



Norfolk Southern Corporation
650 West Peachtree St, NW
Atlanta, GA 30308

April 1, 2022
State PUC
No.: A-2020-3021103

To Whom It May Concern:

Please reference the state's project for modification of grade crossing warning devices at the locations referenced below.

Project #: 19.5214
Road: Custer Ave.
City: New Holland
State: PA
DOT: 517760X MilePost: HZ 28.36

Sincerely,

Kurt J. Young

Kurt J. Young

A-2020-3021103

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REVISIONS


1	01-01-21	TAH	RSD	BES
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NEW PLAN DRAWN ACCOUNT CROSSING UPGRADE AT CUSTER AVE.

PROJECT: #19.5214

IN SERVICE: - -

PER:

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.:	HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21	NEW HOLLAND SEC.		
CHECKED BY:	REV. 1		
BES 01-01-21	CADD or DWG. No. 13332836.NX1		
IN SERVICE:	SHEET INDEX 1		

PROPERTY
PENNSYLVANIA R.R.

TO GREENFIELD

R.R. WEST
M.P. INCREASING

110*

A-2020-3021103

TO EAST EARL

R.R. EAST
M.P. DECREASING

NOTES:

1. MAX. TRAIN SPEED 30 M.P.H.
2. LATITUDE N 40° 06' 00" LONGITUDE W 76° 05' 26" ELEVATION 531'
3. SIGNAL "A" TO HAVE BELL.
4. LOCATE U/G UTILITIES & CABLE BEFORE DIGGING.
5. CROSSING LOCATED IN LANCASTER COUNTY.
6. NEAREST STREET ADDRESS IS 117 CUSTER AVENUE 87' (SOUTH)
7. NEAREST INTERSECTING STREET IS FRANKLIN STREET (NORTH)
8. DISTANCE TO NEAREST INTERSECTING STREET IS 82 FT.

O.H. CATV LINE (V.O.H.C. 28')

O.H. POWER LINE (V.O.H.C. 31'N,31',41')

O.H. PHONE LINE (V.O.H.C. 27')

U.G. GAS LINE

(A)

SIG "A"

DITCH
18"RCP

GCP4000

430 HZ T1 5.9 KHZ

U.G. WATER LINES

GRAVEL LOT

O.H. PHONE LINE (V.O.H.C. 26'G,27',28',29',30')

(C)

SIDEWALK

R.O.W.

MAINLINE 130# CWR

9. 15 CU. YRDS. OF FILL REQUIRED IN QUADRANT "A"-FOR NEW WARNING DEVICE
- 5 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"-FOR NEW WARNING DEVICE
- 10 CU. YRDS. OF FILL REQUIRED IN QUADRANT "B"-FOR NEW CROSSING HOUSE
10. EXTEND 18" RCP CULVERT IN QUADRANT "A" 10'.

11. FIELD FORCES TO REPLACE NON-INSULATED GAUGE RODS WITH INSULATED ONE'S LOCATED WEST OF CROSSING ON SIDING (205', 217', 233', 235')

12. RAISE/RELOCATE OVERHEAD LINE IN QUADRANT "B" - CONTACT: PHONE-FRONTIER (717) 355-7337

13. UTILITIES IN THE AREA - CONTACT:
WATER/SEWER-NEW HOLLAND (717) 354-4567
GAS- EDL (401) 943-8350
GAS-UGI (800) 276-2722

14. NS FORCES TO REPAIR THE EXISTING CROSSING SURFACE AT CUSTER AVE.

15. FIELD FORCES TO BOND/INSULATE AND ADD FOULING FOR SWITCH LOCATED 59' WEST OF CROSSING. ALSO, INSTALL CLEARANCE JOINTS AT THE CLEARANCE POINT, 14' BETWEEN TRACK CENTERS.

16. FIELD FORCES TO BOND/INSULATE AND ADD FOULING FOR SWITCH LOCATED 34' EAST OF CROSSING. ALSO, INSTALL CLEARANCE JOINTS AT THE CLEARANCE POINT, 14' BETWEEN TRACK CENTERS.

17. INSTALL XMIT WIRES JUST PAST NEW FOULING WIRE FOR SWITCH LOCATED 34' EAST OF CROSSING.

18. INSTALL RECV WIRES JUST PAST NEW FOULING WIRE FOR SWITCH LOCATED 59' WEST OF CROSSING.

19. FIELD FORCES TO BOND/INSULATE SWITCH LOCATED 897' EAST OF CROSSING.

12"CMP

DITCH

29'

GAS VENT

U.G. GAS LINE

(D)

GAS VENT

FENCED FIELD

O.H. CATV LINE (V.O.H.C. 28')

O.H. POWER LINE (V.O.H.C. 31'N,31',41')

O.H. PHONE LINE (V.O.H.C. 27')

U.G. GAS LINE

U.G. SEWER LINE

SIDEWALK

U.G. STORM SEWER LINE

CUSTER AVENUE # 517 760X

O.H. PHONE LINE (V.O.H.C. 26'G,27',28',29',30')

SIDEWALK

U.G. WATER LINES

PROPERTY PENNSYLVANIA R.R.

ASPHALT LOT

(B)

20'

6'X6'

AC SERVICE

U.G. GAS LINE

31'

R.O.W.

STATE PROJECT NO. A-2020-302110

IN SERVICE _____ SIGNED _____ DATE _____

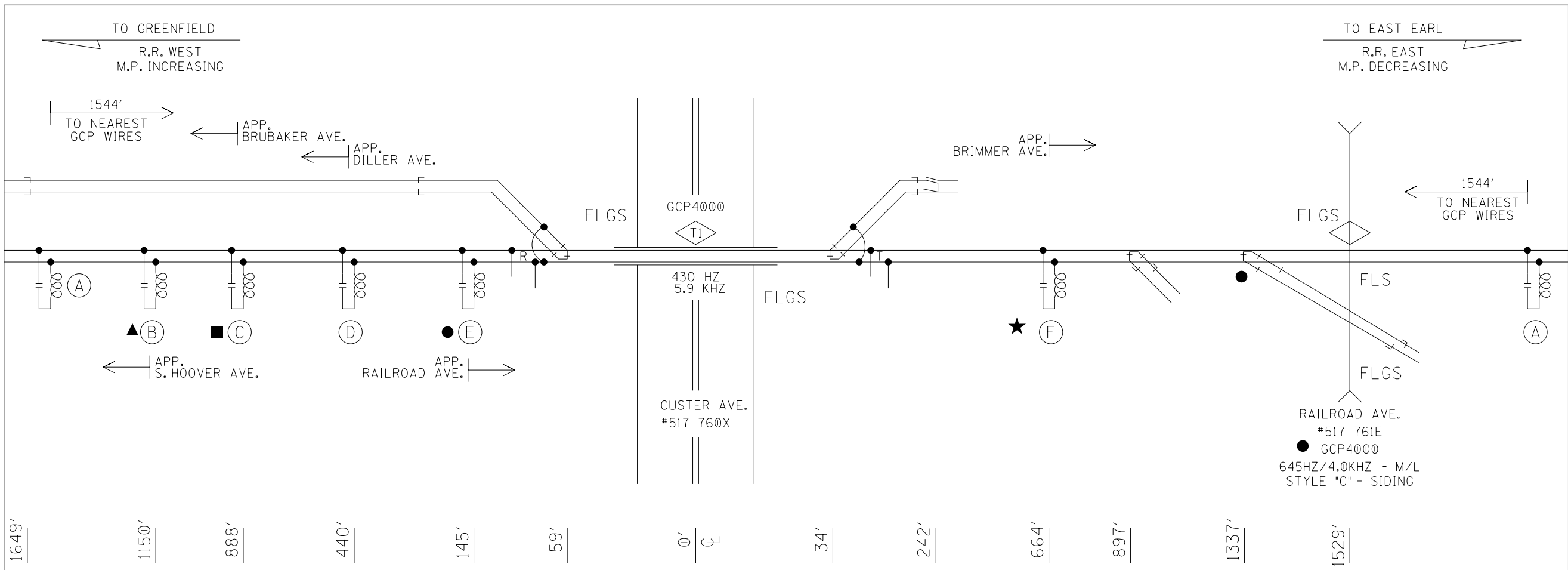
- S&E ENGINEERING COPY
- CONSTRUCTION OFFICE COPY
- RETURN TO S&E ENG. AFTER COMPLETION
- FIELD COPY
- RETURN TO CASE AFTER COMPLETION
- PROJECT ENGINEER COPY

SCALE: 1" = 20'
PROJECT #19.5214

LAYOUT FILE CX No.

DESIGNED BY:	TAH 01-01-21	
DRAWN BY:	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	
RSD 01-01-21	M.P.: HZ-028.36	
CHECKED BY:	BES 01-01-21	
IN SERVICE:	-	
NEW HOLLAND, PA FLGS AT CUSTER AVE.		
NEW HOLLAND SEC.	REV. 1	
CADD or DWG. No. 13332836.01	SHEET No. 1	

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



1649' 1150' 888' 440' 145' 59' 0' 34' 242' 664' 897' 1337' 1529'

- ▲ - WORK WITH PROJECT# 19.5972
- - WORK WITH PROJECT# 19.5973
- - WORK WITH PROJECT# 19.5974
- ★ - WORK WITH PROJECT# 19.5256

Ⓐ - MF-NBS FSS-1E 250849-004 (430HZ) ★ Ⓕ - MF-NBS FSS-1A 250849-000 (267HZ)

▲ Ⓑ - MF-NBS FSS-1F 250849-005 (525HZ)

■ Ⓒ - MF-NBS FSS-1F 250849-005 (970HZ)

Ⓓ - NBS-62775-790HZ

● Ⓔ - MF-NBS FSS-1F 250849-005 (645HZ)

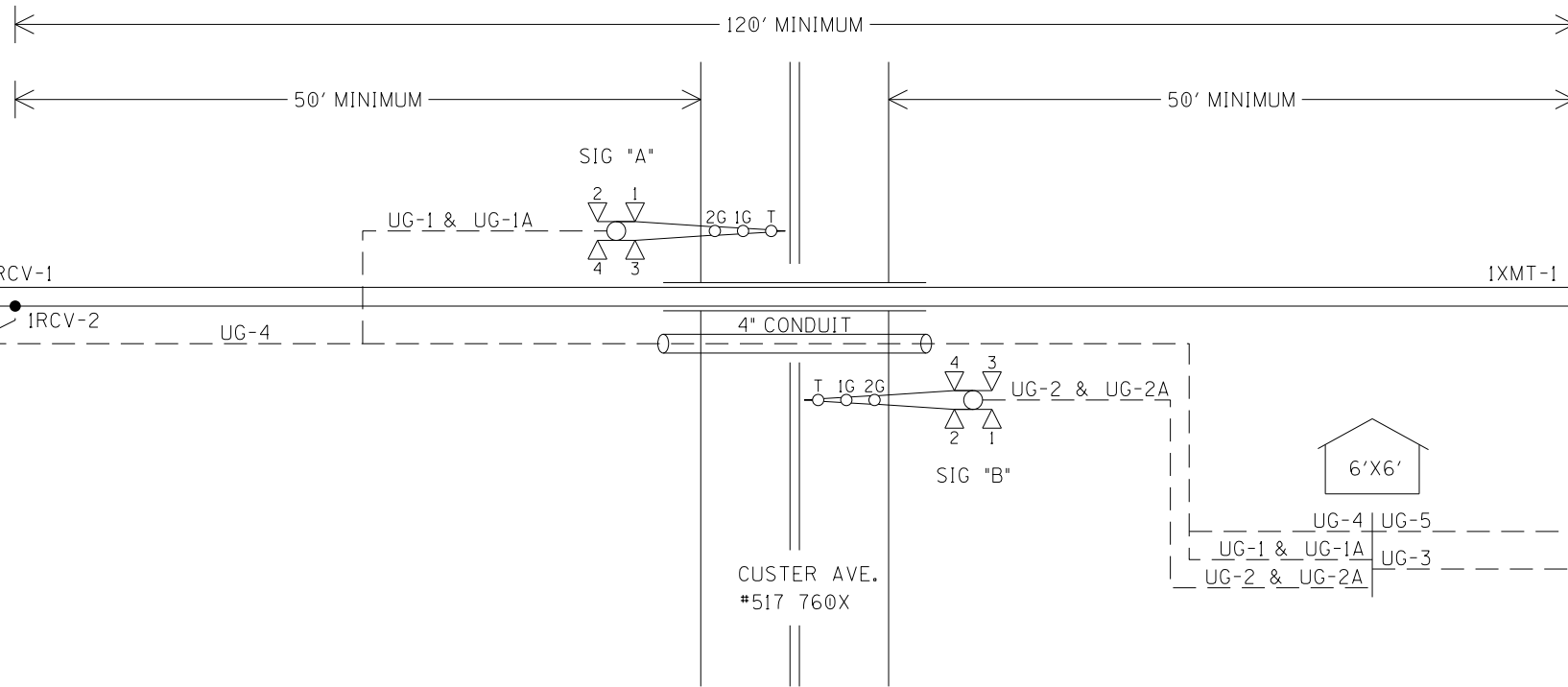
PROFILE

DESIGNED BY:			
TAH	01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:		NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD	01-01-21		
CHECKED BY:		NEW HOLLAND SEC.	REV. 1
BES	01-01-21	CADD or DWG. No.	13332836.02
IN SERVICE:	- -		SHEET No. 2

PROPERTY
PENNSYLVANIA R.R.

