

ALASKA RAILROAD CORPORATION



GIRDWOOD

SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90

MANUAL MONITORED SWITCH



NOTES:

1. ALL WIRING IN BUNGALOW TO BE #16 AWG FLEX TEUFEL
UNLESS OTHERWISE NOTED.

LEGEND:

△ EQUALIZER ②

∠ LINE ARRESTER

○ CLEARVIEW ARRESTOR W/ BAKELITE BASE ③

○ CLEARVIEW ARRESTOR W/ 3 POST PORCELAIN BASE ④

△ NO 6 AWG THNN/THWN FLEX WIRE WITH RED SHEATH (B12)

△ NO 6 AWG THNN/THWN FLEX WIRE WITH BLACK SHEATH (N12)

△ NO 6 AWG THNN/THWN FLEX WIRE WITH GREEN SHEATH
(SAFETY GROUND)

Ⓢ TWISTED WIRE TWO TURNS PER FOOT

MATERIAL REFERENCE IDENTIFICATION NUMBER

PTC DEVICE COUNT NUMBER

OS INSTALL
COLORED PLANS

RED = ⊕ = IN
YELLOW = ⊗ = OUT

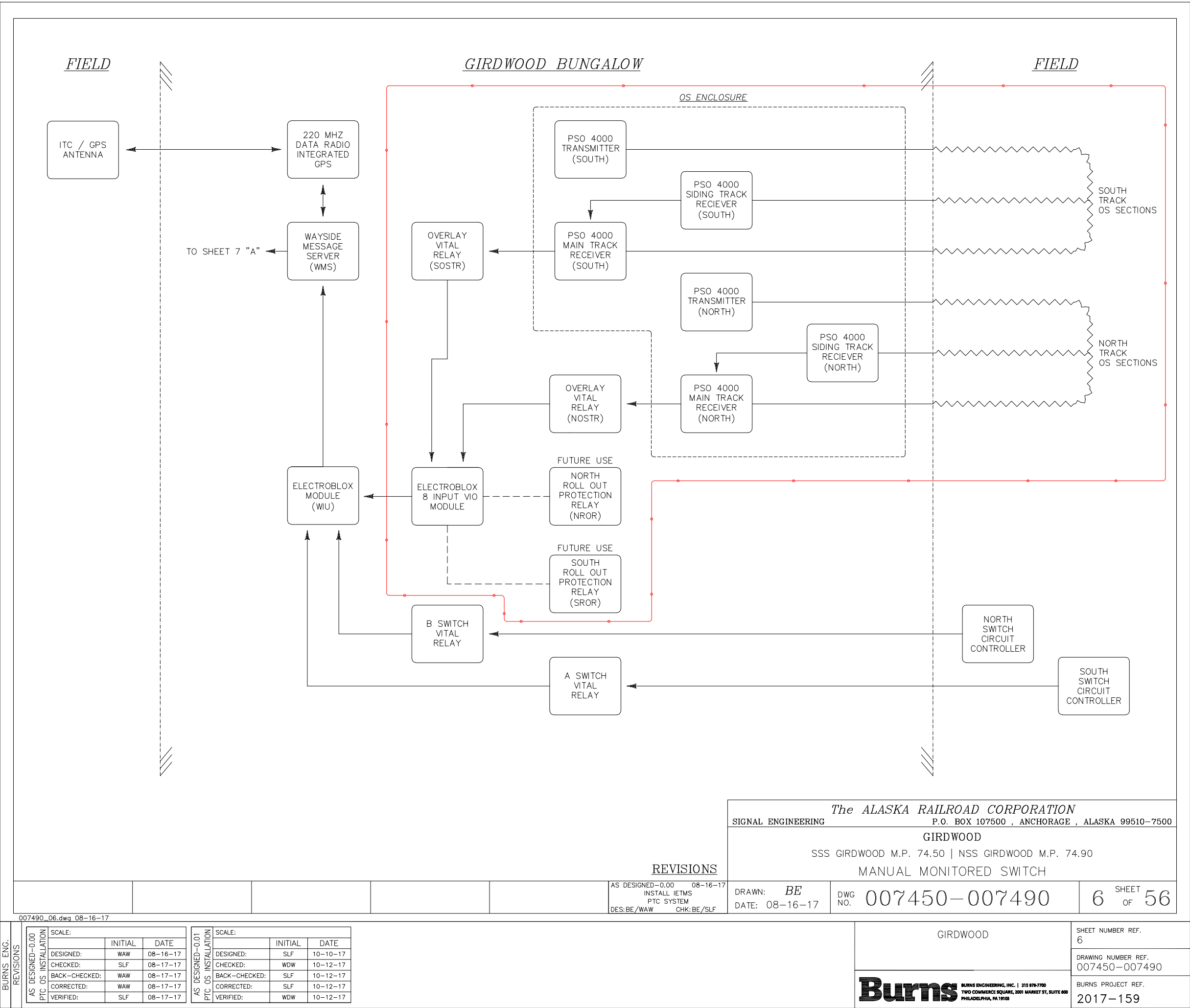
REVISIONS

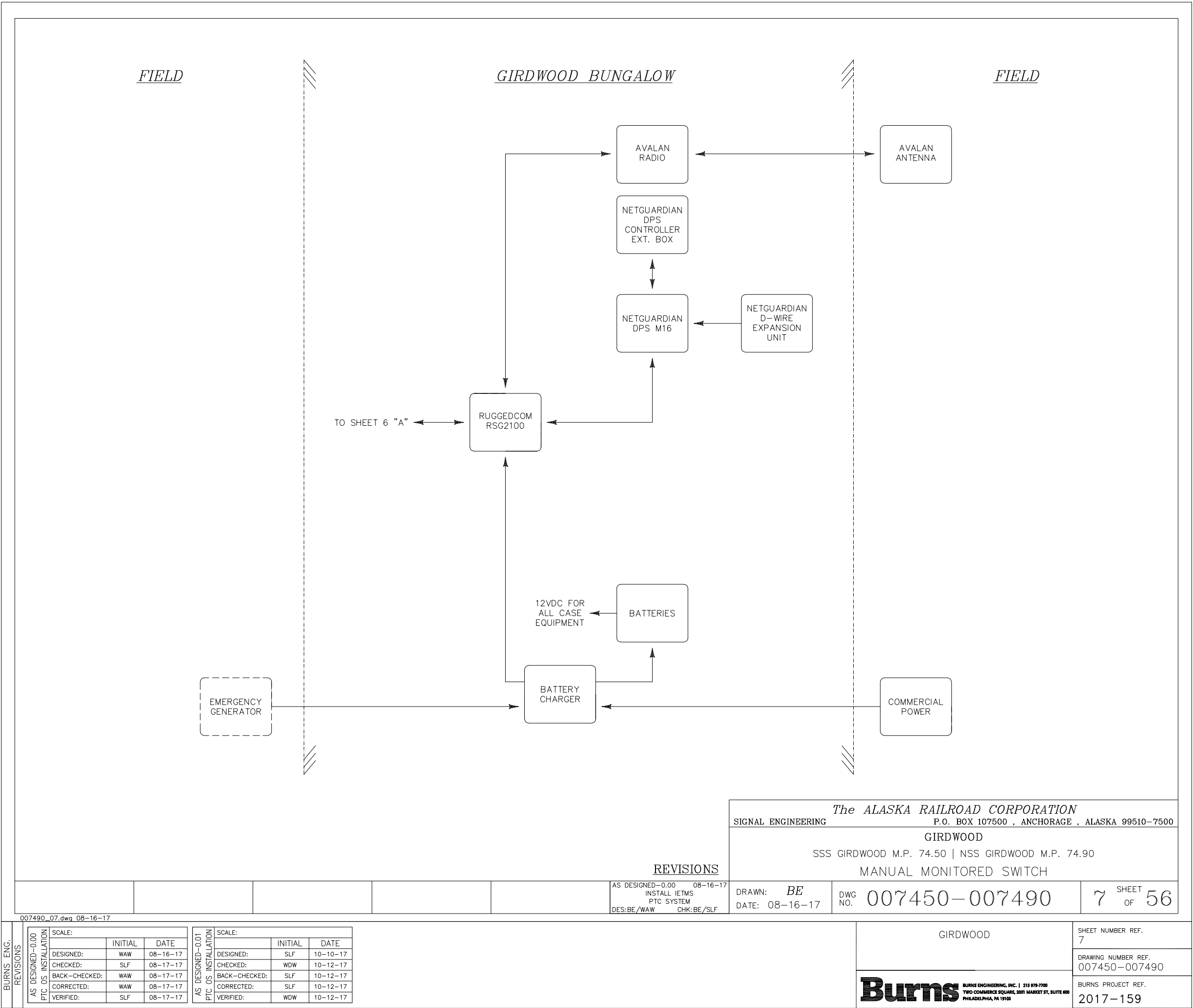
The ALASKA RAILROAD CORPORATION		
P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500		
GIRDWOOD		
SSS GIRDWOOD M.P. 74.50 NSS GIRDWOOD M.P. 74.90		
MANUAL MONITORED SWITCH		
DRAWN: BE	DWG NO. 007450-007490	SHEET 0 OF 56
DATE: 08-16-17		

007490_00.dwg 08-16-17

BURNS ENG. REVISIONS	AS DESIGNED-000 PTC OS INSTALLATION			SCALE:			GIRDWOOD			SHEET NUMBER REF. 0	
	DESIGNED:			WAW			SLF			DRAWING NUMBER REF. 007450-007490	
	CHECKED:			SLF			WDW			BURNS PROJECT REF. 2017-159	
	BACK-CHECKED:			WAW			SLF				
BURNS ENG. REVISIONS	CORRECTED:			WAW			SLF				
	VERIFIED:			SLF			WDW				
	AS DESIGNED-001 PTC OS INSTALLATION			SCALE:							
	DESIGNED:			WAW			SLF				
BURNS ENG. REVISIONS	CHECKED:			SLF			WDW				
	BACK-CHECKED:			WAW			SLF				
	CORRECTED:			WAW			SLF				
	VERIFIED:			SLF			WDW				

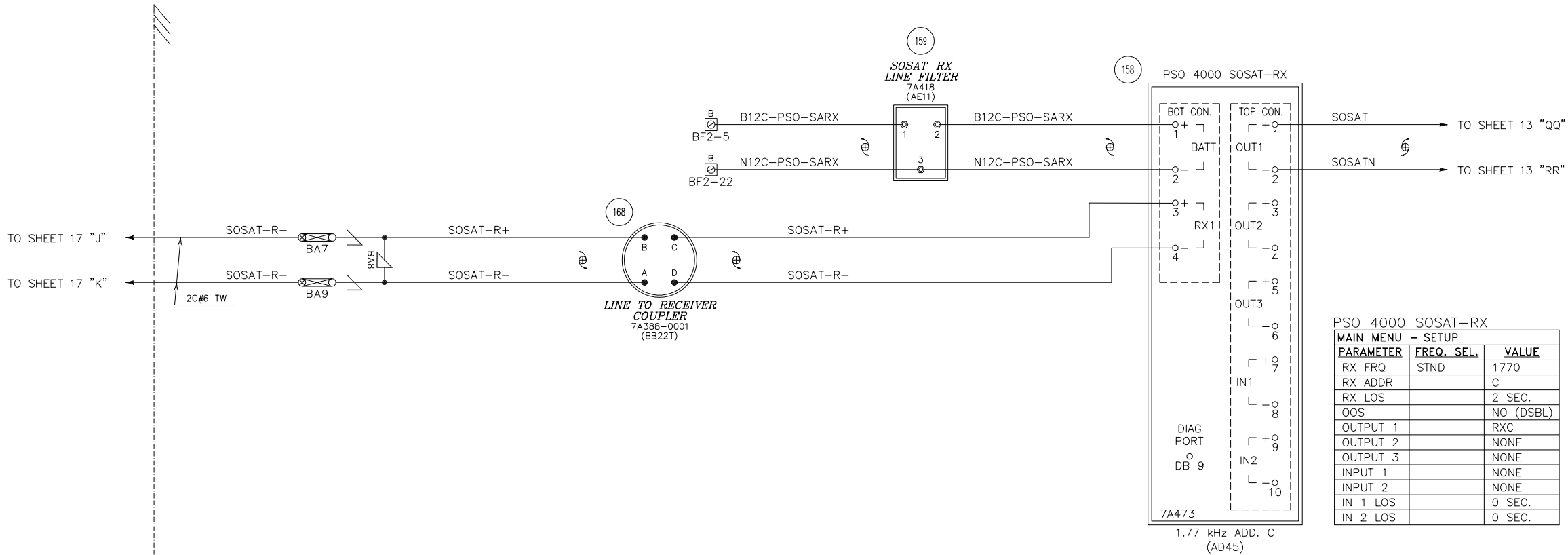
Burns BURNS ENGINEERING, INC. | 215 979-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103





