

**Rappatta, Mike**

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**From:** Rappatta, Mike

**Sent:** Monday, November 01, 2010 9:01 AM

**To:** 'Susan Kirkland (skirklan@dot.state.oh.us)'; 'susan.Arduini@dot.state.oh.us'

**Cc:** 'Patricia Gray'; 'George Martin (George.Martin@puc.state.oh.us)'; 'Tod Darfus (tod.darfus@dot.state.oh.us)'; Ray, Rick H.

November 01,

2010

CX0118349

**Re: Norfolk Southern's Sandusky Line, regarding the modification of automatic grade crossing warning devices at Reedtown Road in Seneca County, Ohio, DOT: 481-602P, Milepost S-087.94, order 10-1003-RR-FED.**

Susan Kirkland, Supervisor  
Ohio Rail Development Commission  
50 West Broad Street, Room 1520  
Columbus, Ohio 43215

Dear Ms. Kirkland:

Attached for your review and approval are electronic copies of the detailed cost estimate, material list and engineering plans for this crossing.

Although we cannot give you an exact date of installation at this time we can provide our average installation time, which is 9.1 months after authorization from the state. After this project is authorized, we will order material and schedule for installation once we have received approvals from ODOT's District Office.

A copy of the estimate, material list and project plans have been filed on Ohio's Public Utilities Commission Docketing Information System.

If you have any questions or concerns, please contact Mike Rappatta at 404-582-6377 or [mike.rappatta@nscorp.com](mailto:mike.rappatta@nscorp.com).

11/1/2010

**Detailed Estimate for Grade Crossing Warning Devices**

City/State: BELLEVUE, OH

Road: REEDTOWN RD.

MilePost: S-87.94

DOT/AAR: 481620P

State Proj. No.:

County: SENECA

S&amp;E Proj. No.: 10.0003

File Number:

Man Days: 96

<b>***Purchases - Others***</b>		
Meals and Lodging:	\$12,902.40	
Rental of Equipment:	\$22,848.00	
(2 Trucks, 1 Backhoe w/ Trailer and 1 Pipe-Pusher for 24 Days)		
Construction Supervision Vehicle:	\$4,765.91	
Purchases - Other Total:		\$40,516.31
<b>***Material And Additives***</b>		
Material Cost:	\$88,394.00	
Sales and Use Tax:	\$0.00	
Material Handling Freight:	\$4,419.70	
Material Total:		\$92,813.70
<b>***Labor And Additives***</b>		
Labor Cost:	\$26,880.00	
(4 man crew at \$1,120.00 a day for: 24 days)		
Payroll Tax & Overheads:	\$35,707.39	
Preliminary Engineering:	\$10,144.10	
Construction Supervision:	\$15,058.18	
Labor Total:		\$87,789.67
Project Cost:		\$221,119.68
Scrap / Salvage Credit:		\$0.00
<b>Project Total:</b>		<b>\$221,120.00</b>

Estimated on: 01-Nov-10

Estimated by: n5s2v

**Estimate valid for 1 year from date of estimate**



Highway Crossing Signalization Program - Material List

Do not substitute items without permission from S & E Engineering

City:	BELLEVUE
Road:	REEDTOWN RD.
Mile Post:	S-87.94
Drawing Number:	SNCS08794
State ProjectNumber:	
County:	SENECA
A A R Number:	481620P
Project Number:	10.0003
File Number:	
New File Number:	TBD
A F E Number:	F32820
Store Number:	08726
Supervisor:	A.J. PEASE
Tax Code:	3500
Vendor to supply the following copies after pricing:  1 Set - Material Management with original Invoice 2 Sets - with plans shipped in car with material 1 Set - S&E Gen. Supt. Construction w/copy of invoice	

Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed			Quantity Returned (Credit)	Special Instructions
							Date Quan.	Date Quan.	Date Quan.		
3	670-360693-4	EA	\$5.50	\$16.50	AAR/DOT NUMBER PLATE/DECAL, ORDER 3 PER PROJECT. 60 DAY LEAD TIME. SUPPLIED BY S'TRAN.						
1	165-006505-4	EA	\$1,051.54	\$1,051.54	AC SERVICE, COMPLETE LESS METER BASE, ASSEMBLED ON 30' POLE						
13	105-288384-4	EA	\$261.39	\$3,398.07	BATTERY,GNB 368AH MODEL 50G15 SINGLE CELL 2.25 VOLTS, FOR USE WITH CROSSINGS DESIGNED AFTER 09/09						
2	670-980689-4	EA	\$78.58	\$157.16	BRACKET HIGH WIND, (RIGID 3'), WIG- 191036, WALRUS TUSK TYPE						
2	670-561375-4	EA	\$1,197.90	\$2,395.80	BRACKET, GATE SAVER, NEG385102GS, SPRING LOADED SWING AWAY ADAPTER FOR FIBERGLASS/ALUMINUM GATES, USE WITH GATE 38' AND LESS						
1	670-356949-4	EA	\$57.37	\$57.37	CABLE, 10' GENERATOR HOOK UP, SERRMI P/N 40524. FEMALE CONNECTOR						
300	465-939422-4	LF	\$2.74	\$822.00	CABLE, UG 12 CONDUCTOR NO 14 AWG SOLID EACH CONDUCTOR WITH 5/64 IN INSULATION 10 MIL						
600	465-292862-4	LF	\$1.27	\$762.00	CABLE, UG 2-6 TWISTED, S-23 OKONITE 113-12-3933 SOLID TINNED CONDUCTOR						
500	465-292929-4	LF	\$3.84	\$1,920.00	CABLE, UG 5 COND. NO. 6 AWG SOLID COPPER CABLE TO MEET NS CORP. SPEC. FOR SIGNAL						
100	465-791835-4	FT	\$3.31	\$331.00	CABLE, UG AC ENTRANCE 3C#6-7X OKONITE FMPF-L 094-078 TR W/G 1 X 8 7X W010 BRZ TAPE 600V PRODUCT CODE 206-11-6070						
80	165-544477-4	FT	\$2.19	\$175.20	CONDUIT, 4"x10' PVC, SCHEDULE 80 BELL CONNECTOR AT ONE END, 1/2 PT. GLUE IN KIT 670-123298-4						
4	670-664917-4	EA	\$61.53	\$246.12	CONNECTOR KIT, WELDED FAR RAIL, CONSISTING OF RUBBER HOSE PROPERLY DRILLED, BONDSTRAND, 1 SPLICING SLEEVE, 1 REDUCING SLEEVE, 3 CLAMPS, 1 TRACK CLIP, 1 WEB WELDED TRACK CONNECTOR, 1 WELD METAL, SAFETRAN 111359-2X						
4	670-632520-4	EA	\$51.89	\$207.56	CONNECTOR KIT, WELDED NEAR RAIL, CONSISTING OF, RUBBER HOSE PROPERLY DRILLED, BONDSTRAND, SPLICING SLEEVE, 1 REDUCING SLEEVE, 5 CLAMPS, 1 TRACK CLIP, 1 WEB WELDED TRACK CONNECTOR, 1 WELD METAL, SAFETRAN 111359-1X						
2	670-793404-4	EA	\$1,212.73	\$2,425.46	COUNTERWEIGHT PKAGE, 17-24'GATE S'TRAN S- MECH ONLY, STAINLESS, TO INCLUDE HUB, SUPPORT ARMS						

APPROVED BY STATE	APPROVED BY RAILROAD	CAR NUMBER	SEAL NUMBER
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Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed Date Date Date Quan. Quan. Quan.			Quantity Returned (Credit)	Special Instructions
4	670-760012-4	EA	\$39.64	\$158.56	COVER, FOR 1 WAY FLASHING LIGHT ASSY. 18 OZ. BLACK VINYL COATED NYLON. ====TO COVER 2 LAMPS=====						
1	670-986650-4	EA	\$339.81	\$339.81	DISPOSAL, CONSTRUCTION DEBRIS AND CLEANING X'ING EQUIPMENT CONTAINER						
1	670-000004-4	EA	\$700.00	\$700.00	FCC LICENSE FOR MONITOR/RADIO						
4	670-000003-4	EA	\$255.85	\$1,023.40	FILL/STONE #57, QUANITY IS BASED ON TRUCK LOAD PLUS DELIVERY COST						
2	670-015231-4	EA	\$577.50	\$1,155.00	FOUNDATION, DIXIE,S-2 GATE 2'6"X2'6"X5'6" ASSEMBLED						
2	670-257031-4	EA	\$339.19	\$678.38	GATE, ARM FIBERGLASS-ALUMINUM 17-24 FT., INCLUDES GATE GUARD FOR GATE LIGHT CABLE, NEG P/N 8002-244NFS/CG						
1	670-696894-4	EA	\$37,189.54	\$37,189.54	GCP 4000 2 TRK, REDUNDANT, (2TRK CHASSIS), WIRED RACK EQUIPMENT FOR 6X8 FARADAY, 2 EA SSCCIII, 2 EA 40 AMP CRAIG CHARGER, WITH SEAR Ili, SAFETRAN 003131-4X						
1	670-477991-4	EA	\$317.90	\$317.90	KIT, GROUNDING ASSY FOR AL I/S INCLUDES 8 GRD RDS,200'#4WIRE,12 4 WIRE ONE-SHOTS. ERICO SBK206						
1	670-123298-4	EA	\$309.31	\$309.31	KIT, HARDWARE SUPPLIES REQUIRED X'ING P'CKAGES. WEB CONNECTORS FOR SHUNT(8EA) TAPE, AMPS,P'GUM PAINT,SLEEVES,TAGS,GLUE, 100 EA WHITE TAGS, )NE CAN BLUE MARKING PAINT ETC...						
2	670-764166-4	EA	\$1,244.13	\$2,488.26	LAMP ASSY, 5" MAST MTG. 2W IND. 20" BKGRD, FLX-12 W/BULB S'TRAN #042003-487XNS						
6	165-643547-4	EA	\$5.98	\$35.88	LAMP, 18 WATT 10 VOLT S-11 SC BAY 18S11/1SC CLEAR RWY SIGNAL UJ-71463 GE						
4	255-590880-4	EA	\$17.08	\$68.32	LOCK, AMERICAN LOCK MODEL H-10KA KEYED ALIKE TO PRIVATE KEYWAY D456 AND STAMPED "NS SIG"						
2	670-637778-4	EA	\$1,019.15	\$2,038.30	MAST, 5" ALUMINUM 13'10" WITH DOUBLE JCT. BOX BASE. S'TRAN P# 070519-11AX.						
2	670-850933-4	EA	\$3,886.16	\$7,772.32	MECHANISM, GATE MODEL S-60, WITH DEFROSTER AND MINI TRACKSIDE SENSOR S'TRAN # 0740007-X002B3						
1	000-000000-4	EA	\$5,000.00	\$5,000.00	MISC. EXPENSE, UNDERGROUND BORING						
4	670-001347-4	EA	\$44.58	\$178.32	PACKAGE, HARDWARE SIGN 5 IN. MOUNTING, SERRMI A1250-5, HARMON @200965-000, OR						

