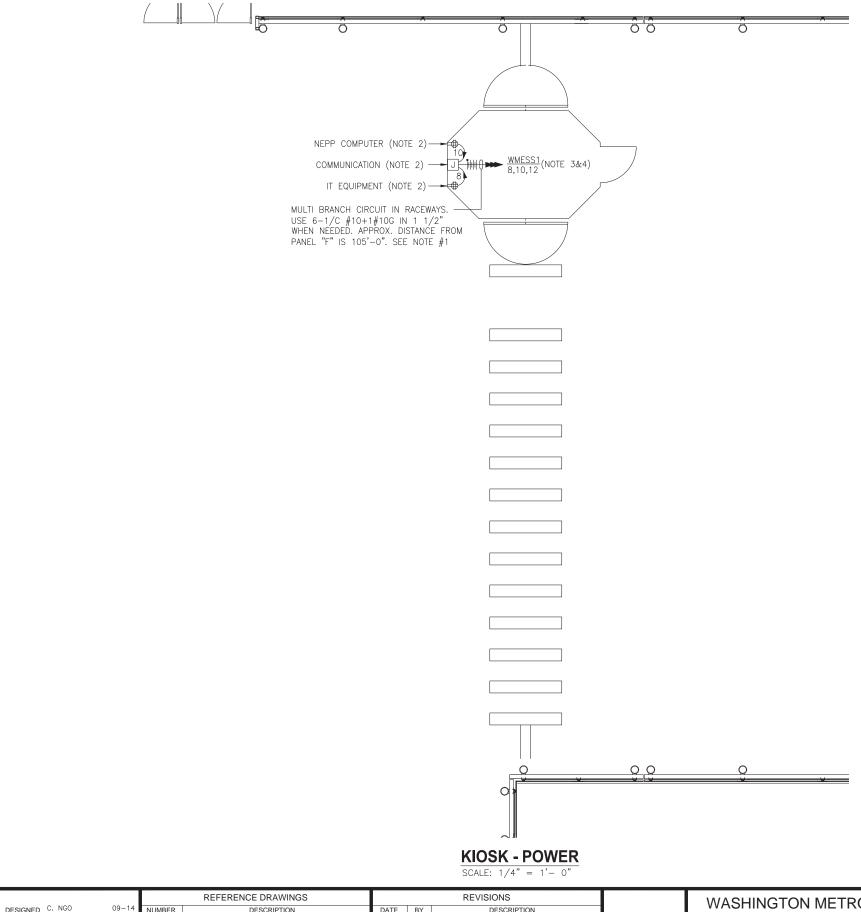
APPROVED



WEATHERPROOF

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

DRAWING NO. G04-E-001 NOT TO SCALE



- 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.

14-FQ10060-CENI-24

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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
MORGAN BOULEVARD
KIOSK - POWER

SCALE DRAWING NO.
AS SHOWN G04-E-101

AMPERES: 250	VOLTS:	120/208		INON	NTING:	SURF	ACE			
MAINS: 250A MCB	PHASE:				TION:			ROOM 2	05	
RATING: 10K AIC	WIRE:	4		SECT		1 OF 1				
		CKT E	KRS	CKT.		CKT.	Скт	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	4		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
SPARE	0.0	20	1	1	A	2	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SO
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.0	FUTURE AFC FARE GATE
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.0	EXISTING VEND
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.8	EXISTING VEND
SPARE	0.0	20	1	27	- B -	28	1	20	0.8	EXIST ING VEND
SPARE	0.0	20	1	29	C	30	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.8	EXIST ING VEND
EXIST ING VENDOR	0.8	20	1	35	C	36	1	20	0.8	EXIST ING VEND
EXISTING VENDOR	0.8	20	1	37	A	38	3	40	3.3	EXIST . KIOSK LOAD CENTER "K
EXISTING VENDOR	0.8	20	1	39	- B -	40	-	-	2.5	
EXISTING VENDOR	0.8	20	1	41	C	42	-		2.5	
			1.0) A D	SUN	1N/1 A	DV			
IOLITO					301	IIVIA	K I			2.10.0
LIGHTS			x 125%) KVA
RECEPTACLES, FIRST 10 KVA			x 100%) KVA
RECEPTACLES			x 50%							S KVA
MISC. APPLIANCES			x 100%) KVA
LARGEST MOTOR			x 125%) KVA
MOTORS			x 100%						0.0) KVA
HEAT			x 125%						3.8	3 KVA
neai		4.5	x 100%	%					4.5	5 KVA
			x 1259	/ ^					0.0) KVA
AC		0.0	X 1207							
AC WATER HEATING			KVA				IAND K' IAND AI			OKVA GAMPS
AC WATER HEATING TOTAL CONNECTED LOAD	MMARY									
AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SUI PHASE A:	MMARY	34.7		o e						
AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SUI	MMARY	34.7 12.1	KVA	·						

			REFERENCE DRAWINGS	REVISIONS						
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CHECKED B. IDILBI	09-14									
11.74	DATE									
APPROVED N/A	DATE									
	DATE									

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED -



NEW ELECTRONIC PAY PROGRAM	(NEPF
IN METRORAIL STATIONS	•
MORGAN BOULEVARD	
PANEL SCHEDULE	

SCALE DRAWING NO. G04-E-102

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- 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
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- 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
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- 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.
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7001	<u> </u>		
A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
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GND	GROUND	W	WATT
JB	JUNCTION BOX	WMATA	WASHINGTON METROPOLITIAN AREA TRANSIT AUTHORITY

DRAWING INDEX

G05-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

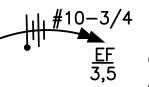
MM-G-E21 LARGO TOWN CENTER - AC POWER ONE LINE DIAGRAM

G05-E-101 LARGO TOWN CENTER - KIOSK - POWER

GO5-E-102 LARGO TOWN CENTER - PANEL SCHEDULE

ELECTRICAL SYMBOL LIST

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- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
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WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

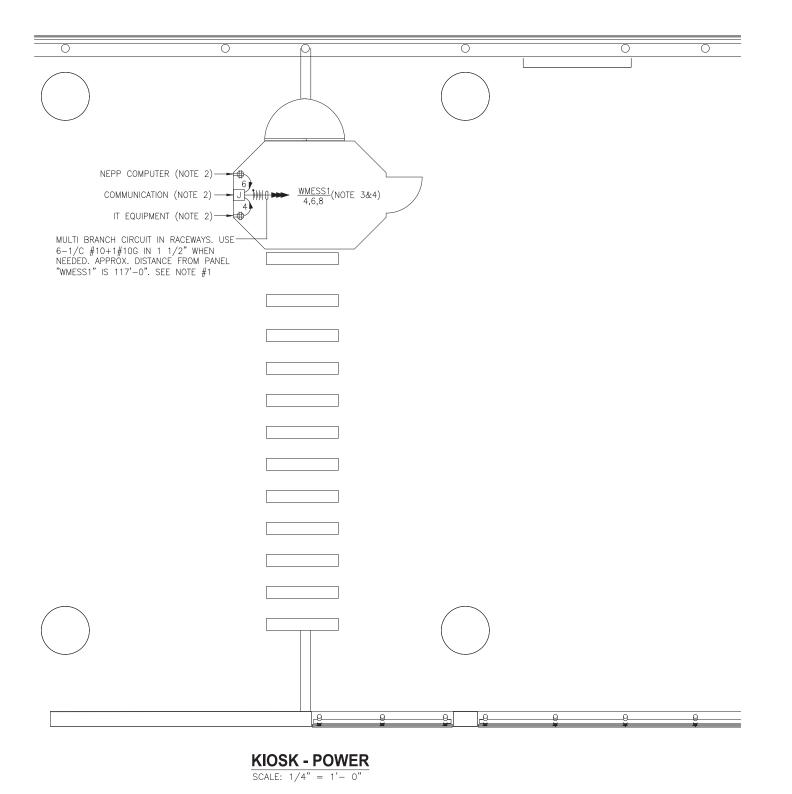
APPROVED



WEATHERPROOF

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

DRAWING NO. G05-E-001 NOT TO SCALE



- 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	09-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	09-14					
CHECKED B. IDILBI	DATE 09-14					
APPROVED N/A	DATE					
AFFROVED	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
LARGO TOWN CENTER
KIOSK - POWER

SCALE DRAWING NO.
AS SHOWN G05-E-101

AMPERES: 250	VOLTS:			_		SURF A		SS1"		
								ADINET	9 CED\4	OF DM 404
MAINS: 250A MCB RATING: 10K AIC	PHASE:			LOCA			QUIP. C	ABINEI	& SERVI	CE RM 101
RATING. TUR AIC	WIRE:	4			ION:	1 OF 1	0.7	21/20	· · · · · · · · · · · · · · · · · · ·	
	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	EXISTING VENDOR
SPARE	0.0	20	1	3	- B -	4	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)
EXISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SOC)
SPARE	0.0	20	1	7	A	8	1	20	0.0	FUTURE AFC FARE GATE
SPARE	0.0	20	1	9	- B -	10	1	20	0.0	SPARE
SPARE	0.0	20	1	11	C	12	1	20	0.0	SPARE
SPARE	0.0	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
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
SPARE	0.0	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	EXIST ING VENDOR
EXISTING VENDOR	0.8	20	1	35	C	36	1	20	0.8	EXISTING VENDOR
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	
SPARE	0.0	20	1	41	C	42	-		2.5	

LOAD SUMMARY								
LIGHTS	0.0 x 125%		0.0 KVA					
RECEPTACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA					
RECEPTACLES	12.8 x 50%		6.4 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	4.5 x 100%		4.5 KVA					
WATER HEATING	3.0 x 125%		3.8 KVA					
TOTAL CONNECTED LOAD	30.3 KVA	TOTAL DEMAND KVA	24.7 KVA					
		TOTAL DEMAND AMPS	68.5 AMPS					
CONNECTED LOAD PHASE SUMMARY								
PHASE A:	10.9 KVA							
PHASE B:	10.5 KVA							
PHASE C:	9.7 KVA							

			REFERENCE DRAWINGS	REVISIONS					
DESIGNED C. NGO	09-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION			
DRAWN C. NGO	09-14								
CHECKED B. IDILBI	DATE 09-14								
	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 (N	1EPF
IN METRORAIL STATIONS `	
LARGO TOWN CENTER	
PANEL SCHEDULE	

. , ,								
SCALE NOT TO SCALE	G05-E-102	75						

- 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 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.
- 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.

