

FILE

10-2532-RR-FED

28

WHEELING & LAKE ERIE RAILWAY COMPANY

Dan Reinsel
Signal & Communication Supervisor

100 East First Street
Brewster, OH 44613

Tel. 330-767-7202

dreinsel@wlerwy.com

Fax: 330-767-3213

22 January 2011

Public Utilities Commission of Ohio
Attn: Docketing Division 13th Floor
180 East Broad Street
Columbus, OH 43215-3793

Re: Estimates for crossing warning systems at:
*Smith Road, DOT 002-071D
Jones Road, DOT 473-586P
SR103, DOT 001-964F

RECEIVED-DOCKETING DIV
2011 JAN 25 PM 12:35
PUCO

Dear Docketing,

Please file this letter and the accompanying materials in the dockets for the identified crossing projects. As required by the Finding and Order this letter is notice that the W&LE has submitted plans and estimates to the Commission for the above identified project.

Respectfully,

Dan Reinsel

Dan Reinsel

encl.

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Technician SMS Date Processed 1/25/11

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22 Jan. 2011

Ohio Rail Development Commission
Mr. Joe Reinhardt
1980 West Broad Street, Room 2B
Columbus, OH 43223

RECEIVED-DOCKETING DIV
2011 JAN 25 PM 12:36
PUCO

Re: Estimate for Railroad Crossing Warning System at Smith Road, DOT 002-071D

Dear Mr. Reinhardt,

I am providing this estimate for the crossing package and installation at Jones Road. Award of the material package will be the result of a competitive bid; copies of the submitted quotes will be forwarded to your office when they are completed. Installation will be preformed under our continuing construction agreement with CTC LLC.

CTC Managed Services, Material Package, & Installation	\$131,053.02
Fill Materials	\$1,000.00
Fill Material Transport	\$500.00
Two Gate Foundations (note 1)	\$1,377.00
Electric Service	\$500.00
Site Preparation (foundations, bores)	\$18,000.00
<u>WLE Direct Labor</u>	<u>\$3,000.00</u>
Estimated Total	\$155,430.02

Please contact me if additional details are required.

Respectfully,

Dan Reinsel

Dan Reinsel

Notes

1: Direct purchase from Fabricated Metals, 60' galvanized gate foundation, \$459 ea.

c: PUCO, Jill Henry
PUCO, George Martin

Wheeling & Lake Erie Railway Co.
Lafayette, Ohio - W Smith Rd (CR4) DOT# 002 071D
Project Estimate - CT10156

ENGINEERING					
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>		<i>Amount</i>
SIGNAL DESIGNER	40	HR	31.25		\$1,250.00
SIGNAL CHECKER, LEVEL 1	4	HR	36.06		\$144.24
SIGNAL CHECKER, LEVEL 2/FIELD ENGINEER		HR	36.06		\$0.00
SUBTOTAL					\$1,394.24
G&A BURDEN FOR LABOR					\$2,551.46
FIXED FEE					\$394.57
ENGINEERING TOTAL					\$4,340.27

PROJECT MANAGEMENT					
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>		<i>Amount</i>
SENIOR SIGNAL ENGINEER	12	HR	\$72.11		\$865.32
PROJECT MANAGER	24	HR	\$31.25		\$750.00
CONSTRUCTION MANAGER	24	HR	\$36.06		\$865.44
ACCOUNTING, LEVEL1	16	HR	\$39.81		\$636.96
ADMINISTRATIVE	4	HR	\$25.48		\$101.92
SUBTOTAL					\$3,219.64
G&A BURDEN FOR LABOR					\$5,891.94
FIXED FEE					\$911.16
PROJECT MANAGEMENT TOTAL					\$10,022.74

CONSTRUCTION LABOR					
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>		<i>Amount</i>
SIGNAL FOREMAN	60	HR	\$28.50		\$1,710.00
SIGNALMAN	60	HR	\$19.50		\$1,170.00
SIGNAL HELPER	60	HR	\$19.00		\$1,140.00
SUBTOTAL					\$4,020.00
G&A BURDEN FOR LABOR					\$7,356.60
FIXED FEE					\$1,137.66
CONSTRUCTION LABOR TOTAL					\$12,514.26

CONSTRUCTION LABOR EXPENSES					
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>		<i>Amount</i>
EMPLOYEE MEALS (PER DIEM)	19	EA	\$30.00		\$570.00
EMPLOYEE TRAVEL & LODGING	16	EA	\$60.00		\$960.00
SUBTOTAL					\$1,530.00
CONSTRUCTION LABOR EXPENSES TOTAL					\$1,530.00

Wheeling & Lake Erie Railway Co.
Lafayette, Ohio - W Smith Rd (CR4) DOT# 002 071D
Project Estimate - CT10156

CONSTRUCTION EQUIPMENT					
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>		<i>Amount</i>
TRUCK, PU, 1 TON CREW CAB	60	HR	\$11.78		\$706.80
TRUCK, BOOM, ART, TELESCOPING	20	HR	\$55.95		\$1,119.00
TRAILER, UTILITY, 4 TIRE, 12,000lbs SC410	60	HR	\$7.55		\$453.00
RENTAL EQUIPMENT (FORK LIFT/BACKHOE/SKYTRAK)	1	WK	\$690.00		\$690.00
EQUIPMENT DELIVERY/PICKUP	1	LS	\$150.00		\$150.00
SUBTOTAL					\$3,118.80
CONSTRUCTION EQUIPMENT TOTAL					\$3,118.80

MATERIAL					
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>		<i>Amount</i>
HOUSE MATERIAL (SEE ATTACHED DETAIL)	1	LS			\$53,345.38
FIELD MATERIAL(SEE ATTACHED DETAIL)	1	LS			\$34,341.57
HOUSE AND SIGNAL WIRING	1	LS			\$7,500.00
FILL DIRT	10	TN	\$7.50		\$75.00
CONCRETE		YD	\$500.00		\$0.00
COVER ROCK	10	TN	\$26.50		\$265.00
BORING 4"		FT	\$35.00		\$0.00
ELECTRICAL PERMITS		EA	\$3,500.00		\$0.00
METER POLE ASSY AND INSTALLATION		EA	\$2,500.00		\$0.00
FREIGHT & CONTAINER PRICE	1	LS			\$4,000.00
SUBTOTAL					\$99,526.95
MATERIAL TOTAL					\$99,526.95

TOTAL PROJECT ESTIMATE	\$131,953.02
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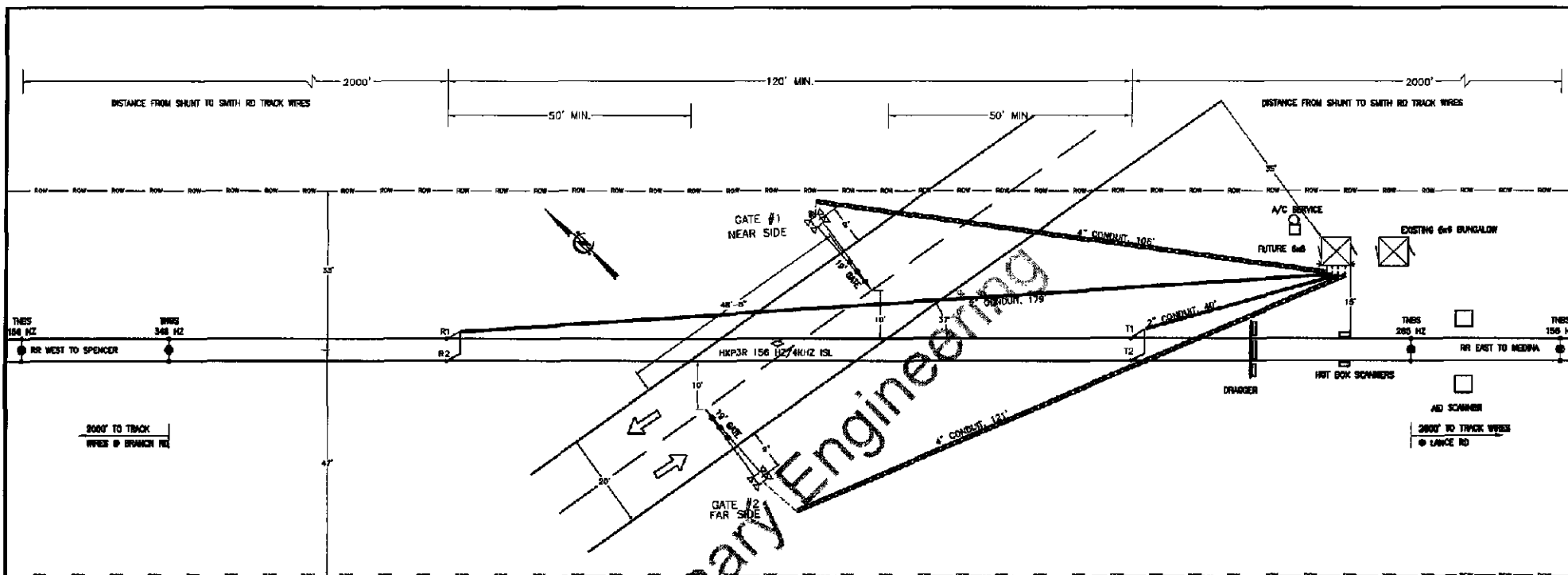
HOUSE MATERIALS