APPROVED BY STATE	APPROVED BY RAILROAD	CAR NUMBER	SEAL NUMBER
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Qty.	Class-Item-CD	UI	Price per Item	Total Price	Item Description	Quantity Shipped	Quantity Installed			Quantity Returned (Credit)	Special Instructions
1	670-514605-4	EA	\$11.04	\$11.04	PINNACLE, W-C SECT 1-11, 4"& 5" REF K1 110-8 OR SAFETRAN NO. @035045-503X		Date Quan.	Date Quan.	Date Quan.		
1	165-902002-4	EA	\$294.80	\$294.80	PROTECTOR, SURGE 120/240VAC, ERICO P/N EPD120/240TDFL						
4	465-002899-4	EA	\$36.06	\$144.24	REEL, CABLE DISPOSABLE FOR CROSSING SIGNAL PACKAGES						
2	435-805560-4	EA	\$3.45	\$6.90	SAND, 25LB BAG FOR CABLE ENTRANCE INTO THE SHELTER						
1	670-027556-4	EA	\$2,629.77	\$2,629.77	SEARIIi, ACCESSORY PACKAGE, W/2-ILOD, 1-E-BELL, 2-GTS, 1-GFT, 1-VHFC, WITHOUT MTSS/SEAR UNIT						
1	670-749325-4	EA	\$226.97	\$226.97	SHELF, FOLDING, FOR LAPTOP USE IN FARADAY 6X8 SHELTER, SAFETRAN 052852-128X						
1	670-755523-4	EA	\$9,358.99	\$9,358.99	SHELTER, 6'X8' ALUMN FARADAY W/CABLE CHUTES BEHIND TERMINAL BOARD, W/1EA EQUIPMENT RACK, W/GEN RECEPTICAL, BREAKER BOX GFI OUTLET FOR LAPTOP SHELF SAFETRAN 058400-68-85						
4	670-586967-4	EA	\$25.79	\$103.16	SHUNT COVER W/LAG SCREWS, 19"X19", SERRMI #40271, ORDER 1 PER SHUNT						
4	670-652773-4	EA	\$472.80	\$1,891.20	SHUNT, MULTI-FREQ. #62775-1543 SAFETRAN NARROW BAND						
2	670-393331-4	EA	\$37.43	\$74.86	SIGN CROSSING MALFUNCTION ASSEMBLY FOR 4" AND 5" MAST, SAFETRAN #T17215						
2	670-806648-4	EA	\$71.37	\$142.74	SIGN, X-BUCK, LESS HARDWARE, SAFETRAN 035200-X CR 02-490546						
2	670-353390-4	EA	\$37.24	\$74.48	SIGN, "2 TRACKS" LESS HARDWARE SAFETRAN 035207-2X						
1	670-330382-4	RL	\$15.68	\$15.68	TAPE, THOR 3" DURATEC, ORANGE 1000' LENGTHS. "WARNING STOP DIGGING"						

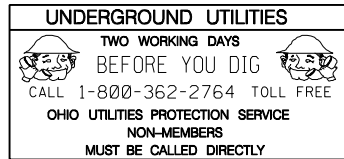
Total Material: \$88,393.91

APPROVED BY STATE	APPROVED BY RAILROAD	CAR NUMBER	SEAL NUMBER
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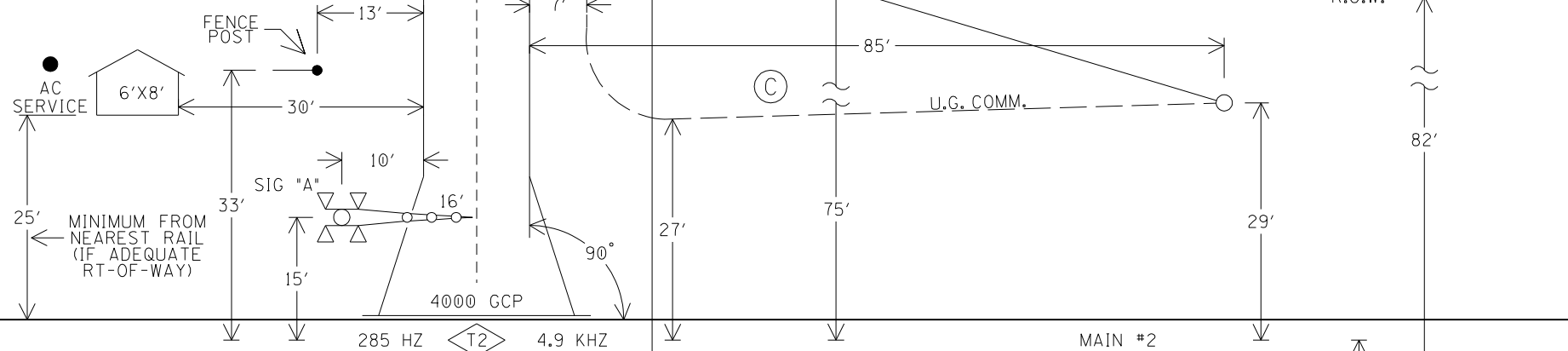
TO BAYSIDE  
(R.R. WEST)

AGRICULTURAL  
DEVELOPMENT

TO CW TOWER  
(R.R. EAST)



(A)



4000 GCP

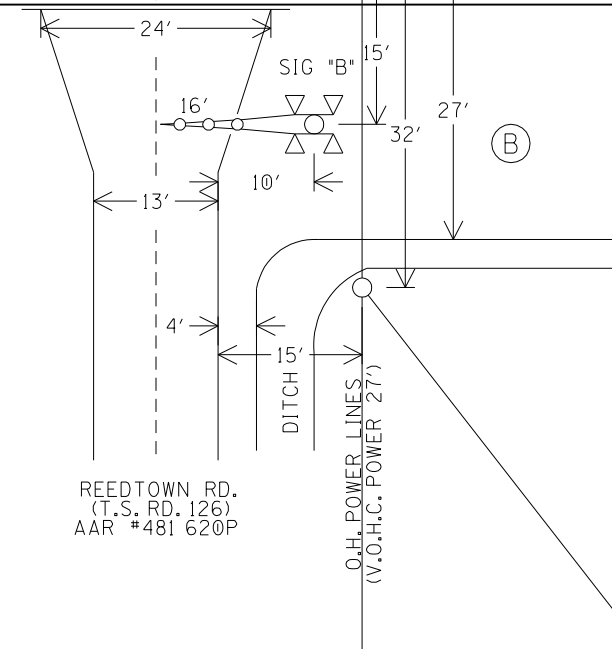
285 HZ T1 4.0 KHZ

MAIN #2

14'

MAIN #1

(D)



IN SERVICE \_\_\_\_\_ SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
☐ S&E ENGINEERING COPY  
☐ CONSTRUCTION OFFICE COPY  
RETURN TO S&E ENG. AFTER COMPLETION  
☐ FIELD COPY  
RETURN TO CASE AFTER COMPLETION  
☐ PROJECT ENGINEER COPY

R.O.W.

NOTES:

1. MAX. TRAIN SPEED 60 M.P.H.
2. LATITUDE N 41° 09' 12" LONGITUDE W 82° 52' 15" ELEVATION 56'
3. SIGNAL "A" TO HAVE BELL.
4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
5. CROSSING LOCATED IN SENECA COUNTY.
6. NEAREST STREET ADDRESS IS 15458 REEDTOWN RD.
7. NEAREST INTERSECTING STREET IS N. TOWNSHIP RD. WEST OF CROSSING
8. DISTANCE TO NEAREST INTERSECTING STREET IS 2639 FT.

(A) (B) (C) (D) = QUADRANT MARKERS

SCALE: 1" = 20'  
PROJECT #10.0003

LAYOUT

FILE TBA  
NO.

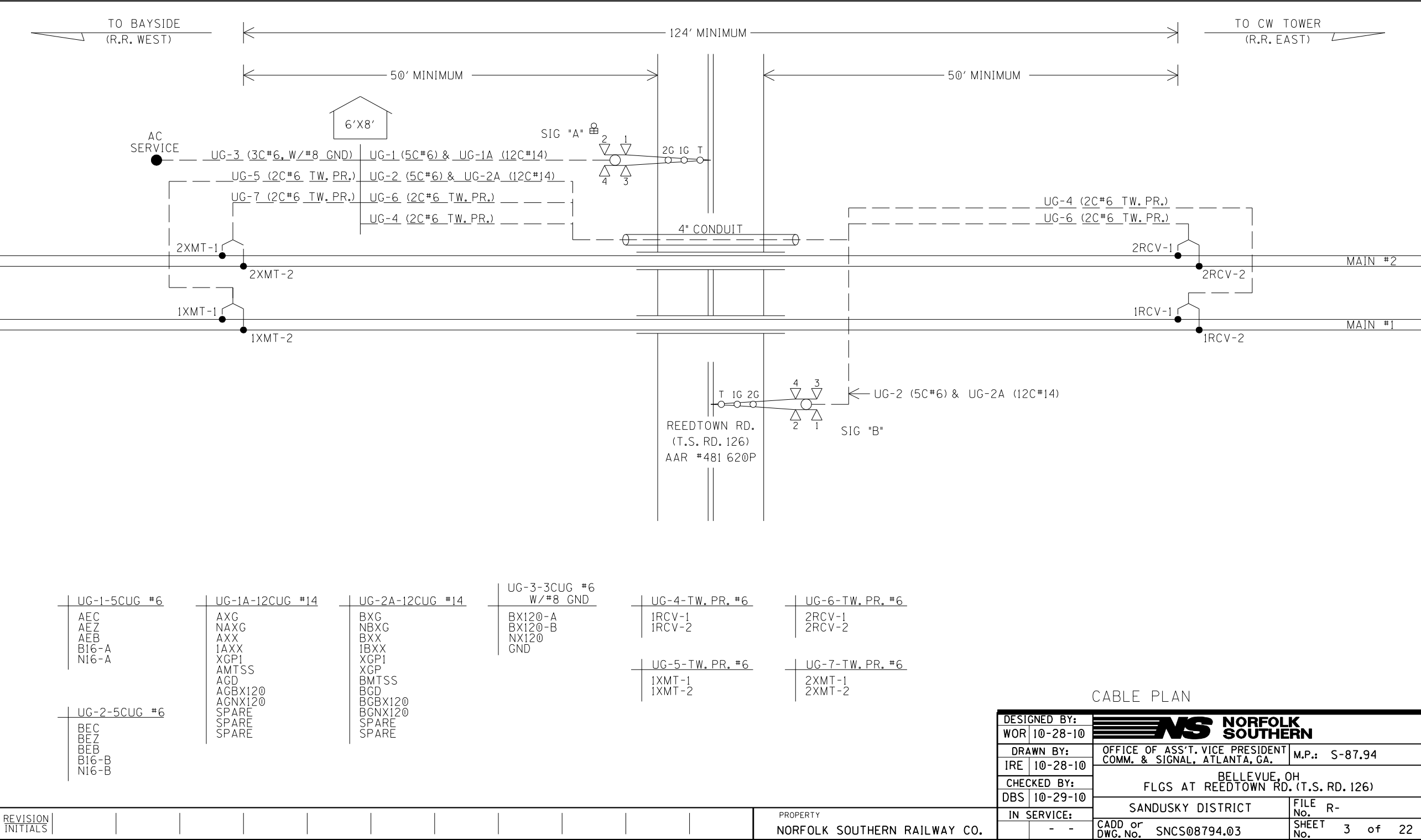
DESIGNED BY:	NS NORFOLK SOUTHERN		
WOR 10-28-10			
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: S-87.94
IRE 10-28-10			
CHECKED BY:	BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)		
DBS 10-29-10			
IN SERVICE:	SANDUSKY DISTRICT		FILE NO. R-
- -	CADD or DWG. No. SNCS08794.01		SHEET No. 1 of 22