BURNS ENGINEERING, INC. | 215 879-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

GIRDWOOD BUNGALOW JUNCTION BOX



MAIN MENU - SETUP		
PARAMETER	FREQ. SEL.	VALUE
RX FRQ	STND	1770
RX ADDR		C
RX LOS		2 SEC.
OOS		NO (DSBL)
OUTPUT 1		RXC
OUTPUT 2		NONE
OUTPUT 3		NONE
INPUT 1		NONE
INPUT 2		NONE
IN 1 LOS		0 SEC.
IN 2 LOS		0 SEC.

NOTES:
1. ALL WIRING TO BE #16 AWG FLEX TEFLON UNLESS OTHERWISE NOTED.

ALL NEW

SIGNAL ENGINEERING

The ALASKA RAILROAD CORPORATION

P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

GIRDWOOD

SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90

MANUAL MONITORED SWITCH

AS DESIGNED-0.00 08-16-17
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

DRAWN: BE
DATE: 08-16-17

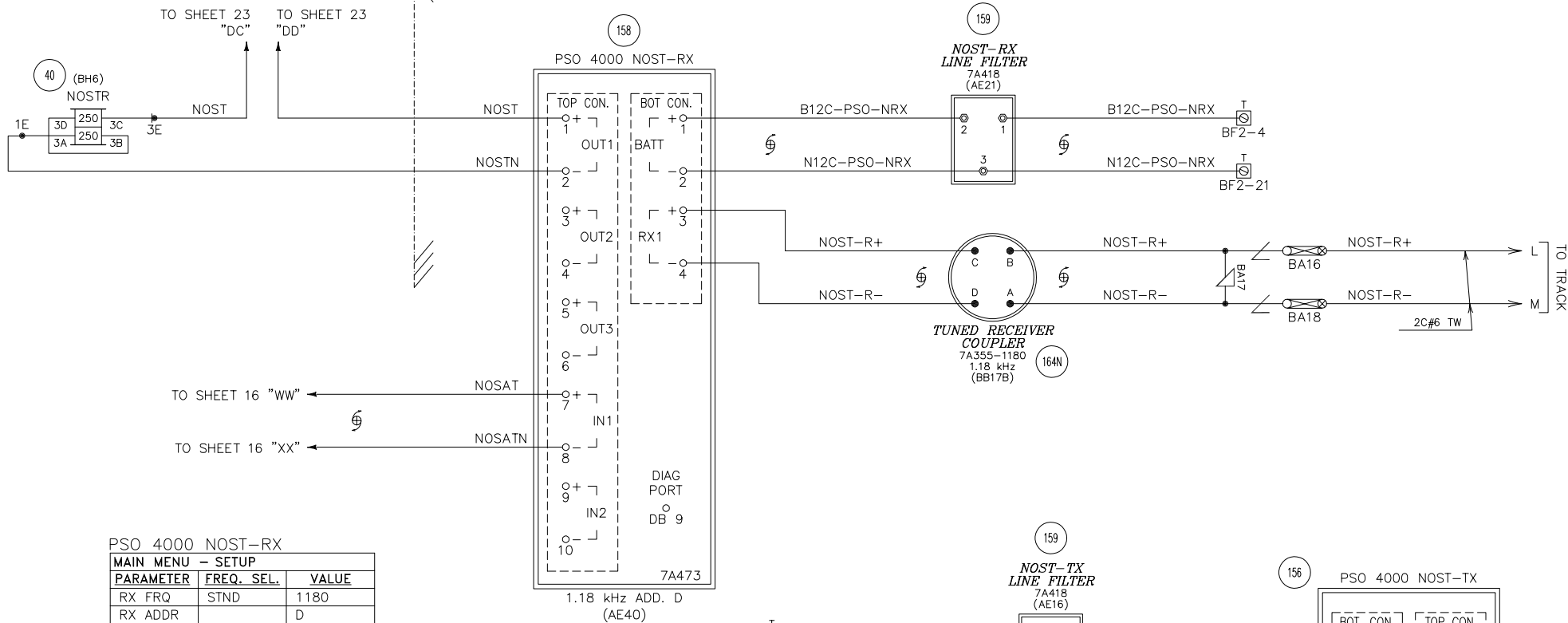
DWG NO. 007450-007490

14 SHEET OF 56

						AS DESIGNED-0.00 08-16-17 INSTALL IETMS PTC SYSTEM DES:BE/WAW CHK:BE/SLF		DRAWN: BE DATE: 08-16-17		DWG NO. 007450-007490		14 SHEET OF 56		
007490_14.dwg 08-16-17														
BURNS ENG. REVISIONS	AS DESIGNED-0.00 PTC OS INSTALLATION	SCALE:			AS DESIGNED-0.01 PTC OS INSTALLATION	SCALE:			GIRDWOOD				SHEET NUMBER REF. 14	
		DESIGNED:	WAW	08-16-17		DESIGNED:	SLF	10-10-17					DRAWING NUMBER REF. 007450-007490	
		CHECKED:	SLF	08-17-17		CHECKED:	WDW	10-12-17					BURNS PROJECT REF. 2017-159	
		BACK-CHECKED:	WAW	08-17-17		BACK-CHECKED:	SLF	10-12-17	Burns BURNS ENGINEERING, INC. 215 878-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19103					
		CORRECTED:	WAW	08-17-17		CORRECTED:	SLF	10-12-17						
		VERIFIED:	SLF	08-17-17		VERIFIED:	WDW	10-12-17						

GIRDWOOD BUNGALOW

GIRDWOOD BUNGALOW JUNCTION BOX



PSO 4000 NOST-RX		
MAIN MENU - SETUP		
PARAMETER	FREQ. SEL.	VALUE
RX FRQ	STND	1180
RX ADDR		D
RX LOS		2 SEC.
OOS		NO (DSBL)
OUTPUT 1		RXD
OUTPUT 2		NONE
OUTPUT 3		NONE
INPUT 1		RX ENBL
INPUT 2		NONE
IN 1 LOS		0 SEC.
IN 2 LOS		0 SEC.

PSO 4000 NOST-TX		
MAIN MENU - SETUP		
PARAMETER	FREQ. SEL.	VALUE
TX FRQ	STND	1180
TX ADDR		D
TX LVL		LOW
INPUT 1		NONE
INPUT 2		NONE
IN 1 LOS		0 SEC.
IN 2 LOS		0 SEC.

NOTES:

1. ALL WIRING TO BE #16 AWG FLEX TEFLON UNLESS OTHERWISE NOTED.
2. ALL PSO TUNED COUPLERS IN BUNGALOW SHOULD BE LOCATED WITHIN 300 FT. OF TRACK CONNECTIONS.

ALL NEW

REVISIONS

AS DESIGNED-0.00	08-16-17
INSTALL IETMS	
PTC SYSTEM	
DES:BE/WAW	CHK:BE/SLF

DRAWN: BE
DATE: 08-16-17

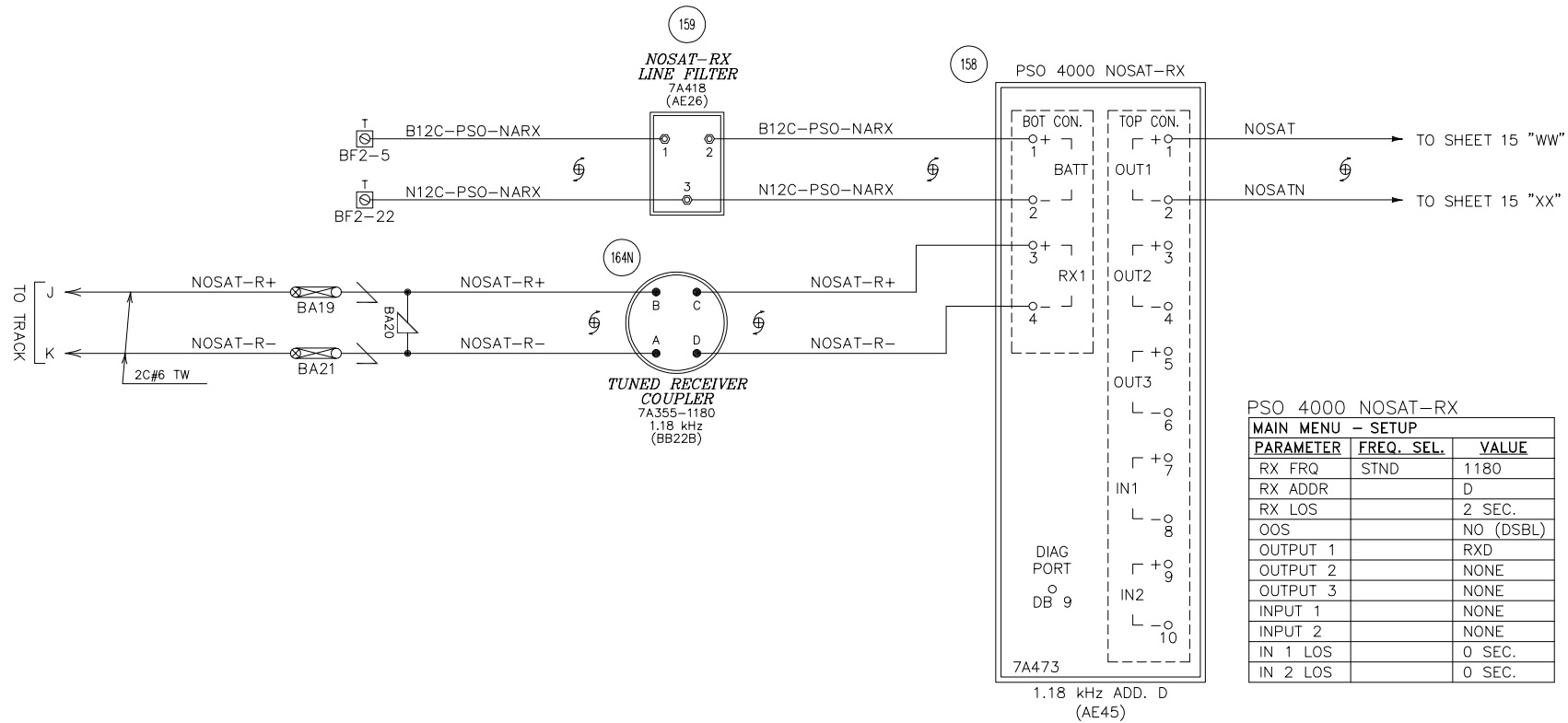
DWG NO. 007450-007490

15 SHEET OF 56

BURNS ENG. REVISIONS	SCALE:		INITIAL	DATE	SCALE:		INITIAL	DATE	GIRDWOOD		SHEET NUMBER REF. 15
	AS DESIGNED-0.00		DESIGNED:	WAW	08-16-17	AS DESIGNED-0.01		DESIGNED:	SLF	10-10-17	DRAWING NUMBER REF. 007450-007490
	PTC OS INSTALLATION		CHECKED:	SLF	08-17-17	PTC OS INSTALLATION		CHECKED:	WDW	10-12-17	BURNS PROJECT REF. 2017-159
			BACK-CHECKED:	WAW	08-17-17			BACK-CHECKED:	SLF	10-12-17	
			CORRECTED:	WAW	08-17-17			CORRECTED:	SLF	10-12-17	
			VERIFIED:	SLF	08-17-17			VERIFIED:	WDW	10-12-17	