TO GREENFIELD
R.R. WEST
M.P. INCREASING

TO EAST EARL
R.R. EAST
M.P. DECREASING



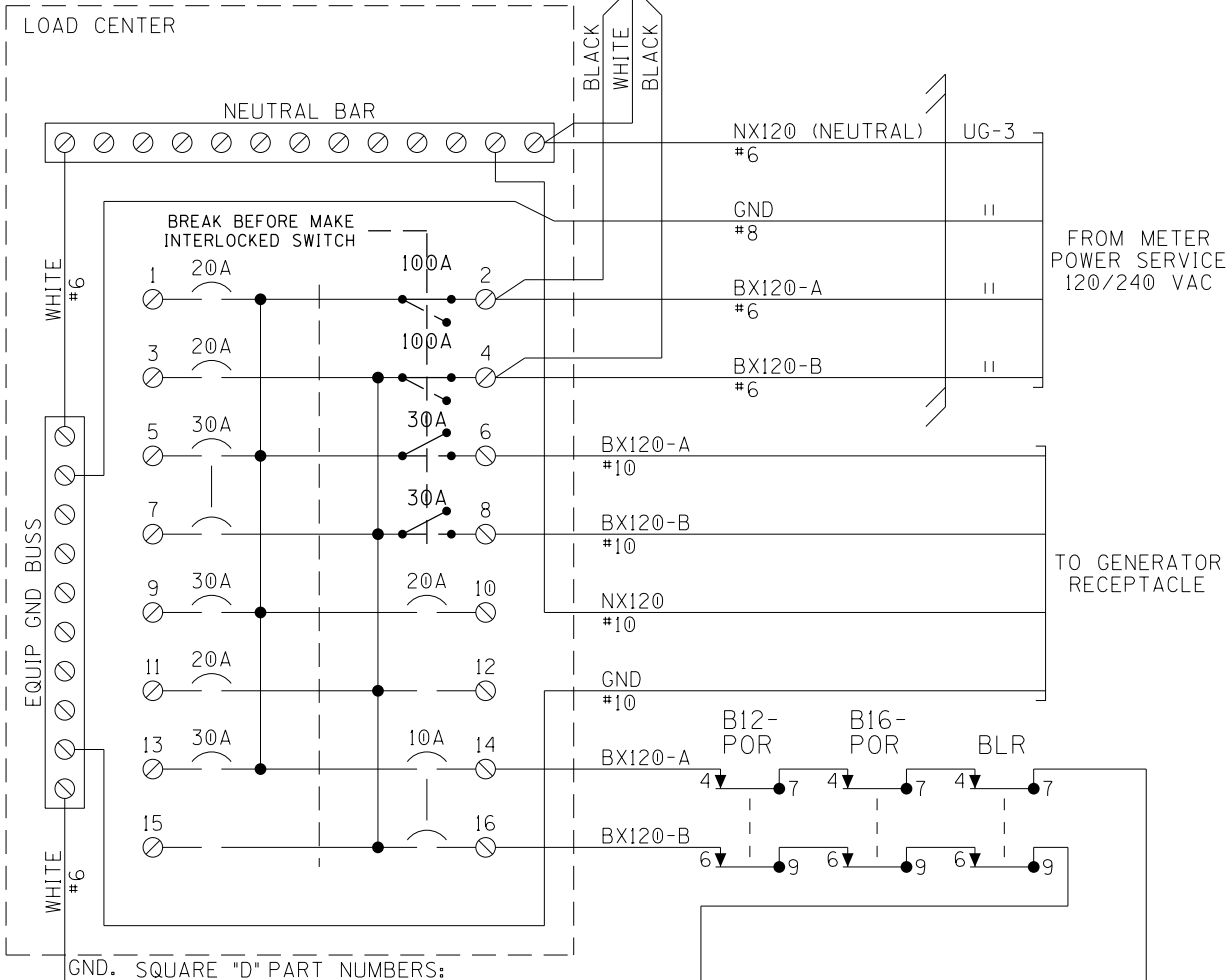
UG-1-5CUG #6 AEC AEZ AEB B16-A N16-A	UG-1A-12CUG #14 AXG NAXG AXX IAXX AGD XGP1 AGBX120 AGNX120 SPARE SPARE SPARE SPARE	UG-2A-12CUG #14 BXG NBXG BXX IBXX BGD XGP1 XGP BCBX120 BGNX120 SPARE SPARE SPARE	UG-3-3CUG #6 W/#8 GND BX120-A BX120-B NX120 GND	UG-4-TW. PR. #6 IRCV-1 IRCV-2
UG-2-5CUG #6 BEC BEZ BEB B16-B N16-B				UG-5-TW. PR. #6 1XMT-1 1XMT-2

CABLE PLAN

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21			
CHECKED BY:			
BES 01-01-21	NEW HOLLAND SEC.		REV. 1
IN SERVICE:	CADD or DWG. No. 13332836.03		SHEET 3 No.

PROPERTY
PENNSYLVANIA R.R.

LEA
SP50-240SP



SQUARE "D" PART NUMBERS:

LOAD CENTER — Q0132L125G

10A 2P CIR BKR — Q0210

15A 2P CIR BKR — Q0215

20A 1P CIR BKR — Q0120

30A 1P CIR BKR — Q0130

30A 2P CIR BKR — Q0230

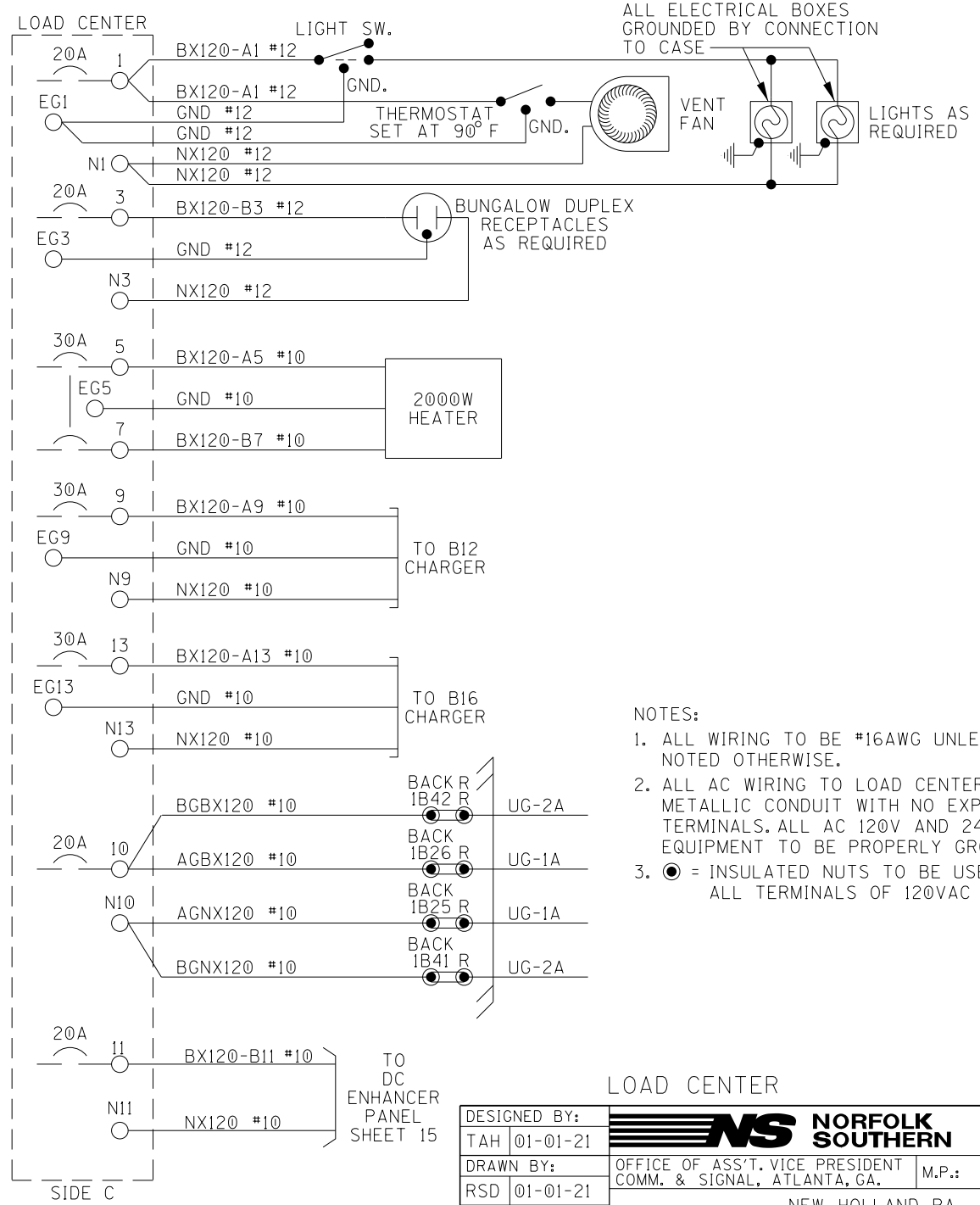
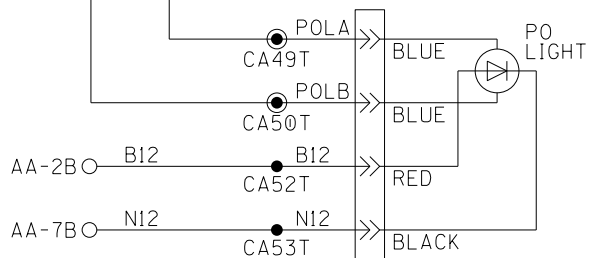
60A 2P CIR BKR — Q0260