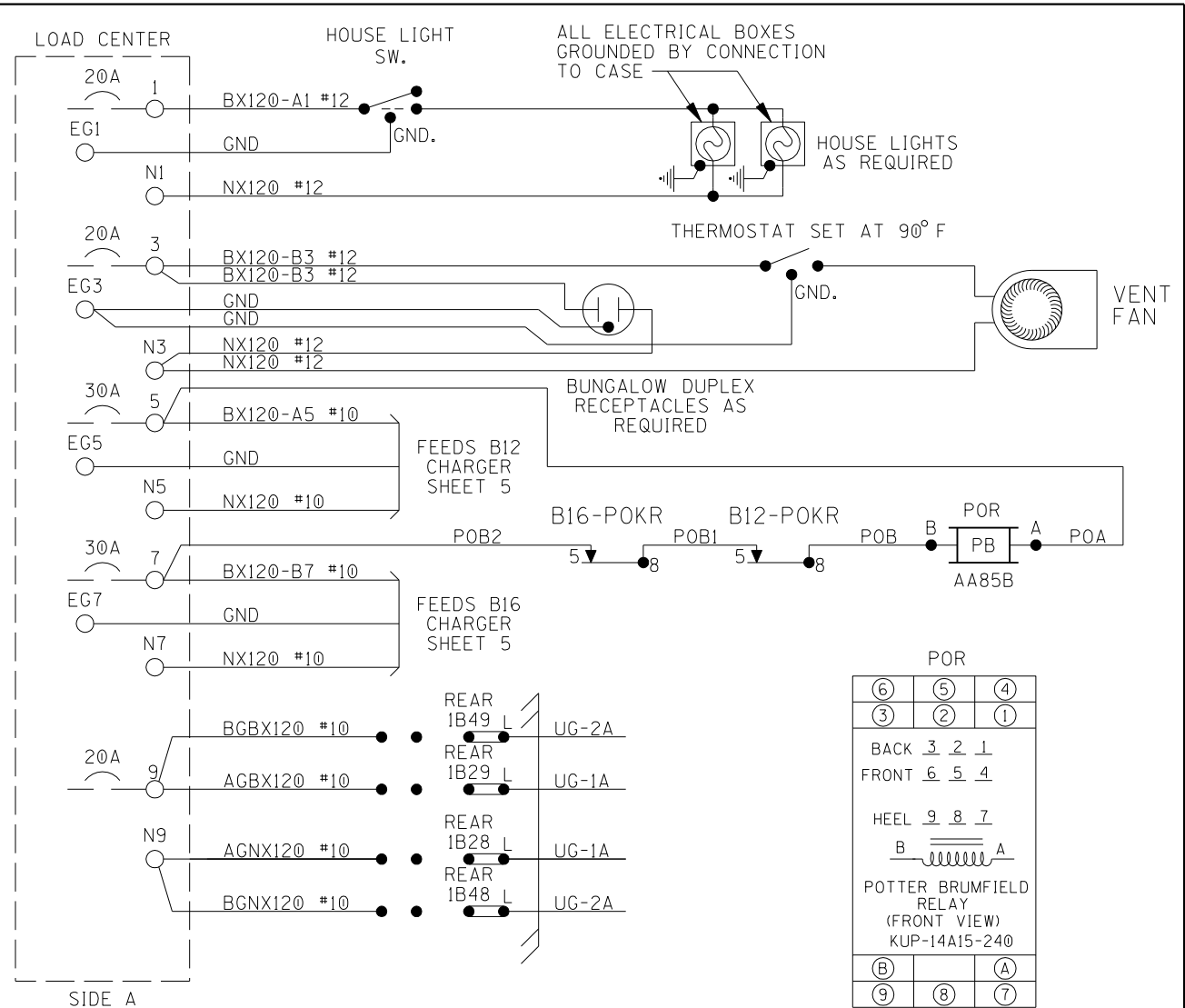
REVISION  
INITIALS

PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.









GENERATOR RECEPTACLE:  
MALE CONNECTOR - NEMA L1430-FI

POR

⑥	⑤	④
③	②	①

BACK   3   2   1


FRONT   6   5   4

HEEL   9   8   7

POTTER BRUMFIELD  
RELAY  
(FRONT VIEW)  
KUP-14A15-240

(B)		(A)
(9)	(8)	(7)

DESIGNED BY:	 <b>NORFOLK SOUTHERN</b>	
WOR 10-28-10		
DRAWN BY:	OFFICE OF ASST. VICE PRESIDENT	M.P.: S-87.94
IRE 10-28-10	COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:	BELLEVUE, OH	
DBS 10-29-10	FLGS AT REEDTOWN RD. (T.S. RD. 126)	
IN SERVICE:	SANDUSKY DISTRICT	FILE R-
- -	CADD or DWG. No. SNCS08794.04	SHEET 4 of 22

[illegible]





Program Report

Location and SIN

DOT Number: 481620P  
Milepost Number: S-87.94  
Site Name: REEDTOWN RD (TS RD 126)  
SIN: 755023601716

MCF and Template Selection

MCF Name: GCP-T6X-02-1.mcf  
MCF Revision: 021  
MCF CRC: 6076E435

Template = 1A:6 Trk BI

Check Numbers

Office Check No. (DT 4.6.0): 0033D5DD  
Office Check Number: 0033D5DD  
Config. Check Number: 3536E8F5  
(Based on MCF Revision 021)

Program

BASIC: module configuration  
Track 1 Slot = Track  
Track 2/RIO 1 Slot = Track  
Track 3 Slot = Not Used  
Track 4 Slot = Not Used  
Track 5/RIO 2 Slot = Not Used  
Track 6/RIO 3 Slot = Not Used  
SSCC-1 Slot = SSCC31  
SSCC-2 Slot = SSCC31  
SEAR Used = Yes

BASIC: MS/GCP operation  
Track 1: MS/GCP Operation = Yes  
Track 2: MS/GCP Operation = Yes

BASIC: island operation  
Track 1: Island Used = Internal  
Track 2: Island Used = Internal

BASIC: preemption  
Preempt Logic = No

BASIC: radio Dax links  
Radio DAX link A Used = No  
Radio DAX link B Used = No

BASIC: Vital Comms links  
Vital Comms link 1 Used = No  
Vital Comms link 2 Used = No

PREDICTORS: track 1  
Track 1: Prime Used = Yes  
Track 1: Dax A Used = No  
Track 1: Dax B Used = No  
Track 1: Dax C Used = No  
Track 1: Dax D Used = No  
Track 1: Dax E Used = No  
Track 1: Dax F Used = No  
Track 1: Dax G Used = No

PREDICTORS: track 2  
Track 2: Prime Used = Yes  
Track 2: Dax A Used = No  
Track 2: Dax B Used = No  
Track 2: Dax C Used = No  
Track 2: Dax D Used = No  
Track 2: Dax E Used = No  
Track 2: Dax F Used = No  
Track 2: Dax G Used = No

GCP: track 1  
Track 1: GCP Freq Category = Standard  
Track 1: GCP Frequency = 285 Hz  
Track 1: Approach Distance = 3061 ft  
Track 1: Uni/Bi/Sim-Bidirnl = Bidirnl  
Track 1: GCP Transmit Level = High  
Track 1: Island Connection = Isl2  
Track 1: Island Distance = 124 ft  
Track 1: Computed Distance = 9999 ft  
Track 1: Linearization Steps = 100

GCP: track 1 enhanced det  
Track 1: Inbound PS Sensitivity = Off  
Track 1: Speed Limiting Used = Yes  
Track 1: Outbound False Act Lvl = Normal  
Track 1: Outbound PS Timer = 20 sec  
Track 1: Trailing Switch Logic = On  
Track 1: Post Joint Detn Time = 15 sec  
Track 1: Adv Appr Predn = No  
Track 1: Cancel Pickup Delay = This Isl

GCP: track 1 prime  
Track 1: Prime Warning Time = 30 sec  
Track 1: Prime Offset Distance = 0 ft  
Track 1: Switch MS EZ Level = 10  
Track 1: Prime MS/GCP Mode = Pred  
Track 1: Prime Pickup Delay = 15 sec  
Track 1: Prime UAX = Not Used

GCP: track 1 pos start  
Track 1: Positive Start = Off  
Track 1: Sudden Shnt Det Used = No  
Track 1: Low EZ Detection Used = No

GCP: track 1 MS Control  
Track 1: MS/GCP Ctrl IP Used = No  
Track 1: MS Sensitivity Level = 0  
Track 1: Compensation Level = 1300  
Track 1: Warn Time-Ballast Comp = High  
Track 1: Low EX Adjustment = 39  
Track 1: Bidirnl Dax Passthru = No  
Track 1: False Act on Train Stop = No  
Track 1: EX Limiting Used = Yes  
Track 1: EZ Correction Used = Yes

GCP: track 2  
Track 2: GCP Freq Category = Standard  
Track 2: GCP Frequency = 285 Hz  
Track 2: Approach Distance = 3061 ft  
Track 2: Uni/Bi/Sim-Bidirnl = Bidirnl  
Track 2: GCP Transmit Level = High  
Track 2: Island Connection = Isl2  
Track 2: Island Distance = 124 ft  
Track 2: Computed Distance = 9999 ft  
Track 2: Linearization Steps = 100

GCP: track 2 enhanced det  
Track 2: Inbound PS Sensitivity = Off  
Track 2: Speed Limiting Used = Yes  
Track 2: Outbound False Act Lvl = Normal  
Track 2: Outbound PS Timer = 20 sec  
Track 2: Trailing Switch Logic = On  
Track 2: Post Joint Detn Time = 15 sec  
Track 2: Adv Appr Predn = No  
Track 2: Cancel Pickup Delay = This Isl

GCP: track 2 prime  
Track 2: Prime Warning Time = 30 sec  
Track 2: Prime Offset Distance = 0 ft  
Track 2: Switch MS EZ Level = 10  
Track 2: Prime MS/GCP Mode = Pred  
Track 2: Prime Pickup Delay = 15 sec  
Track 2: Prime UAX = Not Used

GCP: track 2 pos start  
Track 2: Positive Start = Off  
Track 2: Sudden Shnt Det Used = No  
Track 2: Low EZ Detection Used = No