ARREVIATIONS

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>ABBI</u>	<u>REVIATIONS</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
	Ç	CENTER LINE	TYP	TYPICAL
	CLG	CEILING	U/G	UNDER GROUND
	CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATORI
			UON	UNLESS OTHERWISE NOTED
	DISC	DISCONNECT	VOLT	VOLTAGE
Ε		ELECTRICAL	W	WATT

WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY

DRAWING INDEX

J02-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

J02-E-101 VAN DORN STREET - KIOSK - POWER

J02-E-102 VAN DORN STREET - PANEL SCHEDULE

MM-J&H-E06 VAN DORN STREET - 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.

H10-3/4 HOMERUN TO PANEL, NUMBER OF ARROWHEADS INDICATES NUMBER OF CONDUCTORS, NUMBER INDICATES SIZE OF CONDUCTOR AND SIZE OF CONDUIT

I – 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

NOT TO SCALE DRAWING NO.

J02-E-001

DESIGNED C. NGO O9-14 DATE

DRAWN C. NGO O9-14 DATE

CHECKED B. IDILBI O9-14 APPROVED N/A

DATE

APPROVED N/A

DATE

DATE

DATE

DATE

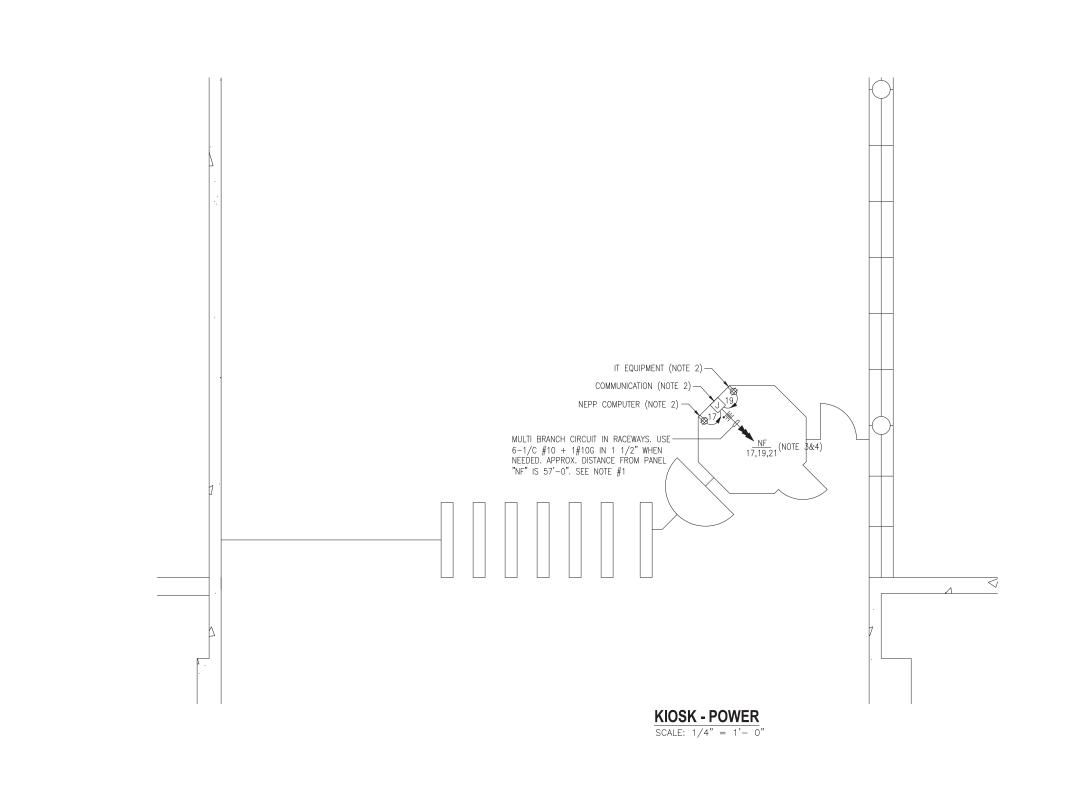
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED

TRUCTURE
SES
VAL PROGRAM

SUBMITTED PROJECT MANAGER



- 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.
- 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:

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

CONTRACT NO. 14-FQ10060-CENI-24

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
VAN DORN STREET
KIOSK - POWER

SCALE DRAWING NO.
AS SHOWN J02-E-101

AMPERES: 225	VOLTS:	120/208		MOUN	ITING:	SURF/	CE			
MAINS: 200A MCB	PHASE:	3		LOCA	TION:	AC SW	BD ROC	OM 110		
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
SPARE	0.0	20	1	1	A	2	3	30	2.9	EXIST. LOAD CENTER "KES
EXISTING VENDOR	0.8	20	1	3	- B -	4	-	-	2.5	
EXISTING VENDOR	0.8	20	1	5	C	6	-	-	2.5	
EXIST ING 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
EXIST ING 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
EXIST ING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXIST ING VENDOR
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	17	C	18	1	20	0.8	EXIST ING VENDOR
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	19	A	20	1	20	0.8	EXIST ING VENDOR
FUTURE AFC FARE GATE	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
SPARE	0.0	20	1	25	A	26	1	20	0.0	SPARI
EXIST ING VENDOR	0.8	20	1	27	- B -	28	1	20	0.0	SPARI
EXIST ING VENDOR	0.8	20	1	29	C	30	1	20	0.0	SPARI
SPARE	0.0	20	1	31	A	32	1	20	0.0	SPARI
EXIST ING VENDOR	0.8	20	1	33	- B -	34	1	20	0.0	SPARI
SPARE	0.0	20	1	35	C	36	1	20	0.0	SPARI
SPARE	0.0	20	1	37	A	38	1	20	0.0	SPARI
SPARE	0.0	20	1	39	- B -	40	1	20	0.0	SPARI
SPARE	0.0	20	1	41	C	42	1	20	0.0	SPARI

LOAD SUMMARY									
LIGHTS	0.0 x 125%		0.0 KVA						
RECEPTACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA						
RECEPTACLES	6.4 x 50%		3.2 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	23.9 KVA	TOTAL DEMAND KVA	21.5 KVA						
		TOTAL DEMAND AMPS	59.6 AMPS						
CONNECTED LOAD PHASE SUMMARY									
PHASE A:	7.7 KVA								
PHASE B:	8.9 KVA								
PHASE C:	8.1 KVA								

14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	09-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	09-14					
CHECKED B. IDILBI	DATE 09-14					
CHECKED	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 (NEPF
IN METRORAIL STATIONS	
VAN DORN STREET	
PANEL SCHEDULE	

SCALE DRAWING NO.
NOT TO SCALE J02-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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- 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.
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NUMBER

DATE

DATE

REFERENCE DRAWINGS

DESCRIPTION

- 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.