100A 2P CIR BKR — Q02100

MECH INTERLOCK — PK4DTIM4LA

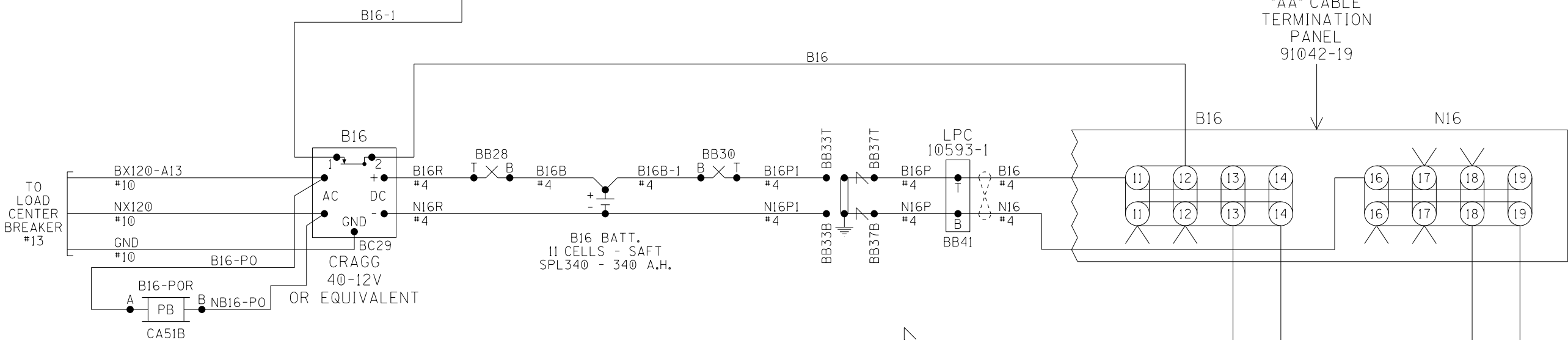
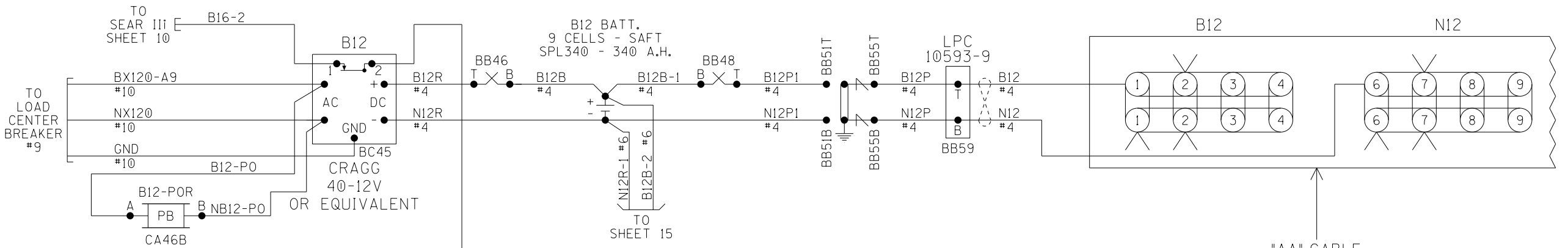
GENERATOR RECEPTACLE:

MALE CONNECTOR — NEMA L1430-FI

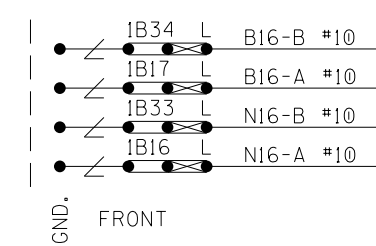
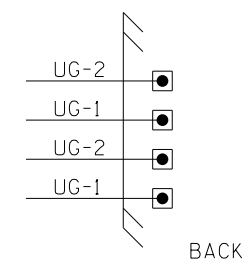
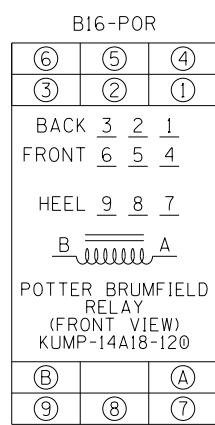
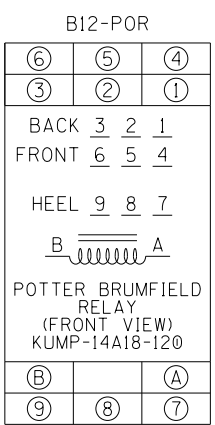


- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. ALL AC WIRING TO LOAD CENTER TO BE IN METALLIC CONDUIT WITH NO EXPOSED TERMINALS. ALL AC 120V AND 240V EQUIPMENT TO BE PROPERLY GROUNDED.
 3. ● = INSULATED NUTS TO BE USED ON ALL TERMINALS OF 120VAC AND ABOVE.

DESIGNED BY:	TAH 01-01-21		
DRAWN BY:	RSD 01-01-21		
CHECKED BY:	BES 01-01-21	M.P.: HZ-028.36	
IN SERVICE:	- -	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
PROPERTY	PENNSYLVANIA R.R.	NEW HOLLAND SEC.	REV. 1
		CADD or DWG. No. 13332836.04	SHEET 4 No.



"AA" CABLE
TERMINATION
PANEL
91042-19

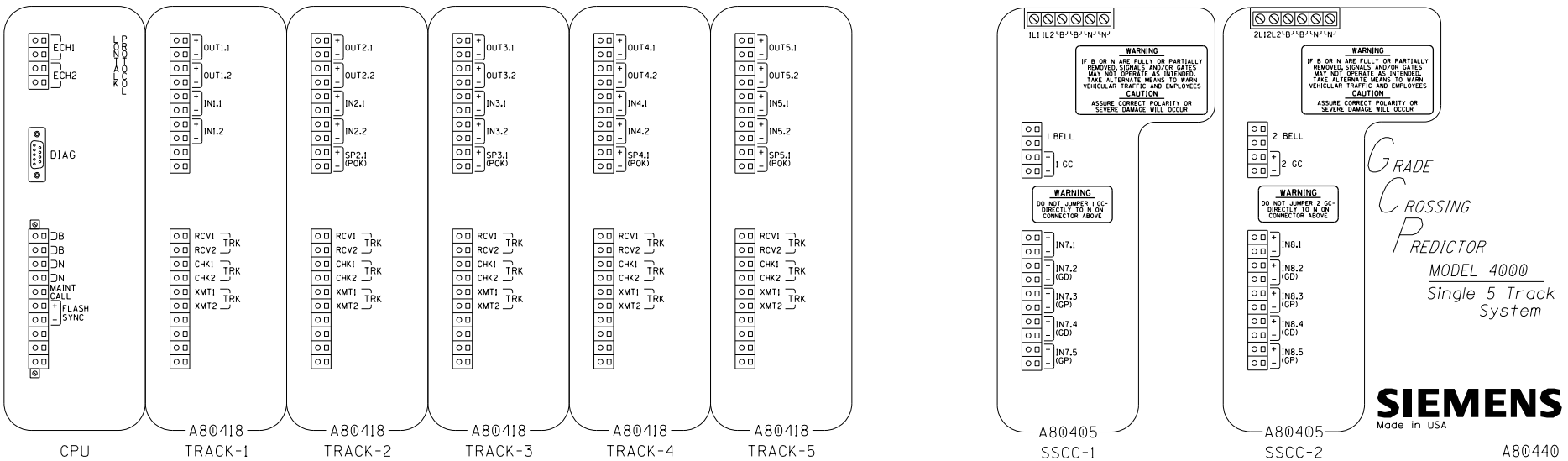


- NOTES:
- ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 - = TWIST

CHARGERS & BATTERIES

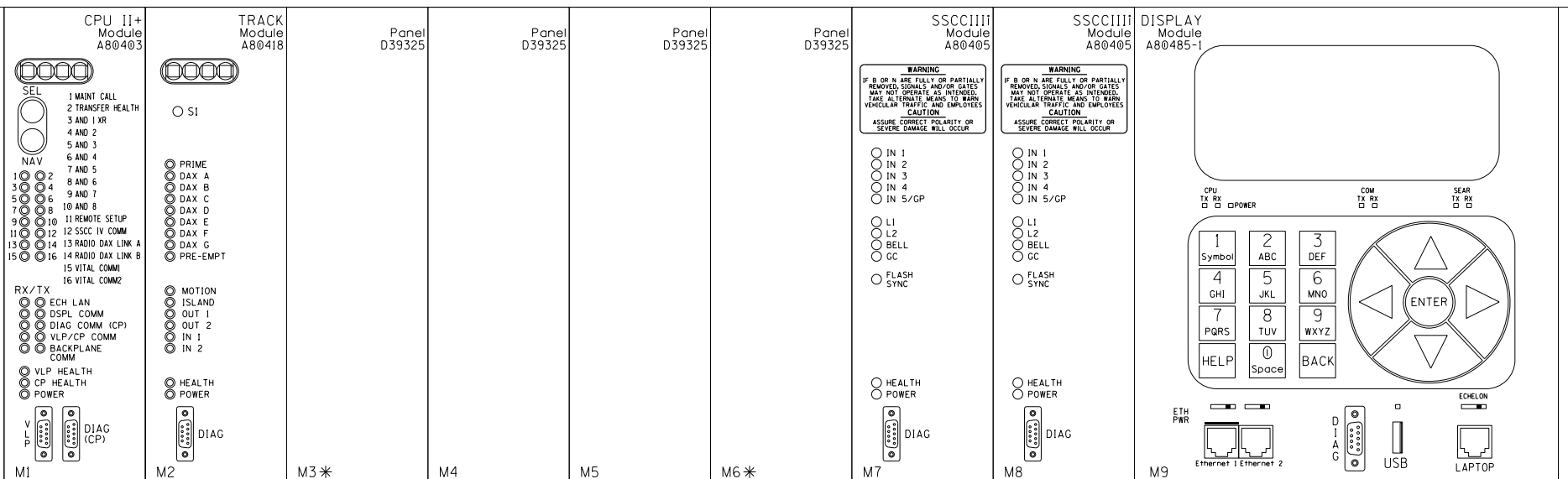
DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	
CHECKED BY:	REV. 1	
BES 01-01-21	CADD or DWG. No. 13332836.05	
IN SERVICE:	SHEET 5	

PROPERTY
PENNSYLVANIA R.R.

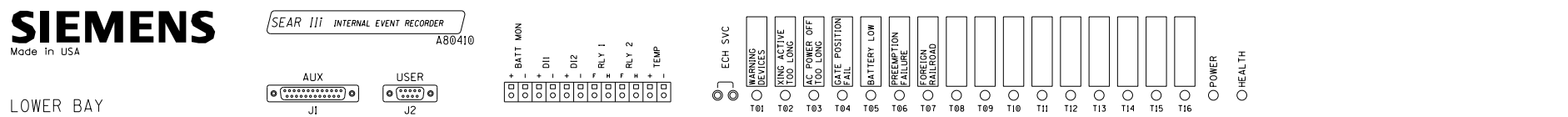


WARNING
REMOVAL OF THE SSCCIII MODULE WILL CAUSE THE GATE(S) TO DROP WITHOUT GATE DELAY AND FLASHING LIGHTS WILL NOT ACTIVATE.

CAUTION
ENSURE CORRECT POLARITY OF B AND N FOR SSCCIII MODULE OR SEVERE DAMAGE WILL OCCUR.
REFER TO DETAILED INSTRUCTIONS ON THE SSCCIII BEFORE APPLYING POWER TO THE POWER CONNECTOR(S).



* = MAY USE RIO IN 2nd AND/OR 5th TRACK SLOTS (M3 & M6)



GCP4000 CHASSIS & MODULE LAYOUT

DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:		
BES 01-01-21	NEW HOLLAND SEC.	REV. 1
IN SERVICE:	CADD or DWG. No. 13332836.06	SHEET No. 6

PROPERTY
PENNSYLVANIA R.R.