Burns BURNS ENGINEERING, INC. | 215 878-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

GIRDWOOD BUNGALOW JUNCTION BOX



PSO 4000 NOSAT-RX		
MAIN MENU - SETUP		
PARAMETER	FREQ. SEL.	VALUE
RX FRQ	STND	1180
RX ADDR		D
RX LOS		2 SEC.
OOS		NO (DSBL)
OUTPUT 1		RXD
OUTPUT 2		NONE
OUTPUT 3		NONE
INPUT 1		NONE
INPUT 2		NONE
IN 1 LOS		0 SEC.
IN 2 LOS		0 SEC.

NOTES:

- ALL WIRING TO BE #16 AWG FLEX TEFLON UNLESS OTHERWISE NOTED.
- ALL PSO TUNED COUPLERS IN BUNGALOW SHOULD BE LOCATED WITHIN 300 FT. OF TRACK CONNECTIONS.

ALL NEW

REVISIONS

AS DESIGNED-0.00	08-16-17
INSTALL IETMS	
PTC SYSTEM	
DES:BE/WAW	CHK:BE/SLF

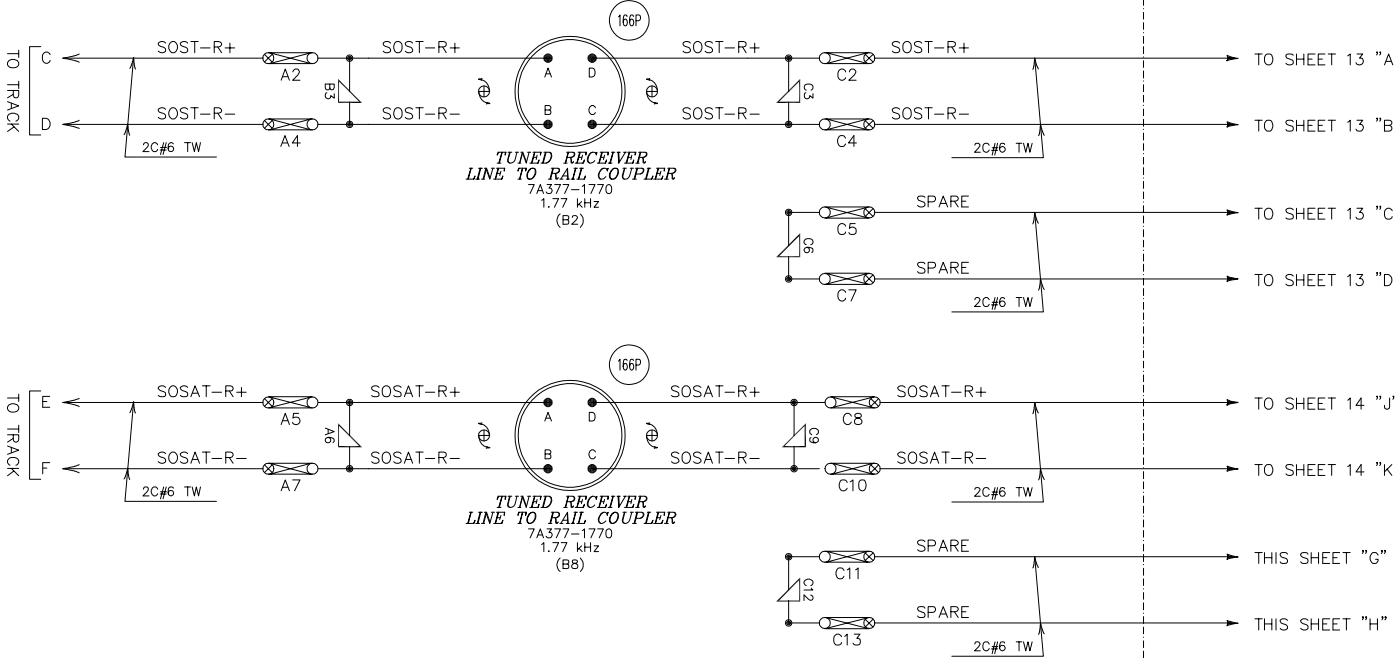
The ALASKA RAILROAD CORPORATION	
SIGNAL ENGINEERING	
P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500	
GIRDWOOD	
SSS GIRDWOOD M.P. 361.45 NSS GIRDWOOD M.P. 362.93	
MANUAL MONITORED SWITCH	
DRAWN: BE	DWG NO. 007450-007490
DATE: 08-16-17	16 SHEET OF 56

007490_16.dwg 08-16-17

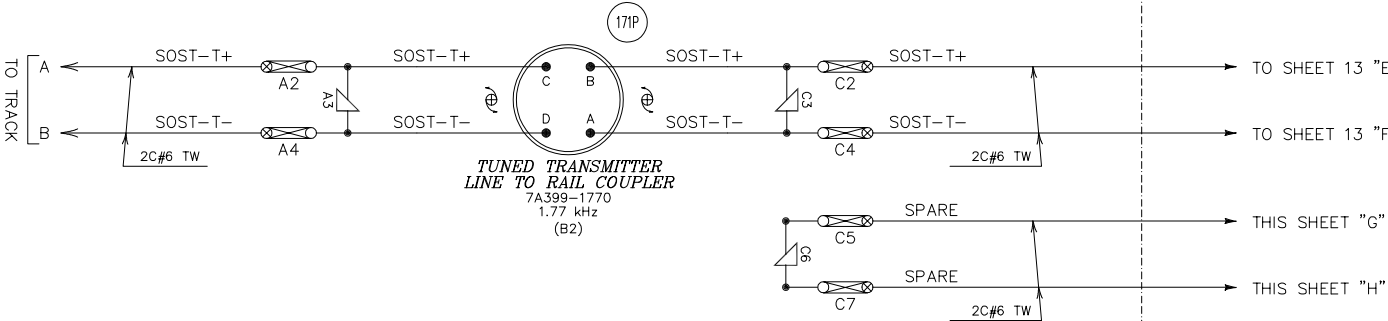
BURNS ENG. REVISIONS	SCALE:			SCALE:			GIRDWOOD		SHEET NUMBER REF. 16	
	AS DESIGNED-0.00	DESIGNED:	INITIAL	DATE	AS DESIGNED-0.01	DESIGNED:	INITIAL	DATE	DRAWING NUMBER REF. 007450-007490	
	PTC OS INSTALLATION	CHECKED:	SLF	08-17-17	PTC OS INSTALLATION	CHECKED:	WDW	10-12-17	BURNS PROJECT REF. 2017-159	
		BACK-CHECKED:	WAW	08-17-17		BACK-CHECKED:	SLF	10-12-17		
		CORRECTED:	WAW	08-17-17		CORRECTED:	SLF	10-12-17		
		VERIFIED:	SLF	08-17-17		VERIFIED:	WDW	10-12-17		

Burns BURNS ENGINEERING, INC. | 215 878-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

SSS GIRDWOOD CLEARANCE ENCLOSURE



SSS GIRDWOOD SWITCH POINT ENCLOSURE



ALL NEW

NOTES:

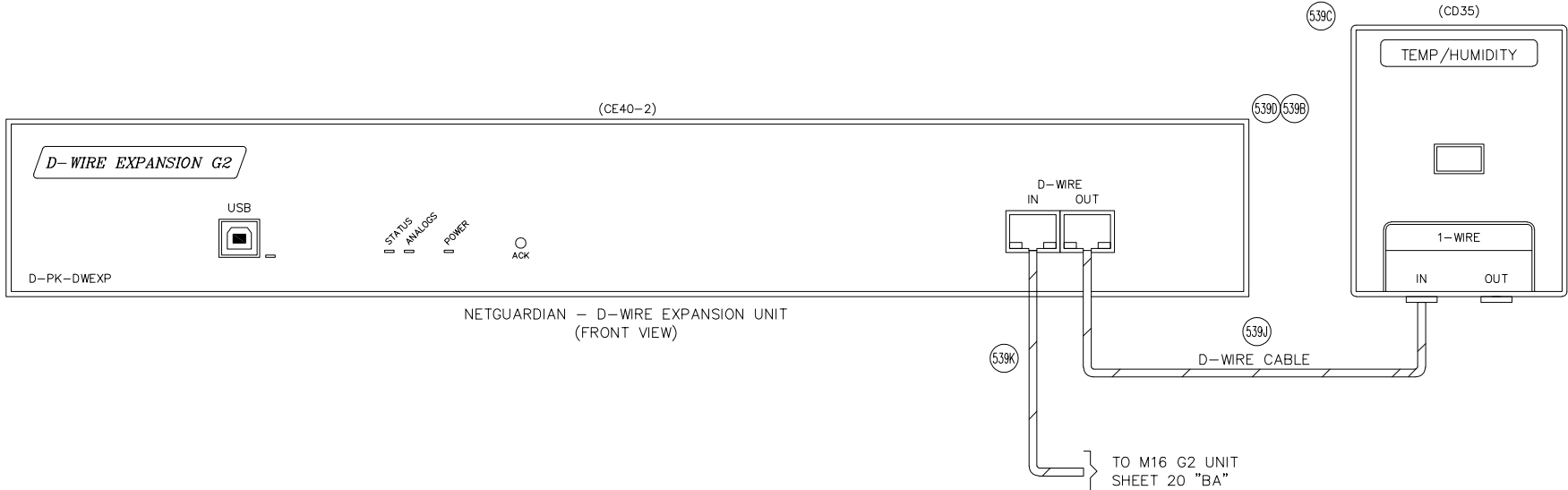
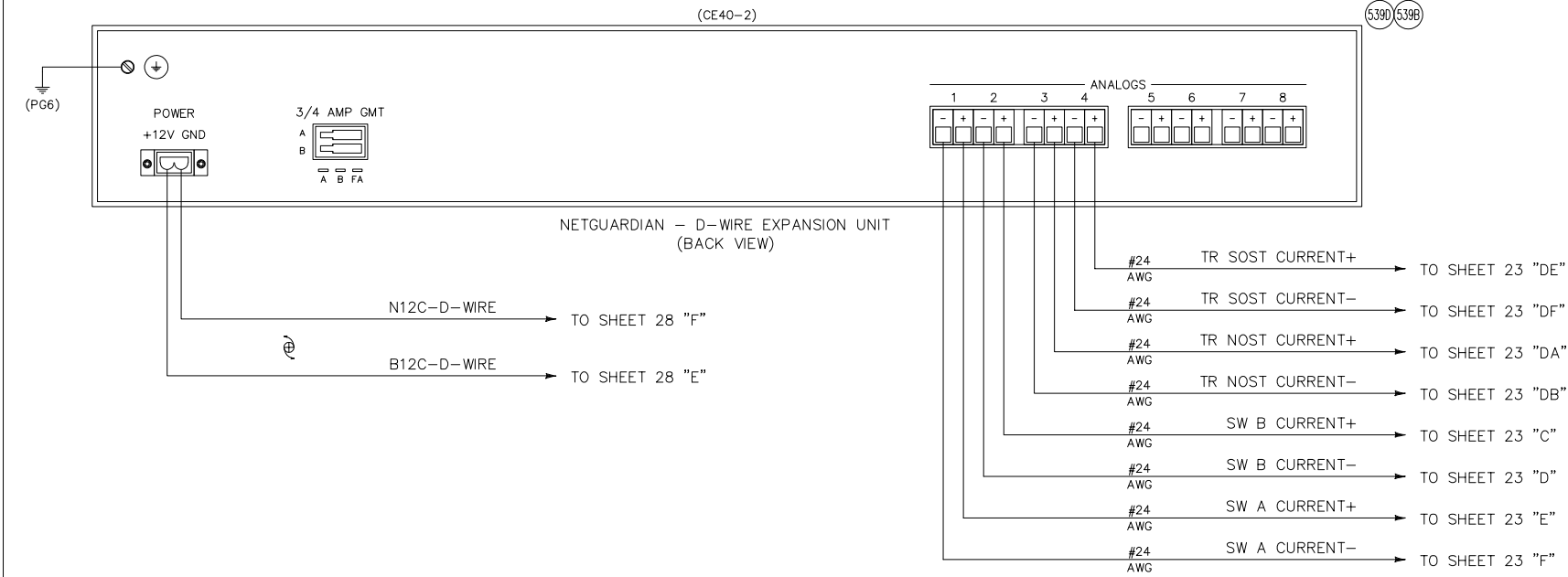
1. ALL WIRING TO BE #16 AWG FLEX TEFLON UNLESS OTHERWISE NOTED
2. ALL PSO LINE COUPLERS IN OUTLYING CASES SHOULD BE LOCATED WITHIN 100 FT. OF TRACK CONNECTIONS.