ARREVIATIONS

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 LABORATORI
DISC	DISCONNECT	UON	UNLESS OTHERWISE NOTED
E	ELECTRICAL	VOLT	VOLTAGE
_	LLLOTTIOAL		14/A TT

WATT

WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY

DRAWING INDEX

JO3-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

J03-E-101 FRANCONIA - SPRINGFIELD - KIOSK - POWER

J03-E-102 FRANCONIA - SPRINGFIELD - PANEL SCHEDULE

MM-J&H-E09 FRANCONIA - SPRINGFIELD - 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

 INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD

- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

APPROVED

A Gannett Fleming/Parsons
JOINT VENTURE PROJECT MANAGER

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

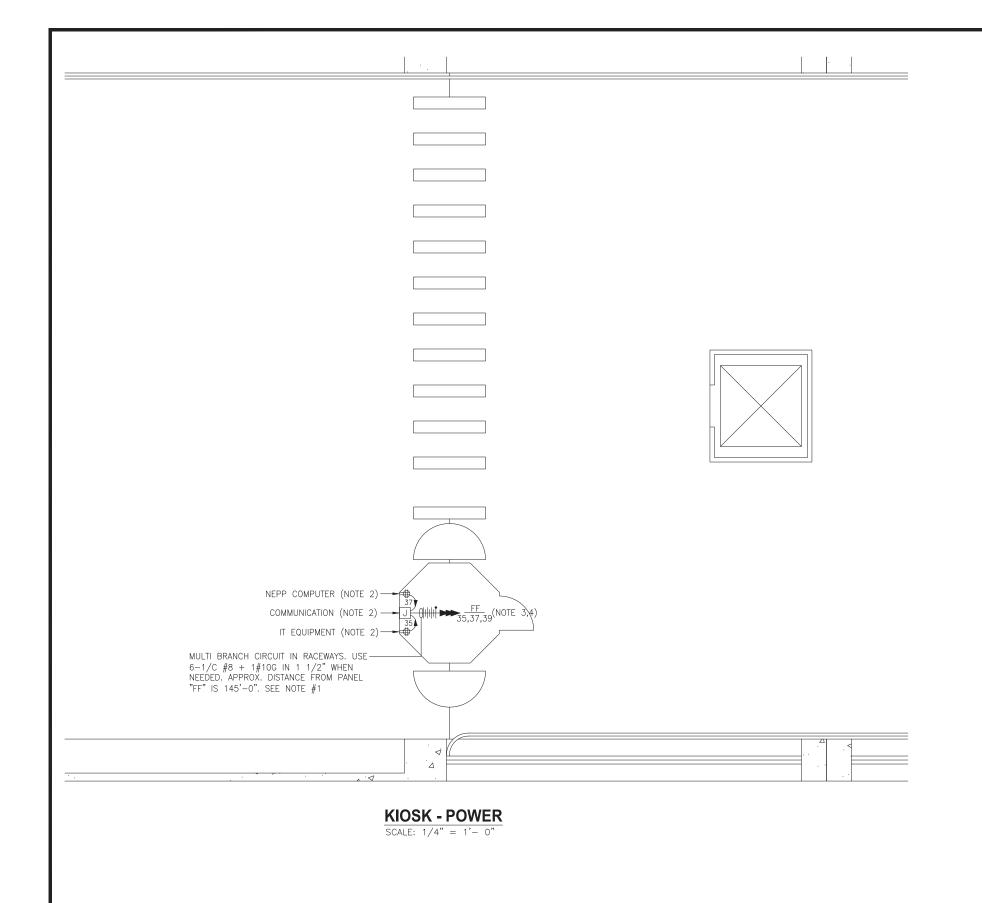
DRAWING NO. J03-E-001 NOT TO SCALE

DESIGNED C. NGO

DRAWN C. NGO

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 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	09-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	09-14					
CHECKED B. IDILBI	DATE 09-14					
APPROVED N/A	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
FRANCONIA SPRINGFIELD
KIOSK - POWER

SCALE DRAWING NO.
AS SHOWN J03-E-101

MPERES: 225		E	EXIS	TIN	G PA	NEL	. "FF	-"		
	VOLTS:	120/208	SURFA	CE						
IAINS: 200A MCB	PHASE:	3		LOCA	TION:	AC SWI	3D ROC	DM 216		
AT ING: 10K AIC	WIRE:	4		SECT	ION: 1	OF 1				
		CKT B	KRS	CKT.		CKT.	CKT	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
XISTING VENDOR	0.8	20	1	1	A	2	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	5	C	6	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOR
XIST ING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXISTING VENDOR
PARE	0.0	20	1	25	A	26	1	20	0.0	SPARE
XISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	29	C	30	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDOR
XISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.0	SPARE
EW KIOSK RECEPT. (IT/NCS)	0.8	20	1	35	C	36	1	20	0.0	SPARE
EW KIOSK RECEPT. (NEPP/SOC	3) 0.8	20	1	37	A	38	3	30	2.9	EXIST. LOAD CENTER "KES"
UTURE AFC FARE GATE	0.0	20	1	39	- B -	40	-	-	2.5	
PARE	0.0	20	1	41	C	42	-	-	2.5	

	LOAI	D SUMMARY		
LIGHTS	0.0 x 125%		0.0 KVA	
RECEPT ACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA	
RECEPTACLES	16.0 x 50%		8.0 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	33.5 KVA	TOTAL DEMAND KVA	26.3 KVA	
		TOTAL DEMAND AMPS	72.9 AMPS	
CONNECTED LOAD PHASE SUMMARY				
PHASE A:	11.7 KVA			
PHASE B:	11.3 KVA			
PHASE C:	11.3 KVA			

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	09-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	09-14			<u> </u>		
CHECKED B. IDILBI	DATE 09-14					
CHECKED B. IDILBI	DATE					
APPROVED N/A	DATE					
	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED -



NEW ELECTRONIC PAY PROGRAM	(NEPF
IN METRORAIL STATIONS	`
FRANCONIA SPRINGFIELD	
PANEL SCHEDULE	

DRAWING NO.
J03-E-102 scale NOT TO SCALE

- 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 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.

REVISIONS

- 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

JUNCTION BOX

THOUSAND AMPERE

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

MAX

MEZZ

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

<u>/\DDI</u>	<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
Ç	CENTER LINE	TYP	TYPICAL
Ψ 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		

DRAWING INDEX

K01-E-001	ABBREVIATIONS,	DRAWING	INDEX,	SPECIFICATIONS	&	SYMBOL	LIST

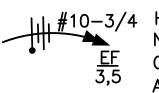
K01-E-101 COURT HOUSE - KIOSK - POWER

K01-E-102 COURT HOUSE - PANEL SCHEDULE

MM-K-E06 COURT HOUSE - 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.



| | #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

NEW ELECTRONIC PAY PROGRAM (NEPP)

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

DRAWING NO. K01-E-001 NOT TO SCALE

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED

A Gannett Fleming/Parsons PROJECT MANAGER

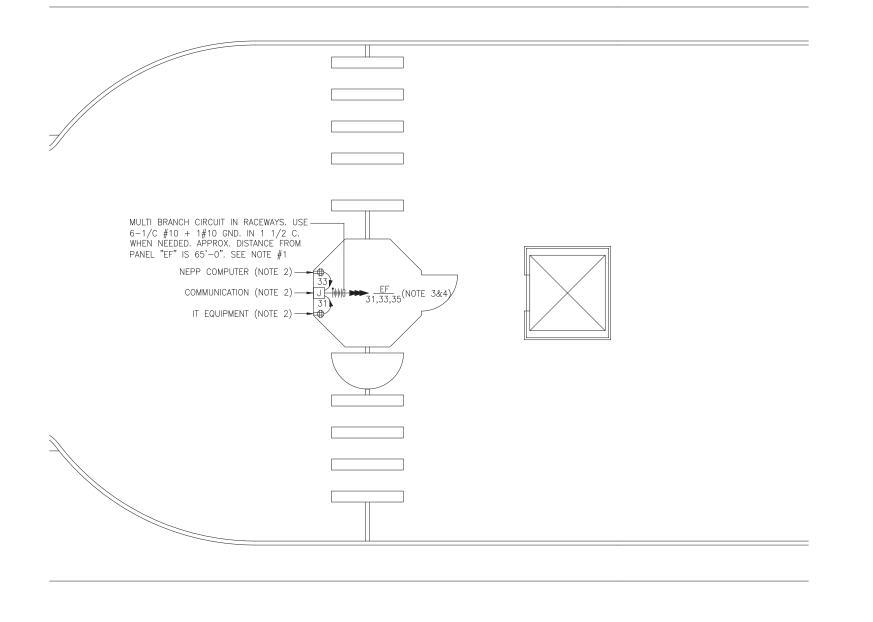
WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY

DESIGNED C. NGO 12-14 DATE BY NUMBER DESCRIPTION DESCRIPTION DRAWN C. NGO 12-14 DATE CHECKED B. IDILBI 12-14 DATE APPROVED N/A DATE

REFERENCE DRAWINGS



MEZZANINE KIOSK - POWER

REVISIONS

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

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



14-FQ10060-CENI-24 NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS

COURT HOUSE MEZZANINE KIOSK - POWER

AS SHOWN K01-E-101

DRAWING NOTES:

SAFETY PREÇAUTION:

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.

NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

REFERENCE DRAWINGS

DESIGNED C. NGO

DRAWN C. NGO

CHECKED B. IDILBI

APPROVED N/A

12-14 DATE

12-14 DATE

DATE

PROJECT MANAGER

		E	XIS	TING	G PA	<u>NE</u> L	<u>"EF</u>	"				
AMPERES: 250	VOLTS: 120/208 MOUNTIN					SURF	ACE					
MAINS: 250A MCB	PHASE:	3		LOCA	TION:	ELEC. EQUIPMENT RM. 205						
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1	I OF 1					
		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	40	3	1	A	2	1	20	0.8	EXISTING VENDO		
	2.5	-	-	3	- B -	4	1	20	0.8	EXIST ING VENDO		
	2.5	-	-	5	C	6	1	20	0.8	EXISTING VENDO		
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.0	SPAR		
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.0	SPAR		
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDO		
EXIST ING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDO		
EXIST ING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDO		
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDO		
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDO		
EXISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VENDO		
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.0	SPAF		
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.0	SPAF		
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDO		
EXIST ING VENDOR	0.8	20	1	29	C	30	1	20	0.0	SPAF		
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	31	A	32	1	20	0.0	SPAF		
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	33	- B -	34	1	20	0.0	SPAF		
FUTURE AFC FARE GATE	0.0	20	1	35	C	36	1	20	0.0	SPAF		
SPARE	0.0	20	1	37	A	38	1	20	0.0	SPAF		
SPARE	0.0	20	1	39	- B -	40	1	20	0.0	SPAR		
SPACE	0.0	-	-	41	C	42	-	-	0.0	SPAC		
SPACE	0.0	-	-	43	A	44	-	-	0.0	SPAC		

LOAD SUMMARY						
LIGHTS	0.0 x 125%		0.0 KVA			
RECEPTACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA			
RECEPTACLES	8.8 x 50%		4.4 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	3.0 x 125%		3.8 KVA			
AC	4.5 x 100%		4.5 KVA			
WAT ER HEATING	0.0 x 125%		0.0 KVA			
TOTAL CONNECTED LOAD	26.3 KVA	TOTAL DEMAND KVA	22.7 KVA			
		TOTAL DEMAND AMPS	62.9 AMPS			
CONNECTED LOAD PHASE SUMMARY						
PHASE A:	9.3 KVA					
PHASE B:	9.7 KVA					
PHASE C:	8.1 KVA					

			REFERENCE DRAWINGS	REVISIONS					
DESIGNED C. NGO	12-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION			
DRAWN C. NGO	DATE 12-14								
	DATE								
CHECKED B. IDILBI	12-14 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	,
COURT HOUSE	
PANEL SCHEDULE	

SCALE DRAWING NO.

K01-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
- 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
- 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 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

A R R R F \ / | A T | O N C

A, AMP	AMPERES	MAX	MAXIMUM
AC	ALTERNATING CURRENT	MCA	MINIMUM CIRCUIT AMPERE
AEMS	AUTOMATED ENERGY	MCB	MAIN CIRCUIT BREAKER
AF	MANAGEMENT SYSTEM AMPERE FRAME	MEZZ	MEZZANINE
AFC	AUTOMATED FARE	MIN	MINIMUM
AIC	COLLECTION SYSTEM	MLO	MAIN LUGS ONLY
4FF	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		
BKR	BREAKER	PH	PHASE
Æ	BASELINE	PNL	PANELBOARD
С	CONDUIT	PRI	PRIMARY
CB	CIRCUIT BREAKER	PROP	PROPOSED
CCT	CIRCUIT	RGS	RIGID GALVANIZED STEEL
Q.	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 LABORATORII
IG	ISOLATED GROUND	UON	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	VOLT	VOLTAGE
KAIC	THOUSAND AMPERE INTERRUPTING CAPACITY	W WMATA	WASHINGTON METROPOLITIAN
KCMIL	THOUSAND CIRCULAR MILL		AREA TRANSIT AUTHORITY
KVA	KILOVOLT AMPERE	WP	WEATHERPROOF

DRAWING INDEX

KO2-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

K02-E-101 CLARENDON - MEZZANINE KIOSK - POWER

K02-E-102 CLARENDON - PANEL SCHEDULE

KO2-E-301 CLARENDON - PANELBOARD IMAGE

MM-K-E07 CLARENDON - 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.

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

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

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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



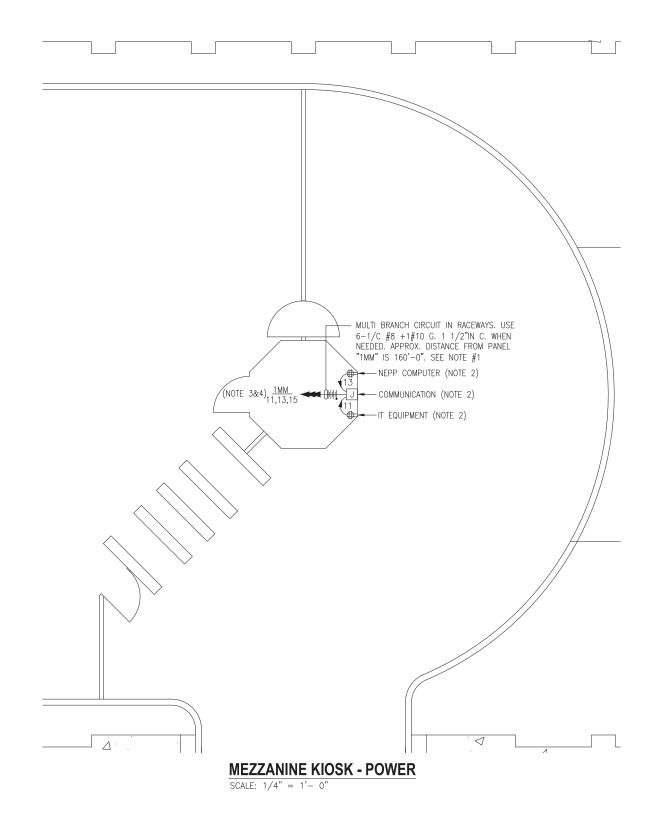
PROJECT MANAGER

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

NOT TO SCALE

K02-E-001

85



- 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.
- 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"

SAFETY PRECAUTION:

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

14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	12-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
	DATE					
CHECKED B. IDILBI	12-14 DATE					
APPROVED N/A						
	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



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

SCALE DRAWING NO. K02-E-101

AMPERES: 225	VOLTS: 120/208 MOUNTING: SURFACE									
MAINS: 200A MCB	PHASE: 3 LOCATION: MECH. EQUIPMEN					MENT RI	1. C203			
RATING: 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
EXIST. LOAD CENTER "KES"	2.9	30	3	1	A	2	3	20	0.0	SPAR
	2.5	-	-	3	- B -	4	- 1	-	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 VENDO
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDOR
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDOI
FUTURE AFC FARE GATE	0.8	20	1	15	- B -	16	1	20	0.0	SPAR
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VENDOI
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXISTING VENDOI
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.8	EXISTING VENDOI
SPARE	0.0	20	1	27	- B -	28	1	20	0.0	SPAR
SPARE	0.0	20	1	29	C	30	1	20	0.0	SPAR
SPACE	0.0	-	-	31	A	32	-	-	0.0	SPAC
SPACE	0.0	-	-	33	- B -	34	-	-	0.0	SPAC
SPACE	0.0	-	-	35	C	36	-	-	0.0	SPAC
SPACE	0.0	-	-	37	A	38	-	-	0.0	SPAC
SPACE	0.0	-	-	39	- B -	40	-	-	0.0	SPAC
SPACE	0.0	-	-	41	C	42	-	-	0.0	SPAC

LOAD SUMMARY							
LIGHTS	0.0 x 125%		0.0 KVA				
RECEPT ACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA				
RECEPTACLES	4.8 x 50%		2.4 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	3.0 x 125%		3.8 KVA				
AC	6.0 x 100%		6.0 KVA				
WATER HEATING	1.0 x 125%		1.3 KVA				
TOTAL CONNECTED LOAD	24.8 KVA	TOTAL DEMAND KVA	23.4 KVA				
		TOTAL DEMAND AMPS	65.0 AMPS				
CONNECTED LOAD PHASE SUMMARY							
PHASE A:	11.8 KVA						
PHASE B:	6.5 KVA						
PHASE C:	73 K\/Δ						

			REFERENCE DRAWINGS	KEVISIONS					
DESIGNED C. NGO	12-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION			
DRAWN C. NGO	DATE 12-14								
DRAWN C. NGO	DATE								
CHECKED B. IDILBI	12-14								
CHECKED	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
CLARENDON
PANEL SCHEDULE

SCALE DRAWING NO. K02-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.

- 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.

ARREVIATIONS

MAX

MEZZ

THOUSAND AMPERE

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

<u>ADDI</u>	<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
		TYP	TYPICAL
Q CLC	CENTER LINE	U/G	UNDER GROUND
CLG	CEILING	U.L.	UNDERWRITERS LABORATOR
CONST	CONSTRUCTION	UON	UNLESS OTHERWISE NOTED
DISC	DISCONNECT	VOLT	VOLTAGE
Е	ELECTRICAL	W	WATT
GND	GROUND		
JB	JUNCTION BOX	WMAIA	WASHINGTON METROPOLITIA AREA TRANSIT AUTHORITY

DRAWING INDEX

K03-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

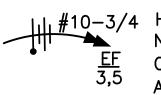
K03-E-101 VIRGINIA SQUARE - MEZZANINE KIOSK - POWER

K03-E-102 VIRGINIA SQUARE - PANEL SCHEDULE

MM-K-E09 VIRGINIA SQUARE - 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.