Description	QTY	UDM	MANUFACTURER PN	Unit Price	Total Price
HOUSE 6X6 AL WLE W/2-23" RKS	1	EA	PTMW	\$8,500.00	\$8,500.00
HOUSE 8X10 AL WLE W/4-23" RKS		EA	PTMW 91000277	\$13,600.00	\$0.00
HOUSE 6X10 AL WLE W/4 RKS		EA	PTMW 12587	\$15,500.00	\$0.00
ASSY HXP-3R W/IDK/(2)4KHZ/RSI/RMM	1	EA	250811-2B01	\$20,063.60	\$20,063.60
ASSY HXP-3R W/IDK/(2)4KHZ/RSI/RMM/(2) AXD		EA	250811-2021	\$21,800.00	\$0.00
ASSY HXP3R2 W/IDK/(4)4KHZ/RSI/RMM		EA	250729-4401	\$28,195.00	\$0.00
ASSY HXP3R2 W/IDK/(4)4KHZ/RSI/RMM/(2)AXD		EA	250729-4421	\$31,029.00	\$0.00
ASSY MDSA-2A		EA	250675-000	\$582.00	\$0.00
ASSY MDSA-1A	1	EA	250204-001C	\$301.43	\$301.43
ASSY TSA-1A W/TTA3 ARRESTORS		EA	250787-000	\$134.00	\$0.00
2TC DC CONVERTER		EA	800-003510-000	\$507.00	\$0.00
3TC DC CONVERTER		EA	800-003502-000	\$628.00	\$0.00
RECTIFIER ERBC 12/20 W/10' PROBE		EA		\$530.00	\$0.00
RECTIFIER ERBC 12/40 W/10' PROBE		EA		\$685.00	\$0.00
RECTIFIER ERBC 5/5 W/10' PROBE		EA		\$260.00	\$0.00
RECTIFIER NRS 12/20 GRAY		EA		\$452.00	\$0.00
RECTIFIER NRS 12/40 GRAY		EA		\$604.00	\$0.00
CHARGER 40A 12V CRAGG 40ETC12V	2	EA	017061-203	\$673.27	\$1,346.53
RECTIFIER POWER CORD 14/4 SJE BLK		FT		\$1.00	\$0.00
BATTERY GNB 250AH	19	EA		\$643.00	\$12,217.00
BATTERY GNB 425AH		EA		\$854.00	\$0.00
BATTERY EXIDE ELM 340AH		EA		\$224.00	\$0.00
BATTERY EXIDE ELM 500AH		EA		\$291.00	\$0.00
BATTERY NICAD 250 AH SPL-250		EA		\$290.00	\$0.00
TRAY BATTERY 12 X 27" POLYETHYLE	4	EA	7438-01	\$32.96	\$131.82
THERMOSTAT SPDT REMOTE BULB 8A	1	EA	009186-004	\$73.94	\$73.94
XFMR 115-230VPR1/16VCT 5A 80VA		EA	016206-105	\$19.09	\$0.00
RLY DPDT 12VDC 5A OCT	4	EA	007192-032	\$13.22	\$52.89
SCKT RLY 8-PIN OCT SCREW PNLMT	4	EA	132246-001	\$4.48	\$17.91
ASSY AGA-1 ARRESTOR		EA	202216-001	\$20.76	\$0.00
ASSY AGE-1 EQUALIZER		EA	202217-000	\$21.75	\$0.00
OUT OF SERVICE LIGHT KIT		EA		\$116.40	\$0.00
POWER OFF LIGHT KIT	1	EA		\$116.40	\$116.40
NUT INSULATED HARMON	20	EA	013986-000	\$2.97	\$59.40
SSCCIII DUAL 40A 19" BASE	1	EA	201772-200	\$3,577.46	\$3,577.46
PANEL LTG SURGE SSCC 91170-01	1	EA	201756-015	\$608.75	\$608.75
PANEL LTG SURGE SSCC 91170-02		EA		\$608.75	\$0.00
MICRO DATA ANALYZER II WLE PK	1	EA	072113-100	\$3,450.00	\$3,450.00
MDA CURRENT SENSOR	2	EA		\$220.00	\$440.00
BATTERY GROUND DETECTOR	1	EA	NAS	\$1,250.00	\$1,250.00
RELAY 500 OHM 6FB NEUTRAL		EA	ST1 400000	\$750.00	\$0.00
RELAY 4 OHM 6FB NEUTRAL		EA	ST1 400010	\$870.00	\$0.00
RELAY 194 OHM SLOW RELEASE		EA	ST1 400210	\$820.00	\$0.00
RELAY PLUGBOARD B1 W/10-14 CRIMP TERMINALS		EA		\$203.00	\$0.00
TEST LINK W/PLT & INSUL		EA	032257-002	\$1.98	\$0.00

TEST LINK 2.375" CNTR FL INSUL		EA	032258-003	\$40.52	\$0.00
LABEL RK PNL-MAINTAINER TST SW		EA	125372-000	\$4.74	\$0.00
WIRE 16AWG/19 TC EPR/PVC BLU	300	FT	012092-002	\$0.22	\$66.00
WIRE 10AWG/19 TC EPR/PVC BLU	350	FT	012092-000	\$0.62	\$215.60
WIRE 6AWG/19THHN BLK	50	FT	012253-000	\$0.79	\$39.60
WIRE 6AWG/19 THHN RED	50	FT	012253-003	\$0.84	\$41.80
WIRE 6AWG/19 THHN GRN	30	FT	012253-002	\$0.75	\$22.44
BOARD 3/4"X60"X24		EA	N/A	\$112.95	\$0.00
CABLE RAW 3/14AWG PWR 300V	30	FT	012690-010	\$0.77	\$23.10
RES ADJ WW 15W 5.69 OHM PNLMNT	1	EA	002238-101	\$26.09	\$26.09
CONN PLUG L6-15 250V 15A 2P3W	2	EA	132286-001	\$11.53	\$23.06
ASSY 2WAY TERM BLK W/AAR HARD	2	EA	202810-000	\$15.82	\$31.64
ASSEMBLY, 4 POST TERMINALBLOCK	4	EA	203032-000	\$43.48	\$173.93
ASSY TERM STRIP DBL POST 12	2	EA	250094-300	\$19.77	\$39.53
GROUND POST P5-162	4	EA	113047-000	\$25.94	\$103.75
WRENCH AAR TERMINAL	1	EA	095058-001	\$15.28	\$15.28
KIT APRVD SM PARTS/SL XING		EA	180394-590	\$1,058.90	\$0.00
LABEL, DANGER 240 V, 1.75 X 2.	1	EA	SQS108	\$3.86	\$3.86
NOTIFICATION SIGN HSE	1	EA	HSE SIGN	\$312.55	\$312.55

FIELD MATERIALS					
Description	QTY	UOM	MANUFACTURER PN	Unit Price	Total Price
MAST & BASE WCH 715-2149-324		EA	511044-WCH	\$860.37	\$0.00
GATE MECH S-40 W/CTWT KIT 32'		EA	076044-012	\$5,884.62	\$0.00
KIT TORQUE WRENCH S/T 070981X	1	EA	2587-01	\$256.38	\$256.38
HEATER FOR GATE MECH **USE-30STN 070898		EA	4137-01	\$55.44	\$0.00
BRACKET HI WIND NEG WIG191036 NEG WIG191		EA	10018-01	\$61.37	\$0.00
GATE KEEPER SK1000-2W DUAL DIR		EA	076007-005	\$1,250.21	\$0.00
SO CORD 10/3	60	FT		\$0.90	\$54.00
GATE ARM 16-32' UHI LED LGHTS	2	EA	076045-014	\$613.73	\$1,227.47
BRKT EXT F/SIDELT 4"-5" MASTS		EA	005961-005	\$289.36	\$0.00
SLEEVE 4 ALUMINUM REC #82958	2	EA	14187-01	\$44.33	\$88.66
2-WAY CROSSARM, LESS LED'S (06)		EA	076048-116	\$1,064.72	\$0.00
LIGHT MTG. HDW. 5"		EA	076048-103	\$25.48	\$0.00
LED INSERT DIALIGHT FLX4000		EA	076048-109	\$247.76	\$0.00
U-BOLT 3/4-10 5" SS W/HDW		EA	113022-017	\$19.06	\$0.00
PINNACLE 5" MACHINED W/SETSCRW		EA	54-11305	\$5.40	\$0.00
DECAL, DOT STRIP	2	EA		\$16.00	\$32.00
SIGN XING WCH 3380-990		EA	125535-WCH	\$214.81	\$0.00
BELL ELECTRONIC CROSSING 4/5"		EA	8147-01	\$210.03	\$0.00
ASSY WLE STANDARD FLASHER/GATE W/O ARM, GATE ARM LIGHTS, GATE KEEPER	2	ASSY	CTC	\$12,000.00	\$24,000.00
ASSY WLE STANDARD FLASHER ONLY		ASSY	CTC	\$3,000.00	\$0.00
TAPE MARKER BURIED RR CABLE	1	EA	029989-000	\$21.43	\$21.43
CABLE UG 3 COND #6 AWG SOLID		FT	1013-02	\$4.06	\$0.00
CABLE UG 7 COND #6 AWG SOLID	300	FT	1077-02	\$6.29	\$1,887.80
CABLE UG 12 COND #14 AWG SOLID	300	FT		\$6.50	\$1,950.00
CABLE UG 7 COND #14 AWG SOLID		FT	1023-02	\$2.22	\$0.00
WIRE UG TRK #6 AWG DUPLEX	250	FT	1084-02	\$1.46	\$365.75
PVC CONDUIT 4 IN. SCH 80		FT		\$5.50	\$0.00
PVC CONDUIT 2 IN. SCH 80		FT		\$2.00	\$0.00
PVC CEMENT, 1QT W/BRUSH TOP	1	EA		\$7.15	\$7.15
GRINDING WHEEL 6IN X 1IN	4	EA		\$30.00	\$120.00
BOOTLEG KIT/1 PR TRACKWIRE WLE STANDARD	2	EA	D&W SB7100080	\$42.10	\$84.20
BOND JOINT 5/16" X 7" TAB ERICO #SB-	200	EA	2161-01	\$5.41	\$1,082.40
WIRE #6 SOFT BARE COPPER	30	FT	1436-01	\$0.40	\$11.88
CARTRIDGE SB25 POWDER W/ATTACHMETAL FOR	200	EA	1026-39	\$1.55	\$310.20
ROD 5/8 X 8 NS GRD***USE-02***	6	EA	1357-01	\$14.72	\$88.31
CONNECTION SBNT1-161G ONE-SHOTFOR 5/8 IN	6	EA	1029-01	\$6.17	\$37.03
CADWELD TYPE GR 5/8GRDX#6WIRE	6	EA	005755-002	\$7.10	\$42.67
CLAMP ASSY GRND/MAST 3 1/2-8" SBB852A8C1		EA	4098-01	\$77.64	\$0.00
BOND STRAND 8-STR 3/16" TINNEDSBS&TINSUL	100	FT	4133-01	\$1.21	\$121.00
BOOTLEG BOND W/COUPLER KIT 1EA SBTBBU4A		EA	3622-01	\$4.18	\$0.00
ASSY FSS-1A 86HZ-267HZ	2	EA	250849-000	\$867.00	\$1,734.00
ASSY FSS-1B 267HZ-560HZ		EA	250849-001	\$460.00	\$0.00
ASSY FSS-1/2C 630HZ-979HZ		EA	250849-002	\$413.00	\$0.00
DUMMY LOAD 250'		EA	227032-000	\$86.00	\$0.00
DUMMY LOAD 500'		EA	227032-001	\$86.00	\$0.00

