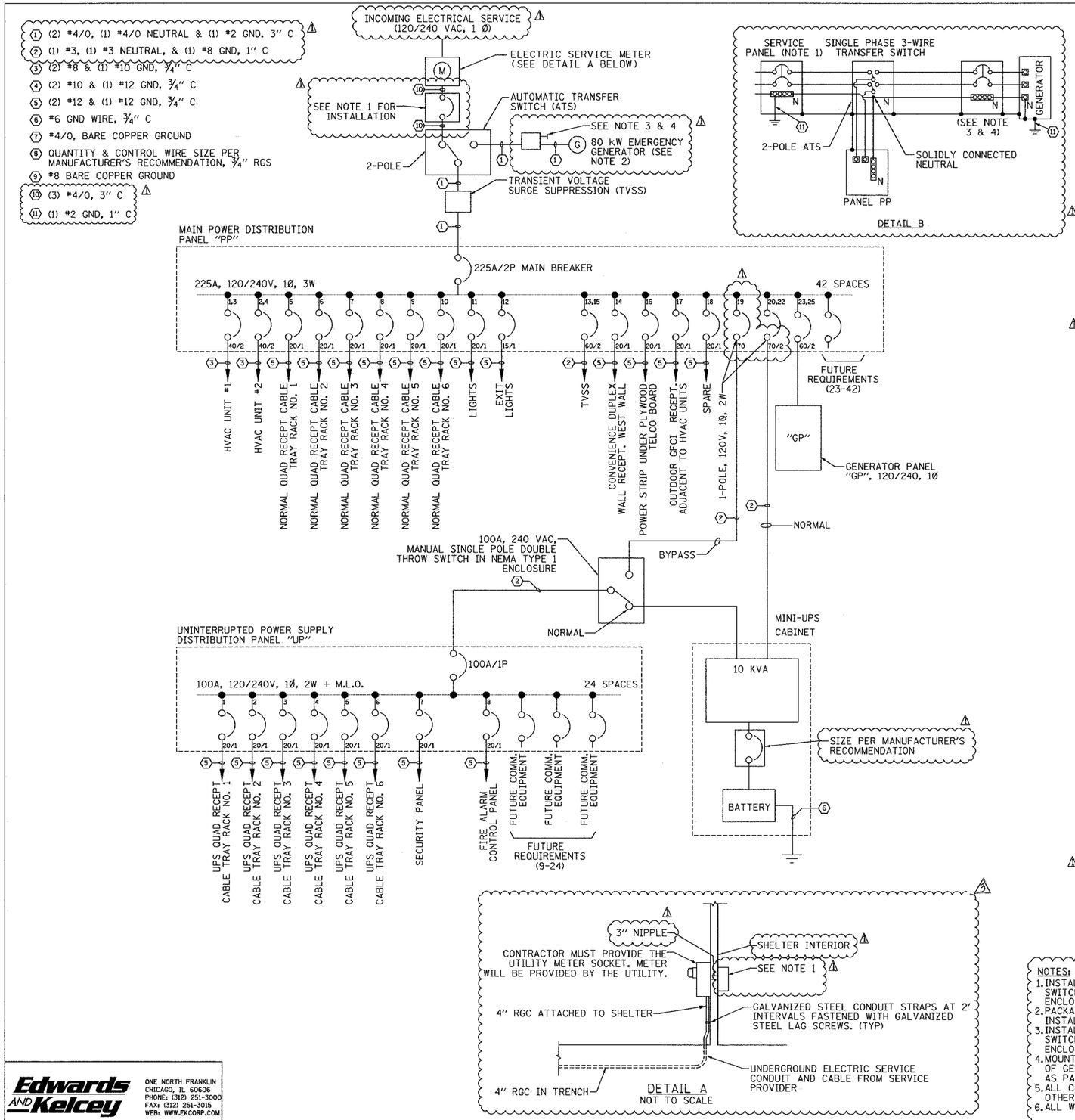
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
94/90	2003-0311	COOK	976	853
STA.		TO STA.		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

62583

(1) (2) #4/0, (1) #4/0 NEUTRAL & (1) #2 GND, 3" C
(2) (1) #3, (1) #3 NEUTRAL, & (1) #8 GND, 1" C
(3) (2) #8 & (1) #10 GND, 3/4" C
(4) (2) #10 & (1) #12 GND, 3/4" C
(5) (2) #12 & (1) #12 GND, 3/4" C
(6) #6 GND WIRE, 3/4" C
(7) #4/0, BARE COPPER GROUND
(8) QUANTITY & CONTROL WIRE SIZE PER MANUFACTURER'S RECOMMENDATION, 3/4" RGS
(9) #8 BARE COPPER GROUND
(10) (3) #4/0, 3" C
(11) (1) #2 GND, 1" C



PANEL CIRCUIT AND LOAD SCHEDULE

WIRE SIZE #3/0
1P, 225A

SERVICE : 120/240VAC, 1Ø, 3W
DESIGNATION : IDOT- SHELTER NORMAL POWER (PP)
LOCATION : I-55 SHELTER (RO1)

LOAD DESCRIPTION	QTY	UNIT (W)	LOAD PER PHASE(KVA) A	LOAD PER PHASE(KVA) B	TRIP	POLES	WIRE SIZE
HVAC UNIT 1 (36K BTU)	1	10300	5150	5150	40	2	6
NORMAL QUAD RECEPTACLE - RACK 1	1	900	900		20	1	12
NORMAL QUAD RECEPTACLE - RACK 3	1	900		900	20	1	12
NORMAL QUAD RECEPTACLE - RACK 5	1	900	900		20	1	12
LIGHTS	8	50		400	20	1	12
TVSS	1	N/A	—	—	60	2	4
OUTDOOR GFCI RECEPTACLE	1	180	180		20	1	12
UPS BYPASS (LOAD NOT INCLUDED IN TOTALS)					70	1	3
SPARE					20	1	
GENERATOR PANEL "GP"					60	2	6
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SUBTOTAL LEFT			1980	6450			