11 #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	<u>12-14</u> DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
CHECKED B. IDILBI	DATE 12-14					
APPROVED N/A	DATE DATE					
	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED

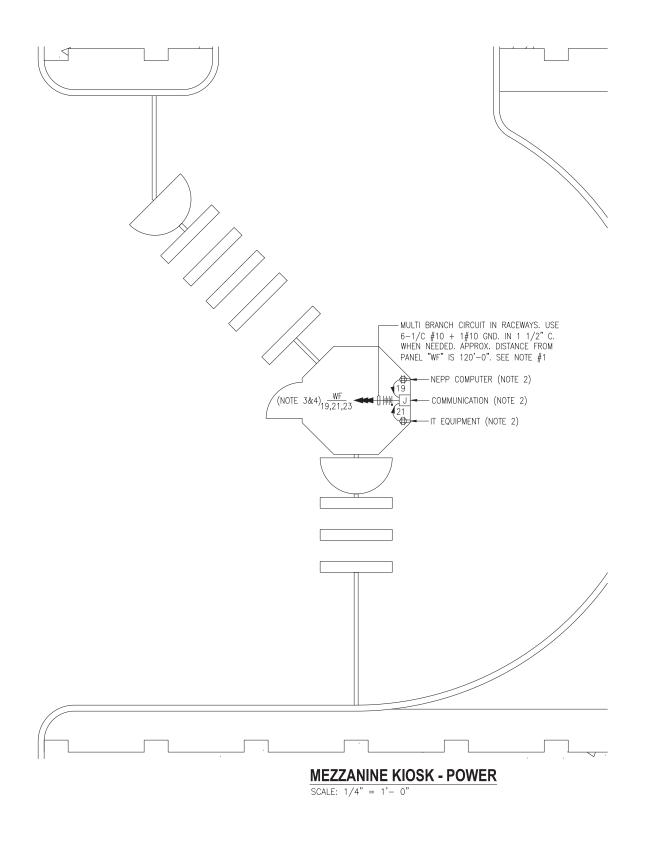


WEATHERPROOF

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

DRAWING NO.

K03-E-E001



- 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.
- 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:

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

14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
		IUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
	2-14					
D	DATE					
	2-14 DATE					
APPROVED N/A						
D	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
VIRGINIA SQUARE
MEZZANINE KIOSK - POWER

SCALE DRAWING NO.

AS SHOWN K03-E-101

AMPERES: 225	VOLTS:	120/208		MOUN	NTING:	SURF/	\CE			
MAINS: 200A MCB	PHASE:	3		LOCA	TION:	ELEV. MACH. /MECH. EQUIPMENT RM C206			T RM C206	
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT E	3KRS	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 VEND
EXISTING VENDOR	0.8	20	1	3	- B -	4	1	20	0.8	EXISTING VEND
SPARE	0.0	20	1	5	C	6	1	20	0.0	SPA
SPARE	0.0	20	1	7	A	8	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VEND
SPARE	0.0	20	1	13	A	14	1	20	0.8	EXISTING VEND
EXISTING VENDOR	0.8	20	1	15	- B -	16	1	20	0.0	SPA
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXISTING VEND
NEW KIOSK RECEPT. (IT/NCS)	0.8	20	1	19	A	20	1	20	0.0	SPA
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	21	- B -	22	1	20	0.8	EXISTING VEND
FUTURE AFC FARE GATE	0.0	20	1	23	C	24	1	20	0.0	SPA SPA
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.8	EXISTING VEND
SPARE	0.0	20	1	27	- B -	28	1	20	0.8	EXISTING VEND
SPARE	0.0	20	1	29	C	30	1	20	0.8	EXISTING VEND
SPACE	0.0	-	-	31	A	32	3	30	2.9	EXISTING LOAD CENTER "K
SPACE	0.0	-	-	33	- B -	34	-	-	2.5	27.01.11.0 2072 02.11.21.11
SPACE	0.0	_	-	35	C	36	-	_	2.5	
SPACE	0.0	-	-	37	A	38	1	20	0.0	SPA
SPACE	0.0	-	-	39	- B -	40	1	20	0.8	EXISTING VEND
SPACE	0.0	-	-	41	C	42	-	-	0.0	SPA SPA
			1.0) A D	CLIM	184.6	DV			
					SUM	1MA	RY			
LIGHTS			x 125%	%	SUM	1MA	RY			KVA
RECEPT ACLES, FIRST 10 KVA		10.0	x 125% x 100%	% %	SUM	1MA	RY		10.0	KVA
RECEPT ACLES, FIRST 10 KVA RECEPT ACLES		10.0	x 125% x 100% x 50%	% %	SUM	1MA	RY		10.0	KVA KVA
RECEPT ACLES, FIRST 10 KVA RECEPT ACLES MISC. APPLIANCES		10.0 6.4 0.0	x 125% x 100% x 50% x 100%	/6 /6 /6	SUM	1MA	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 0.0	x 125% x 100% x 50% x 100% x 125%	% % % %	SUM	1MA	RY		10.0 3.2 0.0	KVA KVA
RECEPT ACLES, FIRST 10 KVA RECEPT ACLES MISC. APPLIANCES		10.0 6.4 0.0 0.0	x 125% x 100% x 50% x 100% x 125% x 100%	% % % % %	SUM	<u>1MA</u>	RY		10.0 3.2 0.0 0.0	KVA KVA KVA
RECEPTACLES, FIRST 10 KVA RECEPTACLES MISC. APPLIANCES LARGEST MOTOR		10.0 6.4 0.0 0.0	x 125% x 100% x 50% x 100% x 125%	% % % % %	SUM	1MA	RY		10.0 3.2 0.0 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 0.0 3.0	x 125% x 100% x 50% x 100% x 125% x 100%	% % % % %	SUM	1MA	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		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%	/6 /6 /6 /6 /6 /6 /6	SUM	1MA	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		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% x 100%	/6 /6 /6 /6 /6 /6 /6	тотл	AL DEN	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	ARY	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% x 100%	/6 /6 /6 /6 /6 /6 /6	тотл	AL DEN			10.0 3.2 0.0 0.0 0.0 3.8 4.5 0.0	KVA 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 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 /6 /6	тотл	AL DEN	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 125% x 100% x 50% x 100% x 125% x 100% x 125% x 100%	/6 /6 /6 /6 /6 /6 /6	тотл	AL DEN	IAND K		10.0 3.2 0.0 0.0 0.0 3.8 4.5 0.0	KVA

CONTRACT NO. 14-FQ10060-CENI-24

			REFERENCE DRAWINGS	REVISIONS				
DESIGNED C. NGO	12-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION		
DRAWN C. NGO	12-14			-				
CHECKED B. IDILBI	DATE 12-14							
APPROVED N/A	DATE							
	DATE							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPF
IN METRORAIL STATIONS	
VIRGINIA SQUARE	
PANEL SCHEDULE	

SCALE DRAWING NO. K03-E-102 90

- 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.

- 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.

ARREVIATIONS

JUNCTION BOX

THOUSAND AMPERE

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

MAX

MEZZ

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

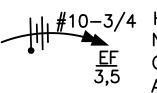
<u>ARRI</u>	<u> </u>		
A, AMP	AMPERES	NEC	NATIONAL ELECTRIC CODE
AC	ALTERNATING CURRENT	Р	POLE
AF	AMPERE FRAME	PH	PHASE
AFC	AUTOMATED FARE COLLECTION SYSTEM	PNL	PANELBOARD
AFF	ABOVE FINISHED FLOOR	PRI	PRIMARY
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
BKR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

DRAWING INDEX

K05-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST K05-E-101 EAST FALLS CHURCH - KIOSK - POWER K05-E-102 EAST FALLS CHURCH - PANEL SCHEDULE MM-K-E14 FAST FALLS CHURCH - 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.



| | #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

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	12-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
CHECKED B. IDILBI	DATE 12-14					
APPROVED N/A	DATE 					
	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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



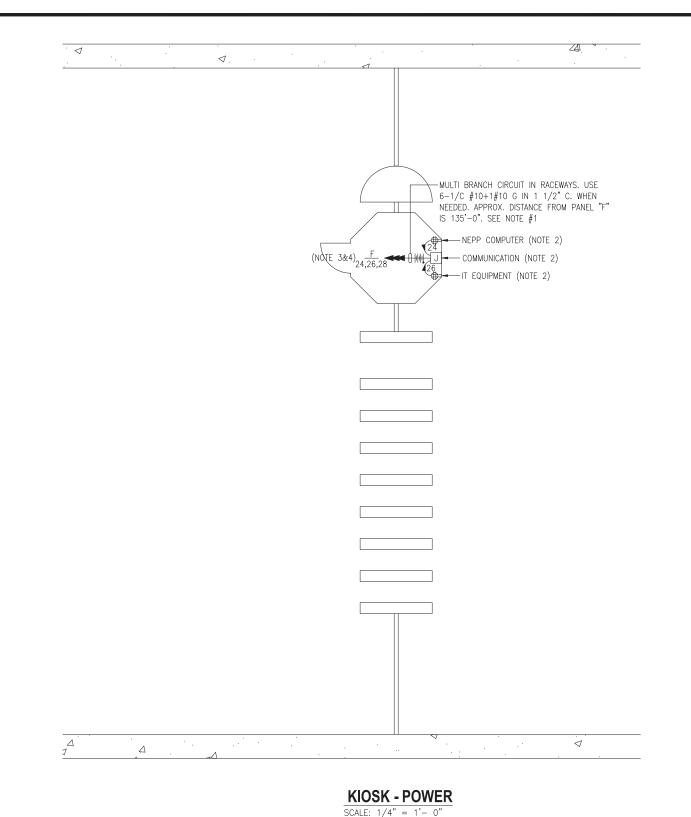
WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY

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

DRAWING NO. K05-E-001 NOT TO SCALE



- 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.
- 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:

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

14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	12-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
CHECKED B. IDILBI	DATE 12-14					
APPROVED N/A	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
EAST FALLS CHURCH
KIOSK - POWER

SCALE DRAWING NO. K05-E-101

	EXISTING PANEL "F"									
AMPERES: 400	VOLTS:	120/208		MOUN	MOUNTING: SURFACE					
MAINS: 400A MCB	PHASE:	3		LOCA	TION:	ELEC. EQUIPMENT ROOM 115				
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 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
SPARE	0.0	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	0.0	SPARE
SPARE	0.0	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
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	NEW KIOSK RECEPT. (IT/NCS)
SPARE	0.0	20	1	25	A	26	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SOC)
SPARE	0.0	20	1	27	- B -	28	1	20	0.0	FUTURE AFC FARE GATE
SPARE	0.0	20	1	29	C	30	1	20	0.0	SPARE
SPARE	0.0	-	-	31	A	32	1	20	0.0	SPARE
SPARE	0.0	-	-	33	- B -	34	1	20	0.0	SPARE
EXISTING LOAD CENTER "KES"	2.9	40	3	35	C	36	1	20	0.0	SPARE
	2.5	-	-	37	A	38	1	20	0.0	SPARE
	2.5	-	-	39	- B -	40	1	20	0.0	SPARE
EXISTING VENDOR	0.8	20	1	41	C	42	-	-	0.0	SPACE
					SUN	ИΜΑ	RY			
LIGHTS			x 125%							KVA
RECEPTACLES, FIRST 10 KVA			x 100%	6						KVA
RECEPTACLES			x 50%							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		3.0	x 125%	6					3.8	KVA
AC		4.5	x 100%	6					4.5	KVA
WATER HEATING		0.0	x 125%	6					0.0	KVA
TOTAL CONNECTED LOAD		24.7	KVA			AL DEN				KVA AMPS
CONNECTED LOAD PHASE SUMM	ARY									-
PHASE A:		8.9	KVA							
PHASE B:			KVA							
PHASE C:			KVA							
		3.0								

14-FQ10060-CENI-24

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM

APPROVED -



NEW ELECTRONIC PAY PROGRAM (NEPP)
IN METRORAIL STATIONS
EAST FALLS CHURCH
PANEL SCHEDULE

DRAWING NO. K05-E-102 scale NOT TO SCALE

DESIGNED	C. NGO	12-14	NUMBER	
		DATE		
DRAWN	C. NGO	12-14		_
		DATE		-
CHECKED	B. IDILBI	12-14		
CHLCKLD		DATE		
APPROVED	NI /A	5,		
APPROVED	11/7	DATE		
		DATE		

REFERENCE DRAWINGS

REVISIONS

DESCRIPTION

DATE BY

DEPARTMENT OF TRANSIT INFRASTRUCTURE

- 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.

- 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

MAX

MEZZ

THOUSAND AMPERE

KILOVOLT AMPERE

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

INTERRUPTING CAPACITY

THOUSAND CIRCULAR MILL

MINIMUM CIRCUIT AMPERE

MAIN CIRCUIT BREAKER

<u> </u>	<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
Ç	CENTER LINE	TYP	TYPICAL
۷ 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

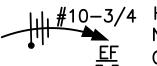
K06-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST K06-E-101 WEST FALLS CHURCH - KIOSK - POWER

K06-E-102 WEST FALLS CHURCH - PANEL SCHEDULE

MM-K-E16 WEST FALLS CHURCH - 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.



11 #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	<u>12-14</u>	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
CHECKED B. IDILBI	DATE —					
APPROVED N/A	DATE — 					
	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED

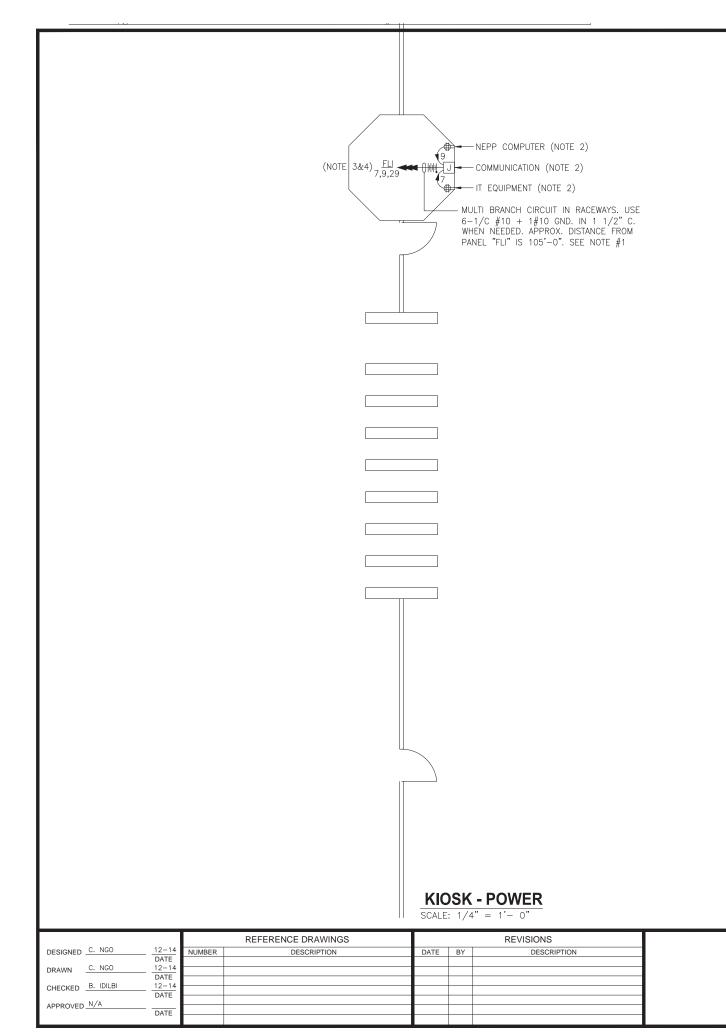


PROJECT MANAGER

WEATHERPROOF

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

DRAWING NO. K06-E-001 NOT TO SCALE



- 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 COLLED 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.

SAFETY PRECAUTION:

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

14-FQ10060-CENI-24

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

APPROVED -

A Gannett Fleming/Parsons JOINT VENTURE SUBMITTED PROJECT MANAGER

NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS WEST FALLS CHURCH **KIOSK - POWER**

AS SHOWN

95 K06-E-101

AMPERES: 225	VOLTS:	OLTS: 120/208 MOUNTING: SURFACE								
MAINS: 225A MCB	PHASE:	HASE: 3 LOCATION: ELEC. EQUIPMENT ROOM 212								
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
EXIST. KIOSK LOAD CENTER (KES)	2.9	40	3	1	A	2	1	20	0.8	EXISTING VENDO
	2.5	-	-	3	- B -	4	1	20	0.8	EXISTING VENDOI
	2.5	-	-	5	C	6	1	20	0.8	EXISTING VENDOR
NEW KIOSK RECEPT. (IT & NCS)	0.8	20	1	7	A	8	1	20	8.0	EXIST ING VENDOR
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	9	- B -	10	1	20	0.8	EXIST ING VENDOR
EXIST ING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXIST ING VENDOR
EXIST ING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXISTING VENDO
EXIST ING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDO
EXIST ING VENDOR	0.8	20	1	17	C	18	1	20	0.0	SPAR
EXIST ING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDOI
EXIST ING VENDOR	0.8	20	1	21	- B -	22	1	20	0.0	SPAR
EXIST ING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXISTING VENDO
EXIST ING VENDOR	0.8	20	1	25	A	26	1	20	0.8	EXISTING VENDO
EXIST ING VENDOR	0.8	20	1	27	- B -	28	1	20	0.8	EXISTING VENDO
FUTURE AFC FARE GATE	0.0	20	1	29	C	30	1	20	0.0	SPAR
SPARE	0.0	20	1	31	A	32	-	-	0.0	SPAC
SPARE	0.0	20	1	33	- B -	34	-	-	0.0	SPAC
EXIST ING VENDOR	0.8	20	1	35	C	36	-	-	0.0	SPAC
SPARE	0.0	20	1	37	A	38	1	20	0.8	EXISTING VENDO
SPACE	0.0	-	-	39	- B -	40	1	20	0.0	SPAR
SPACE	0.0	-	-	41	C	42	1	20	0.0	SPARI

LOAD SUMMARY							
LIGHTS	0.0 x 125%		0.0 KVA				
RECEPTACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA				
RECEPTACLES	9.6 x 50%		4.8 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	27.1 KVA	TOTAL DEMAND KVA	23.1 KVA				
		TOTAL DEMAND AMPS	64.0 AMPS				
CONNECTED LOAD PHASE SUMMARY							
PHASE A:	10.9 KVA						
PHASE B:	8.9 KVA						
PHASE C:	8.1 KVA						

CONTRACT NO. 14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	12-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
CHECKED B. IDILBI	DATE 12-14					
OHEORES	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	(NEPF
IN METRORAIL STATIONS	`
WEST FALLS CHURCH	
PANEL SCHEDULE	

SCALE DRAWING NO. K06-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.