DUMMY LOAD 750'		EA	227032-002	\$86.00	\$0.00
DUMMY LOAD 1000'		EA	227032-003	\$86.00	\$0.00
DUMMY LOAD 1250'		EA	227032-004	\$112.00	\$0.00
DUMMY LOAD 1500'		EA	227032-005	\$112.00	\$0.00
KIT BOOTLEG 2 WIRE		EA		\$103.00	\$0.00
KIT BOOTLEG CROSSING PACKAGE		EA		\$215.00	\$0.00
PLATE SHUNT 24"X26"X1/4" GALV.	2	EA	6193-01	\$67.06	\$134.11
SCREW LAG 3/4" X 6" BLACK GRIMLET PO	8	EA	2000-01	\$0.81	\$6.51
TAPE ELECTRICAL 3M #33+ 3/4" PLASTIC	2	RL	1190-01	\$3.62	\$7.24
TAPE ELECTRICAL 3M #130-C LINERLESS		RL	1321-01	\$8.24	\$0.00
COMPOUND INSULATING ELECTRICALSKOTCHKOT		EA	4123-01	\$24.19	\$0.00
DUCTSEAL 1LB BLOCK	10	EA		\$3.30	\$33.00
FOAM INSULATING SPRAY	4	EA		\$12.25	\$49.00
HOSE RUBBER 3/4"		EA	005360-015	\$1.97	\$0.00
STAPLE GROUND WIRE 1-1/16"X3"	50	EA	113005-000	\$0.32	\$15.95
TIE CABLE .184 X 7.31" HIG TEMSELF LOCKI	100	EA	4125-01	\$0.04	\$4.40
CABLE TIE 14-1/2L NAT		EA	005019-022	\$0.19	\$0.00
LUG RING 1/4" 12-10AWG INS BLK	100	EA	032114-008	\$0.01	\$1.10
TAG ST-5 SNAPOUT 11 TAGS/CARD M# 010301	50	EA	2090-01	\$2.28	\$113.85
WIRE DIESEL 10AWG 2000 VOLTS		FT	2125-01	\$0.54	\$0.00
STAPLE COPPERWELD 3/8 X 1-3/4 144 IN. RO	50	EA	1148-01	\$0.26	\$13.20
GREASE RUST PREVENTIVE NO OXID*A SPECIAL	1	EA	1906-01	\$9.83	\$9.83
SLEEVE NICO 3/16"-#6 AWG REDUC#2363-J	20	EA	1145-01	\$0.89	\$17.82
CLIP TRACK WIRE RETAINER - ERICO #SBA	8	EA	1118-01	\$1.97	\$15.75
COMPOUND DUCT SEAL 5 LB PLUG PERMAGUM #		PK	1179-01	\$10.68	\$0.00
LOCK BOLT, SAFETRAN		EA		\$22.10	\$0.00
LOCK MASTER	4	EA	MLCK	\$28.41	\$113.65
NUT INSULATED HARMON		EA	013986-000	\$2.97	\$0.00
EMERGENCY SIGN SIGNAL	1	EA	SIG SIGN	\$113.65	\$113.65
FIELD TAG KIT	1	EA	FLDTGKT	\$170.48	\$170.48



APPROACH AND WARNING TIME CALCULATION	1 HXP	TRACK 1
MINIMUM TIME	20 SEC	
PLUS CLEARANCE TIME	2 SEC	
MINIMUM WARNING TIME (MWT)	22 SEC	
PLUS BUFFER TIME	5 SEC	
TOTAL WARNING TIME (TWT)	27 SEC	
PLUS EQUIPMENT RESPONSE TIME	5 SEC	
PLUS ADVANCE PREEMPT TIME	NA SEC	
TOTAL APPROACH TIME (TAT)	32 SEC	
MAXIMUM TRAIN SPEED	40 MPH	
TIMES RATION OF FT/SEC TO MPH	1.4667	
TOTAL (MINIMUM) APPROACH DISTANCE	1877 FT	

APPROACH LENGTH INSTALLED TO 2,000 FT.
THIS MEETS/EXCEEDS REQUIRED MINIMUM.
PREDICTOR SET FOR 27 SECOND WARNING TIME.

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2781 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

W&LE

Wheeling & Lake Erie Railway

LOCATION: W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO

DESIGN DATE: 12/1/2010	TRK: SITE LAYOUT	CHG NO.: CT10155
DESIGNED BY: CFC	CHKD BY: AKRON	SCALE: N.T.S.
DRAWN BY: CFC	APP'D BY: AT34.87	SHEET: 01 OF 18
CHECKED BY: CFC	REVISED BY: 002-071-0	

REVISION
BLOCK

Preliminary Engineering

CONSTRUCTION NOTES

- 1.) EXISTING CASE AND FLASHERS TO BE REMOVED
- 2.) LAT: 41° 8' 9.14" N ; LOG: 81° 57' 21.24" W
- 3.) TO THE WEST, SITE WILL OVERLAP WITH BRANCH RD CROSSING 348 HZ (EXISTING)
- 4.) TO THE EAST, SITE WILL OVERLAP WITH LANCE RD CROSSING 285 HZ (EXISTING)
- 5.) EXISTING POWER SERVICE IS NEW

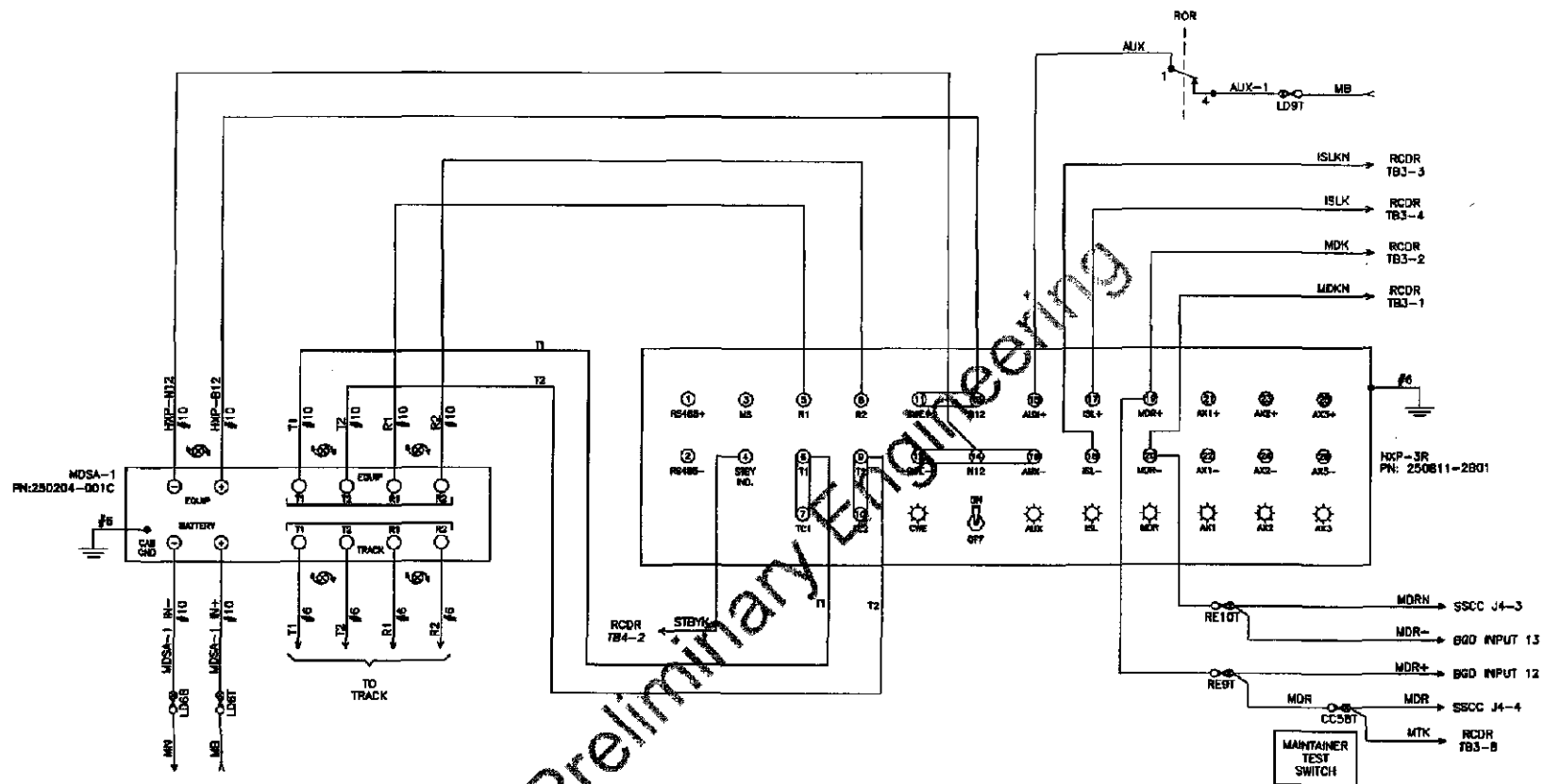
REVISION
BLOCK

W&LE

**Whoddy & Lake Erie
Railway**

LOCATION
W. SMITH RD. (COUNTY RD 4)
LAFAYETTE, OHIO

OWNER DATE	DATE	FILE	SITE LAYOUT NOTES
DESIGNED	12/1/2010	CTC	AKRON
DESIGNED	CTC	AKRON	CT10158
DESIGNED	CTC	AKRON	SCALE N.T.S.
DESIGNED	CTC	AKRON	002-871-0
DESIGNED	CTC	AKRON	01A of 18



NOTE: ALL WIRING THIS SHEET #14 AND
UNLESS NOTED OTHERWISE.