GCP: track 2 MS Control  
Track 2: MS/GCP Ctrl IP Used = No  
Track 2: MS Sensitivity Level = 0  
Track 2: Compensation Level = 1300  
Track 2: Warn Time-Ballast Comp = High  
Track 2: Low EX Adjustment = 39  
Track 2: Bidirnl Dax Passthru = No  
Track 2: False Act on Train Stop = No  
Track 2: EX Limiting Used = Yes  
Track 2: EZ Correction Used = Yes

ISLAND: track 1  
Track 1: Isl Frequency = 4.0 kHz  
Track 1: Pickup Delay (2s +) = 0 sec  
Track 1: Isl Enable IP Used = No

ISLAND: track 2  
Track 2: Isl Frequency = 4.9 kHz  
Track 2: Pickup Delay (2s +) = 0 sec  
Track 2: Isl Enable IP Used = No

AND: track Anding  
AND 1 XR Used = Yes  
AND 2 Used = No  
AND 3 Used = No  
AND 4 Used = No  
AND 5 Used = No  
AND 6 Used = No  
AND 7 Used = No  
AND 8 Used = No

AND: AND 1 XR  
AND 1 XR Track 1 = Prime  
AND 1 XR Track 2 = Prime  
AND 1 Enable Used = Yes  
And 1 Enable Pickup = 5 sec  
AND 1 Enable Drop = 0 sec  
AND 1 Wrap Used = No

ADVANCED: MS restart  
MS/GCP Restart Used = No

ADVANCED: out of service  
00S Control = Display+00S IPs  
00S Timeout = Yes  
00S Timeout = 1 hrs

ADVANCED: out of service 2  
T1 00S Control = 00S Input 1  
T2 00S Control = 00S Input 1

ADVANCED: track wrap circuits  
Wrap LOS Timer = 5 sec  
Track 1 Wrap Used = No  
Track 2 Wrap Used = No

ADVANCED: trk 1 overrides  
Track 1: AllPredictors Override Used = No

ADVANCED: trk 2 overrides  
Track 2: AllPredictors Override Used = No

ADVANCED: OR logic  
OR 1 Used = No  
OR 2 Used = No  
OR 3 Used = No  
OR 4 Used = No

ADVANCED: internal I/O 1  
Pass Thrus = No  
Int.1 Sets = Not Used  
Int.1 Set by = Not Used  
Int.2 Sets = Not Used  
Int.2 Set by = Not Used  
Int.3 Sets = Not Used  
Int.3 Set by = Not Used  
Int.4 Sets = Not Used  
Int.4 Set by = Not Used

ADVANCED: internal I/O 2  
Int.5 Sets = Not Used  
Int.5 Set by = Not Used  
Int.6 Sets = Not Used  
Int.6 Set by = Not Used  
Int.7 Sets = Not Used  
Int.7 Set by = Not Used  
Int.8 Sets = Not Used  
Int.8 Set by = Not Used


ADVANCED: internal I/O 3  
Int.9 Sets = Not Used  
Int.9 Set by = Not Used  
Int.10 Sets = Not Used  
Int.10 Set by = Not Used  
Int.11 Sets = Not Used  
Int.11 Set by = Not Used  
Int.12 Sets = Not Used  
Int.12 Set by = Not Used

ADVANCED: internal I/O 4  
Int.13 Sets = Not Used  
Int.13 Set by = Not Used  
Int.14 Sets = Not Used  
Int.14 Set by = Not Used  
Int.15 Sets = Not Used  
Int.15 Set by = Not Used  
Int.16 Sets = Not Used  
Int.16 Set by = Not Used

ADVANCED: site options  
Daylight Savings = On  
Units = Standard  
Maint Call Rpt IP Used = No  
Emergency Activate IP = No  
EZ/EX Logging = Change  
EZ/EX Point Change = 3

CONTINUED ON SHEET 8

4000 GCP PROGRAMMING SETUP

DESIGNED BY:		 <b>NORFOLK SOUTHERN</b>	
WOR	10-28-10		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: S-87.94
IRE	10-28-10	BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)	
CHECKED BY:			
DBS	10-29-10		
IN SERVICE:		SANDUSKY DISTRICT	FILE R-
	- -	CADD or DWG. No. SNCS08794.07	SHEET 7 of 22 No.

REVISION  
INITIALS

PROPERTY

NORFOLK SOUTHERN RAILWAY CO.

SSCC  
Gates Used = Yes  
SSCC1+2 GPs Coupled = Yes  
Min Activation = 0 sec  
Rmt Activation Cancel= 2 min  
Bell On Gate Rising = No  
Mute Bell On Gate Down = No  
SSCCIV Controller Used = No

SSCC: 1  
SSCC-1 Activation = AND 1 XR  
SSCC-1 Gate Delay = 4 sec  
SSCC-1 Number of GPs = 1  
SSCC-1 Number of GDs = 2  
SSCC 1: Flash Rate = 40  
SSCC-1: Low Battery Detection = No  
SSCC-1: Flash Sync = master  
SSCC-1: Invert Gate Output = No  
SSCC 1: Lamp Neutral Test = On  
Aux-1 Xng Ctrl Used = No

SSCC: 2  
SSCC-2 Activation = AND 1 XR  
SSCC-2 Gate Delay = 4 sec  
SSCC-2 Number of GPs = 0  
SSCC-2 Number of GDs = 0  
SSCC 2: Flash Rate = 40  
SSCC-2: Low Battery Detection = No  
SSCC-2: Flash Sync = slave  
SSCC-2: Invert Gate Output = No  
SSCC 2: Lamp Neutral Test = On  
Aux-2 Xng Ctrl Used = No

OUTPUT: assignment page 1  
OUT 1.1 = Not Used  
OUT 1.2 = Not Used  
OUT 2.1 = Not Used  
OUT 2.2 = Not Used

INPUT: assignment page 1  
IN 1.1 = Not Used  
IN 1.2 = Not Used  
IN 2.1 = Not Used  
IN 2.2 = Not Used

IO: assignment SSCC  
OUT GC 1 = Gate Output 1  
OUT GC 2 = Gate Output 2  
IN 7.1 = Not Used  
IN 7.2 = GD 1.2  
IN 7.3 = AND 1 XR Enable  
IN 7.4 = GD 1.1  
IN 7.5 = GP 1.1  
IN 8.1 = Not Used  
IN 8.2 = Out Of Service IP 1  
IN 8.3 = Not Used  
IN 8.4 = Not Used  
IN 8.5 = Not Used

SEAR  
SEAR Subnode = 3  
DI 1 = Gnd Flt Tester 1  
DI 2 = Not Used  
RIY 1 = Ground Fault Test  
RIY 2 = AC Control

SEAR: inputs  
IN 2.1 = POK 1  
IN 5.1 = Not Used  
IN 5.2 = Not Used  
IN 5.3 = Not Used  
IN 5.4 = Not Used  
IN 6.1 = Not Used

SEAR: slot 1-4 inputs  
IN 1.1 = Not Used  
IN 1.2 = Not Used  
IN 2.1 = Not Used  
IN 3.2 = Not Used  
IN 3.1 = Not Used  
IN 3.2 = Not Used  
IN 4.1 = Not Used  
IN 4.2 = Not Used

SEAR: inputs slot 5  
IN 5.1 = Not Used  
IN 5.2 = Not Used


SEAR: inputs slot 6  
IN 6.1 = Not Used  
IN 6.2 = Not Used

SEAR: slot 7-8 inputs  
IN 7.1 = ISS 1  
IN 8.1 = ISS 1  
IN 8.3 = POK 2  
IN 8.4 = Not Used  
IN 8.5 = Not Used

SITE: programming  
Radio Subnode = 1  
Field Password = Off  
Low Battery Enabled = Off

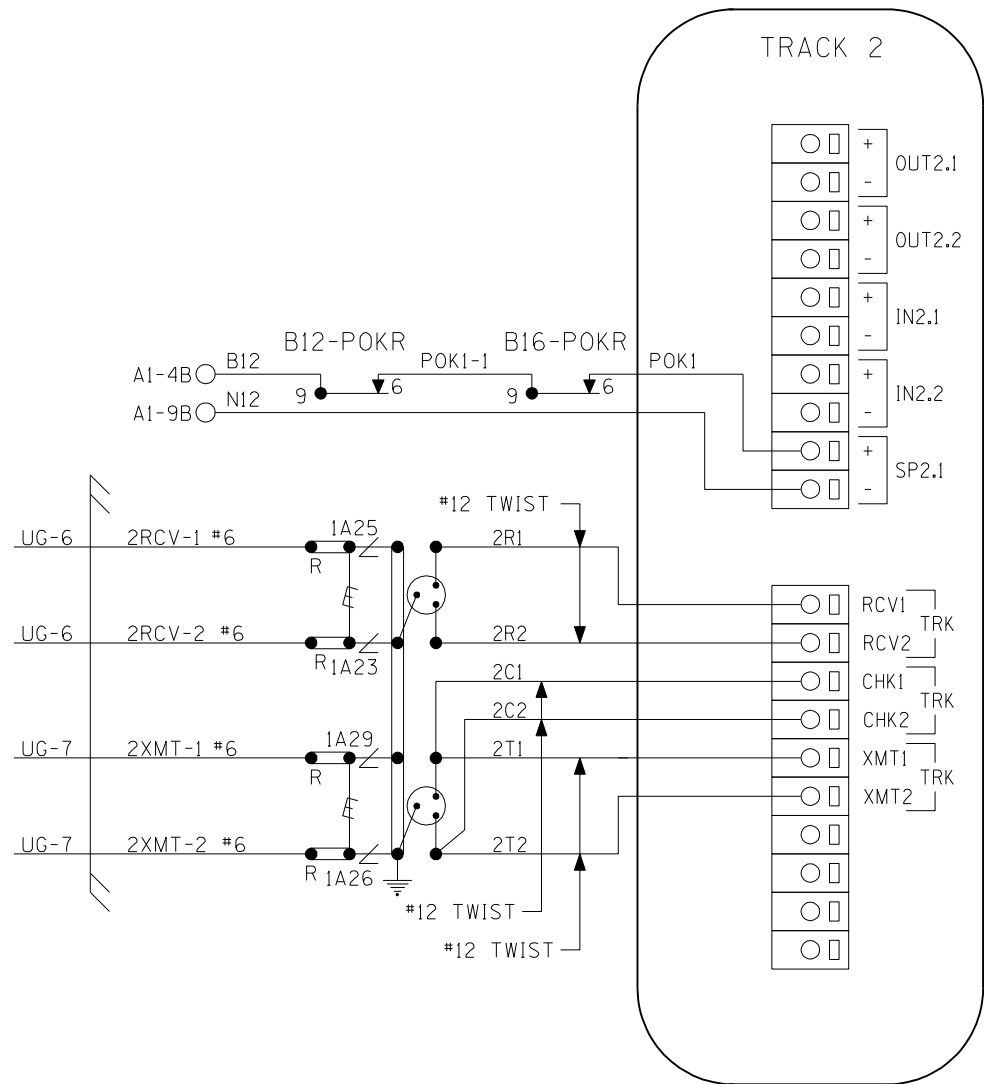
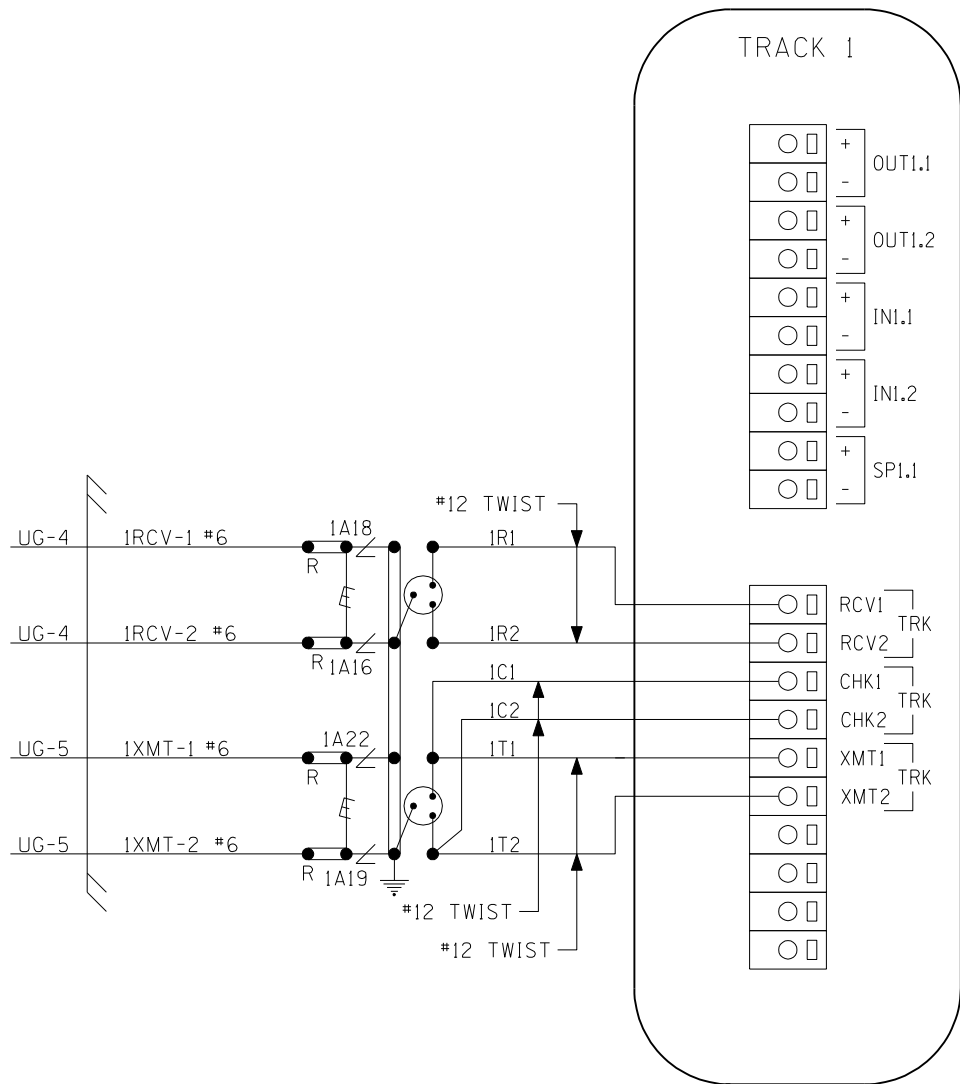
Configuration Package File  
-----  
Filename: Sncs08794.pac