- 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

- 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 guads. All boxes used in or on the kiosk shall be

ARREVIATIONS

MAX

MEZZ

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
C	CONDUIT	SHT	SHEET
СВ	CIRCUIT BREAKER	SW	SWITCH
CCT	CIRCUIT	SWBD	SWITCHBOARD
Q Q	CENTER LINE	TYP	TYPICAL
۷ CLG	CEILING	U/G	UNDER GROUND
CONST	CONSTRUCTION	U.L.	UNDERWRITERS LABORATORIE
		UON	UNLESS OTHERWISE NOTED
DISC	DISCONNECT	VOLT	VOLTAGE
E	ELECTRICAL	W	WATT
GND	GROUND		WASHINGTON METROPOLITIAN
JB	JUNCTION BOX	WIVIAIA	AREA TRANSIT AUTHORITY

DRAWING INDEX

K07-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST

K07-E-101 DUNN LORING - KIOSK - POWER

K07-E-102 DUNN LORING - PANEL SCHEDULE

MM-K-E23 DUNN LORING - 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.

11 #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

NEW ELECTRONIC PAY PROGRAM (NEPP)

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

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

A Gannett Fleming/Parsons

PROJECT MANAGER

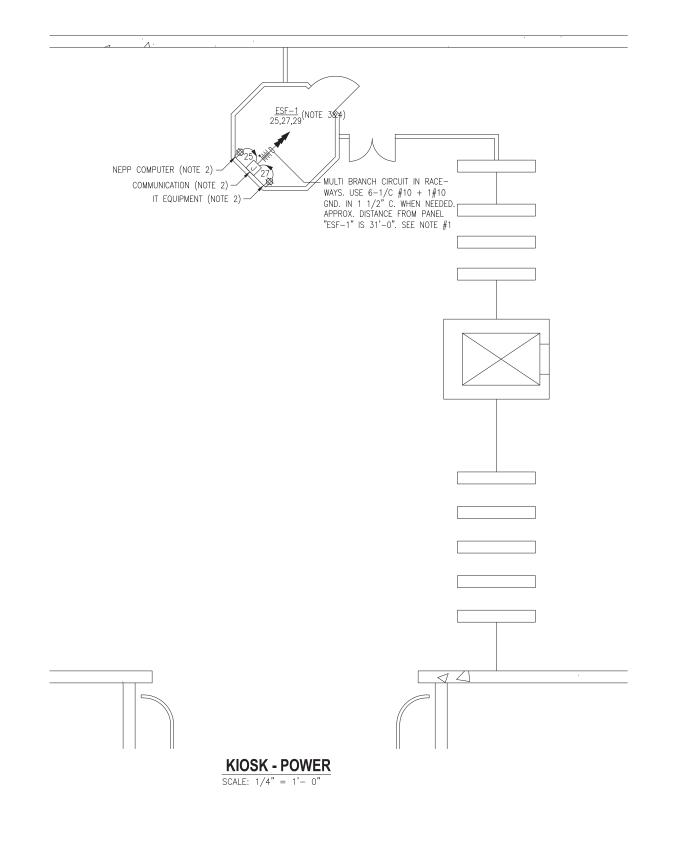
WEATHERPROOF

DESIGNED C. NGO 12-14 DATE BY NUMBER DESCRIPTION DESCRIPTION DRAWN C. NGO 12-14 DATE CHECKED B. IDILBI 12-14 DATE APPROVED N/A DATE

REFERENCE DRAWINGS

NOT TO SCALE

DRAWING NO. K07-E-001



- 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
- 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"

SAFETY PRECAUTION:

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

14-FQ10060-CENI-24

			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	12-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
CHECKED B. IDILBI	DATE 12-14					
CHECKED B. IDILBI	DATE					
APPROVED N/A						
	DATE					

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED



NEW ELECTRONIC PAY PROGRAM (NEPP) IN METRORAIL STATIONS **DUNN LORING KIOSK - POWER**

SCALE AS SHOWN K07-E-101

	1	EX								
AMPERES: 175		120/208			ITING:					
MAINS: 175A MCB	PHASE:			LOCA			QUIPM	ENT CAB	INET RO	OM 301
RATING: 10K AIC	WIRE:	4		SECT	ION:	1 OF 1				
		CKT E		CKT.		CKT.		BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.			POLE	AMP	KVA	LOAD DESCRIPTION
EXISTING LOAD CENTER "KES"	2.9	40	3	1	A	2	1	20	0.8	EXISTING VENDO
	2.5	-	-	3	- B -	4	1	20	0.8	EXISTING VENDO
	2.5	-	-	5	C	6	1	20	0.8	EXISTING VENDO
SPARE	0.0	20	1	7	A	8	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	8.0	20	1	13	A	14	1	20	0.8	SPAC
EXISTING VENDOR	8.0	20	1	15	- B -	16	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	8.0	20	1	17	C	18	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	8.0	20	1	19	A	20	1	20	0.0	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.0	EXISTING VENDO
SPACE	0.0	-	-	23	C	24	1	20	0.0	EXISTING VENDO
NEW KIOSK RECEPT. (IT &NEPP)	0.8	20	1	25	A	26	1	20	0.0	EXIST ING VENDO
NEW KIOSK RECEPT. (NEPP/SOC)	0.8	20	1	27	- B -	28	1	20	0.0	EXISTING VENDO
FUTURE AFC FARE GATE	0.0	20	1	29	C	30	1	20	0.0	EXISTING VENDO
SPARE	0.0	20	1	31	A	32	1	20	0.0	SPAF
SPACE	0.0	-	-	33	- B -	34	1	20	0.0	SPAR
SPACE	0.0	-	-	35	C	36	-	-	0.0	SPAC
SPACE	0.0	-	-	37	A	38	-	-	0.0	SPAC
SPACE	0.0	-	-	39	- B -	40	-	-	0.0	SPAC
SPACE	0.0	-	-	41	C	42	-	-	0.0	SPAC
			LC	DAD	SUN	1MA	RY			
LIGHTS		0.0	x 125%	6					0.0	KVA
RECEPT ACLES, FIRST 10 KVA		10.0	4000							16) (4)
RECEPTACLES	<u></u>			6					10.0	KVA
			_	6						
			x 50%						2.0	KVA
MISC. APPLIANCES		0.0	x 50% x 100%	6					2.0 0.0	KVA KVA
MISC. APPLIANCES LARGEST MOTOR		0.0	x 50% x 100% x 125%	6					2.0 0.0 0.0	KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS		0.0	x 50% x 100% x 125% x 100%	6 6					2.0 0.0 0.0 0.0	KVA KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT		0.0 0.0 0.0 3.0	x 50% x 100% x 125% x 100% x 125%	6 6 6					2.0 0.0 0.0 0.0 3.8	KVA KVA KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC		0.0 0.0 0.0 3.0 4.5	x 50% x 100% x 125% x 100% x 125% x 100%	6 6 6 6					2.0 0.0 0.0 0.0 3.8 4.5	KVA KVA KVA KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING		0.0 0.0 0.0 3.0 4.5 0.0	x 50% x 100% x 125% x 100% x 125% x 100% x 125%	6 6 6 6	TO-	AL DE	AAND 10		2.0 0.0 0.0 0.0 3.8 4.5	KVA KVA KVA KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC		0.0 0.0 0.0 3.0 4.5 0.0	x 50% x 100% x 125% x 100% x 125% x 100%	6 6 6 6			IAND KY		2.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING	ARY	0.0 0.0 0.0 3.0 4.5 0.0	x 50% x 100% x 125% x 100% x 125% x 100% x 125%	6 6 6 6					2.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD	ARY	0.0 0.0 0.0 3.0 4.5 0.0 21.5	x 50% x 100% x 125% x 100% x 125% x 100% x 125%	6 6 6 6					2.0 0.0 0.0 3.8 4.5 0.0	KVA KVA KVA KVA KVA KVA KVA KVA KVA
MISC. APPLIANCES LARGEST MOTOR MOTORS HEAT AC WATER HEATING TOTAL CONNECTED LOAD CONNECTED LOAD PHASE SUMM	ARY	0.0 0.0 0.0 3.0 4.5 0.0 21.5	x 50% x 100% x 125% x 100% x 125% x 100% x 125% KVA	6 6 6 6					2.0 0.0 0.0 3.8 4.5 0.0	KVA

CONTRACT NO. 14-FQ10060-CENI-24

I			REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	<u>12-14</u>	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	DATE 12-14					
	DATE					
CHECKED B. IDILBI	12-14 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
DUNN LORING
PANEL SCHEDULE

SCALE DRAWING NO. K07-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.
- 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.
- 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 guads. All boxes used in or on the kiosk shall be