W&LE		W. Smith & Sons Engineering	
		W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
DATE: 12/1/2010 DRAWN: CTO CHECKED: CTO	BY: ACRON DATE: 11/30/10 DWG NO: 002-071-B	PROJECT: CROSSING CONTROL CIRCUITS SHEET: CH10186 SCALE: N.T.S. SHEET: 02 of 18	

PROGRAM INFORMATION

* = FIELD ADJUSTMENT TO BE MADE ACCORDING
TO THE HXP-3 INSTRUCTION MANUAL.

HXP-3R ADJUSTMENTS

NO.	ADJUSTMENT NAME	TRACK 1	TRACK 2
1	APP. LENGTH	2000'	
2	WARNING TIME	27 SEC	
3	LIA	*	
4	TC	*	
5	MD RESTART	0	

OPTION ADJUSTMENTS

NO.	ABBREVIATION	TRACK 1	TRACK 2
1	TK-ENA	UP	
2	TK-FO	156 HZ	
3	CW/MD	C	
4	UNI-BI	b (B)	
5	NBS-C	*	
6	CW-WT	DL (80 SEC.)	
7	LOS	DL (18 SEC.)	
8	LI-LOS	DL (5 SEC.)	
9	BC	133 *	
10	P-COMP	*	
11	AX1	N/A	
12	AX2	N/A	
13	AX3	N/A	
17	MDR-AX	"dn"	
	OF-TK 1 OR 2	DL (0)	
	CJ-LOS	DL (0)	
	FJ-DET	DL (15)	
	PJ-RX	DL (15)	
18	MD-TMR	DL (10)	
19	MIN-WT	DL (0)	
20	FS-DET	"dn"	
	FS-RX	DL (0)	
	FS-TM	DL (10)	
21	POS-ST	"dn"	
	POS-RX	DL (0)	
	POS-TM	DL (0)	
22	AR-TMR	"dn"	
	AR-RX	DL (0)	
	AR-TM	DL (10)	
47	ATO-RX	UP	
48	PF-ENA	"dn"	

AX ADJUSTMENTS

NO.	ABBREVIATION	AX 1	AX 2	AX 3
1	TK-ASN			
2	OF-TK1			
3	OF-TK2			
4	WT			
5	MD-RST			
6	CW/MD			
7	CJ-LOS			
8	PJ-DET			
9	PJ-RX			
10	POS-ST			

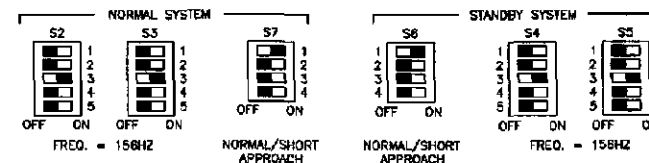
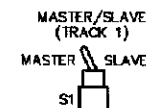
SWITCH INFORMATION

SWITCH	TRACK 1	TRACK 2
MASTER/SLAVE	MASTER	
RSI FAULT JUMPER	0	
RSI-LOS JUMPER	1	
TLM W1 JUMPER	PINS 1-2	
TLM W2 JUMPER	PINS 1-2	
TLM W3 JUMPER	PINS 2-3	
MINUTE TIMEOUT	5 MIN	
CW/MD	CW	
STANDBY/AUTO/NORMAL	AUTO	

NOTE: DL= DEFAULT LEVEL
NA= NON APPLICABLE

SHUNT RECORDS

APPROACH 1	NO SHUNT	100% SHUNT	50% SHUNT	LIA ADDED
	RX	PHASE	RX	PHASE
Track 1	Normal			
	Standby			
Track 2	Normal			
	Standby			
APPROACH 2				
Track 1	Normal			
	Standby			
Track 2	Normal			
	Standby			

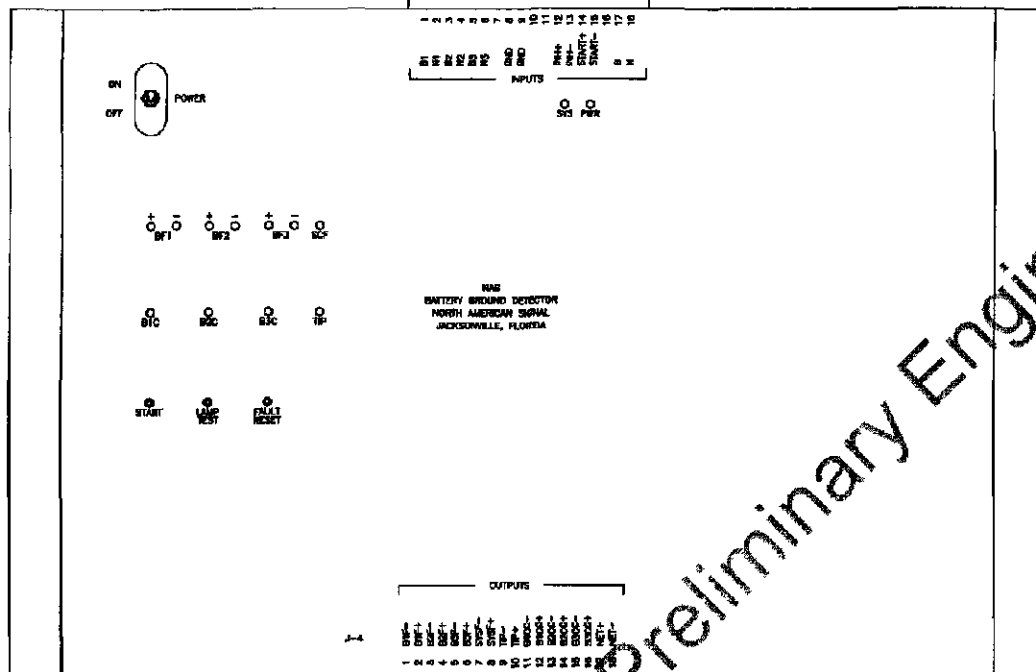


NOTES FOR S6 AND S7:

- 1) ACTUATOR 1 SELECTS NORMAL APPROACH WHEN SET TO ON POSITION.
- 2) WITH ACTUATOR 1 IN OFF POSITION ACTUATOR 2 SELECTS SHORT APPROACH WHEN OFF AND SELECTS VERY SHORT WHEN ON.
- 3) ACTUATOR 3 AND 4 RESERVED FOR FUTURE USE.

		Whooling & Lato Eto Highway	
		LOCATION: W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
DRAWN DATE: 12/1/2010 CHECKED: CTC DESIGNED: CTC	TITLE: HXP PROGRAM INFORMATION RUN: AKRON REVISION: A134.87 DATE: 002-071-D	CDR: CTC DATE: 002-071-D SCALE: 0.5 or 1.8	CDR: CTC DATE: 002-071-D SCALE: 0.5 or 1.8

BCD



NAS CONTROLLER SOFTWARE CONFIGURATION MANAGEMENT TABLE			
APPLICATION	FILE NAME	DATE	DESCRIPTION
GPD EXEC	XXX	XX/XX/XXXX	GPD MODULE EXECUTIVE

NOTE: ALL WIRING THIS SHEET #14 AWG
UNLESS NOTED OTHERWISE.

SW1 CURRENT 1/10 MA

POSITION	1	2	3	4	5	6	7	8
CLOSED								
OPEN								

(2 MA)

SWITCH VALUES CLOSED
POSITION (BINARY)

SW1 = 1
SW2 = 2
SW3 = 4
SW4 = 8
SW5 = 16
SW6 = 32
SW7 = 64
SW8 = 128

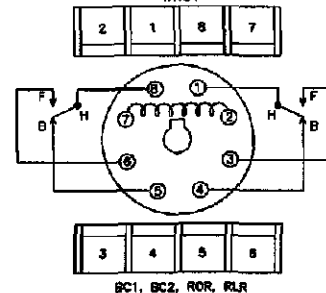
SW1 CURRENT 1/10 MA

POSITION	1	2	3	4	5	6	7	8
CLOSED								
OPEN								

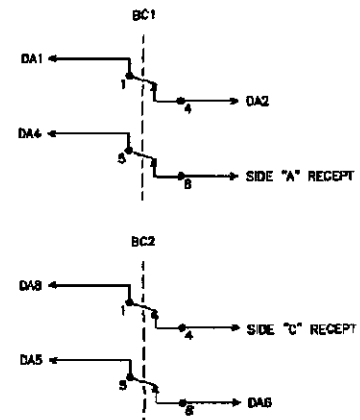
(12 HOURS)

SWITCH VALUES CLOSED
POSITION (BINARY)