4000 GCP PROGRAMMING SETUP

DESIGNED BY:		 <b>NORFOLK SOUTHERN</b>		
WOR	10-28-10			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	M.P.: S-87.94	
IRE	10-28-10	COMM. & SIGNAL, ATLANTA, GA.		
CHECKED BY:		BELLEVUE, OH		
DBS	10-29-10	FLGS AT REEDTOWN RD. (T.S. RD. 126)		
IN SERVICE:		SANDUSKY DISTRICT	FILE R-	
	- -	CADD or DWG. No. SNCS08794.08	SHEET No. 8 of 22	


REVISION  
INITIALS

PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.



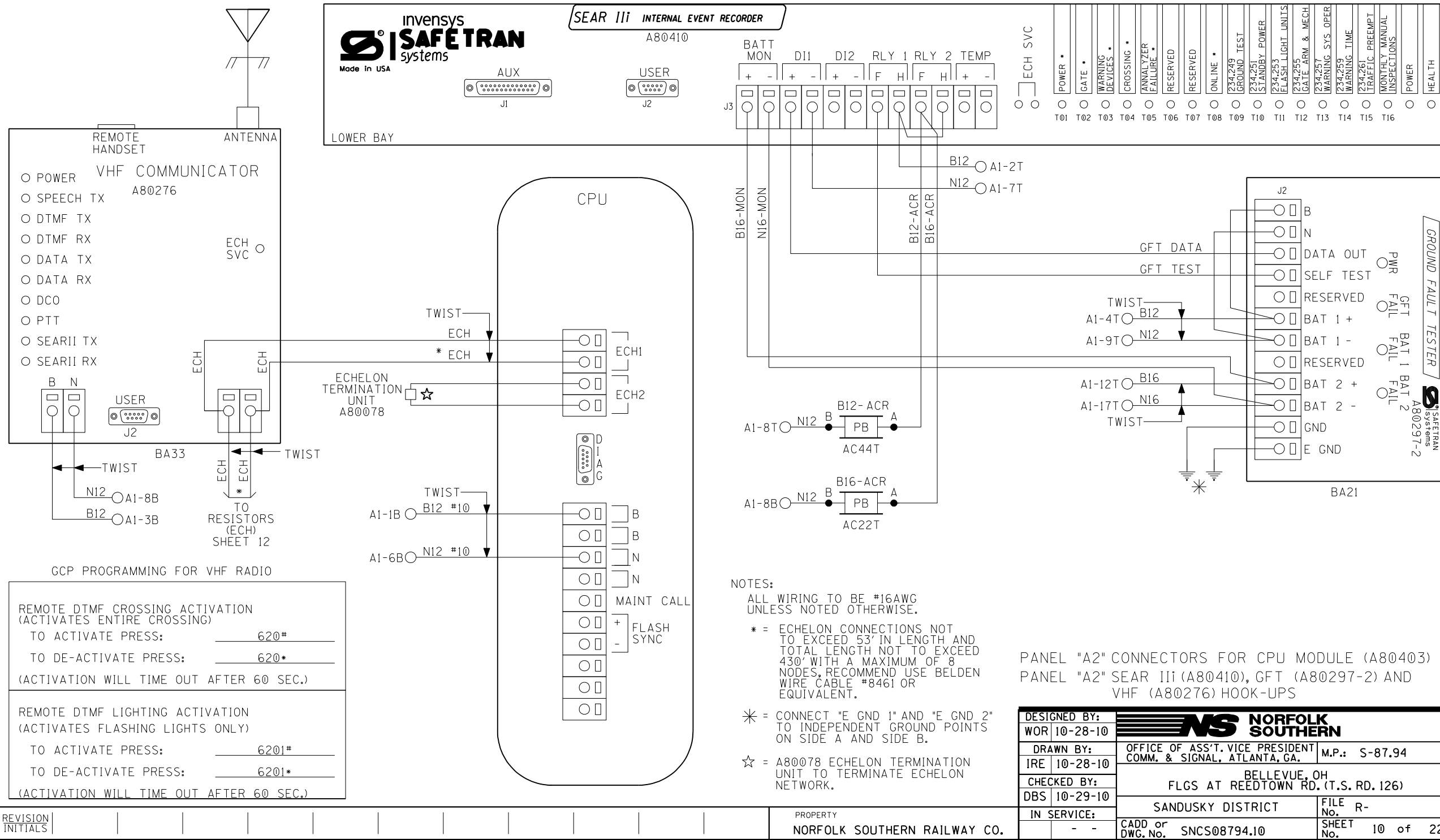
PANEL "A2" CONNECTORS FOR MODULES (A80418)

NOTE:  
ALL WIRING TO BE #16AWG  
UNLESS NOTED OTHERWISE.

DESIGNED BY:			
WOR	10-28-10		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	M.P.: S-87.94
IRE	10-28-10	COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:		BELLEVUE, OH	
DBS	10-29-10	FLGS AT REEDTOWN RD. (T.S. RD. 126)	
IN SERVICE:		SANDUSKY DISTRICT	FILE R-
	- -	CADD or DWG. NO. SNCS08794.09	SHEET 9 of 22

REVISION  
INITIALS

PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.





TO CONFIGURE SEARCHPRESS SITE SETUP KEY.  
USE ARROW KEYS TO MAKE SELECTION,  
PRESS ENTER AFTER SELECTION HAS BEEN MADE.

	SITE SET UP PROCEDURE	
	FUNCTION	LED DISPLAY
	DATE/TIME	
	AUTOMATIC DST ADJUSTMENT	YES
	TIME ZONE	EST
	SITE NAME	REEDTOWN RD. (T.S. RD. 126)
	MILEPOST	S-87.94
	DOT #	681 420P
	TESTER TYPE	CROSSING
	DATE FORMAT	MM-DD-YYYY
	TEMP FORMAT	FAHRENHEIT
	INDICATE HOLD (SEC)	0
	INDICATE REFRESH (SEC)	60
	SITE ATCS	7.550.236.017.03.01
	SITE TYPE	NO COMMUNICATION
***	OFFICE ATCS ADDRESS	2.550.00.0000
***	PRIMARY HOP ADDR	7.RRR.LLL.GGG.XX.XX
***	BACKUP HOP ADDR 1	7.RRR.LLL.GGG.XX.XX
***	BACKUP HOP ADDR 2	7.RRR.LLL.GGG.XX.XX
***	POLL ID	1
***	MODE	GEN/ATCS
***	WAMS XID	DISABLED
***	OFFICE COMM DEVICE	MCM (ECHELON)
***	RADIO ATCS ADDR	7.RRR.LLL.GGG.01.01
***	PHONE #	(OFFICE NUMBER)
***	INIT STRING	
***	FIELD COMM	NONE
****	USER PORT	BAUD 57600, N, 8, 1, NONE
****	AUX PORT	BAUD 9600, N, 8, 1, NONE

VERIFY NUMBER OF BULBS: SENSOR #1	
CURR 1: LAMP SET UP	4 BULBS
CURR 2: LAMP SET UP	4 BULBS

VERIFY NUMBER OF BULBS: SENSOR #2	
CURR 1: LAMP SET UP	4 BULBS
CURR 2: LAMP SET UP	4 BULBS

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER	550
CROSSING CONFIGURATION	NORMAL
AND 1 USED AS XR?	YES
AND 2 USED AS XR?	NO
AND 3 USED AS XR?	NO
AND 4 USED AS XR?	NO
AND 5 USED AS XR?	NO
AND 6 USED AS XR?	NO
AND 7 USED AS XR?	NO
AND 8 USED AS XR?	NO
XR CONTROLLED BY FOREIGN RR	
ENTRANCE GATES	2
GATES CONTROLLED BY FOREIGN RR	
GATE POSITION FAIL TIME (SECONDS)	20
BATTERY BANKS	2
BATTERY MON USED	YES
INTERNAL CROSSING CONTROLLERS	2
EXTERNAL CROSSING CONTROLLERS	0
VHF COMMUNICATOR	YES
DTMF ACTIVATION	YES
ACTIVATION CODE	620
ACTIVATION TIMEOUT (SECONDS)	60
ILOD MODULES	2
ANY LED BULBS USED	NO
AUTO INSPECTIONS	NO
BELL SENSORS	1
BELL SENSOR TSS1	YES
BELL SENSOR TSS2	NO
BELL SENSOR TSS3	NO
BELL SENSOR TSS4	NO
BELL SENSOR TSS5	NO
BELL SENSOR TSS6	NO
BELL SENSOR TSS7	NO
BELL SENSOR TSS8	NO