ABBREVIATIONS

GROUND

MAXIMUM

MEZZANINE

MAIN LUGS ONLY

MINIMUM

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
AIC	AMPERE INTERRUPTING CAPACITY	PROP	PROPOSED
AT	AMPERE TRIP	RGS	RIGID GALVANIZED STEEL
BKR	BREAKER	SEC	SECONDARY
C		SHT	SHEET
CB	CONDUIT CIRCUIT BREAKER	SW	SWITCH
CCT	CIRCUIT	SWBD	SWITCHBOARD
		TYP	TYPICAL
Ĺ CLG	CENTER LINE	U/G	UNDER GROUND
	CEILING	U.L.	UNDERWRITERS LABORATOR
CONST	CONSTRUCTION	UON	UNLESS OTHERWISE NOTED
DISC	DISCONNECT	VOLT	VOLTAGE
E	ELECTRICAL	W	WATT

DRAWING INDEX

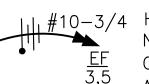
K08-E-001 ABBREVIATIONS, DRAWING INDEX, SPECIFICATIONS & SYMBOL LIST K08-E-101 VIENNA - KIOSK - POWER K08-E-102 VIENNA - PANEL SCHEDULE

MM-K-E26 VIENNA - AC POWER ONE LINE DIAGRAM

K08-E-301 VIENNA - PANELBOARD IMAGE

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.



111 #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

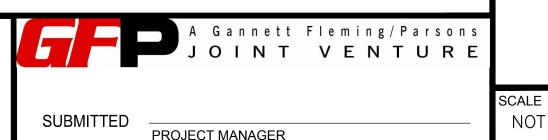
- I INDICATES GROUNDING WIRE TO GROUNDING BUS AT THE PANELBOARD
- INDICATES CIRCUIT HOME RUN PANELBOARD AND CIRCUIT NUMBER IDENTIFICATION

14-FQ10060-CENI-24

		REFERENCE DRAWINGS			REVISIONS
DESIGNED C. NGO	12-14 DATE NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN <u>C. NGO</u>	12-14 DATE				
CHECKED B. IDILBI	12-14 DATE				
APPROVED N/A	DATE				

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES OFFICE OF INFRASTRUCTURE RENEWAL PROGRAM "Dhappi **APPROVED**



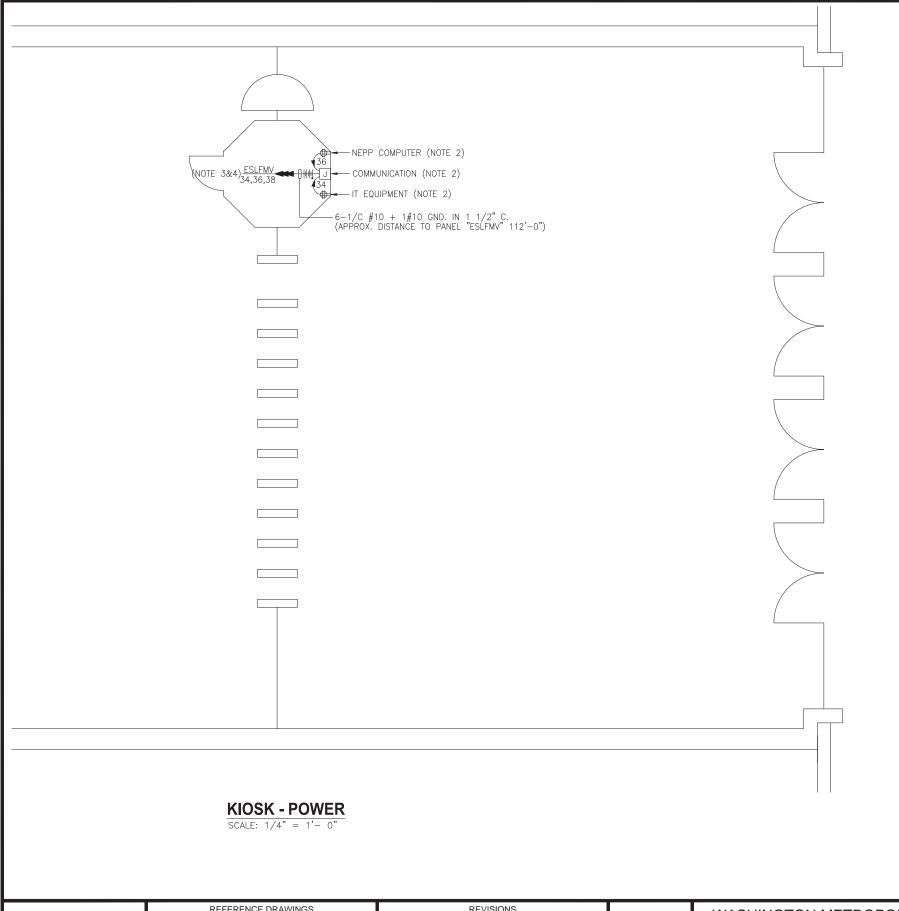
WMATA WASHINGTON METROPOLITIAN

WEATHERPROOF

AREA TRANSIT AUTHORITY

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

DRAWING NO. K0&-E-001 NOT TO SCALE



- 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 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 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	12-14 DATE	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN C. NGO	12-14					
CHECKED B. IDILBI	DATE 12-14					
APPROVED N/A	DATE					
AFFROVED,	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
VIENNA

KIOSK - POWER

SCALE DRAWING NO. K08-E-101

AMPERES: 400	VOLTS	VOLTS: 120/208 MOUNTING: SURFACE								
MAINS: 300A MCB	PHASE	3		LOCATION: CLEANER ROOM 406						
RATING: 10K AIC	WIRE:	IRE: 4 SECTION: 1 OF 1								
		CKTE	SKRS	СКТ.		СКТ.	CKT	BKRS		
LOAD DESCRIPTION	KVA	AMP	POLE	NO.		NO.	POLE	AMP	KVA	LOAD DESCRIPTION
XIST. KIOSK LOAD CENTER (KES)	2.9	50	3	1	A	2	1	20	0.8	EXIST ING VENDO
	2.5	-	-	3	- B -	4	1	20	0.8	EXISTING VENDO
	2.5	-	-	5	C	6	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	7	A	8	1	20	0.8	EXISTING VENDO
XISTING VENDOR	0.8	20	1	9	- B -	10	1	20	0.8	EXIST ING VENDO
XISTING VENDOR	0.8	20	1	11	C	12	1	20	0.8	EXIST ING VENDO
EXISTING VENDOR	0.8	20	1	13	A	14	1	20	0.8	EXIST ING VENDO
XIST ING VENDOR	0.8	20	1	15	- B -	16	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	17	C	18	1	20	0.8	EXIST ING VENDO
EXISTING VENDOR	0.8	20	1	19	A	20	1	20	0.8	EXISTING VENDO
XISTING VENDOR	0.8	20	1	21	- B -	22	1	20	0.8	EXIST ING VENDO
EXISTING VENDOR	0.8	20	1	23	C	24	1	20	0.8	EXIST ING VENDO
EXISTING VENDOR	0.8	20	1	25	A	26	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	27	- B -	28	1	20	0.0	SPAR
EXISTING VENDOR	0.8	20	1	29	C	30	1	20	0.8	EXIST ING VENDO
EXISTING VENDOR	0.8	20	1	31	A	32	1	20	0.8	EXISTING VENDO
EXISTING VENDOR	0.8	20	1	33	- B -	34	1	20	0.8	NEW KIOSK RECEPT. (IT & NEP
EXISTING VENDOR	0.8	20	1	35	C	36	1	20	0.8	NEW KIOSK RECEPT. (NEPP/SO
XISTING VENDOR	0.8	20	1	37	A	38	1	20	0.0	FUTURE AFC FARE GAT
XISTING VENDOR	0.8	20	1	39	- B -	40	1	20	0.8	EXIST ING VENDO
EXISTING VENDOR	0.8	20	1	41	C	42	1	20	0.8	EXISTING VENDO

LOAD SUMMARY							
LIGHTS	0.0 x 125%		0.0 KVA				
RECEPT ACLES, FIRST 10 KVA	10.0 x 100%		10.0 KVA				
RECEPTACLES	26.4 x 50%		13.2 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	43.9 KVA	TOTAL DEMAND KVA	31.5 KVA				
		TOTAL DEMAND AMPS	87.4 AMPS				
CONNECTED LOAD PHASE SUMMARY							
PHASE A:	12.5 KVA						
PHASE B:	12.1 KVA						
PHASE C:	12.9 KVA						

CONTRACT NO. 14-FQ10060-CENI-24

		REFERENCE DRAWINGS			REVISIONS			
DESIGNED C. NGO	12-14	NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION		
DRAWN C. NGO	DATE 12-14							
	DATE							
CHECKED B. IDILBI	12-14 DATE							
APPROVED N/A								
	DATE							

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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

APPROVED -



IEW ELECTRONIC PAY PROGRAM (NEPP
IN METRORAIL STATIONS `	
VIENNA	

VIENNA PANEL SCHEDULE

SCALE DRAWING NO. K08-E-102