SW1 = 1
SW2 = 2
SW3 = 4
SW4 = 8
SW5 = 16
SW6 = 32
SW7 = 64
SW8 OPEN=HOUR CLOSED=DAYS

DAYS
HOURSDAYTON
12VDC
1A484

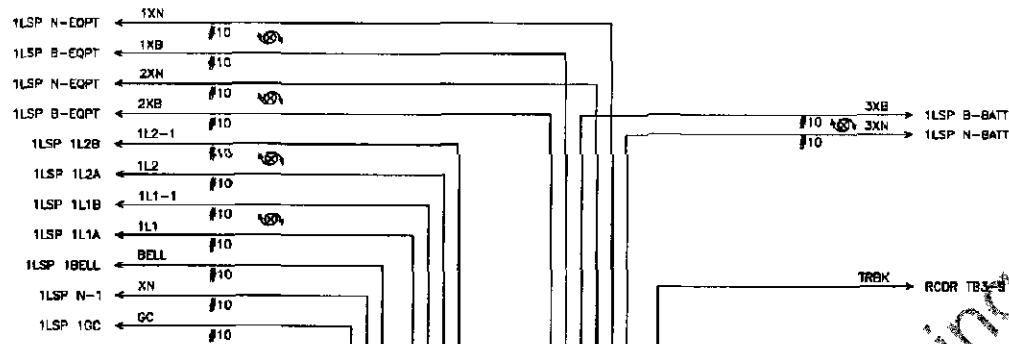
BC1, BC2, ROR, RLR



W&LE

W. SMITH RD. (COUNTY RD 4)
LAFAYETTE, OHIO

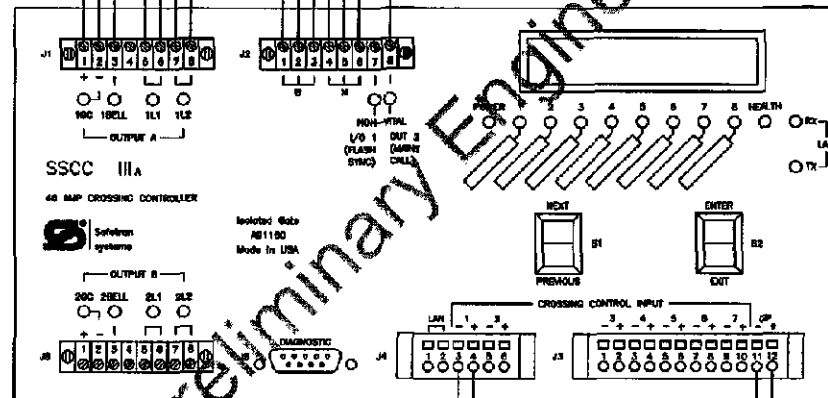
W&LE			
REVISION	12/1/2010	FILE	BCD
REVISION	CIC	NO	AKRON
REVISION	CIC	NO	A154.B7
REVISION	CIC	NO	002-071-0
REVISION	CIC	NO	05 = 18



MCF-Basic MCF Revision F CRC-1D240612

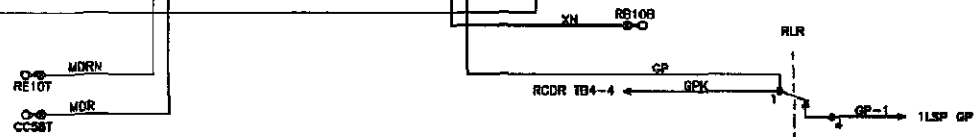
PROGRAM	
FLASHER RATE:	50 PPM
GATE DELAY 1 TIMER:	4 SEC.
GATE DELAY 2 TIMER:	4 SEC.
BELL-ON GATE RISING	ON
MIN ACTIVATION TIME:	0 SEC.
ENABLE INPUTS:	1 THRU 1
PRG ENABLED OUTPUTS: A&B	A
TIME	
DATE	
DAYLIGHT SAVINGS	DISABLED
PASSWORD	DISABLED
SET TO DEFAULT	N/A

CONFIGURE	
INPUT XLOS	10
ATCS ADDRESS	700000000000
LOW BATTERY	DISABLED
AUX I/O	INV OUTPUT
DETECT LAMP NEUTRAL WIRE	NO



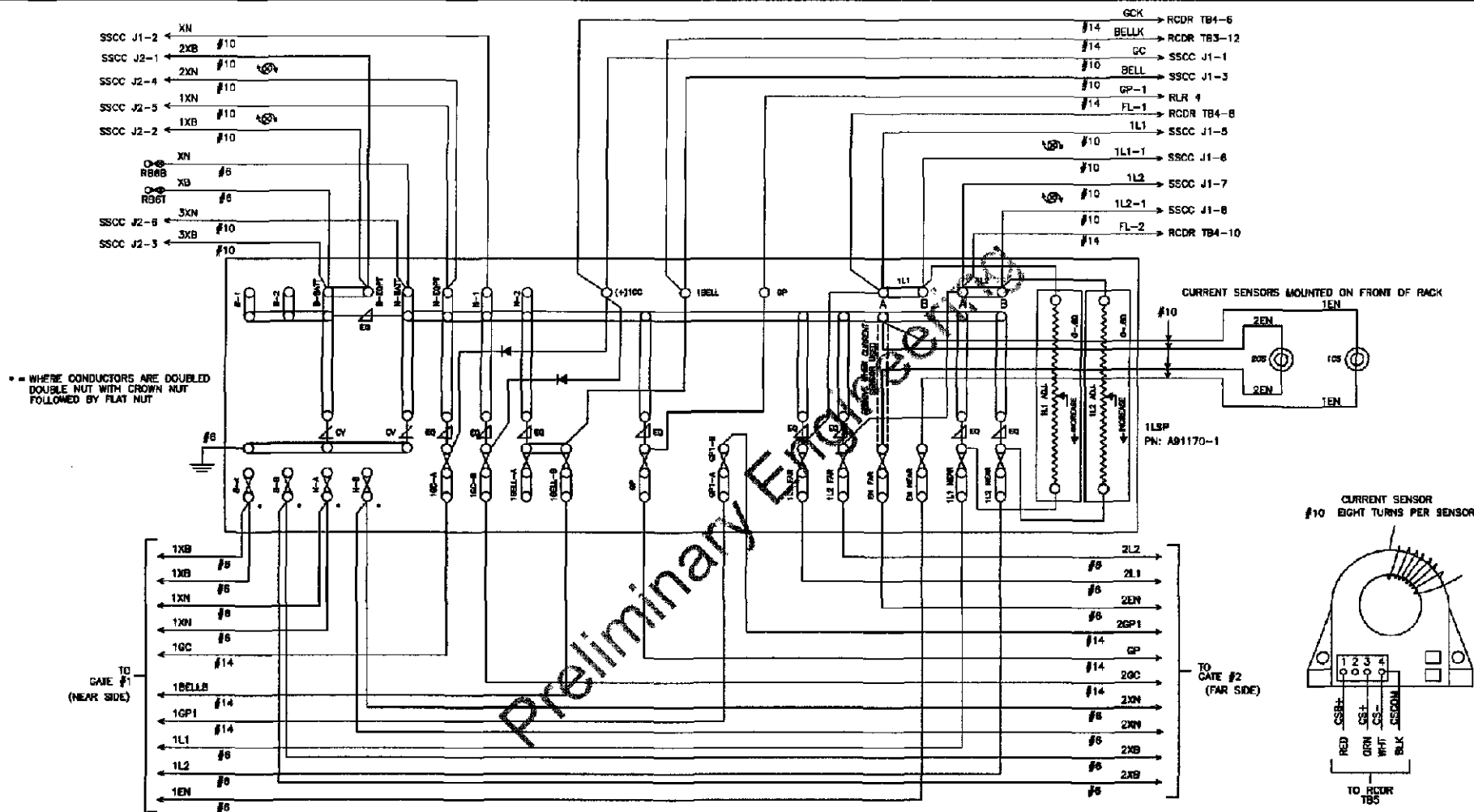
INCORRECT POLARITY WILL RESULT IN SEVERE DAMAGE TO THE CONTROLLER UNIT.

WARNING
IF B OR N ARE FULLY OR PARTIALLY REMOVED, SIGNALS AND/OR GATES MAY NOT OPERATE AS INTENDED. TAKE ALTERNATE MEANS TO WARN VEHICULAR TRAFFIC AND EMPLOYEES.