Program Report

Location and SIN

DOT Number: 517760X
Milepost Number: HZ-28.36
Site Name: CUSTER AVE

SIN: 755048809416

MCF and Template Selection

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

Template = 1A:6 Trk Bi

Check Numbers

Office Check No. (DT 4.6.0): 111CA620
Office Check Number: 111CA620
Config. Check Number: 77E4266B
(Based on MCF Revision 021)

Comments

Program

BASIC: module configuration
Track 1 Slot = Track
Track 2/RIO 1 Slot = Not Used
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 = SSCC3i
SSCC-2 Slot = SSCC3i
SEAR Used = Yes

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

BASIC: island operation
Track 1: 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: VitalComms links
VitalComms link 1 Used = No
VitalComms 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

GCP: track 1
Track 1: GCP Freq Category = Standard
Track 1: GCP Frequency = 430 Hz
Track 1: Approach Distance = 1544 ft
Track 1: Uni/Bi/Sim-Bidirnl = Bidirnl
Track 1: GCP Transmit Level = Medium
Track 1: Island Connection = Isl1
Track 1: Island Distance = 220 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 CtrlIP 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

ISLAND: track 1
Track 1: Isl Frequency = 5.9 kHz
Track 1: Pickup Delay (2s +) = 0 sec
Track 1: 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 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
OOS Control = Display+OOS IPs
OOS Timeout = Yes
OOS Timeout = 1 hrs

ADVANCED: out of service 2
TI OOS Control = OOS Input 1

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

ADVANCED: trk 1 overrides
Track 1: All Predictors 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

GCP4000 PROGRAMMING

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21			
CHECKED BY:			
BES 01-01-21	NEW HOLLAND SEC.		REV. 1
IN SERVICE:	CADD or DWG. No. 13332836.07		SHEET No. 7

PROPERTY
PENNSYLVANIA R.R.

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

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

SSCC: 1
 SSCC-1 Activation = AND 1 XR
 SSCC-1 Gate Delay = 6 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 NeutralTest = Off
 Aux-1 Xng CtrlUsed = No

SSCC: 2
 SSCC-2 Activation = AND 1 XR
 SSCC-2 Gate Delay = 6 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 NeutralTest = Off
 Aux-2 Xng CtrlUsed = No

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

INPUT: assignment page 1
 IN 1.1 = AND 1 XR Enable
 IN 1.2 = 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 = Out Of Service IP 1
 IN 8.2 = Not Used
 IN 8.3 = Not Used
 IN 8.4 = Not Used
 IN 8.5 = Not Used

SEAR
 SEAR Subnode = 3
 DI 1 = Not Used
 DI 2 = Not Used
 Rly 1 = General
 Rly 2 = Not Used

SEAR: inputs
 SP 2.1 = POK 1
 SP 3.1 = Not Used
 SP 4.1 = Not Used
 SP 5.1 = Not Used
 SP 6.1 = Not Used

SEAR: slot 1-4 inputs
 IN 1.2 = Not Used
 IN 2.1 = Not Used
 IN 2.2 = 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 = Not Used
 IN 8.2 = Not Used
 IN 8.3 = Not Used
 IN 8.4 = Not Used
 IN 8.5 = Not Used

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

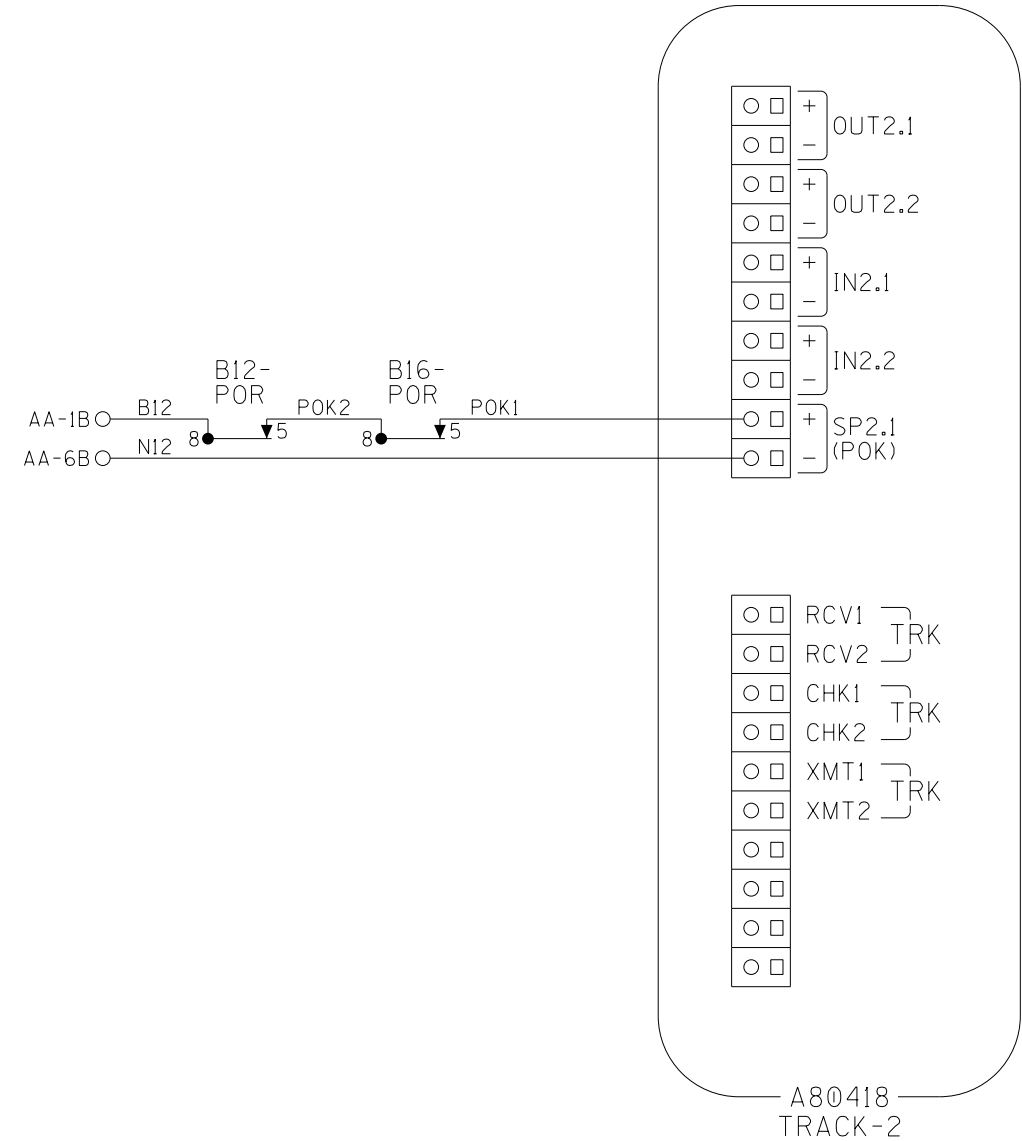
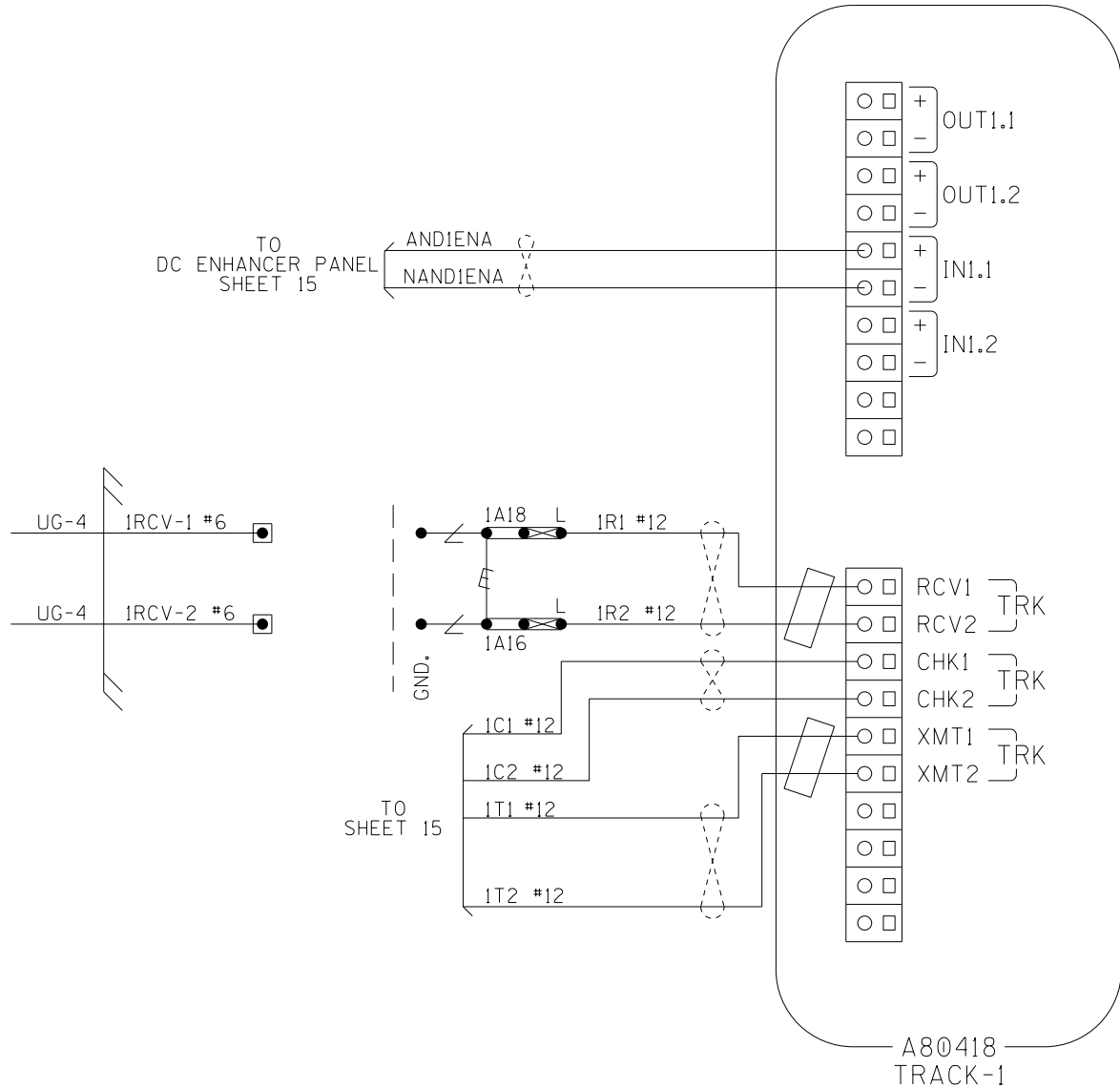
Configuration Package File

 Filename: 13332836.pac

GCP4000 PROGRAMMING

DESIGNED BY:			
TAH	01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:		NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD	01-01-21		
CHECKED BY:		NEW HOLLAND SEC.	
BES	01-01-21	REV.	1
IN SERVICE:		CADD or DWG. No.	13332836.08
	- -	SHEET	8

PROPERTY
 PENNSYLVANIA R.R.



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. = TWIST
 3. = FERRITE BEAD

CONNECTORS FOR TRACK MODULES

DESIGNED BY:	TAH 01-01-21		M.P.: HZ-028.36
DRAWN BY:	RSD 01-01-21		
CHECKED BY:	BES 01-01-21	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
IN SERVICE:	- -	NEW HOLLAND SEC.	REV. 1
PROPERTY	PENNSYLVANIA R.R.	CADD or DWG. No. 13332836.09	SHEET 9 No.