REVISIONS

AS DESIGNED-0.00 08-16-
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

<i>The ALASKA RAILROAD CORPORATION</i>		
SIGNAL ENGINEERING P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500		
GIRDWOOD		
SSS GIRDWOOD M.P. 74.50 NSS GIRDWOOD M.P. 74.90		
MANUAL MONITORED SWITCH		
DRAWN: <i>BE</i> DATE: 08-16-17	DWG NO. 007450-007490	17 SHEET OF 56

REVISIONS BURNS ENG.	AS DESIGNED-0.00 PTC OS INSTALLATION			SCALE:			GIRDWOOD			SHEET NUMBER REF. 17	
	DESIGNED:	INITIAL	DATE	DESIGNED:	INITIAL	DATE				DRAWING NUMBER REF. 007450-007490	
	WAW	08-16-17		SLF	10-10-17						
	CHECKED:	SLF	08-17-17	WDW	10-12-17						
	BACK-CHECKED:	WAW	08-17-17	SLF	10-12-17						
	CORRECTED:	WAW	08-17-17	SLF	10-12-17						
	VERIFIED:	SLF	08-17-17	WDW	10-12-17					BURNS PROJECT REF. 2017-159	
			AS DESIGNED-0.01 PTC OS INSTALLATION								



NOTES:

- 1. ALL WIRING TO BE #10 AWG FLEX TEFLON UNLESS OTHERWISE NOTED.
- 2. ALL GROUND WIRES TO BE #6 AWG GREEN FLEX TEFLON UNLESS OTHERWISE NOTED.

REVISIONS

AS DESIGNED-0.00	08-16-17
INSTALL IETMS	
PTC SYSTEM	
DES:BE/WAW	CHK:BE/SLF

DRAWN: BE
DATE: 08-16-17

DWG NO. 007450-007490

SHEET 21 OF 56

The ALASKA RAILROAD CORPORATION

SIGNAL ENGINEERING

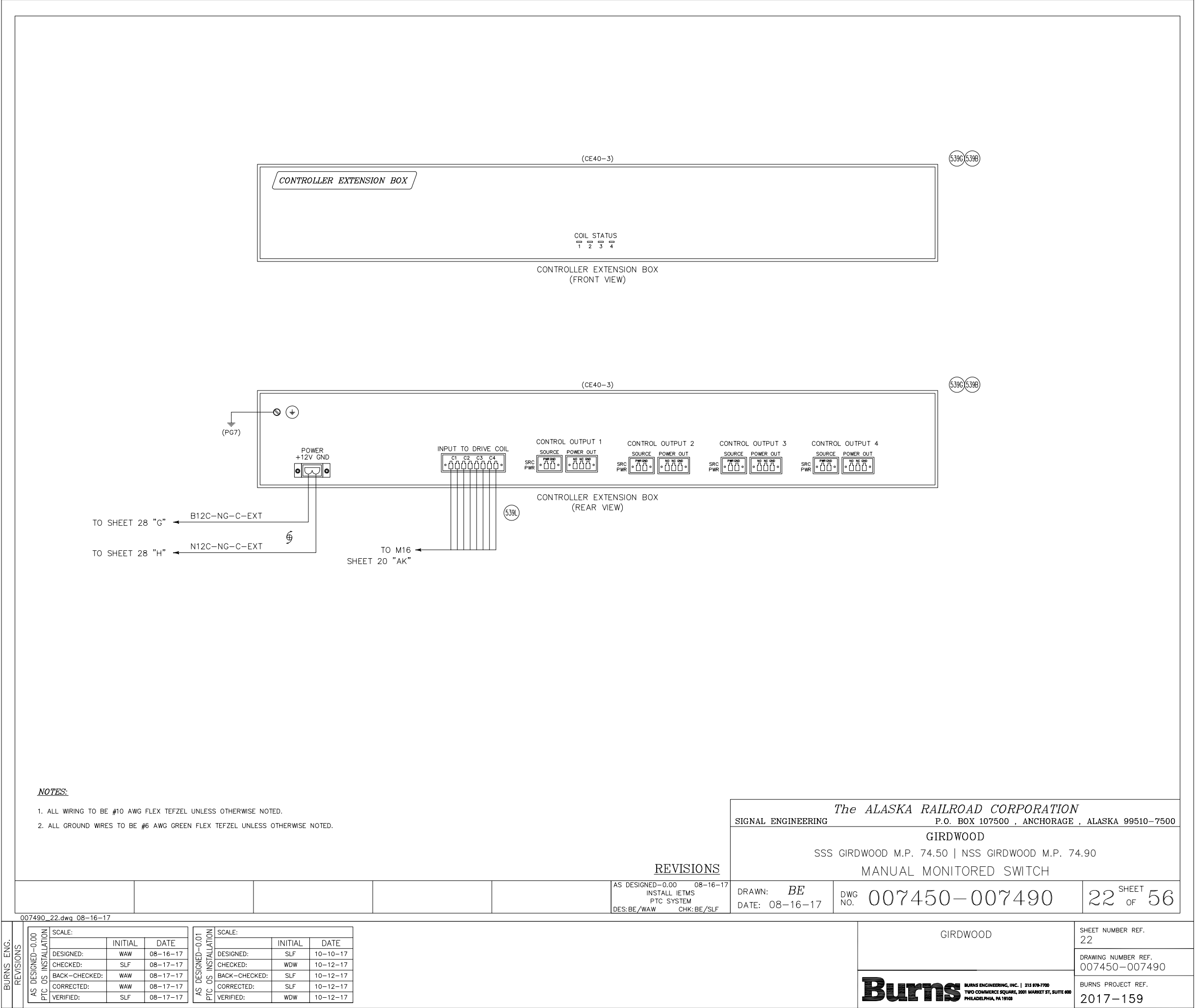
P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

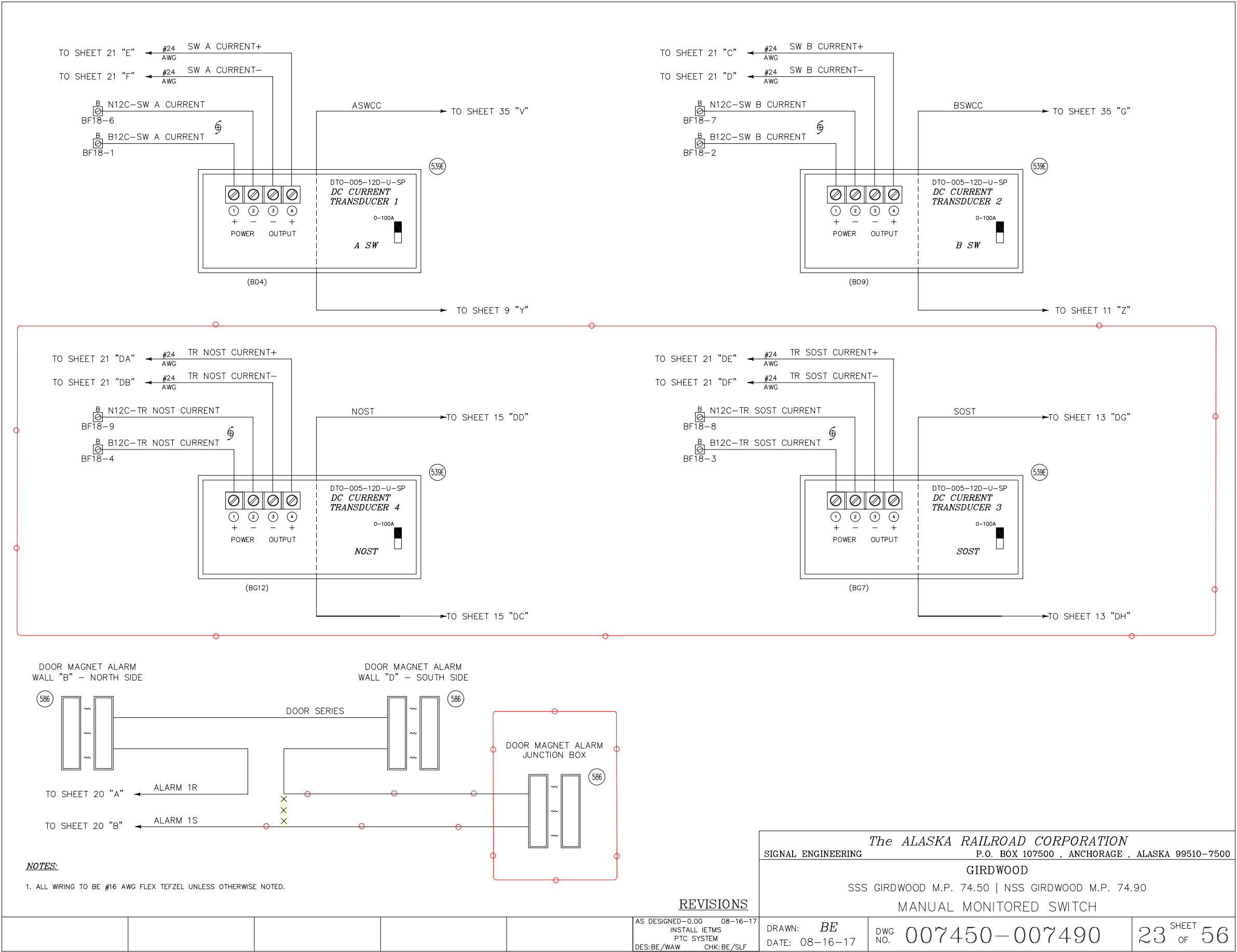
GIRDWOOD

SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90

MANUAL MONITORED SWITCH

BURNS ENG. REVISIONS									GIRDWOOD		SHEET NUMBER REF. 21	
	AS DESIGNED-0.00 PTC OS INSTALLATION				SCALE: DESIGNED: INITIAL DATE WAW 08-16-17 CHECKED: SLF 08-17-17 BACK-CHECKED: WAW 08-17-17 CORRECTED: WAW 08-17-17 VERIFIED: SLF 08-17-17				DRAWING NUMBER REF. 007450-007490			
	AS DESIGNED-0.01 PTC OS INSTALLATION				SCALE: DESIGNED: INITIAL DATE SLF 10-10-17 CHECKED: WDW 10-12-17 BACK-CHECKED: SLF 10-12-17 CORRECTED: SLF 10-12-17 VERIFIED: WDW 10-12-17				Burns BURNS ENGINEERING, INC. 215 978-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19103			
								BURNS PROJECT REF. 2017-159				