LOAD DESCRIPTION	QTY	UNIT (W)	LOAD PER PHASE(W) A	LOAD PER PHASE(W) B	TRIP	POLES	WIRE SIZE
HVAC UNIT 2 (36K BTU)	1	10300	5150	5150	40	2	6
NORMAL QUAD RECEPTACLE - RACK 2	1	900		900	20	1	12
NORMAL QUAD RECEPTACLE - RACK 4	1	900	900		20	1	12
NORMAL QUAD RECEPTACLE - RACK 6	1	900		900	20	1	12
EXIT LIGHT	1	35	35		20	1	12
DUPLEX RECEPTACLE	1	180		180	20	1	12
RECEPTACLE- POWER STRIP	1	900		900	20	1	12
SPARE					20	1	
UPS INPUT (10 KVA)	1	10000	5000	5000	70	2	2
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SPARE	1				20	1	
SUBTOTAL RIGHT			9850	8985			
SUBTOTAL			11830	15435			
TOTAL LOAD:			27,265	W			

VOLTAGE: 120/240V CYCLE: 60 Hz PHASE: 1 WIRES: 3
SOLID NEUTRAL: 225 AMPS
MAIN BREAKER: 225 AMP FRAME 225 AMP TRIP
MAIN LUGS: - AMPS MAIN COPPER BUS: 225 AMPS
MAINS: TOP [X] BOTTOM [ ]
S/N
GRD

MANUFACTURER:
TYPE AND CAT. NO. : ~~QB140M200~~
NO EQUAL: [X] APPROVED EQUAL: [ ]
MOUNTING: SURFACE: [X] FLUSH: [ ]

1. BOLT ON BRANCH BREAKERS
2. ALL COPPER CURRENT CARRYING PARTS
3. (ST) = SHUNT TRIP

PANEL CIRCUIT AND LOAD SCHEDULE

WIRE SIZE (2)
1P, 100A

SERVICE : 120/VAC, 1Ø
DESIGNATION : IDOT- SHELTER UPS POWER (UP)
LOCATION : I-55 SHELTER (RO1)

LOAD DESCRIPTION	QTY	UNIT (W)	LOAD PER PHASE(KVA) A	TRIP	POLES	WIRE SIZE
UPS QUAD RECEPTACLE - CAB 1	1	900	900	20	1	12
UPS QUAD RECEPTACLE - CAB 3	1	900	900	20	1	12
UPS QUAD RECEPTACLE - CAB 5	1	900	900	20	1	12
SECURITY PANEL	1	360	360	20	1	12
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SUBTOTAL LEFT			1800	1160		

LOAD DESCRIPTION	QTY	UNIT (W)	LOAD PER PHASE(W) A	TRIP	POLES	WIRE SIZE
UPS QUAD RECEPTACLE - CAB 2	1	900	900	20	1	12
UPS QUAD RECEPTACLE - CAB 4	1	900	900	20	1	12
UPS QUAD RECEPTACLE - CAB 6	1	900	900	20	1	12
FIRE ALARM CONTROL PANEL	1	360	360	20	1	12
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SPARE	1			20	1	
SUBTOTAL RIGHT			1800	1160		
SUBTOTAL			3600	2320		
TOTAL LOAD:			5,920	W		

VOLTAGE: 120/240V CYCLE: 60 Hz PHASE: 1 WIRES: 2
SOLID NEUTRAL: 100 AMPS
MAIN BREAKER: 100 AMP FRAME 100 AMP TRIP
MAIN LUGS: - AMPS MAIN COPPER BUS: 100 AMPS
MAINS: TOP [X] BOTTOM [ ]
S/N
GRD

MANUFACTURER:
TYPE AND CAT. NO. : ~~QB140M200~~
NO EQUAL: [X] APPROVED EQUAL: [ ]
MOUNTING: SURFACE: [X] FLUSH: [ ]

1. BOLT ON BRANCH BREAKERS
2. ALL COPPER CURRENT CARRYING PARTS

COMM-87

NOTES:
1. INSTALL NEW 225 AMP MAIN CIRCUIT BREAKER DISCONNECT SWITCH WITH NEUTRAL AND GROUND BUS IN NEMA 1 ENCLOSURE.
2. PACKAGED STANDBY GENERATOR AND TRANSFER SWITCH, INSTALLATION ONLY.
3. INSTALL NEW 225 AMP CIRCUIT BREAKER DISCONNECT SWITCH WITH NEUTRAL AND GROUND BUS IN NEMA TYPE 3R ENCLOSURE.
4. MOUNT NEMA 3R DISCONNECT SWITCH TO STRUCTURAL FRAME OF GENERATOR. NOTE: DESIGNATED WORK SHALL BE PAID FOR AS PART OF COMMUNICATION SHELTER.
5. ALL CONDUIT SHALL BE RIGID GALVANIZED STEEL UNLESS OTHERWISE NOTED.
6. ALL WIRE SHALL BE TYPE THWN UNLESS OTHERWISE NOTED.

REVISIONS NAME	DATE
REVISION 1	12/17/04
REVISION	2/11/05

ILLINOIS DEPARTMENT OF TRANSPORTATION
F.A.I. 94/90 (DAN RYAN EXPRESSWAY)
31st STREET to I-57

I-55 SHELTER (RO1)
POWER SINGLE LINE DIAGRAM

SCALE: NOT TO SCALE DRAWN BY: JM
DATE: October 29, 2004 CHECKED BY: CS

Edwards AND Kelcey
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CHICAGO, IL 60606
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