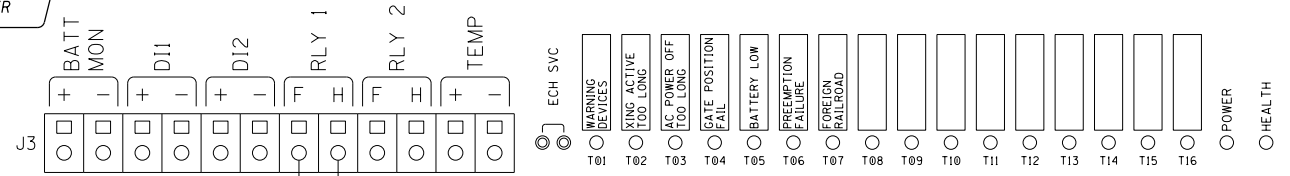
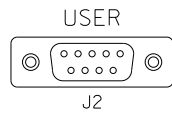
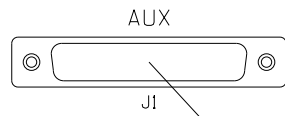
SIEMENS

Made in USA

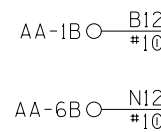
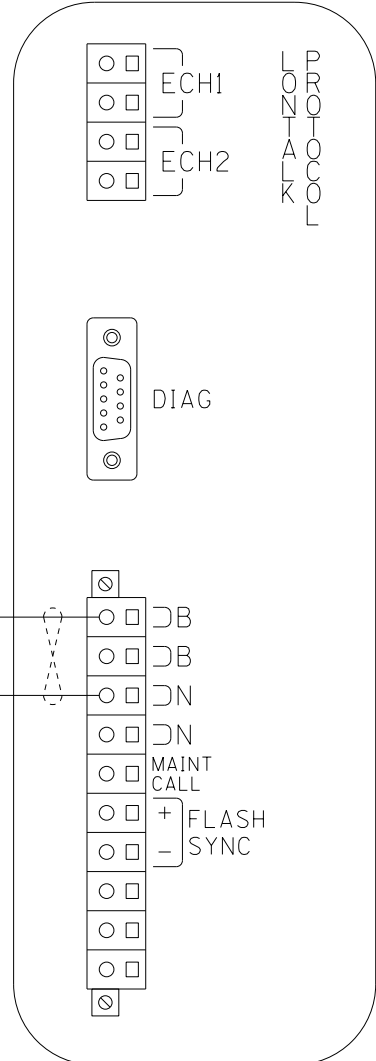
SEAR III INTERNAL EVENT RECORDER

A80410

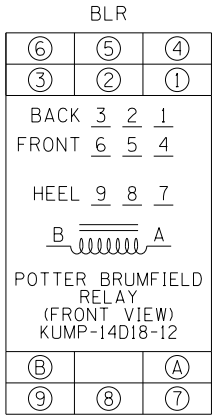
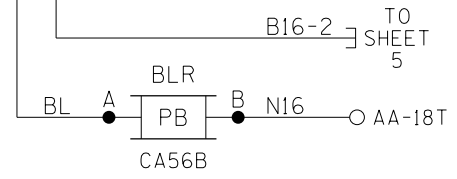
LOWER BAY



TO RADIO SHEET 12



CPU



- NOTES:
- ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 - = TWIST

CPU MODULE & SEAR III HOOK-UP

DESIGNED BY:	TAH	01-01-21	
DRAWN BY:	RSD	01-01-21	
CHECKED BY:	BES	01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.36
IN SERVICE:	-	-	NEW HOLLAND, PA FLGS AT CUSTER AVE.
PROPERTY	PENNSYLVANIA R.R.		NEW HOLLAND SEC. REV. 1
			CADD or DWG. No. 13332836.10 SHEET No. 10

SITE SET UP PROCEDURE	
FUNCTION	LED DISPLAY
SITE NAME	CUSTER AVE.
MILEPOST	HZ-028.36
DOT NUMBER	517-760X
TESTER TYPE	CROSSING
AUTO DST ADJUST	NO
TIMEZONE	OTHER
GMT OFFSET	-00:00
DATE FORMAT	MM-DD-YYYY
TEMP. FORMAT	FAHRENHEIT
INDICATE HOLDOFF (SEC)	0
INDICATE REFRESH (SEC)	60
GEO CTL REFRESH (SEC)	0
SITE ADDRESS (ATCS)	7.550.488.094.03.01
SITE TYPE	NO COMMUNICATION
# OFFICE ADDRESS (ATCS)	2.550.00.0000
# PRIMARY HOP ADDR	7.550.488.092.03.01
# 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 DEVICE	NONE
★ USER PORT BAUD	57600
★ USER PORT DATA BITS	8
★ USER PORT PARITY	NONE
★ USER PORT STOP BITS	1
★ USER PORT FLOW CONTROL	NONE
★ AUX PORT BAUD	9600
★ AUX PORT DATA BITS	8
★ AUX PORT PARITY	NONE
★ AUX PORT STOP BITS	1
★ AUX PORT FLOW CONTROL	NONE

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
THE QUESTION	SELECT FROM MENU OPTION
RESET NAMES AND MODULES?	YES
RAILROAD NUMBER?	550
CROSSING CONFIGURATION?	NORMAL
AND1 USED AS XR?	YES
AND2 USED AS XR?	NO
AND3 USED AS XR?	NO
AND4 USED AS XR?	NO
AND5 USED AS XR?	NO
AND6 USED AS XR?	NO
AND7 USED AS XR?	NO
AND8 USED AS XR?	NO
* XR CONTROLLED BY FOREIGN RR?	(AND1, AND2, AND3, AND4 AND5, AND6, AND7, AND8)
ENTRANCE GATES?	2
85% VOLTAGE RELAY OUT?	YES
BATTERY BANKS?	2
BATT MON USED?	YES
PREEMPTION?	NO
INTERNAL CROSSING CONTROLLERS?	2
EXTERNAL CROSSING CONTROLLERS?	0
VHF COMMUNICATOR?	NO
DTMF ACTIVATION?	NO
ILOD MODULES?	0
USE CELL MODEM NON-CRITICAL FEATURE?	NO


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

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

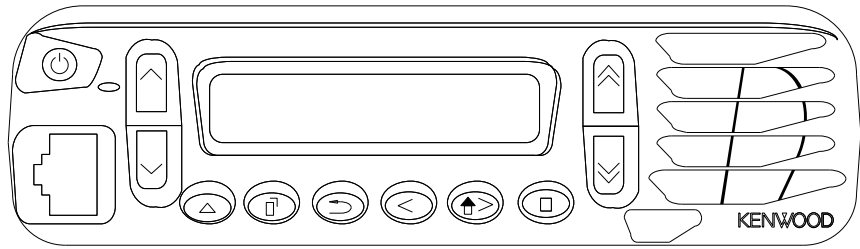
NOTES:

1. # = NOT DISPLAYED IF SITE TYPE = NO COMMUNICATION
2. ★ = USE DEFAULT SETTINGS
3. * = ONLY DISPLAYED IF CROSSING CONFIGURATION = SPLIT GATE

SEAR III PROGRAMMING

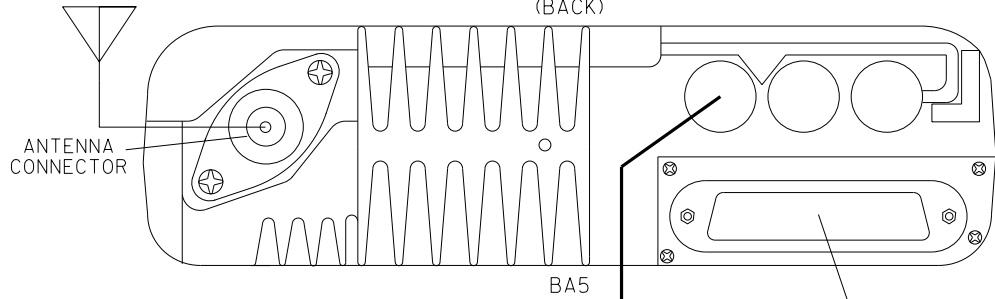
DESIGNED BY:	TAH 01-01-21		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	RSD 01-01-21			
CHECKED BY:	BES 01-01-21	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
IN SERVICE:	- -	NEW HOLLAND SEC.	REV. 1	
PROPERTY PENNSYLVANIA R.R.		CADD or DWG. No. 13332836.11	SHEET No. 11	

(FRONT)



KENWOOD RADIO NX-700H
OR EQUIVALENT

(BACK)



BA5

DB25M - DB25M
STRAIGHT THROUGH CABLE } TO
SEAR III SHEET 10

CABLE - KENWOOD
P/N E30-7520-15

AA-2B ○ B12
AA-7B ○ N12
B12
N12



BB5

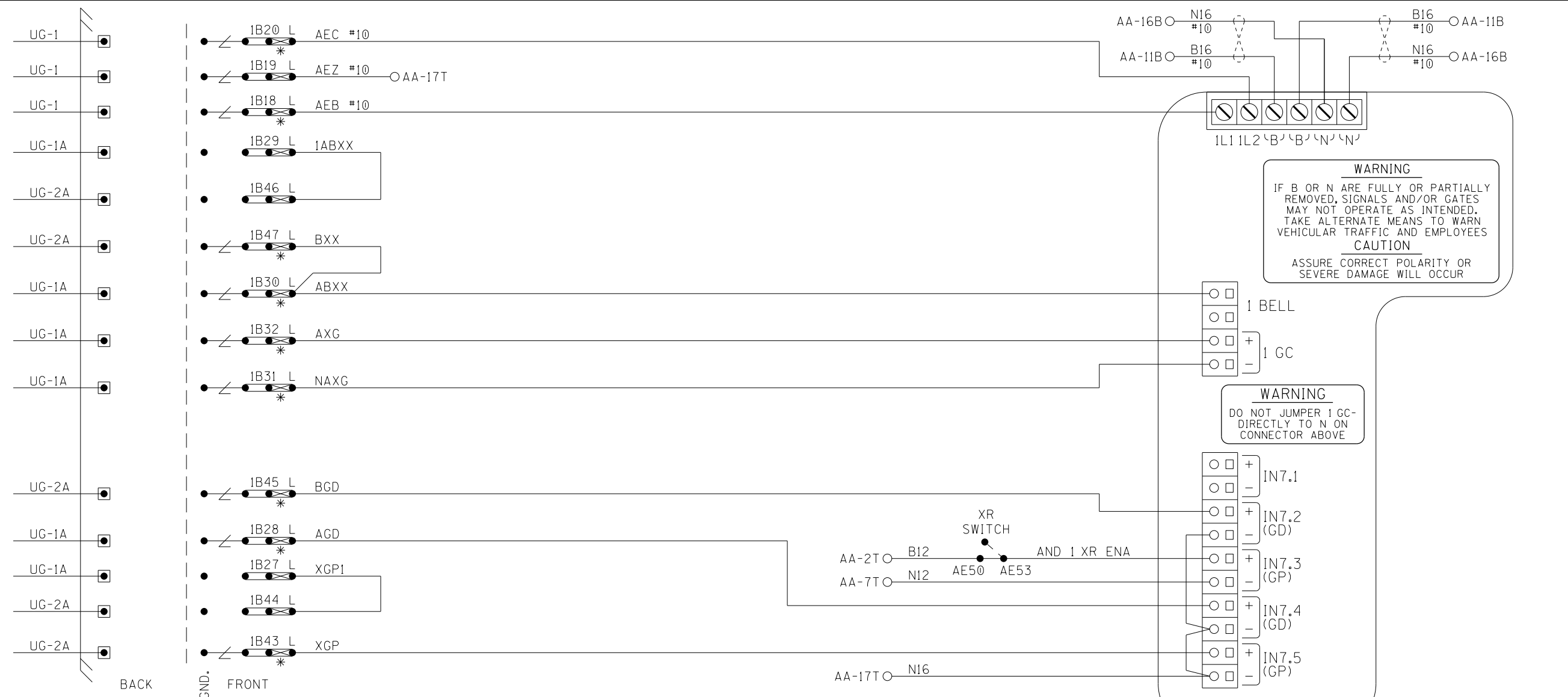
NOTE:

1. ALL WIRING TO BE #10AWG UNLESS NOTED OTHERWISE.

BACKHAUL EQUIPMENT

DESIGNED BY:			
TAH	01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:		NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD	01-01-21		
CHECKED BY:		NEW HOLLAND SEC.	REV. 1
BES	01-01-21		
IN SERVICE:		CADD or DWG. No.	13332836.12 SHEET No. 12

PROPERTY
PENNSYLVANIA R.R.



- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. * = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
 3. = TWIST

SSCC#1 MODULE HOOK-UP

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21	NEW HOLLAND SEC.		
CHECKED BY:	- -		REV. 1
BES 01-01-21	CADD or DWG. No. 13332836.13		SHEET No. 13
IN SERVICE:	PENNSYLVANIA R.R.		



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
CAUTION
 ASSURE CORRECT POLARITY OR SEVERE DAMAGE WILL OCCUR

WARNING
 DO NOT JUMPER 2 GC-DIRECTLY TO N ON CONNECTOR ABOVE

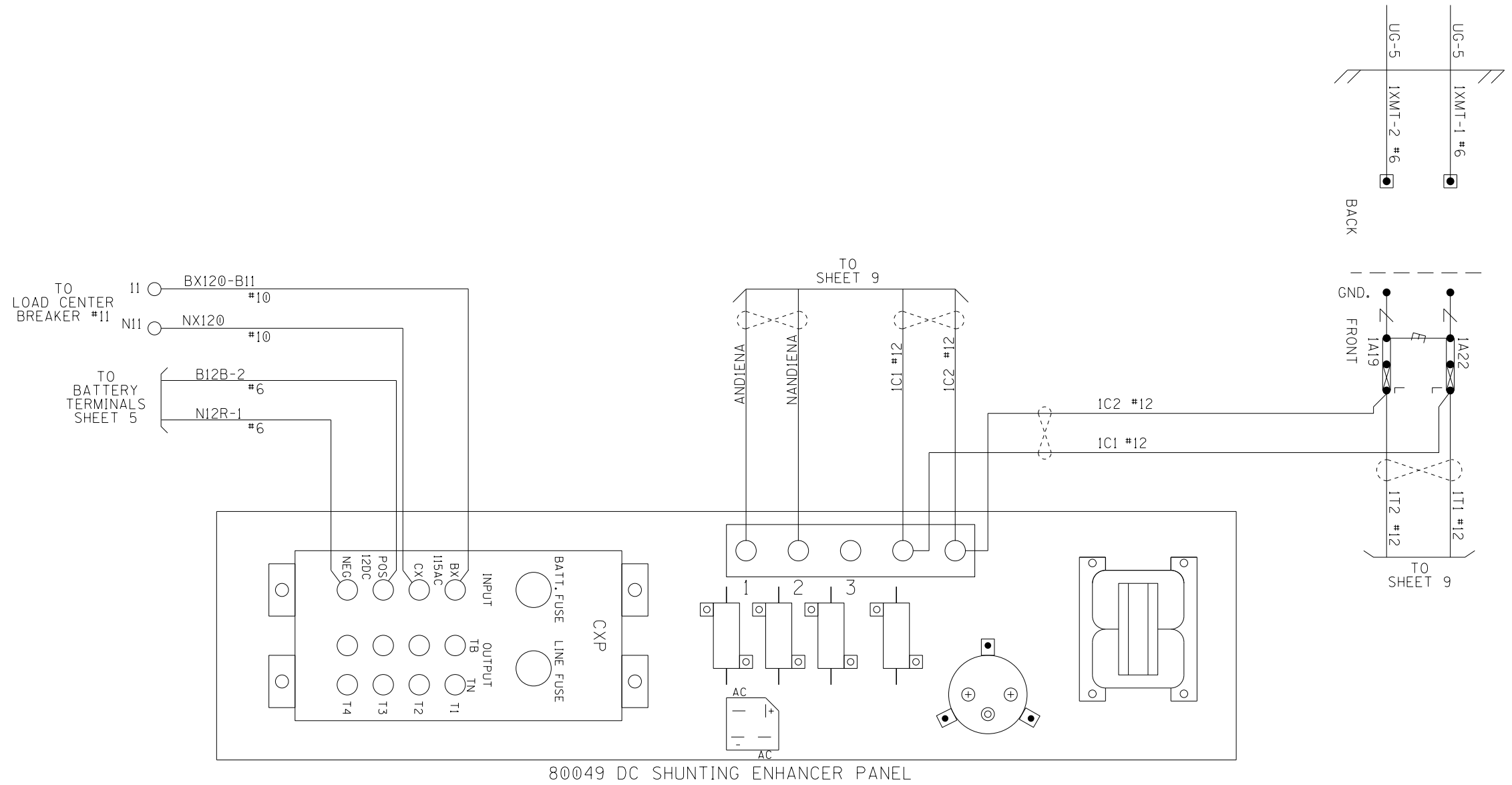
OUT OF SERVICE

- NOTES:
1. ALL WIRING TO BE #16AWG UNLESS NOTED OTHERWISE.
 2. * = TEST LINKS MUST BE OPENED TEMPORARILY FOR COLD START OF NEW OR REPLACEMENT SSCC MODULE AND CAN ONLY BE CLOSED IN SEQUENCE WITH MFR. INSTRUCTION: APPENDIX C OF GCP 4000 REFERENCE MANUAL.
 3. = TWIST

SSCC#2 MODULE HOOK-UP

PROPERTY
 PENNSYLVANIA R.R.

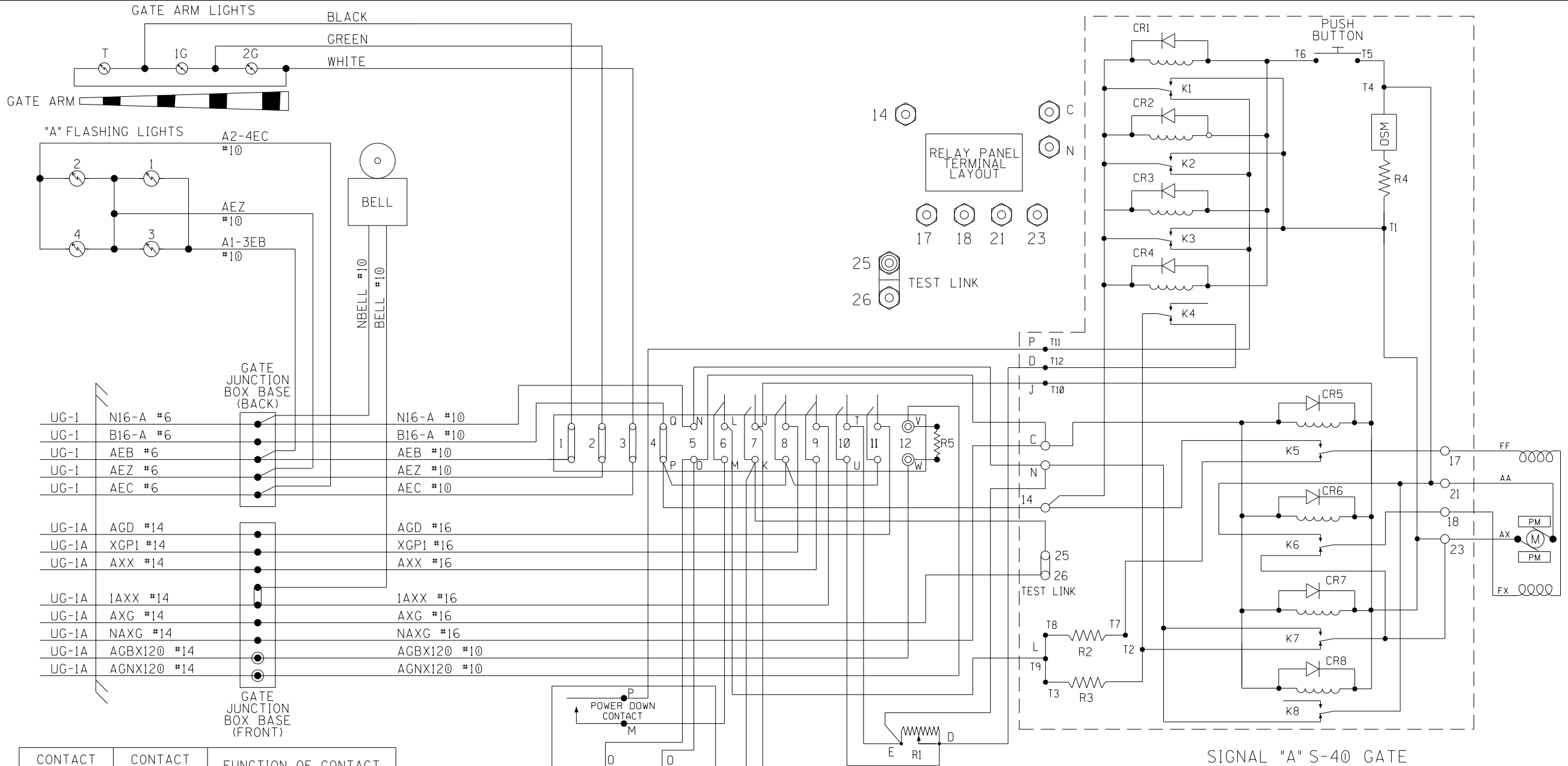
DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21	NEW HOLLAND SEC.		
CHECKED BY:	-		REV. 1
BES 01-01-21	CADD or DWG. No. 13332836.14		SHEET No. 14
IN SERVICE:	-		



80049 DC SHUNTING ENHANCER PANEL

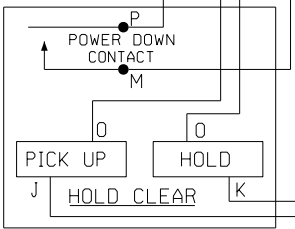
DC SHUNTING ENHANCER PANEL HOOK-UP

DESIGNED BY:	TAH 01-01-21		OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36 NEW HOLLAND, PA FLGS AT CUSTER AVE.
DRAWN BY:	RSD 01-01-21			
CHECKED BY:	BES 01-01-21			
IN SERVICE:	- -			
PROPERTY	PENNSYLVANIA R.R.	NEW HOLLAND SEC.	REV. 1	
		CADD or DWG. No. 13332836.15	SHEET No. 15	



UG-1	N16-A #6	N16-A #10
UG-1	B16-A #6	B16-A #10
UG-1	AEB #6	AEB #10
UG-1	AEZ #6	AEZ #10
UG-1	AEC #6	AEC #10
UG-1A	AGD #14	AGD #16
UG-1A	XGP1 #14	XGP1 #16
UG-1A	AXX #14	AXX #16
UG-1A	1AXX #14	1AXX #16
UG-1A	AXG #14	AXG #16
UG-1A	NAXG #14	NAXG #16
UG-1A	AGBX120 #14	AGBX120 #10
UG-1A	AGNX120 #14	AGNX120 #10