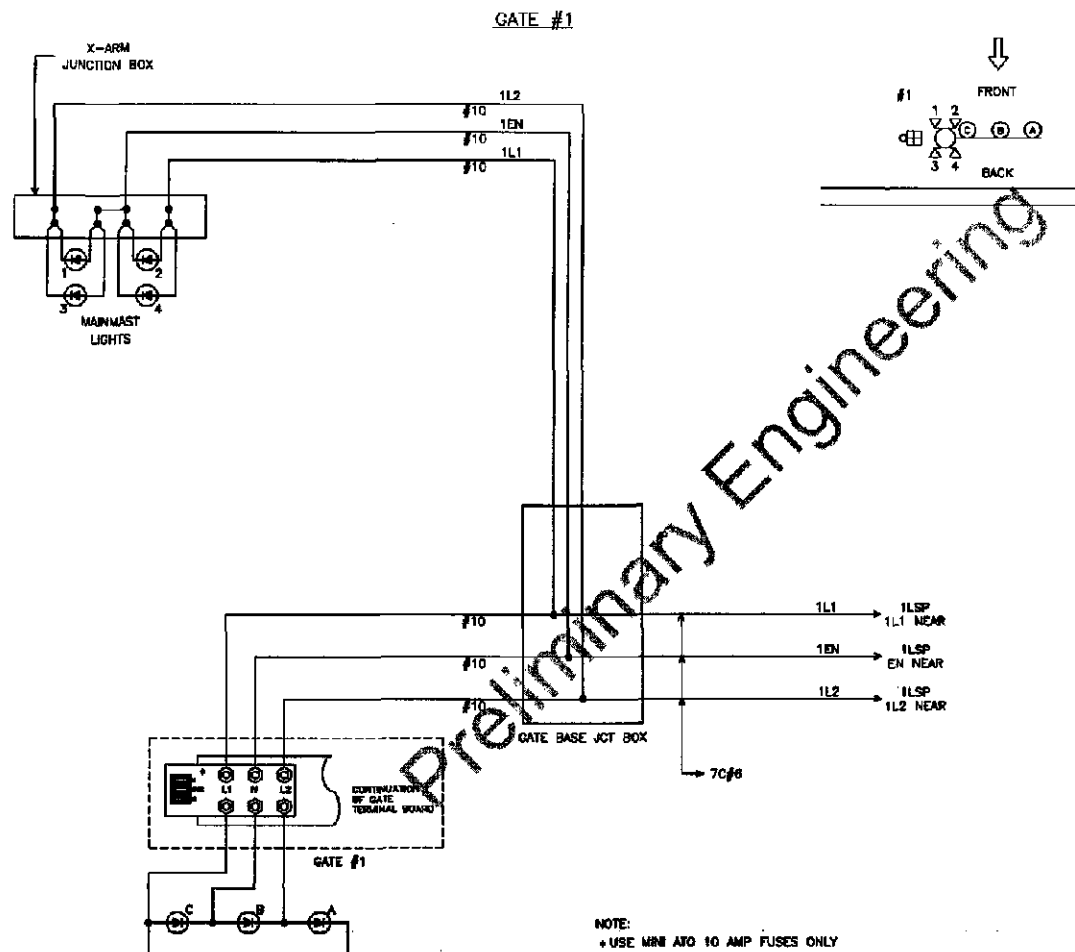
NOTE: ALL WIRING THIS SHEET #14 AWG UNLESS NOTED OTHERWISE.

W&LE Wiring & Lamp Etc Railway		LOCATION W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
		DATE 12/1/2010	FILE SSCC IIIa
DESIGNED BY CTC	DATE 12/1/2010	REV 001	REV 001
INSTALLED BY CTC	DATE 12/1/2010	REV 002	REV 002
TESTED BY CTC	DATE 12/1/2010	REV 003	REV 003



NOTE: ALL WIRING THIS SHEET #14 AWG
UNLESS NOTED OTHERWISE.

W&LE WOODWARD & LOUISIANA ELECTRIC		LOCATION W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
		ORIGINAL DATE 12/1/2010 FILE 1LSP DRAWN CFC APPROVED ARRON DESIGNED CFC PART NO. A134.87 CHECKED CFC PART NO. 002-071-0 REV. NO. 07 of 18	



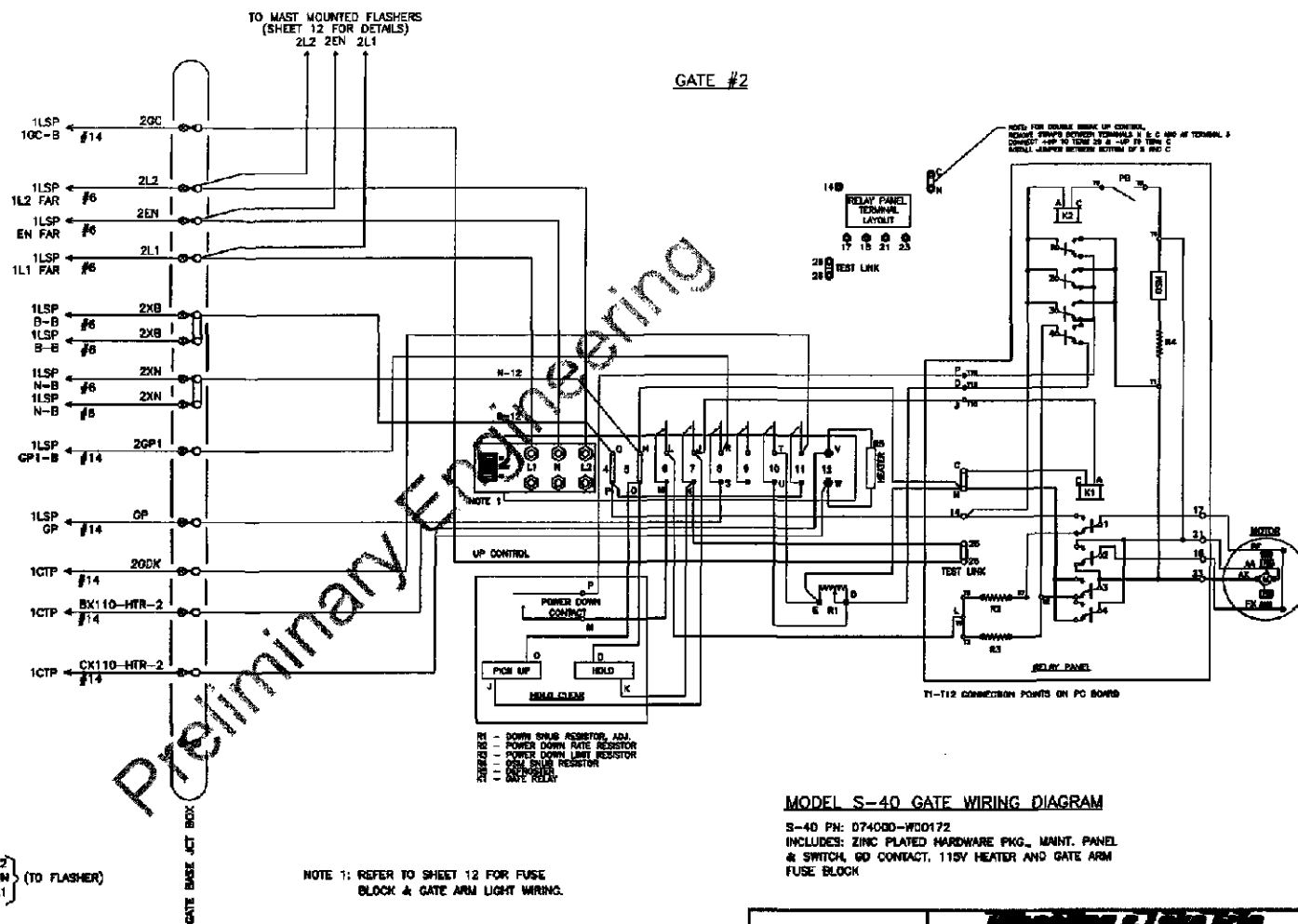
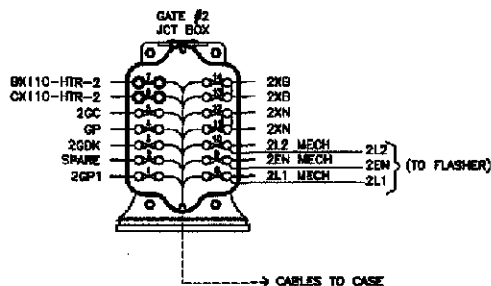
NOTE:
+USE MINI ATO 10 AMP FUSES ONLY

W&LE		
Welding & Lamp Etc. Company		
LOCATION: W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO		
DATE: 12/1/2019	FILE: GATE #1 LIGHTS (NEAR SIDE)	
DESIGNER: W&LE	APPROVED: AKRON	DATE: CT10155
ENGINEER: W&LE	DATE: A134.97	SCALE: N.T.S.
REVISION: 002-071-0	SHEET: 10 OF 16	

SAFETRAN MODEL S-40
GATE MECHANISM

CONTACT	CLOSED	FUNCTION
6	45°-90°	POWER DOWN
7	0°-90°	POWER UP
8	83°-90°	FLASHING LIGHT
9	5°-90°	BELL (NOT USED)
10	0°-5°	HORIZONTAL SNUB
11	0°-5°	GATE DOWN INDICATION

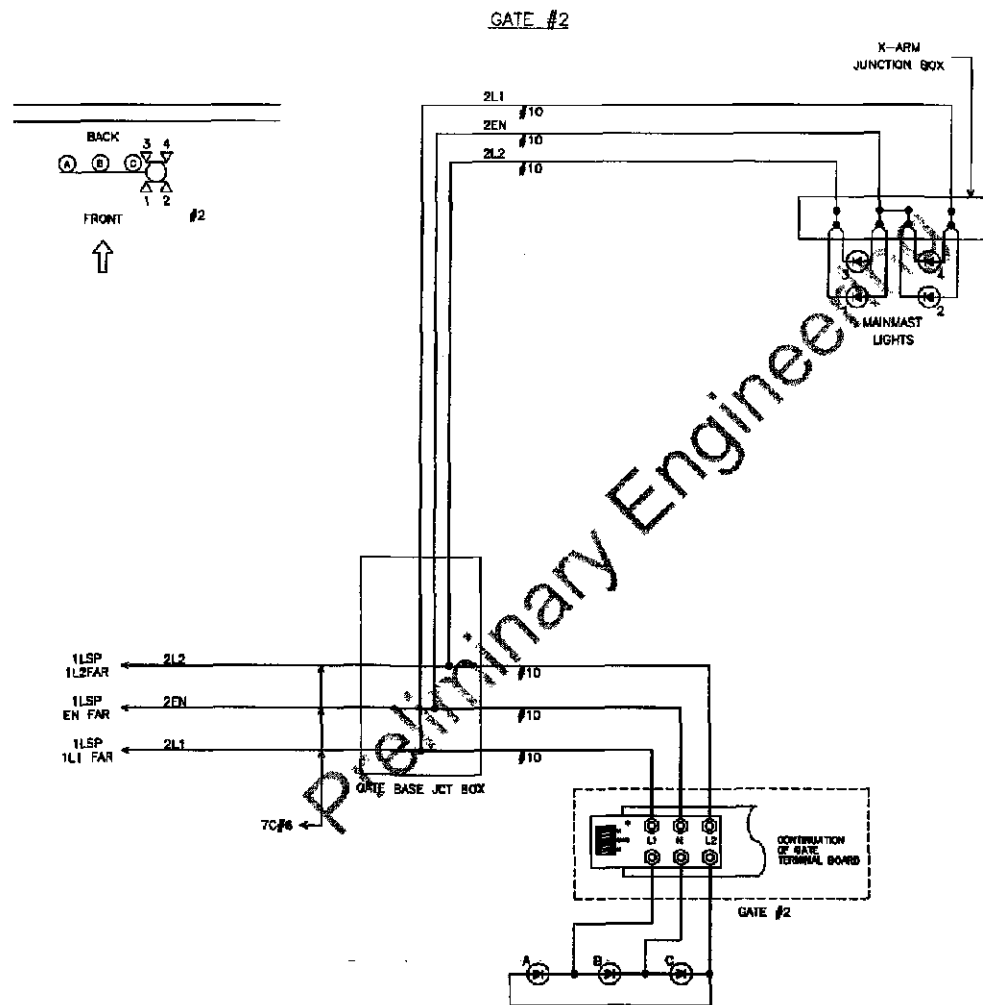
WITH GATE IN UP POSITION



MODEL S-40 GATE WIRING DIAGRAM

S-40 PN: 074000-WDD172
INCLUDES: ZINC PLATED HARDWARE PKG., MAINT. PANEL
& SWITCH, 60 CONDUCT, 115V HEATER AND GATE ARM
FUSE BLOCK