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS (CONT.)	
BELL ON	GATES LOWERING
GFT'S	YES
BATTERIES ON GFT1	2
GATE TIP SENSORS	YES
RTU	NO
VHF VOICE CHANNEL	2
VHF DATA CHANNEL	2
USE CELL MODEM NON-CRITICAL FEATURE	NO
FULL APPROACH MOVES ALARM	ACTIVATE

PROGRAM MENU QUESTIONS	PROGRAM
EDIT DIGITAL INPUTS	NO
EDIT BATTERIES	NO
EDIT RELAYS	NO
EDIT INDICATOR LEDS	NO
EDIT TEST LEDS	NO
EDIT ILOD SENSORS	NO
EDIT VHF SETTINGS	NO
GCP4K ATCS SUBNODE	16

NOTES:

\* = DISPLAYED IF CROSSING CONFIGURATION IS SPLIT GATE

```

** = OPTIONS: IF BELL SENSOR = 0,
      THEN BELL FIELDS ARE NOT USED.

```

```


*** = IF SITE TYPE = NO COMMUNICATION,
      THEN THESE OPTIONS ARE NOT
      DISPLAYED

```

```
***** = THESE SETTINGS SHOULD BE LEFT
          AT THE DEFAULT SETTING.
```

\*\*\*\*\* = USE LAST 3 NUMBERS FROM DOT NUMBER

## SEAR III PROGRAMMING SETUP

DESIGNED BY:		 <b>NORFOLK SOUTHERN</b>	
WOR	10-28-10		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT	
IRE	10-28-10	COMM. & SIGNAL, ATLANTA, GA.	
CHECKED BY:		BELLEVUE, OH	
DBS	10-29-10	FLGS AT REEDTOWN RD. (T.S. RD. 126)	
IN SERVICE:		SANDUSKY DISTRICT	FILE No. R-
Y CO.	- -	CADD or DWG. No. SNCS08794.11	SHEET No. 11 of 22

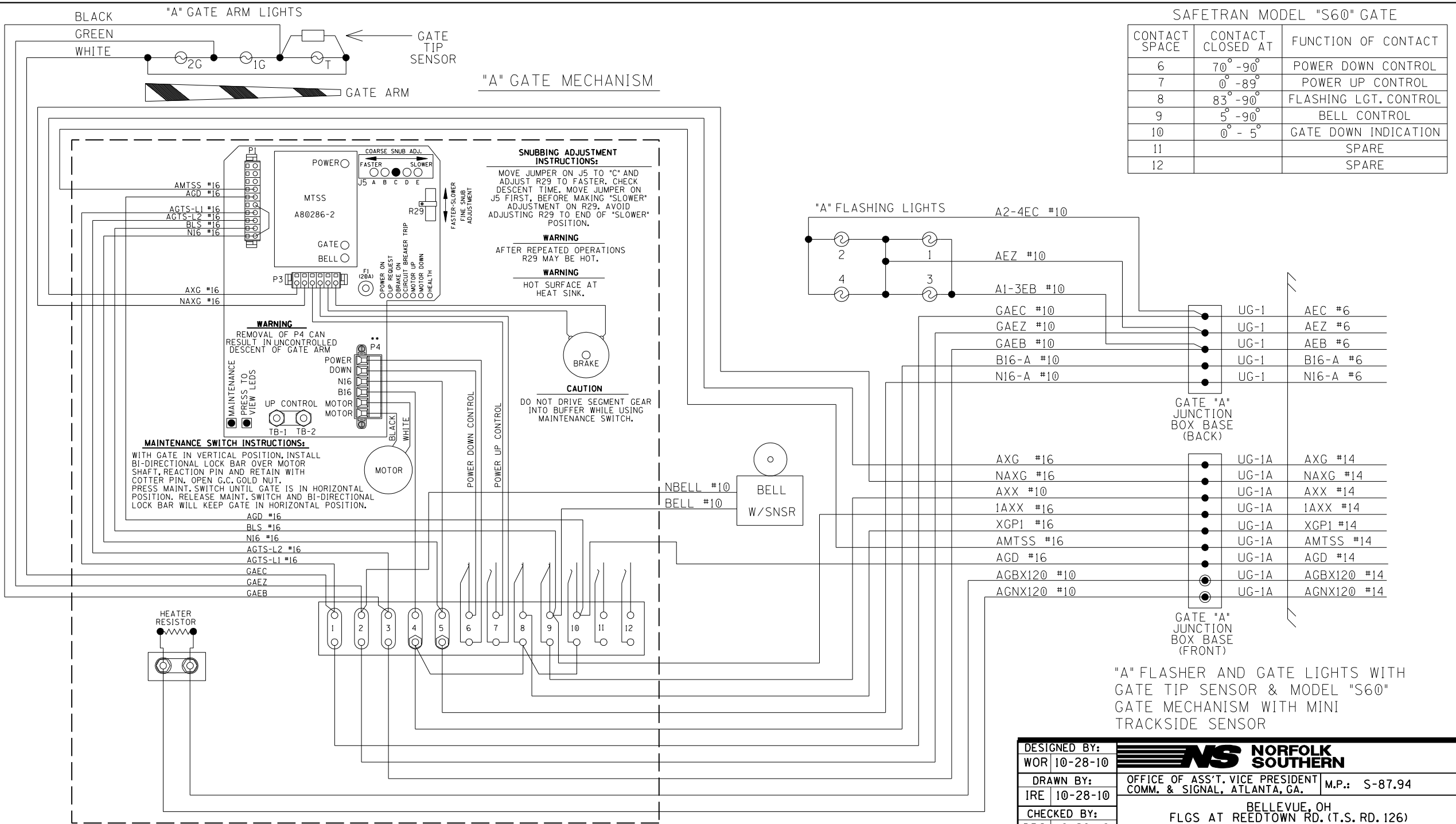
[illegible]

PROPERTY

NORFOLK SOUTHERN RAILWAY CO.








CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
6	70° - 90°	POWER DOWN CONTROL
7	0° - 89°	POWER UP CONTROL
8	83° - 90°	FLASHING LGT. CONTROL
9	5° - 90°	BELL CONTROL
10	0° - 5°	GATE DOWN INDICATION
11		SPARE
12		SPARE

REVISION  
INITIALS

PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.

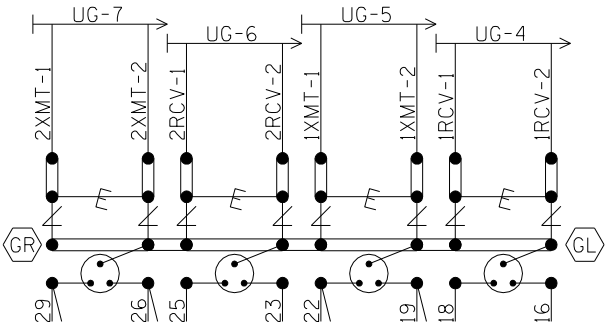
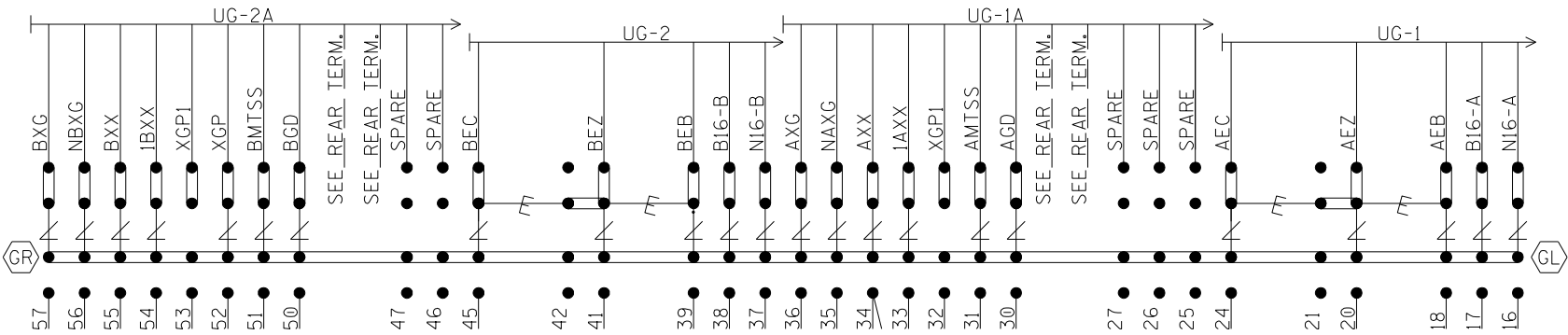
DESIGNED BY: WOR 10-28-10	 <b>NORFOLK SOUTHERN</b>	
DRAWN BY: IRE 10-28-10	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: S-87.94
CHECKED BY: DBS 10-29-10	BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)	
IN SERVICE: - -	SANDUSKY DISTRICT	FILE NO. R-
	CADD or DWG. No. SNCS08794.14	SHEET 14 of 22



LEFT TWO ROWS TERMINAL BOARD 1  
"1A"  
"1B"

NOTE: INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

SEE FARADAY SHIELD DETAILS - 1A & 1B FOR HOW THIS PORTION OF THE FARADAY SHIELD IS PREDRILLED. ONLY INSTALL AND USE THE TERMINALS NEEDED.




- ⚡ = Heavy Duty Equalizer (022700-1X)
- Clearview
- ⚡ = Lightning Arrester (022585-1X)
- ⦿ = LPC-10560-51

- GR = TERMINALS GROUNDED TO SHIELD. 4 POST BLOCKS USE EITHER - GR - SERMMI PART NO. 61278 GL - SERMMI PART NO. 61278-1.