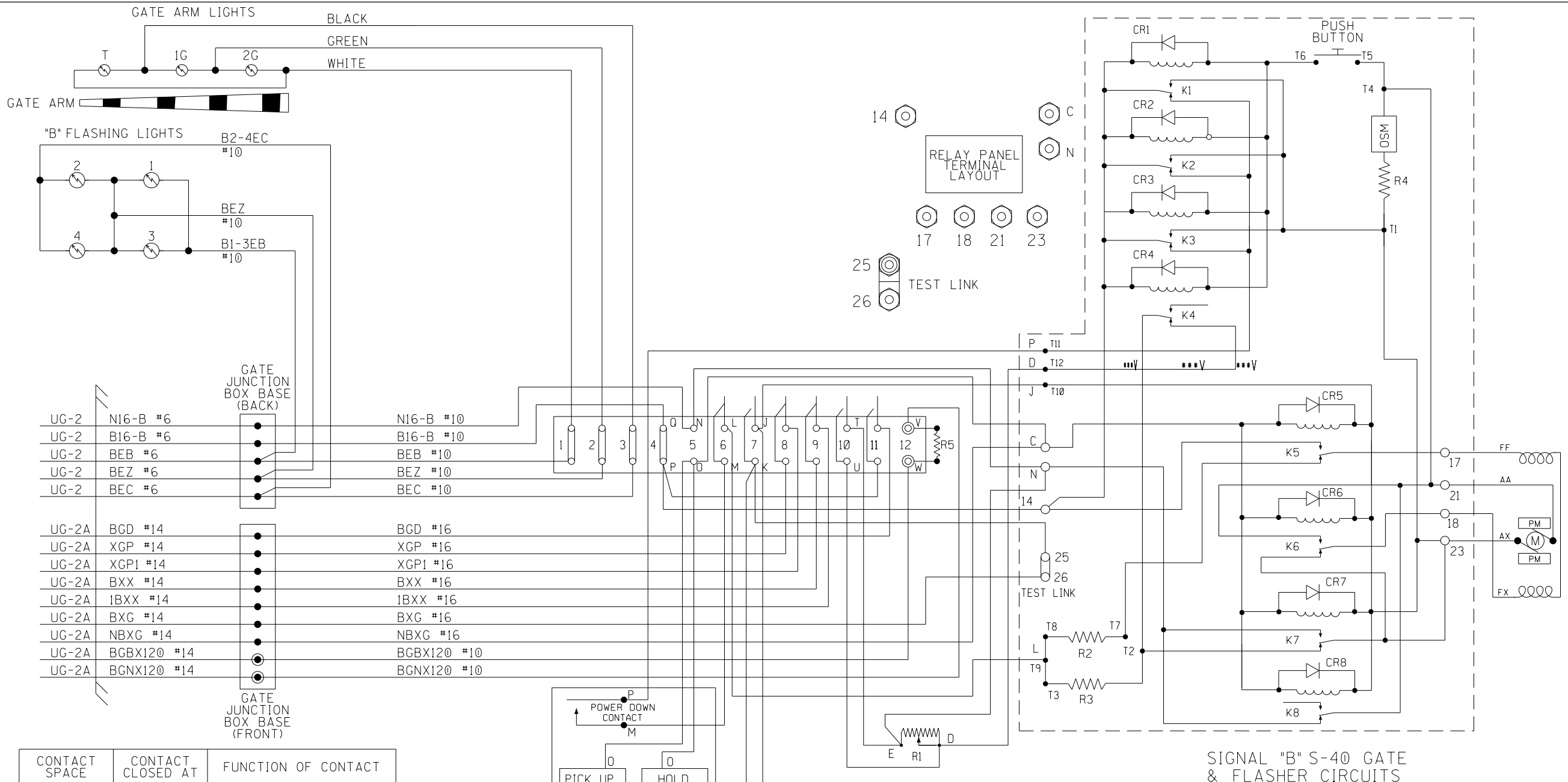
CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION



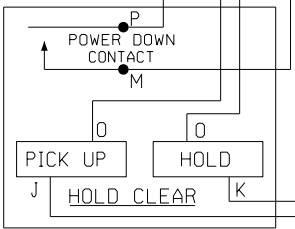
R1 - DOWN SNUB RESISTOR, ADJ.
 R2 - POWER DOWN RATE RESISTOR
 R3 - POWER DOWN LIMIT RESISTOR
 R4 - OSM SNUB RESISTOR
 R5 - DEFROSTER
 K1-8 - GATE & MAINT. RELAYS
 OSM - OVERSPEED MODULE

DESIGNED BY:		
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA. M.P.: HZ-028.36	
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No. 13332836.16	SHEET No. 16
BES 01-01-21		
IN SERVICE:		

PROPERTY PENNSYLVANIA R.R.



CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8)	83° - 90°	FLASHING LGT. CONTROL
(9)	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB
(11)	0° - 5°	GATE DOWN INDICATION

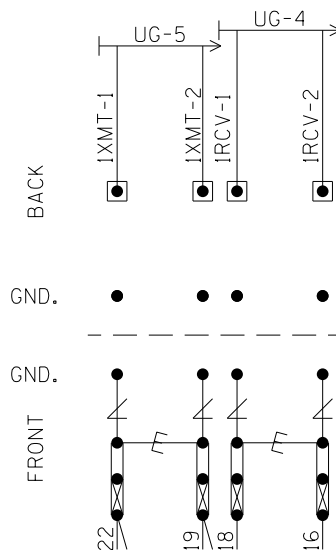


R1 - DOWN SNUB RESISTOR, ADJ.
 R2 - POWER DOWN RATE RESISTOR
 R3 - POWER DOWN LIMIT RESISTOR
 R4 - OSM SNUB RESISTOR
 R5 - DEFROSTER
 K1-8 - GATE & MAINT. RELAYS
 OSM - OVERSPEED MODULE

DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No. 13332836.17	
BES 01-01-21		SHEET 17
IN SERVICE:		

PROPERTY
PENNSYLVANIA R.R.

"1A"



NOTES:

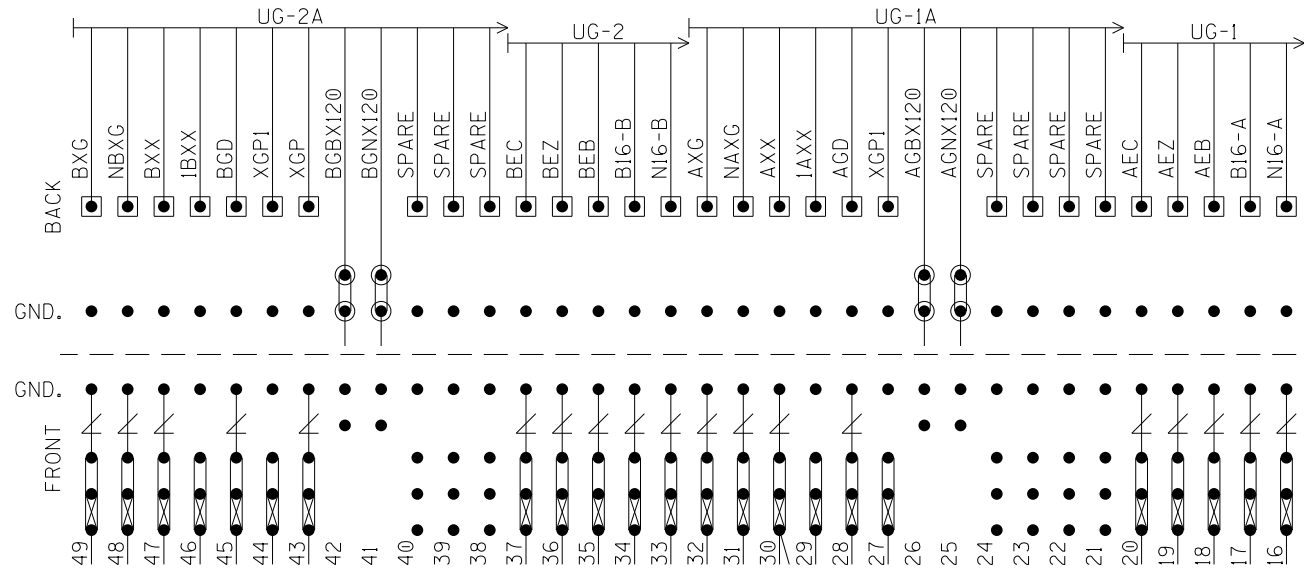
1. ≡ = HEAVY DUTY EQUALIZER (022700-1X)
2. ∠ = ERICO LIGHTNING ARRESTER (EPD2050F)
3. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
4. ≡ = TEST LINK
5. INSTALL TEST LINKS ON ALL TRACK WIRES AND ON ALL LOW VOLTAGE UNDERGROUND CABLE TERMINATIONS.

BACKBOARD 1A

PROPERTY
PENNSYLVANIA R.R.

DESIGNED BY:			
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.		M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.		
RSD 01-01-21	NEW HOLLAND SEC.		
CHECKED BY:	REV. 1		
BES 01-01-21	CADD or DWG. No. 13332836.18		SHEET No. 18
IN SERVICE:			

"1B"

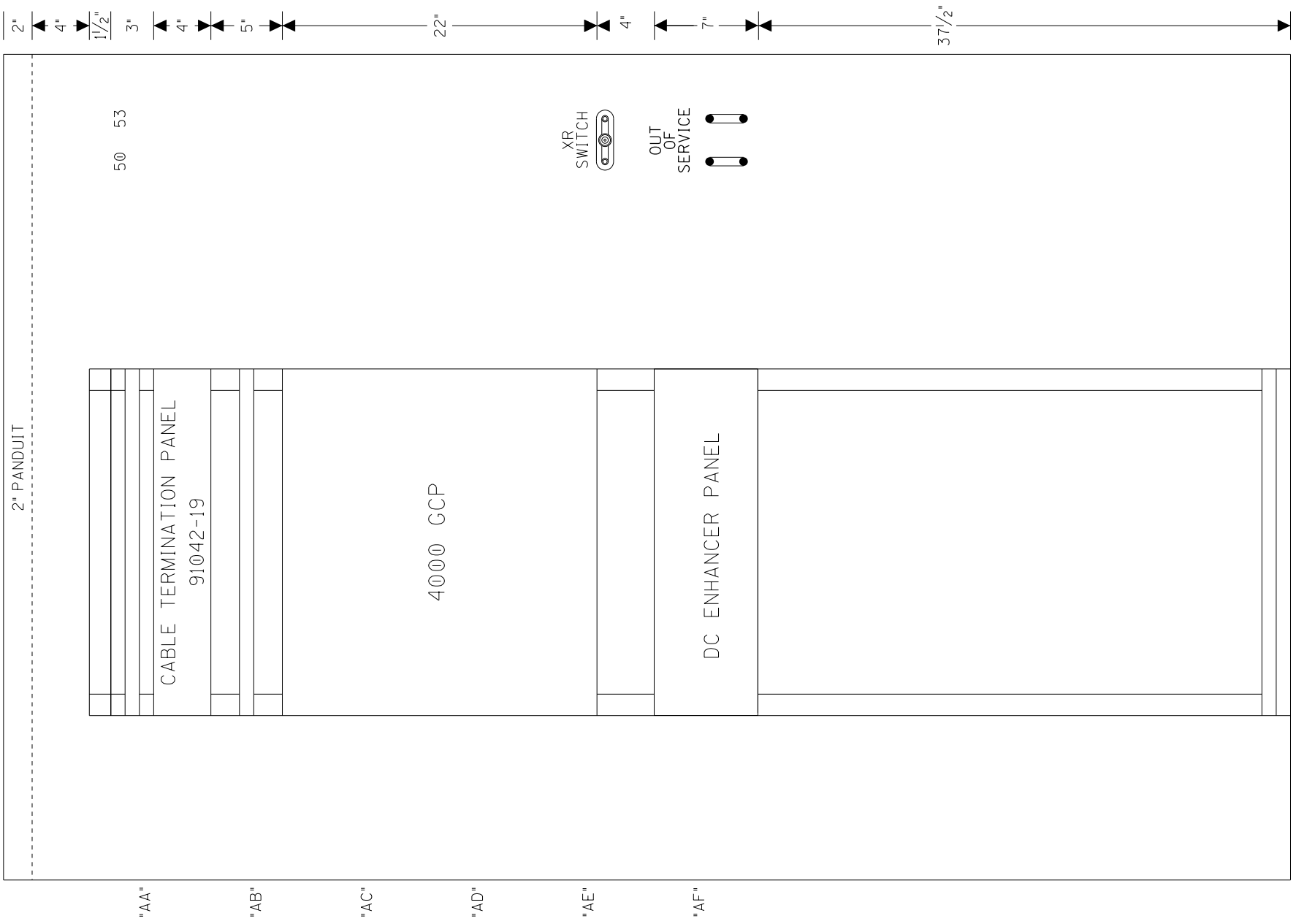


NOTES:

1. GND. ● = THROUGH GROUND POST ON EACH TERMINAL BLOCK TO FARADAY SHIELD
2. ● = INSULATED NUTS TO BE USED ON ALL 120VAC AND ABOVE TERMINALS

BACKBOARD 1B

DESIGNED BY:			
TAH	01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:		NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD	01-01-21		
CHECKED BY:		NEW HOLLAND SEC.	REV. 1
BES	01-01-21	CADD or DWG. No.	13332836.19
IN SERVICE:	- -	SHEET No.	19
PROPERTY	PENNSYLVANIA R.R.		