007490_23.dwg 08-16-17		AS DESIGNED-0.00 08-16-17 INSTALL IETMS PTC SYSTEM DES:BE/WAW CHK:BE/SLF		DRAWN: <i>BE</i> DATE: 08-16-17	DWG NO. 007450-007490	23 SHEET OF 56
GIRDWOOD		The ALASKA RAILROAD CORPORATION SIGNAL ENGINEERING P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500		GIRDWOOD SSS GIRDWOOD M.P. 74.50 NSS GIRDWOOD M.P. 74.90 MANUAL MONITORED SWITCH		SHEET NUMBER REF. 23
Burns		BURNS ENGINEERING, INC. 215 978-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19103		DRAWING NUMBER REF. 007450-007490		BURNS PROJECT REF. 2017-159

BURNS ENG. REVISIONS	AS DESIGNED-0.00 PTC OS INSTALLATION			SCALE:		
	DESIGNED:	WAW	08-16-17	INITIAL	DATE	
	CHECKED:	SLF	08-17-17			
	BACK-CHECKED:	WAW	08-17-17			
	CORRECTED:	WAW	08-17-17			
	VERIFIED:	SLF	08-17-17			
PTC OS INSTALLATION	AS DESIGNED-0.01			SCALE:		
	DESIGNED:	SLF	10-10-17	INITIAL	DATE	
	CHECKED:	WDW	10-12-17			
	BACK-CHECKED:	SLF	10-12-17			
	CORRECTED:	SLF	10-12-17			
	VERIFIED:	WDW	10-12-17			

BURNS ENG. REVISIONS	AS DESIGNED-0.00 PTC OS INSTALLATION	SCALE:			AS DESIGNED-0.01 PTC OS INSTALLATION	SCALE:			GIRDWOOD	SHEET NUMBER REF. 24
		DESIGNED:	INITIAL	DATE		DESIGNED:	INITIAL	DATE		DRAWING NUMBER REF. 007450-007490
		CHECKED:	WAW	08-16-17		CHECKED:	SLF	10-10-17	Burns BURNS ENGINEERING, INC. 215 879-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19103	BURNS PROJECT REF. 2017-159
		CHECKED:	SLF	08-17-17		CHECKED:	WDW	10-12-17		
		BACK-CHECKED:	WAW	08-17-17		BACK-CHECKED:	SLF	10-12-17		
		CORRECTED:	WAW	08-17-17		CORRECTED:	SLF	10-12-17		
		VERIFIED:	SLF	08-17-17		VERIFIED:	WDW	10-12-17		

PTC APPLICATION CONFIGURATION TABLE

WIU SETTINGS	
GENERAL SETTINGS	
WIU ADDRESS	700505361501
ENCRYPTED HMAC KEY:	—
BEACON CONTINUOUS	TRUE
BEACON RATE	3000 ms
BEACON BIT TIME	300 s
BEACON END TIME	120 s
MAX BEACON INTERVAL	0 s
BEACON ON CHANGE	YES
EMP SETTINGS	
EMP_SOURCE_ADDRESS	arr.w.053615:01.wiu
EMP_DEST_ADDRESS	xx.1.x.00000:tmc
EMP_FLAGS (TIME FORMAT)	ABSOLUTE
EMP_FLAGS (ENCRYPTION)	DISABLED
EMP_FLAGS (COMPRESSION)	DISABLED
EMP_FLAGS (DATA INTORTY)	APP SPECIFIC
TTL (TIMED BEACON)	12
QoS (TIMED BEACON)	1648
TTL (WIU STAT RESPONSE)	12
QoS (WIU STAT RESPONSE)	576
CLASS D SETTINGS	
DESTINATION IP ADDRESS	TBD
DESTINATION IP PORT	TBD
MODE	BIDIRECTIONAL
LOG TRAFFIC	NO
KEEP ALIVE INTERVAL	10000 ms
KEEP ALIVE ACK TIMEOUT	5000 ms
DATA ACK ENABLED	YES
DATA ACK TIMEOUT	5000 ms
NAK RETRIES	3
RETRANSMIT DELAY	0
CONN ATTEMPT TIMEOUT	20000 ms
CONN DELAY	1000 ms
CONN RETRY LIMIT	—1
RECONNECTION LIMIT	—1
TIME SETTINGS	
TIME_MESS_BEFORE_WSM	5 MESSAGES
TIME_MESSAGE_DEVIATION	1 s
IGNORED TIME DIFFERENCE	3 s
MAX TIME CHANGE SEC	3 s
MAX TIME CHANGE MIN	60 min
LRM_MAX_TIME_DIFFERENCE	3 s
NO TIME SYNC MESSAGES	6 min
TIME_RE—SYNC_ENABLE	TRUE
ETHERNET CONFIGURATION	
GENERAL SETTINGS	
GATEWAY	TBD
SIG_SYS_ETHERNET_SETTINGS	FALSE
ETHERNET PORT 1	
IP ADDRESS	TBD
SUBNET MASK	TBD
GUI ACCESS LEVEL	READ & WRITE
ETHERNET PORT 2	
IP ADDRESS	0.0.0.0
SUBNET MASK	255.255.255.0
GUI ACCESS LEVEL	READ & WRITE
DHCP SERVER SETTINGS — ETHERNET PORT 1	
ENABLED	DISABLED
IP POOL START ADDRESS	192.168.0.12
IP POOL END ADDRESS	192.168.0.43
DEFAULT GATEWAY	0.0.0.0
DHCP SERVER SETTINGS — ETHERNET PORT 2	
ENABLED	DISABLED
IP POOL START ADDRESS	0.0.0.0
IP POOL END ADDRESS	0.0.0.0
DEFAULT GATEWAY	0.0.0.0
WEB INTERFACE SETTINGS	
WEB PORT NUMBER	80
INACTIVITY TIMEOUT MIN	60
TRUSTED SOURCE 1	
ENABLED	DISABLED
IP ADDRESS	0.0.0.0
SUBNET MASK	0.0.0.0
TRUSTED SOURCE 2	
ENABLED	DISABLED
IP ADDRESS	0.0.0.0
SUBNET MASK	0.0.0.0

I/O CONFIGURATION

GENERAL SETTINGS	
REMOTE_ID	0
LOCAL_NETWORK_ID	0
DESTINATION_UDP_PORT	8280
BEACON_HOLDOFF_TIME_MSEC	0
VITAL INPUTS	
INPUT_CONFIGURATION	4 IN
VITAL_INPUT_1_MODE	GENERAL PURPOSE
VITAL_INPUT_2_MODE	GENERAL PURPOSE
VITAL_INPUT_3_MODE	GENERAL PURPOSE
VITAL_INPUT_4_MODE	GENERAL PURPOSE
COMMON RP200x SETTINGS	
MAX_SEND_DIFF_MSEC	7200
MAX_RECEIVE_DIFF_MSEC	7200
RP2000 SETTINGS	
MESSAGE_INTERVAL_MSEC	248
LINK_TIMEOUT_MSEC	1000
RP2009 SETTINGS	
UPDATE_PERIOD_MSEC	248
ACK_TIMEOUT_MSEC	992
HEARTBEAT_MSG_INT_MSEC	4960
VITAL REMOTES	
VITAL REMOTE 1	
REMOTE_ID	1
MODULE_TYPE	8 Vin
LOCAL_NETWORK_ID	1
REMOTE_NETWORK_ID	0
SOURCE_IP_ADDRESS	TBD
DEST_IP_ADDRESS	TBD
DEST_IP_PORT	8280
SUBNET_MASK	TBD
DEFAULT_GATEWAY	TBD
RP200x	RP2009
VITAL INPUT MODE	
VITAL_INPUT_1_MODE	GENERAL PURPOSE
VITAL_INPUT_2_MODE	GENERAL PURPOSE
VITAL_INPUT_3_MODE	GENERAL PURPOSE
VITAL_INPUT_4_MODE	GENERAL PURPOSE
VITAL_INPUT_5_MODE	GENERAL PURPOSE
VITAL_INPUT_6_MODE	GENERAL PURPOSE
VITAL_INPUT_7_MODE	GENERAL PURPOSE
VITAL_INPUT_8_MODE	GENERAL PURPOSE
TELNET SETTINGS	
TELNET PORT SETTINGS	
TELNET_PORT_NUMBER	23
INACTIVITY_TIMEOUT_MIN	5
TELNET_ENABLED_PORT_1	TRUE
TELNET_ENABLED_PORT_2	FALSE
TELNET TRUSTED SOURCE 1	
ENABLED	DISABLED
IP_ADDRESS	0.0.0.0
SUBNET_MASK	0.0.0.0
TELNET TRUSTED SOURCE 2	
ENABLED	DISABLED
IP_ADDRESS	0.0.0.0
SUBNET_MASK	0.0.0.0
TIME SYNCH SETTINGS	
GENERAL SETTINGS	
TIME_SYNCH_SOURCE	EMP
TIME_ZONE	—9
DST_START_MONTH	MAR
DST_START_WEEK	2
DST_END_MONTH	NOV
DST_END_WEEK	1
EMP_TIME_MULTICAST_IP	239.255.0.4
EMP_TIME_MULTICAST_PORT	32768
SNTP_SERVER_UPDATE_MIN	60
SNTP_SERVER_1_ADDRESS	0.0.0.0
SNTP_SERVER_2_ADDRESS	0.0.0.0