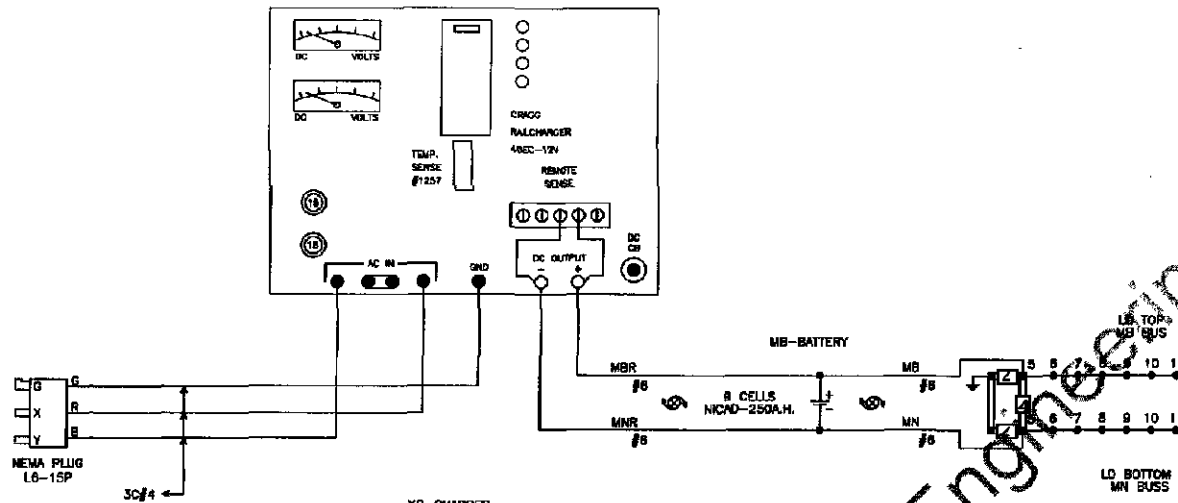
W & L E			
Wiring & Light Etc. Division			
LOCATED	W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO		
DATE	12/1/2010	TITLE	GATE #2 MECHANISM (FAR SIDE)
DESIGNED	CTC	BY	AKRON
TESTED	CTC	REV	A134-97
CHANGED	CTC	REV NO	002-071-D
		WORK	CT10156
		SHEET	11 OF 18



NOTE:
• USE MINI 10 AMP FUSES ONLY

Whitling & Lathin Inc. Electric			
LOCATION W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO			
DATE 12/1/2010 DESIGNER CRC DRAWN CRC CHECKED CRC	FILE GATE #2 LIGHTS (FAR SIDE) REV AKR01 APP AT34.97 REV NO. 002-071-0	REV 1 REV NO. CT10158 REV N.T.S. REV 12 OF 18	

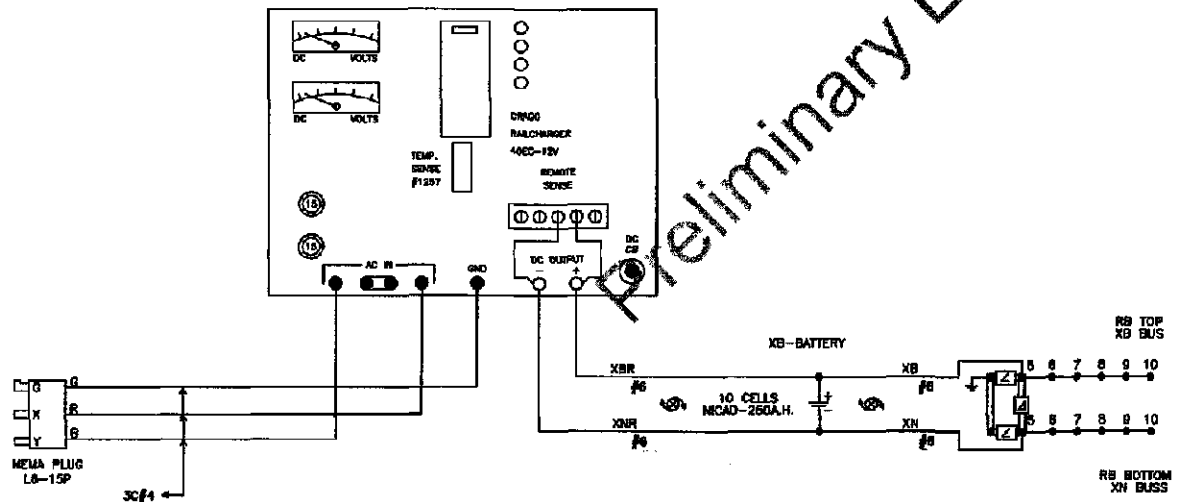
MB-CHARGER



BATTERY BUSS DETAILS

SPARE	12	RCDR TB4-1
BGD INPUT 1	11	BGD INPUT 2
ROR 4	10	ROR 7
RCDR TB6-1	9	RCDR TB6-2
RCDR TB1-4	8	RCDR TB1-3
MOSA-1 BATT+	7	MOSA-1 BATT-
MB BATT+	6	MN BATT-
	5	
MB BUSS (TOP)	LD	MN BUSS (BOTTOM)

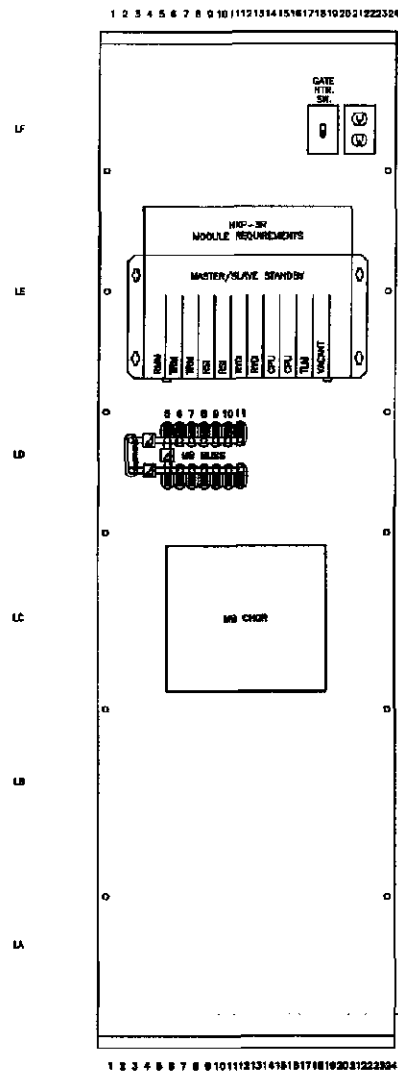
XB-CHARGER



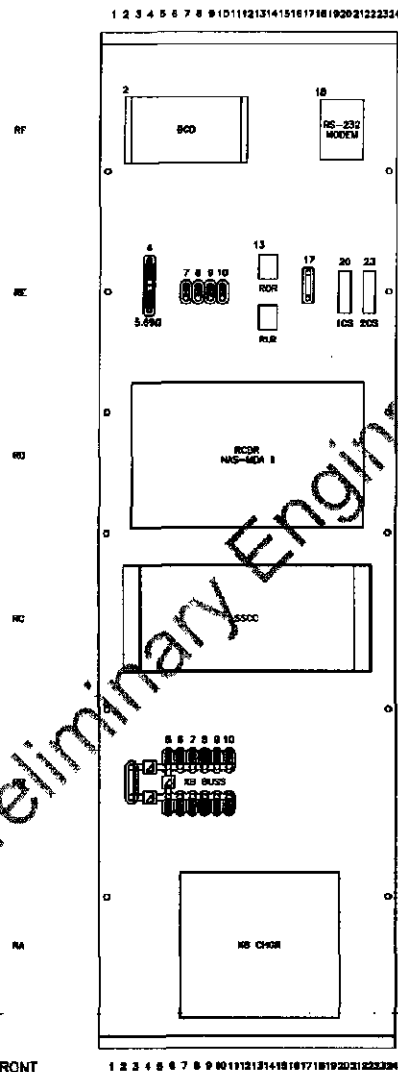
BATTERY BUSS DETAILS

DOOR SWITCH	10	SSOC J3-11
BGD INPUT 3	9	BGD INPUT 4
RCDR TB1-2	8	RCDR TB1-1
SPARE	7	RCDR TB4-15
1LSP 6-BATT	6	1LSP N-BATT
XB BATT+	5	XN BATT-
XB BUSS (TOP)	RB	XN BUSS (BOTTOM)