SIDE A LAYOUT & RACK PLACEMENT

DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:	NEW HOLLAND SEC.	REV. 1
BES 01-01-21	CADD or DWG. No. 13332836.20	SHEET 20 No.

PROPERTY
PENNSYLVANIA R.R.

2" PANDUIT

50 53

CABLE TERMINATION PANEL
91042-19

4000 GCP

DC ENHANCER PANEL

XR SWITCH
OUT OF SERVICE

"AA"

"AB"

"AC"

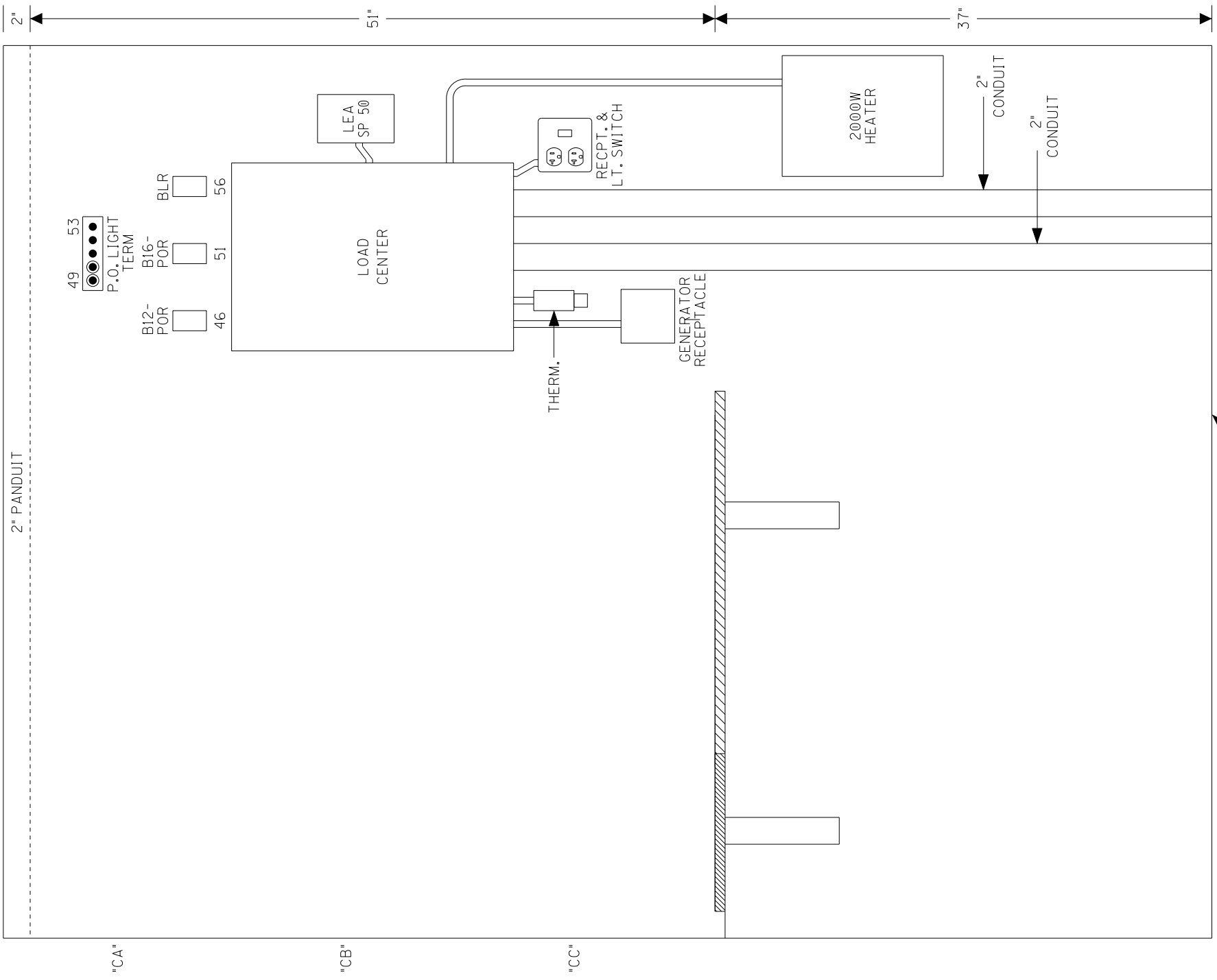
"AD"

"AE"

"AF"

24 1/4"
EQUIPMENT RACK #1
FRONT

2" 4" 1 1/2" 3" 4" 5" 22" 4" 7" 37 1/2"



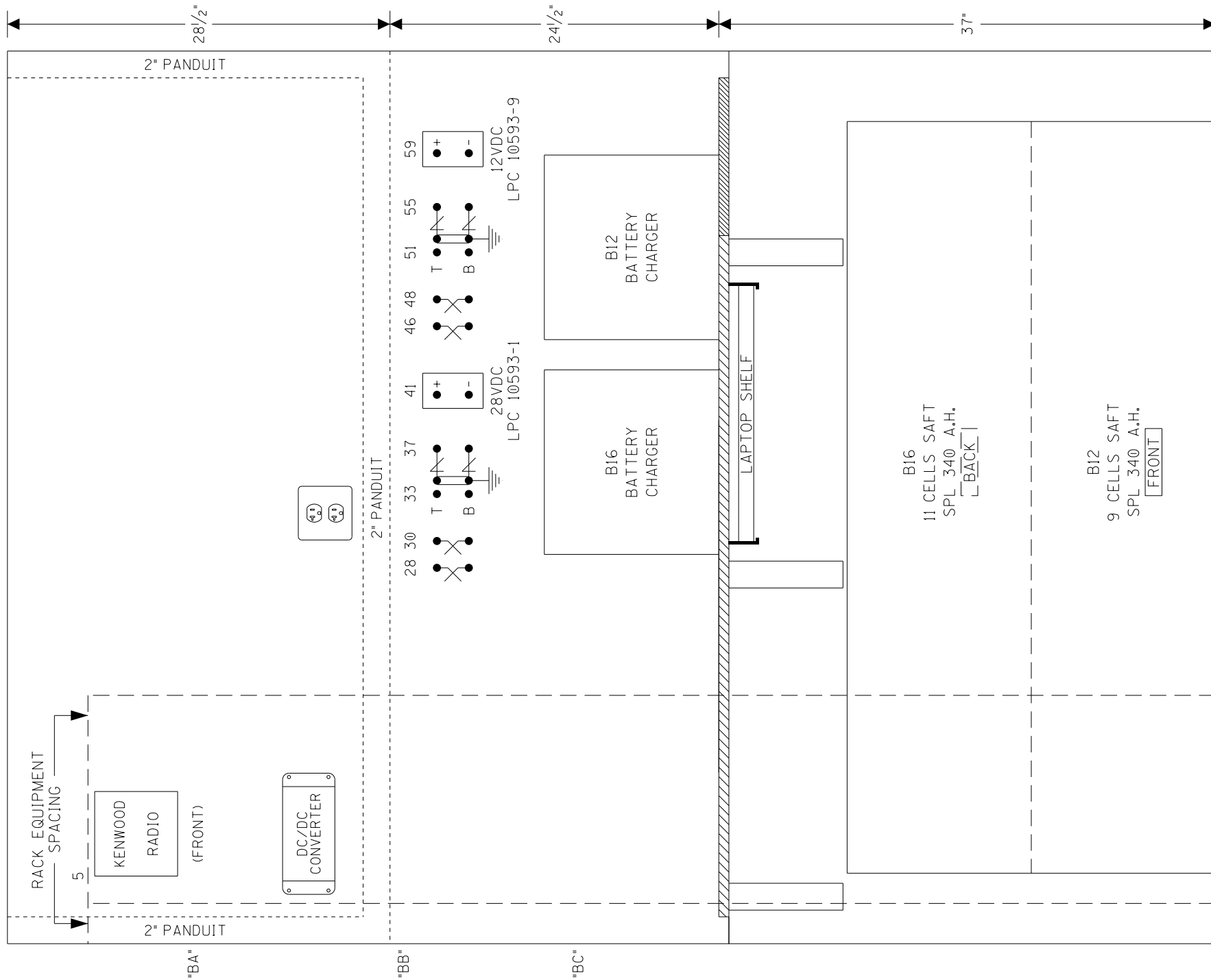
FLOOR →



SIDE C LAYOUT

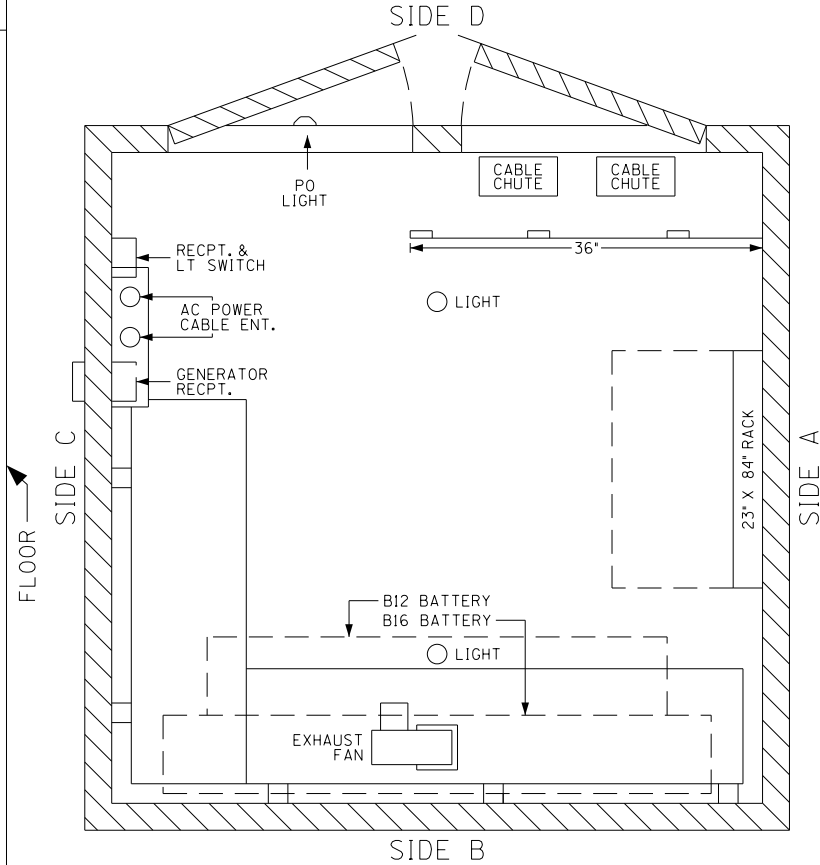
DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21		
CHECKED BY:	NEW HOLLAND SEC.	REV. 1
BES 01-01-21		
IN SERVICE:	CADD or DWG. No. 13332836.21	SHEET No. 21

PROPERTY
PENNSYLVANIA R.R.



***TOP VIEW**

6'X6' HOUSE
(INSULATED)
* = 1/2" SCALE



SIDE B LAYOUT & TOP VIEW

DESIGNED BY:	NS NORFOLK SOUTHERN	
TAH 01-01-21	OFFICE OF ASS'T. VICE PRESIDENT COMM. & SIGNAL, ATLANTA, GA.	M.P.: HZ-028.36
DRAWN BY:	NEW HOLLAND, PA FLGS AT CUSTER AVE.	
RSD 01-01-21	NEW HOLLAND SEC.	REV. 1
CHECKED BY:	CADD or DWG. No.	SHEET 22
BES 01-01-21	13332836.22	No.
IN SERVICE:	- -	

PROPERTY
PENNSYLVANIA R.R.