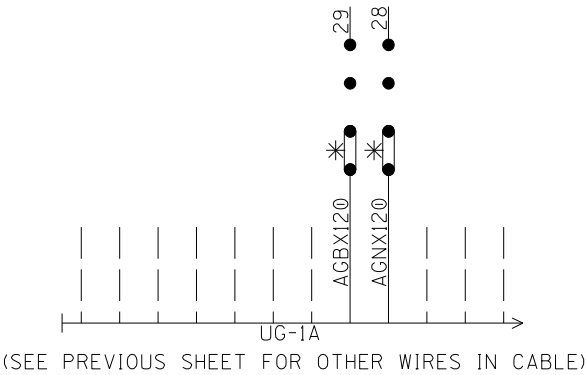
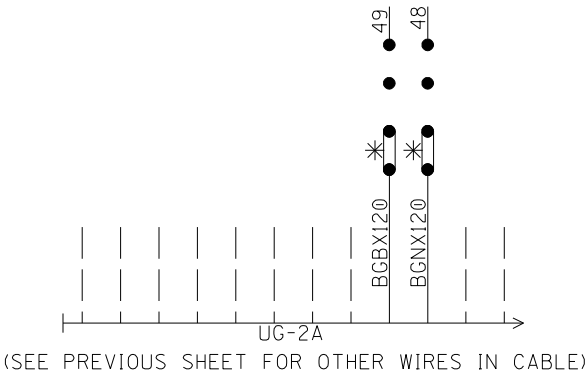
BACKBOARD DETAIL - 1A & 1B

REVISION  
INITIALS

PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.

DESIGNED BY:		 <b>NORFOLK SOUTHERN</b>	
WOR 10-28-10			
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: S-87.94
IRE 10-28-10		BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)	
CHECKED BY:			
DBS 10-29-10		SANDUSKY DISTRICT	FILE No. R-
IN SERVICE:		CADD or DWG. No. SNCS08794.16	SHEET No. 16 of 22
	- -		

REAR VIEW OF LEFT TWO ROWS TERMINAL BOARD 1  
"1A"




NOTE: ALL 120VAC AND ABOVE WILL BE WIRED  
TO THE REAR OF FARADAY BACKBOARD.  
INSULATED NUTS MUST BE USED ON ALL  
TERMINALS.

\* = CLOSED DURING WINTER MONTHS

REAR OF FARADAY BACKBOARD  
REAR BACKBOARD DETAIL - 1A & 1B

REVISION  
INITIALS

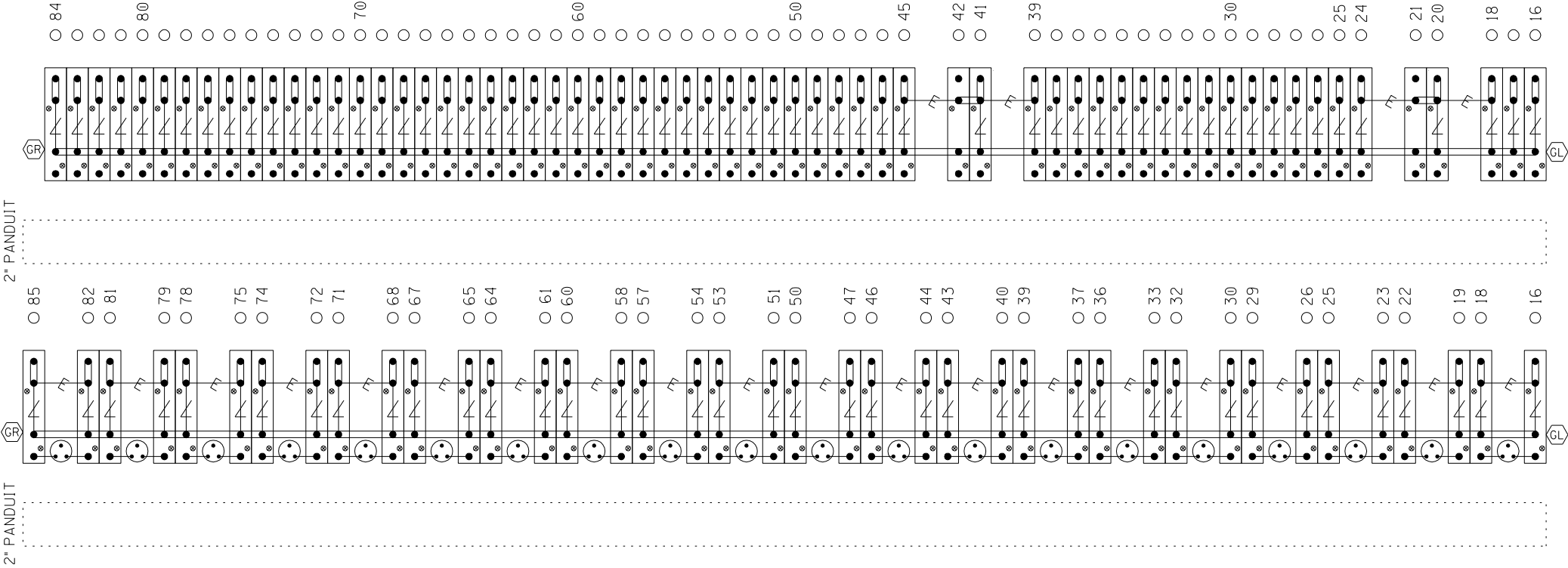
PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.

DESIGNED BY:	 <b>NORFOLK SOUTHERN</b>		
WOR 10-28-10			
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: S-87.94
IRE 10-28-10			
CHECKED BY:	BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)		
DBS 10-29-10			
IN SERVICE:	SANDUSKY DISTRICT		FILE NO. R-
	CADD or DWG. No. SNCS08794.17		SHEET No. 17 of 22

NOTE: IF THE FARADAY SHIELD WOULD EVER NEED TO BE DRILLED IN THE FIELD, PROPER PRECAUTIONS MUST BE TAKEN TO INSURE METAL SHAVINGS DO NOT GET INTO EXISTING TERMINALS/WIRES.

AREA BELOW IS SCALED WITH AS=.75

TERMINAL BOARD 1  
LEFT HALF  
"1A"  
"1B"



⚡ = Heavy Duty Equalizer  
(022700-1X)

Clearview  
⚡ = Lightning Arrester  
(022585-1X)

⦿ = LPC-10560-51

GR  
GL

= TERMINALS GROUNDED TO SHIELD.  
4 POST BLOCKS USE EITHER -  
GR - SERMMI PART NO. 61278  
GL - SERMMI PART NO. 61278-1.


TERMINAL BOARD 1  
LEFT TWO ROWS  
FARADAY SHIELD DETAIL - 1A & 1B

= INDICATES PLACEMENT  
OF PANDUIT

THIS SHEET IS FOR REFERENCE ONLY,  
TO REFLECT HOW THE FARADAY SHIELD  
IS PREDRILLED. ONLY INSTALL AND USE  
THE TERMINALS NEEDED.

REVISION  
INITIALS

PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.

DESIGNED BY: WOR 10-28-10	 <b>NORFOLK SOUTHERN</b>	
DRAWN BY: IRE 10-28-10	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: S-87.94
CHECKED BY: DBS 10-29-10	BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)	
IN SERVICE:	SANDUSKY DISTRICT	FILE No. R-
- -	CADD or DWG. No. SNCS08794.18	SHEET No. 18 of 22

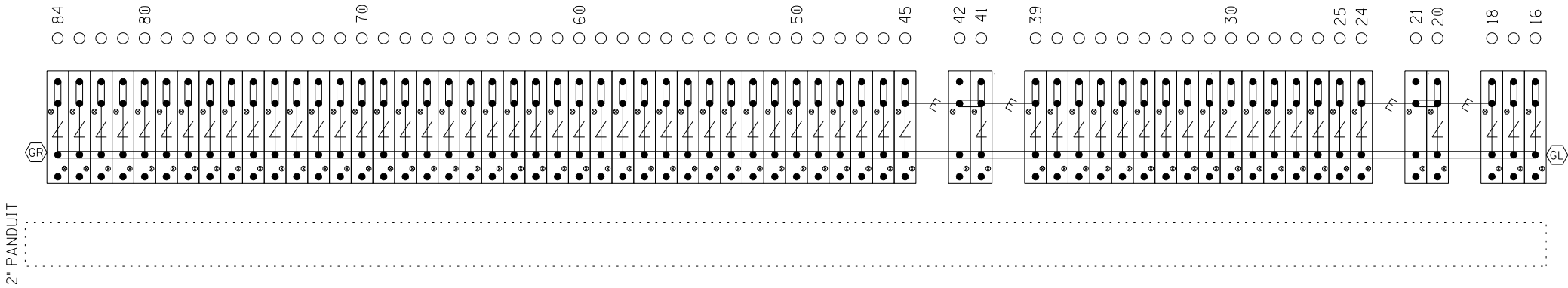


NOTE: IF THE FARADAY SHIELD WOULD EVER NEED TO BE DRILLED IN THE FIELD, PROPER PRECAUTIONS MUST BE TAKEN TO INSURE METAL SHAVINGS DO NOT GET INTO EXISTING TERMINALS/WIRES.

AREA BELOW IS SCALED WITH AS=.75

TERMINAL BOARD 1  
RIGHT HALF

"1C"



⚡ = Heavy Duty Equalizer  
(022700-1X)

∠ = Clearview  
Lightning Arrester  
(022585-1X)


⦿ = LPC-10560-51

GR = TERMINALS GROUNDED TO SHIELD.  
4 POST BLOCKS USE EITHER -  
GR - SERMMI PART NO. 61278  
GL - SERMMI PART NO. 61278-1.