		Whitling & Laiter Inc Battery	
		ADDRESS W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
ORDER NO. CTO	DATE 12/1/2010	PART BATTERY CHARGER	QTY 1
APPROVED CTO	DESIGNED AT34.97	REV 002-071-0	SHEET 13 OF 18



SIDE 'B' FRONT

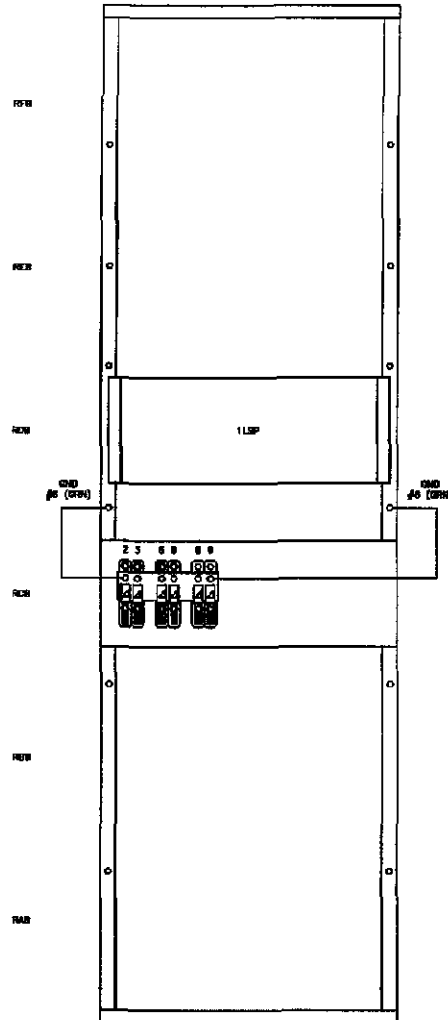


Preliminary Engineering

W&LE		WHEELING & LAKE ERIE RAILWAY	
		ADDRESS: W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
ORDER DATE: 12/1/2010	W&LE: ROCK FRONT VIEW	ORDER NO.: A134.07	WORK: 1"=2'
DRAWING: CTC	REV: A134.07	BUY NO.: 003-091-0	SHEET: 15 OF 15

BACK OF RIGHT SIDE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

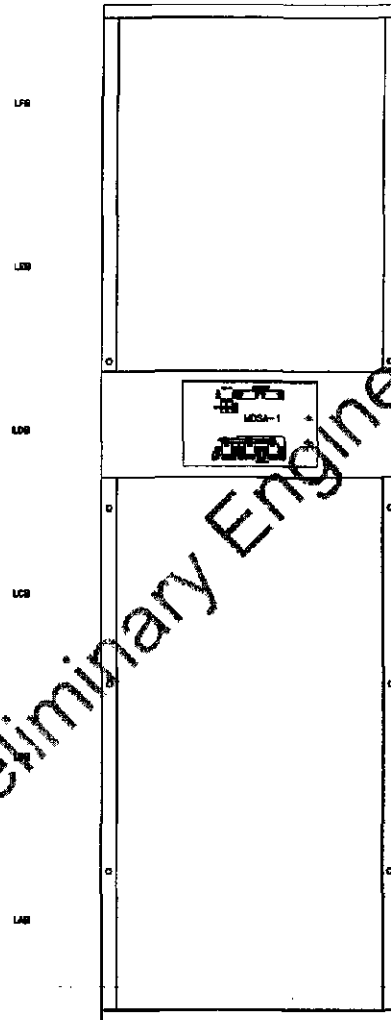


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

SIDE 'B' BACK

BACK OF LEFT SIDE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

Preliminary Engineering

W&LE		Wheeler & Latta Etc Rackery	
		ADDRESS W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
DATE 12/1/2010	TITLE RACK BACK VIEW	DWG NO. CT10155	
DRAWN BY QTD	REV AKRON	SCALE 1"=3'	
CHECKED BY CTC	TRNG AT 34.97	SHEET 18 OF 18	
CHECKED BY CTC	REV NO. 002-071-0		

QUANTITY TYPICAL, II

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65



NEMA 1B-15R
RECEPTACLE



NEMA 1B-15R
RECEPTACLE

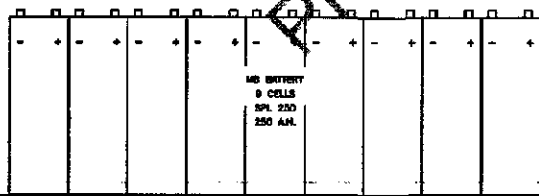
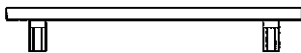
SIDE 'A'

AD

AC

AB

AA



BATTERY TRAY

Preliminary Engineering

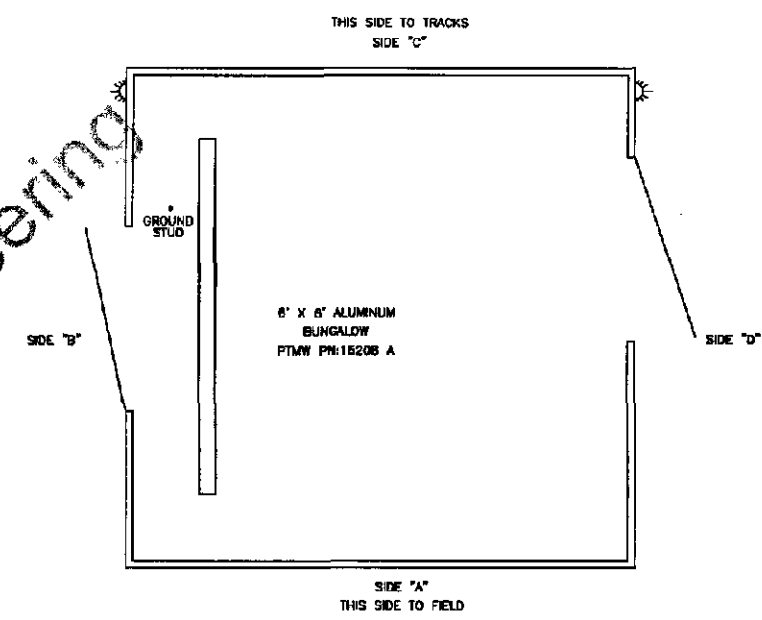
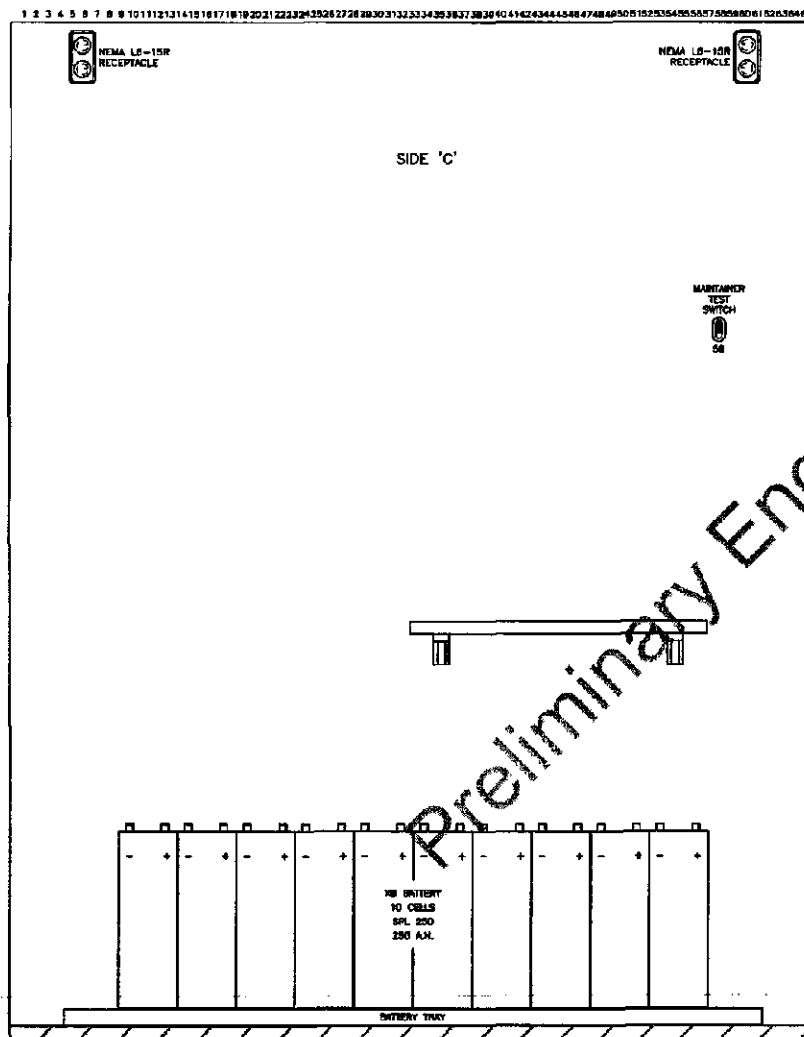


**Whodding & Latta Eric
Rampart**

LOCATION		W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO	
DATE	12/1/2010	FILE	SIDE 'A'
DESIGNER	CIC	BY	AKRON
CHECKER	CIC	DATE	1/14/07
DATE	002-071-0	SCALE	1"=2'
		SHEET	17 of 18

FINISH BLOCK

CHANGING FROM TYPICAL 11



Preliminary Engineering

	Whoddy & Leno Electric Company		
	LOCATION: W. SMITH RD. (COUNTY RD 4) LAFAYETTE, OHIO		
	ORIGINAL DATE: 12/1/2010 DESIGNED BY: CEC CHECKED BY: CTC APPROVED BY: CEC	TITLE: SIDE "C" DRAWING NO.: A134.37 DWG NO.: 002-071-D	STD NO.: C190106 SCALE: 1"=2' SHEET: 18 of 18
	CHANGE FROM TYPICAL 11		