PTC TRACK DATABASE TABLE

DEVICE CONFIGURATION	
WAYSIDE DEVICE COUNT — 8	
TIMESTAMP	2016—01—10T14:32:55
WIU_NAME	ARR—WIU—GIRD
WIU_ADDRESS	arr.w.053615:01.wiu
APPLICATION_PROG_NAME	SSW_Potter_R0.ptcbmap
APPLICATION_PROG_CRC	6130E29C
CONFIGURATION_CRC	4023DF45
LIBRARY_CRC	4EF22829
DEVICE_STATUS_CFG_SCAC	ARR
DEVICE_STATUS_CFG_TBL_ID	1
DEVICE_STATUS_CFG_VERSION	0
DEVICE 1	
SITE_DEVICE_ID	SSW_GIRD
DEVICE_TYPE	SWITCH
DESCRIPTION	SW_A
SITE_NAME	GIRD
TRACK_NAME	M
SUBDIVISION_NUMBER	3
MILEPOST	361.45
WIU_STATUS_INDEX	0
DIRECTION	RF
DEVICE 2	
SITE_DEVICE_ID	NSW_GIRD
DEVICE_TYPE	SWITCH
DESCRIPTION	SW_B
SITE_NAME	GIRD
TRACK_NAME	M
SUBDIVISION_NUMBER	3
MILEPOST	362.94
WIU_STATUS_INDEX	2
DIRECTION	RR
DEVICE 3	
SITE_DEVICE_ID	SOSTK_GIRD_F
DEVICE_TYPE	HAZARD DETECTOR
DESCRIPTION	HD_1
SITE_NAME	GIRD
TRACK_NAME	M
SUBDIVISION_NUMBER	3
MILEPOST	361.43
WIU_STATUS_INDEX	4
DIRECTION	INCREASING
DEVICE 4	
SITE_DEVICE_ID	SOSTK_GIRD_T
DEVICE_TYPE	HAZARD DETECTOR
DESCRIPTION	HD_2
SITE_NAME	GIRD
TRACK_NAME	M
SUBDIVISION_NUMBER	3
MILEPOST	361.49
WIU_STATUS_INDEX	5
DIRECTION	DECREASING
DEVICE 5	
SITE_DEVICE_ID	SOSAKT_GIRD_T
DEVICE_TYPE	HAZARD DETECTOR
DESCRIPTION	HD_3
SITE_NAME	GIRD
TRACK_NAME	S
SUBDIVISION_NUMBER	3
MILEPOST	361.49
WIU_STATUS_INDEX	6
DIRECTION	DECREASING
DEVICE 6	
SITE_DEVICE_ID	NOSTK_GIRD_T
DEVICE_TYPE	HAZARD DETECTOR
DESCRIPTION	HD_4
SITE_NAME	GIRD
TRACK_NAME	M
SUBDIVISION_NUMBER	3
MILEPOST	362.91
WIU_STATUS_INDEX	7
DIRECTION	INCREASING

DEVICE 7

SITE_DEVICE_ID	NOSTK_GIRD_F
DEVICE_TYPE	HAZARD DETECTOR
DESCRIPTION	HD_5
SITE_NAME	GIRD
TRACK_NAME	M
SUBDIVISION_NUMBER	3
MILEPOST	362.96
WIU_STATUS_INDEX	8
DIRECTION	DECREASING

DEVICE 8

SITE_DEVICE_ID	NOSATK_GIRD_T
DEVICE_TYPE	HAZARD DETECTOR
DESCRIPTION	HD_6
SITE_NAME	GIRD
TRACK_NAME	S
SUBDIVISION_NUMBER	3
MILEPOST	362.91
WIU_STATUS_INDEX	9
DIRECTION	INCREASING

PTC INFORMATION TO BE INCLUDED IN AS IN SERVICE DRAWINGS.

AS DESIGNED—0.00
INSTALL IEIMS
PTC SYSTEM
DES:BE/WAW

08—16—17
CHK:BE/SLF

SIGNAL ENGINEERING

The ALASKA RAILROAD CORPORATION

P.O. BOX 107500 , ANCHORAGE , ALASKA 99510—7500

GIRDWOOD

SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90

MANUAL MONITORED SWITCH

DRAWN: *BE*

DATE: 08—16—17

DWG NO.

007450—007490

SHEET 26 OF 56

BURNS ENG.
REVISIONS

AS DESIGNED—0.00
PTC OS INSTALLATION

SCALE:	INITIAL	DATE
DESIGNED:	WAW	08—16—17
CHECKED:	SLF	08—17—17
BACK—CHECKED:	WAW	08—17—17
CORRECTED:	WAW	08—17—17
VERIFIED:	SLF	08—17—17

AS DESIGNED—0.01
PTC OS INSTALLATION

SCALE:	INITIAL	DATE
DESIGNED:	SLF	10—10—17
CHECKED:	WDW	10—12—17
BACK—CHECKED:	SLF	10—12—17
CORRECTED:	SLF	10—12—17
VERIFIED:	WDW	10—12—17

GIRDWOOD

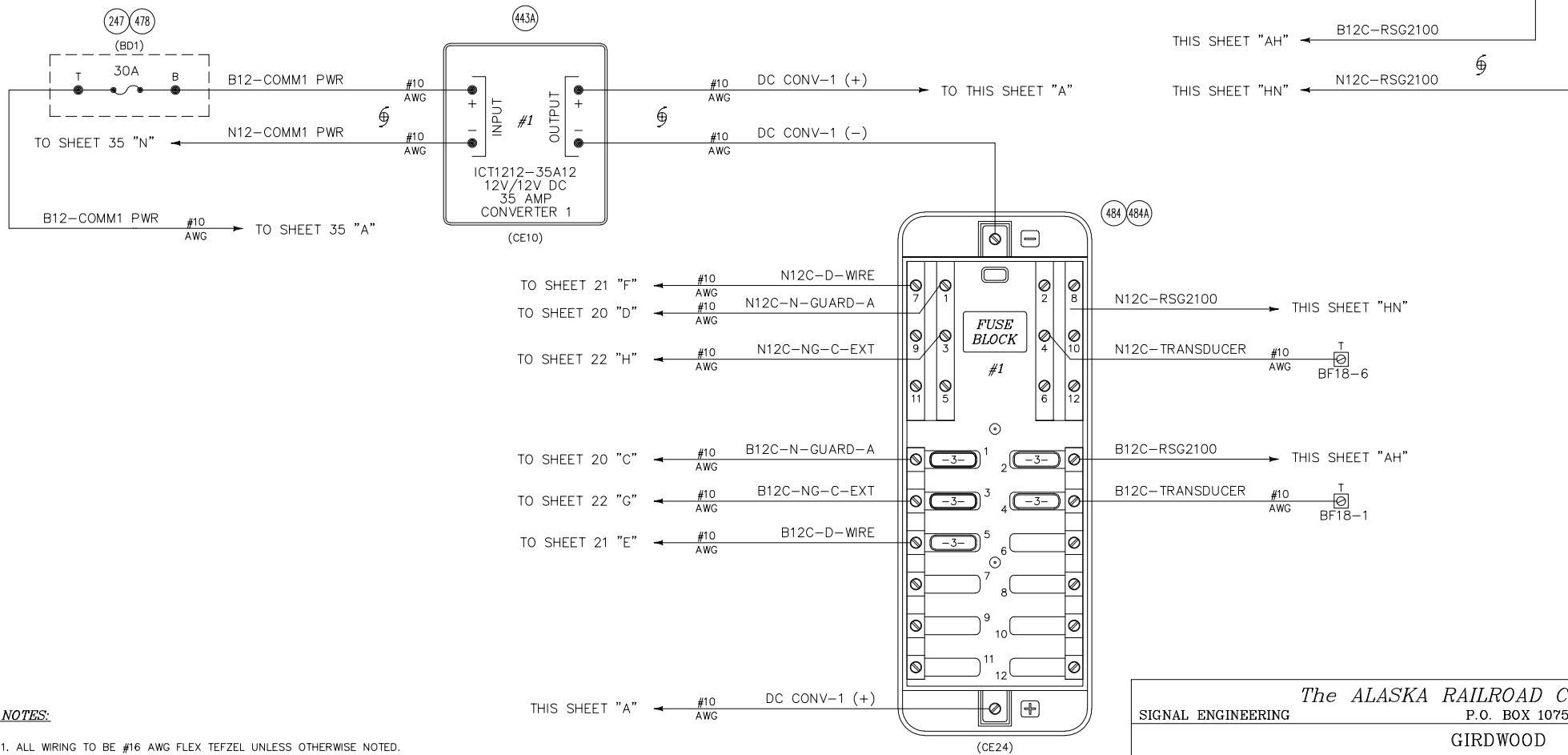
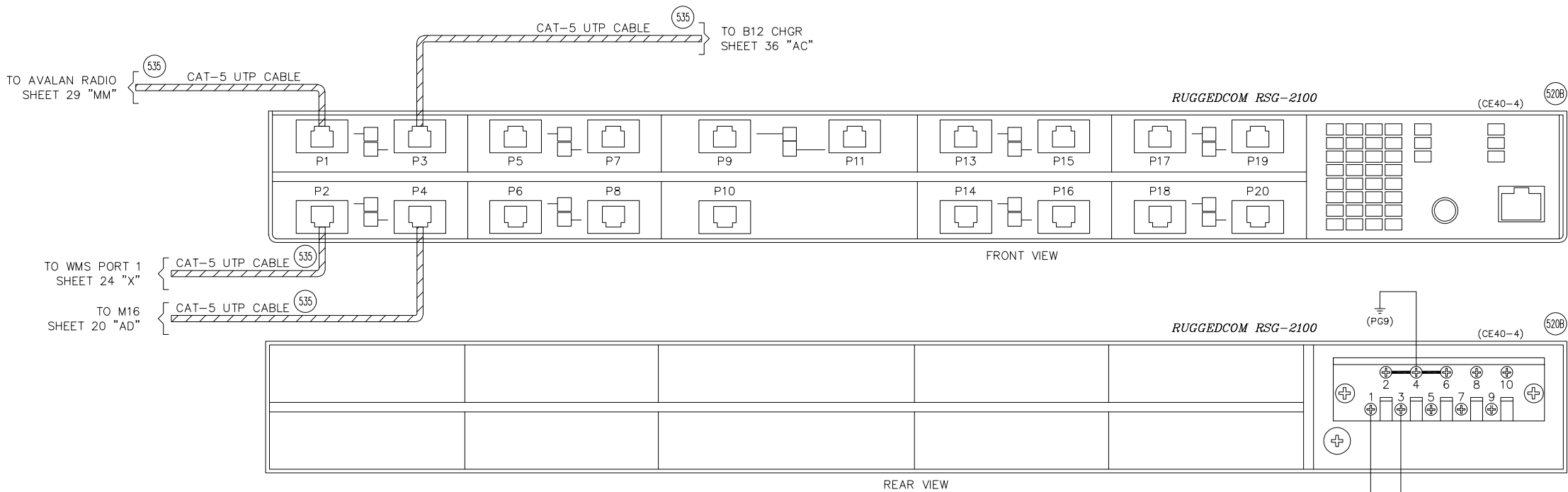
Burns

BURNS ENGINEERING, INC. | 215 978-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

SHEET NUMBER REF.
26

DRAWING NUMBER REF.
007450—007490

BURNS PROJECT REF.
2017—159



NOTES:

- ALL WIRING TO BE #16 AWG FLEX TEFLON UNLESS OTHERWISE NOTED.
- ALL GROUND WIRES TO BE #10 AWG GREEN FLEX TEFLON UNLESS OTHERWISE NOTED.

REVISIONS

AS DESIGNED-0.00 08-16-17
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

DRAWN: BE
DATE: 08-16-17

The ALASKA RAILROAD CORPORATION
SIGNAL ENGINEERING P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500
GIRDWOOD
SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90
MANUAL MONITORED SWITCH

DWG NO. 007450-007490
SHEET 28 OF 56

BURNS ENG.

REVISIONS

SCALE:			
DESIGNED:	INITIAL	DATE	
WAW		08-16-17	
CHECKED:	SLF	08-17-17	
WAW		08-17-17	
CORRECTED:	WAW	08-17-17	
SLF		08-17-17	

SCALE:			
DESIGNED:	INITIAL	DATE	
SLF		10-10-17	
CHECKED:	WDW	10-12-17	
SLF		10-12-17	
CORRECTED:	SLF	10-12-17	
WDW		10-12-17	

GIRDWOOD

Burns BURNS ENGINEERING, INC. | 215 878-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

SHEET NUMBER REF.