TERMINAL BOARD 1  
RIGHT ROW  
FARADAY SHIELD DETAIL - 1C

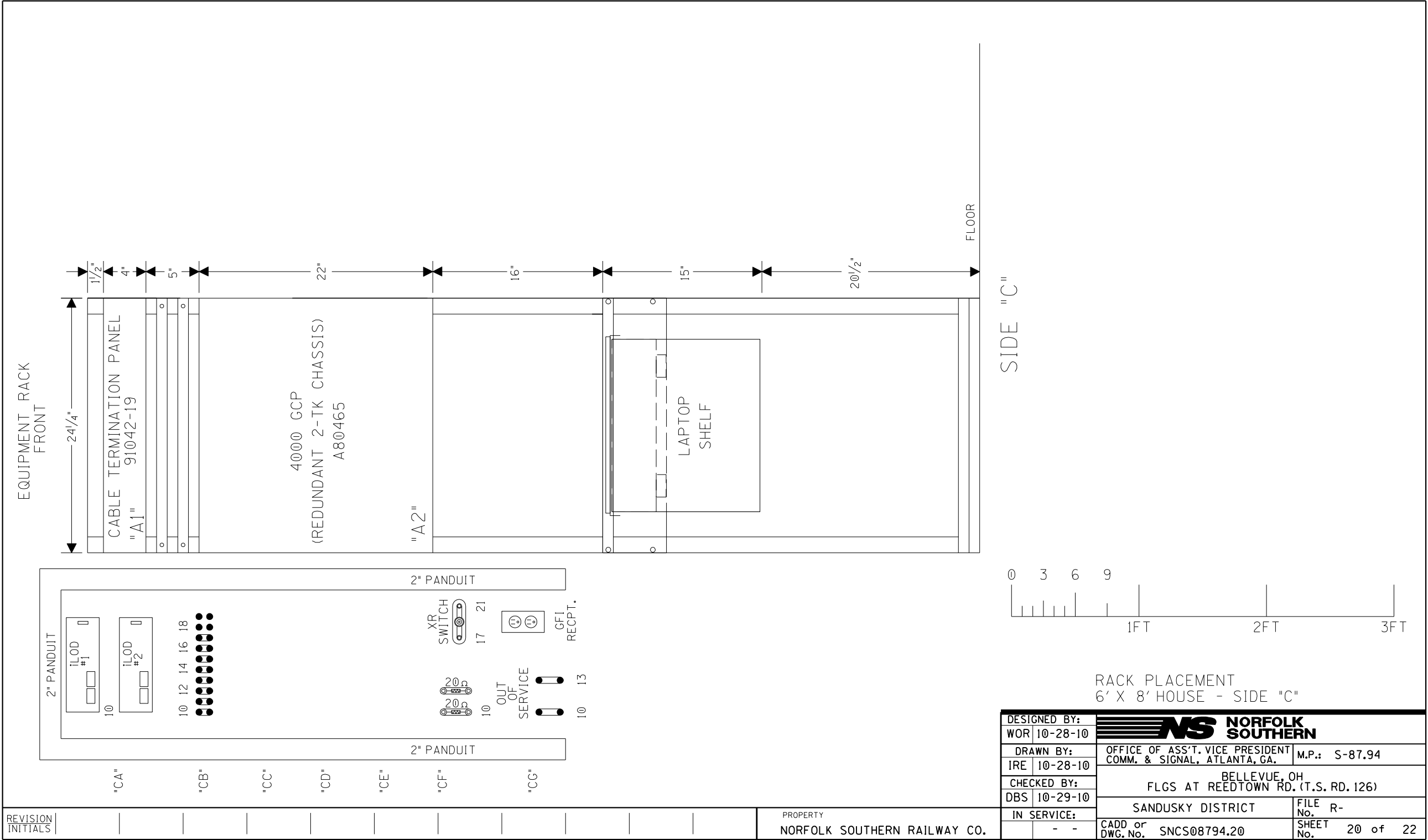
= INDICATES PLACEMENT  
OF PANDUIT

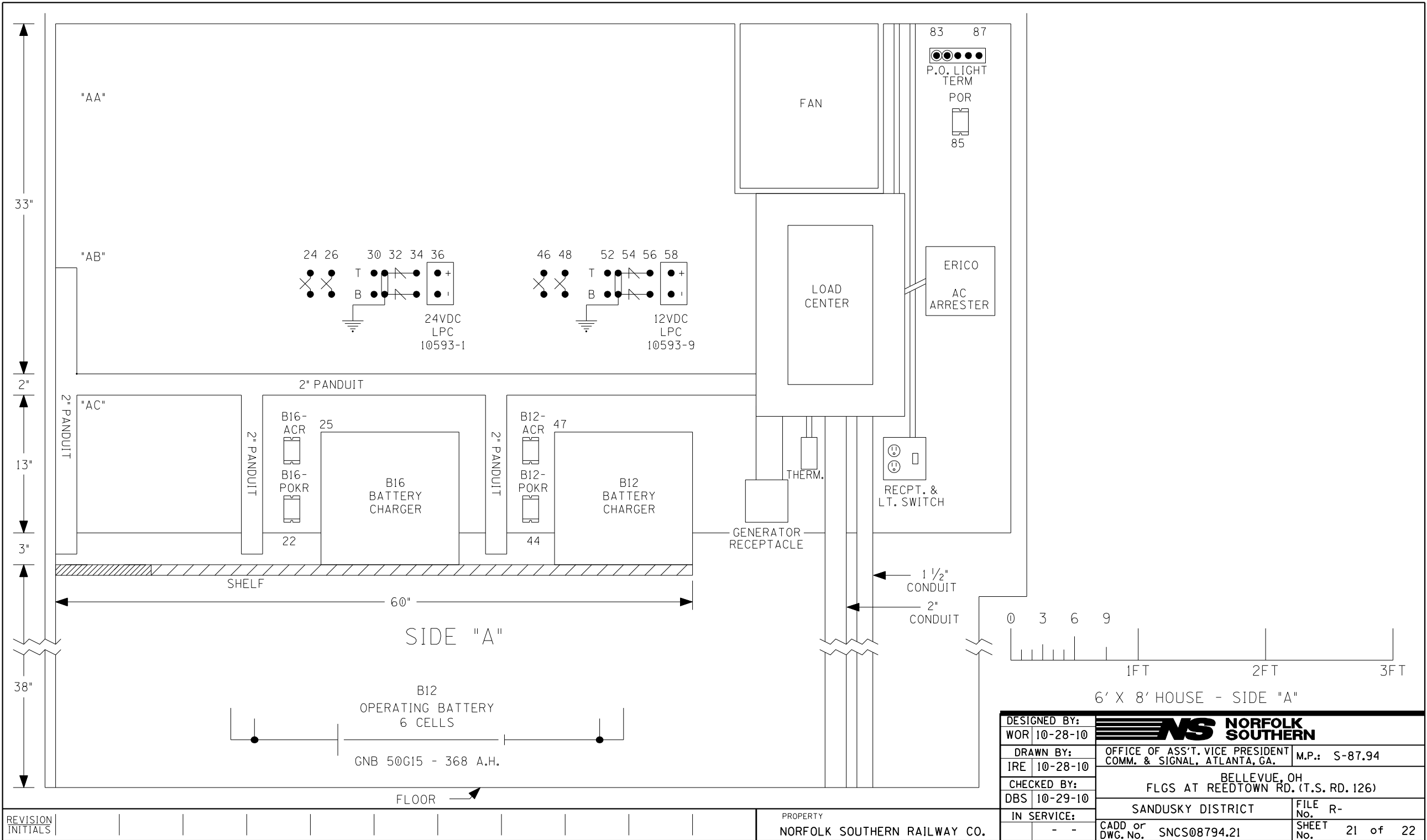
THIS SHEET IS FOR REFERENCE ONLY,  
TO REFLECT HOW THE FARADAY SHIELD  
IS PREDRILLED. ONLY INSTALL AND USE  
THE TERMINALS NEEDED.

DESIGNED BY:	 <b>NORFOLK SOUTHERN</b>		
WOR 10-28-10			
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: S-87.94
IRE 10-28-10			
CHECKED BY:	BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)		
DBS 10-29-10			
IN SERVICE:	SANDUSKY DISTRICT		FILE R-
	CADD or DWG. No. SNCS08794.19		SHEET 19 of 22

REVISION  
INITIALS


PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.

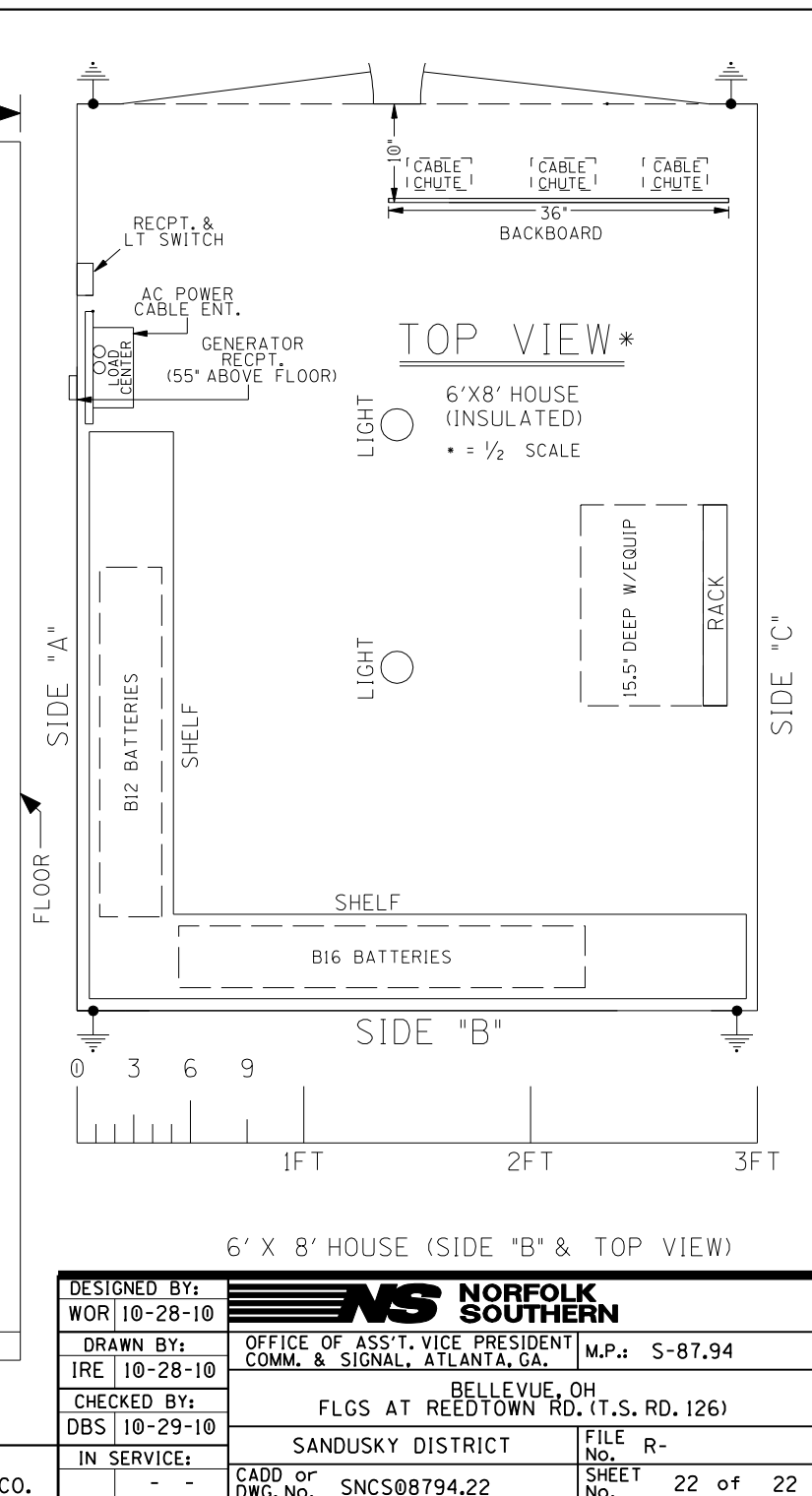




REVISION  
INITIALS

PROPERTY  
NORFOLK SOUTHERN RAILWAY CO.

DESIGNED BY:		 <b>NORFOLK SOUTHERN</b>	
WOR	10-28-10		
DRAWN BY:		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: S-87.94
IRE	10-28-10		
CHECKED BY:		BELLEVUE, OH FLGS AT REEDTOWN RD. (T.S. RD. 126)	
DBS	10-29-10		
IN SERVICE:		SANDUSKY DISTRICT	FILE R-
	- -	CADD or DWG. No. SNCS08794.21	SHEET No. 21 of 22



**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**11/1/2010 9:14:53 AM**

**in**

**Case No(s). 10-1003-RR-FED**

Summary: Correspondence Estimate, material list and design plans for Reedtown Road, DOT 481-620P, located in Bellevue, Seneca County, Oh electronically filed by Mr. Michael L Rappatta on behalf of Norfolk Southern Corp