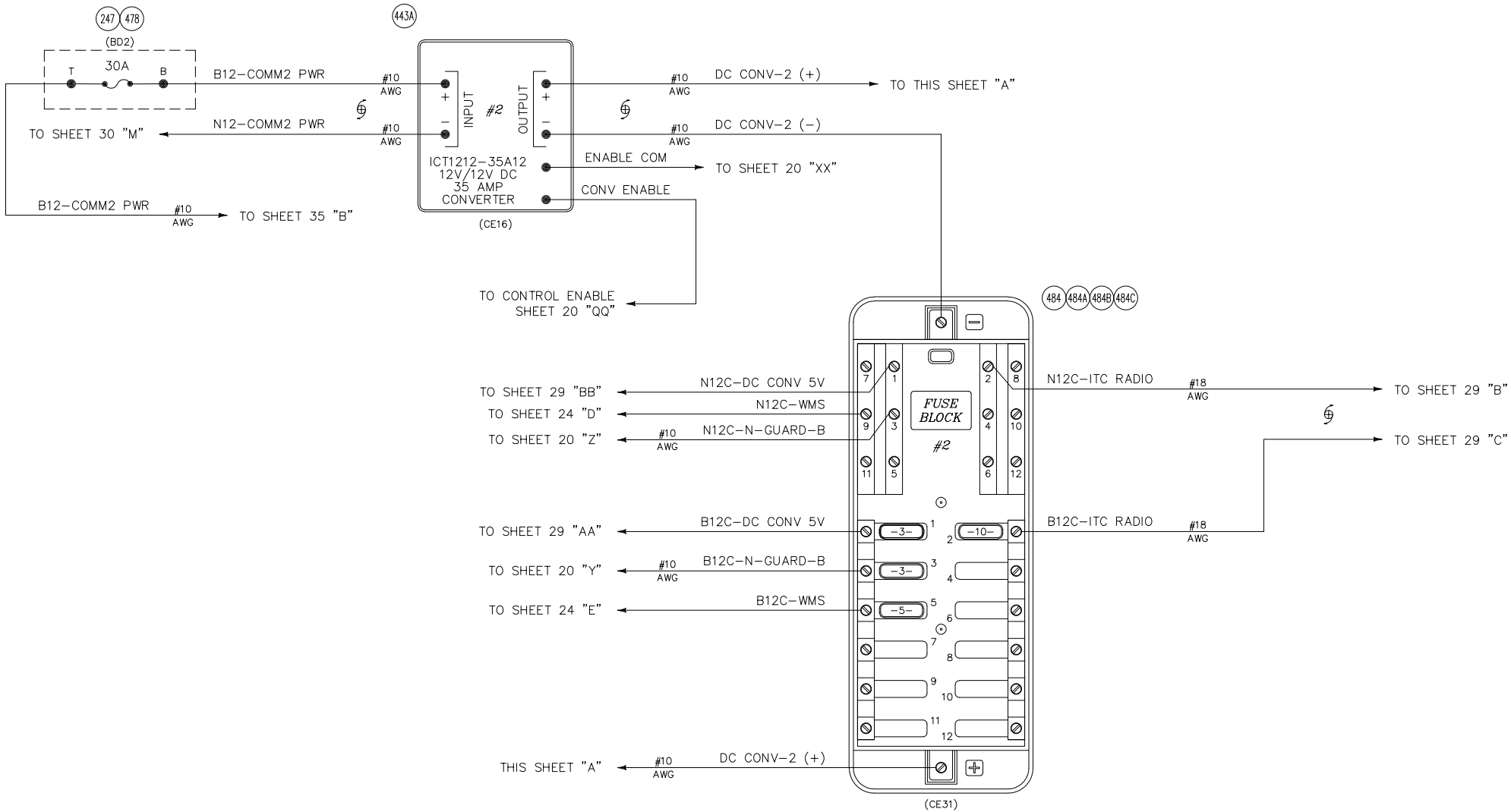
28

DRAWING NUMBER REF.

007450-007490

BURNS PROJECT REF.

2017-159



NOTES:

1. ALL WIRING TO BE #16 AWG FLEX TEFLON UNLESS OTHERWISE NOTED.

The ALASKA RAILROAD CORPORATION
SIGNAL ENGINEERING

P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

GIRDWOOD
SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90
MANUAL MONITORED SWITCH

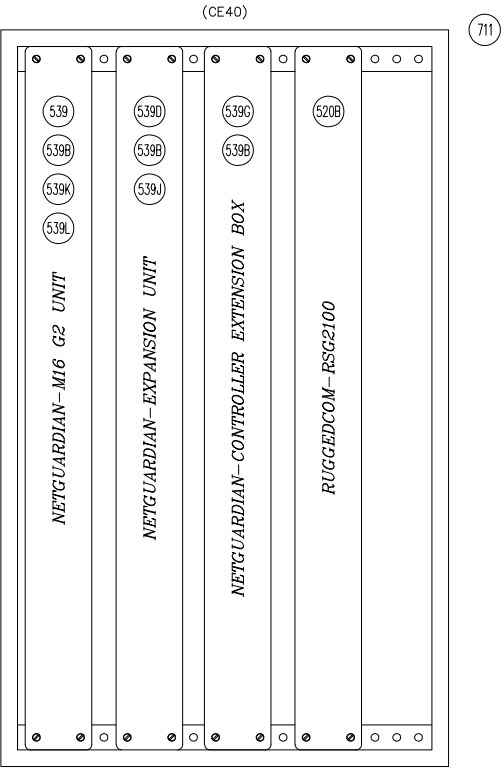
AS DESIGNED-0.00 08-16-17
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

DRAWN: BE
DATE: 08-16-17

DWG NO. 007450-007490

30 SHEET OF 56

BURNS ENG. REVISIONS	SCALE:			SCALE:			GIRDWOOD		SHEET NUMBER REF. 30
	AS DESIGNED-0.00	INITIAL	DATE	AS DESIGNED-0.01	INITIAL	DATE	Burns BURNS ENGINEERING, INC. 215 978-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19103		DRAWING NUMBER REF. 007450-007490
	PTC OS INSTALLATION	WAW	08-16-17	PTC OS INSTALLATION	SLF	10-10-17			BURNS PROJECT REF. 2017-159
	CHECKED:	SLF	08-17-17	CHECKED:	WDW	10-12-17			
	BACK-CHECKED:	WAW	08-17-17	BACK-CHECKED:	SLF	10-12-17			
	CORRECTED:	WAW	08-17-17	CORRECTED:	SLF	10-12-17			
	VERIFIED:	SLF	08-17-17	VERIFIED:	WDW	10-12-17			



RU6 FLUSH MOUNT WALL RACK
(SIDE VIEW)

The ALASKA RAILROAD CORPORATION

SIGNAL ENGINEERING

P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

GIRDWOOD

SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90

MANUAL MONITORED SWITCH

AS DESIGNED-0.00 08-16-17
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

DRAWN: BE
DATE: 08-16-17

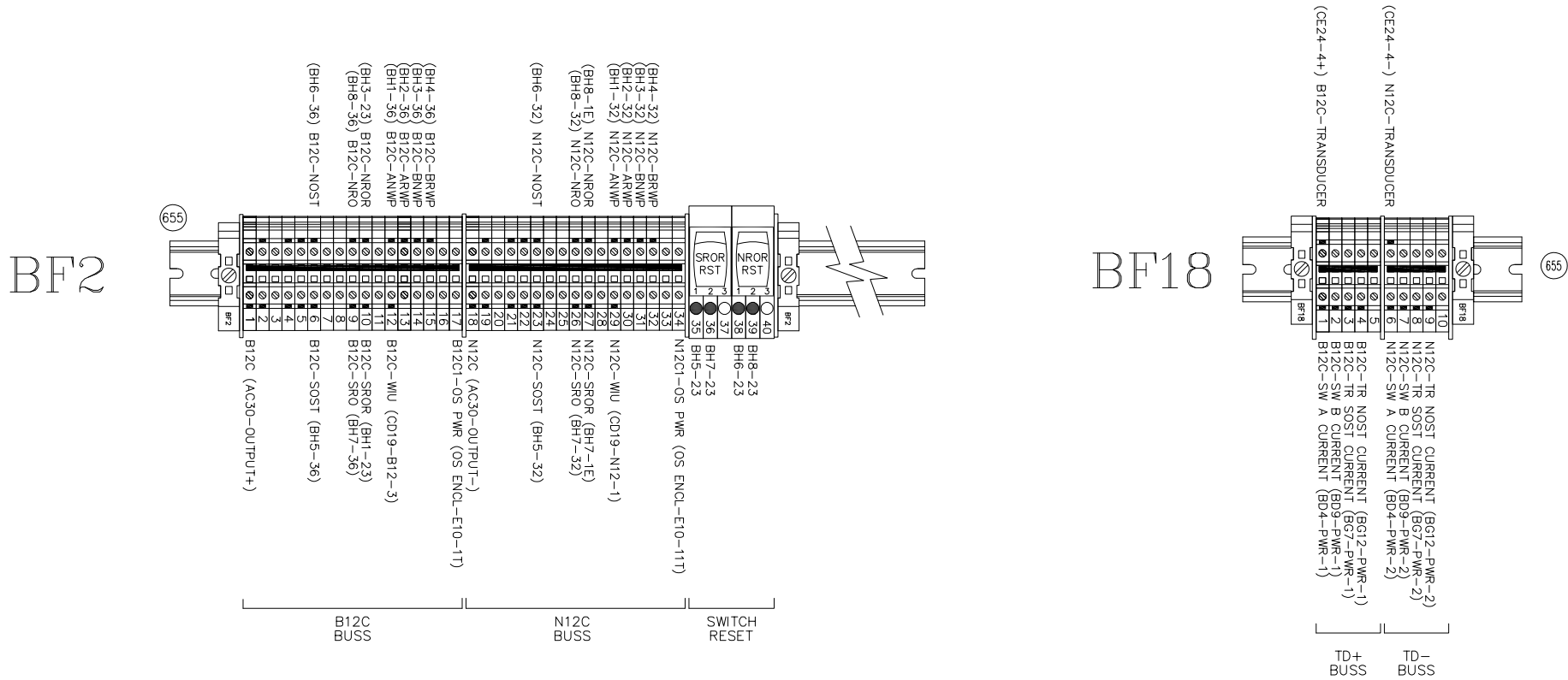
DWG NO. 007450-007490

33 SHEET OF 56

						AS DESIGNED-0.00 INSTALL IETMS PTC SYSTEM DES:BE/WAW CHK:BE/SLF		08-16-17		DRAWN: <i>BE</i> DATE: 08-16-17		DWG NO. 007450-007490		33 ^{SHEET} OF 56					
007490_33.dwg 08-16-17																			
REVISIONS	AS DESIGNED-0.00 PTC OS INSTALLATION			SCALE:			AS DESIGNED-0.01 PTC OS INSTALLATION			SCALE:			GIRDWOOD			SHEET NUMBER REF. 33			
				INITIAL		DATE				INITIAL		DATE				DRAWING NUMBER REF. 007450-007490			
				DESIGNED:	WAW	08-16-17				DESIGNED:	SLF	10-10-17				Burns BURNS ENGINEERING, INC. 215 979-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19103		BURNS PROJECT REF. 2017-159	
				CHECKED:	SLF	08-17-17				CHECKED:	WDW	10-12-17							
				BACK-CHECKED:	WAW	08-17-17				BACK-CHECKED:	SLF	10-12-17							
				CORRECTED:	WAW	08-17-17				CORRECTED:	SLF	10-12-17							
	VERIFIED:			SLF	08-17-17	VERIFIED:			WDW	10-12-17									

REVISIONS BURNS ENG.	AS DESIGNED-0.00 PTC OS INSTALLATION			SCALE:			AS DESIGNED-0.01 PTC OS INSTALLATION			SCALE:			GIRDWOOD			SHEET NUMBER REF. 36		
	DESIGNED:	WAW	08-16-17	DESIGNED:	SLF	10-10-17	DESIGNED:	SLF	10-10-17	DESIGNED:	SLF	10-10-17	<					

TERMINAL DETAILS



NOTES:

1. USE 20 POLE JUMPER MAT REF 669 FOR TERMINAL 657 (BF2 1-17 & 18-34)
2. USE 5 POLE JUMPER MAT REF 678 FOR TERMINAL 657 (BF18 1-5 & 6-10)

REVISIONS

AS DESIGNED-0.00 08-16-17
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

The ALASKA RAILROAD CORPORATION
SIGNAL ENGINEERING P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500
GIRDWOOD
SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90
MANUAL MONITORED SWITCH
DRAWN: BE DATE: 08-16-17
DWG NO. 007450-007490
SHEET 40 OF 56

BURNS ENG. REVISIONS	007490_40.dwg 08-16-17			GIRDWOOD			SHEET NUMBER REF. 40
	DESIGNED-0.00 PTC OS INSTALLATION			BURNS ENGINEERING, INC. 215 979-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19103			DRAWING NUMBER REF. 007450-007490
	SCALE:			BURNS PROJECT REF. 2017-159			
	DESIGNED-0.00 PTC OS INSTALLATION						

BUNGALOW OS ENCLOSURE

ENCLOSURE TYPE: NEMA 3R
SIZE: 48H X 36W X 16D

719

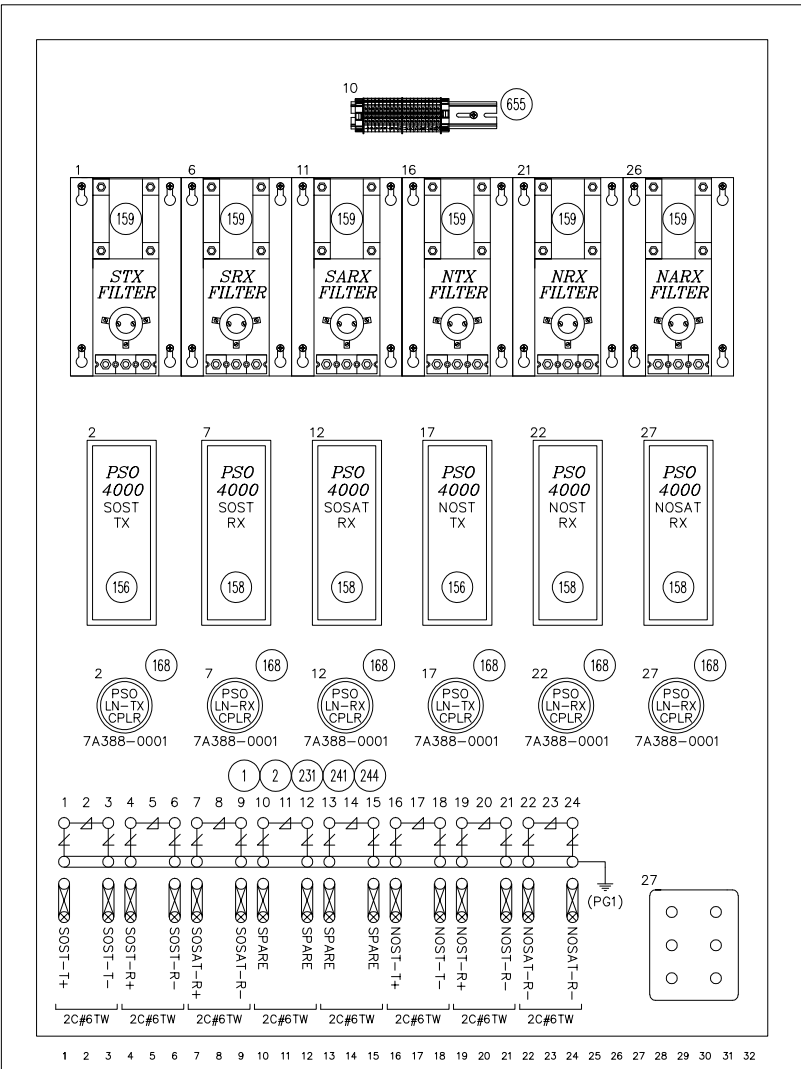
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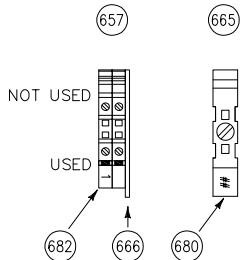
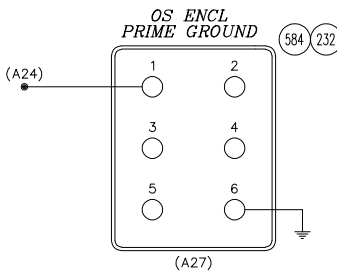
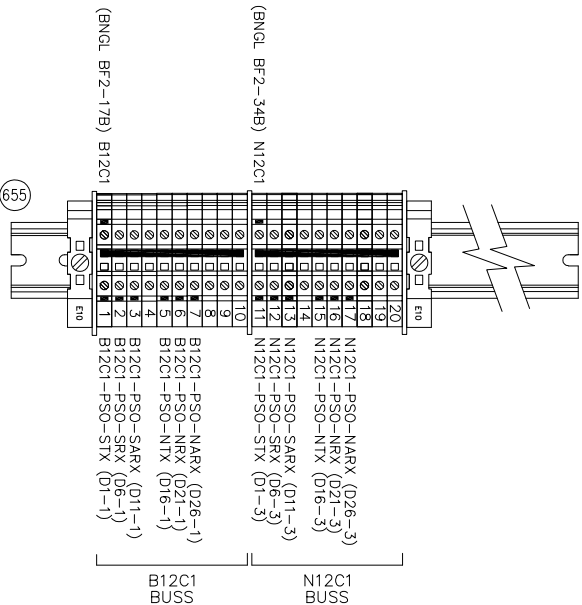
C

B

A



E10



NOTES:

- ALL GROUND WIRES IN ENCLOSURE TO BE #6 AWG GREEN TEFLON UNLESS OTHERWISE NOTED.
- USE 10 POLE JUMPER MAT REF 668 FOR TERMINAL 657 (1-10 & 11-20)

ALL NEW

REVISIONS

AS DESIGNED-0.00 08-16-17
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

The ALASKA RAILROAD CORPORATION	
SIGNAL ENGINEERING	
P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500	
GIRDWOOD	
SSS GIRDWOOD M.P. 74.50 NSS GIRDWOOD M.P. 74.90	
MANUAL MONITORED SWITCH	
DRAWN: BE DATE: 08-16-17	DWG NO. 007450-007490
41 SHEET OF 56	

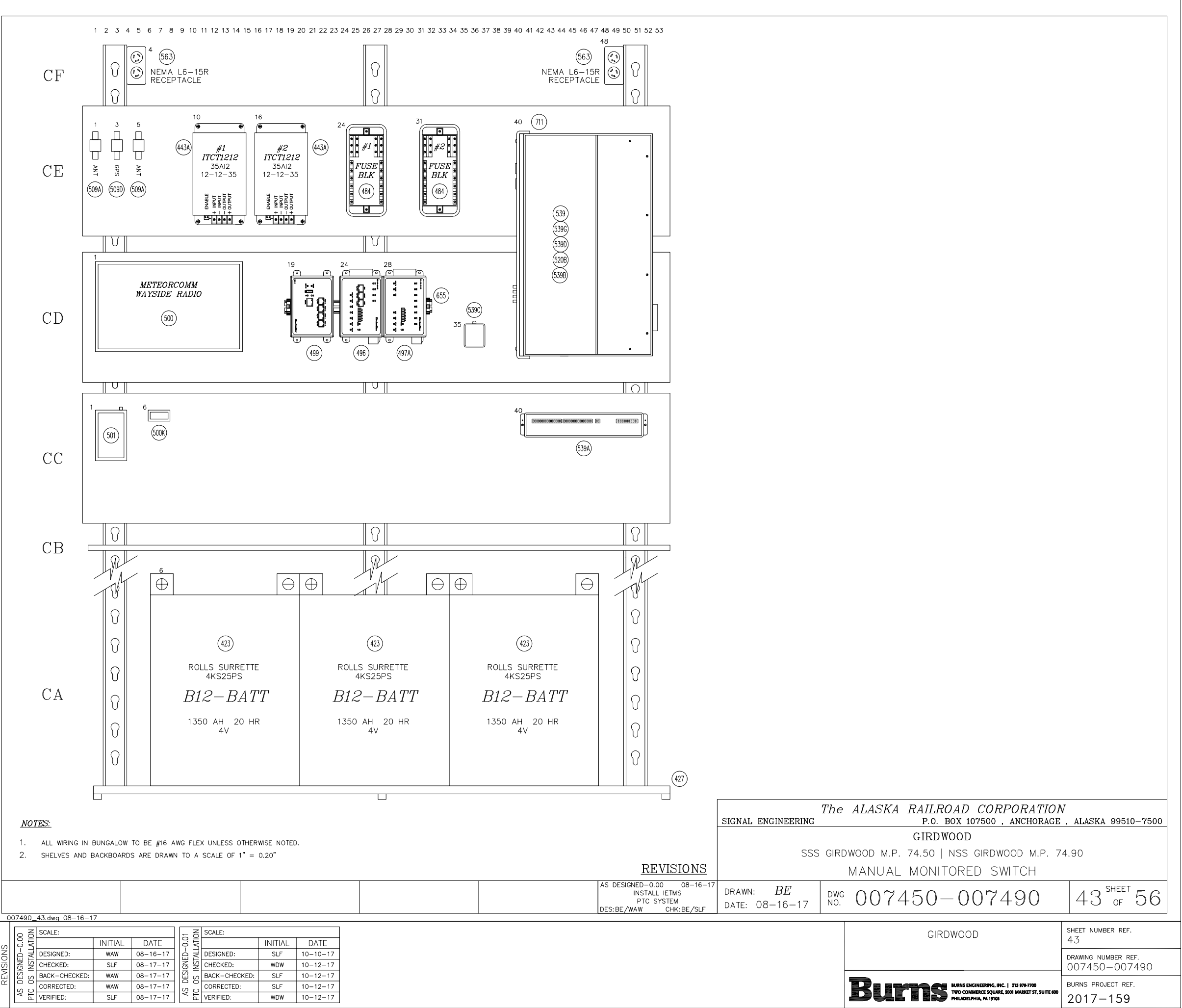
BURNS ENG. REVISIONS	SCALE:		
	DESIGNED:	INITIAL	DATE
	CHECKED:	SLF	08-17-17
	BACK-CHECKED:	WAW	08-17-17
AS DESIGNED-0.01 PTC OS INSTALLATION	SCALE:		
	DESIGNED:	SLF	10-10-17
	CHECKED:	WDW	10-12-17
	BACK-CHECKED:	SLF	10-12-17
AS DESIGNED-0.01 PTC OS INSTALLATION	SCALE:		
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	BACK-CHECKED:	SLF	10-12-17

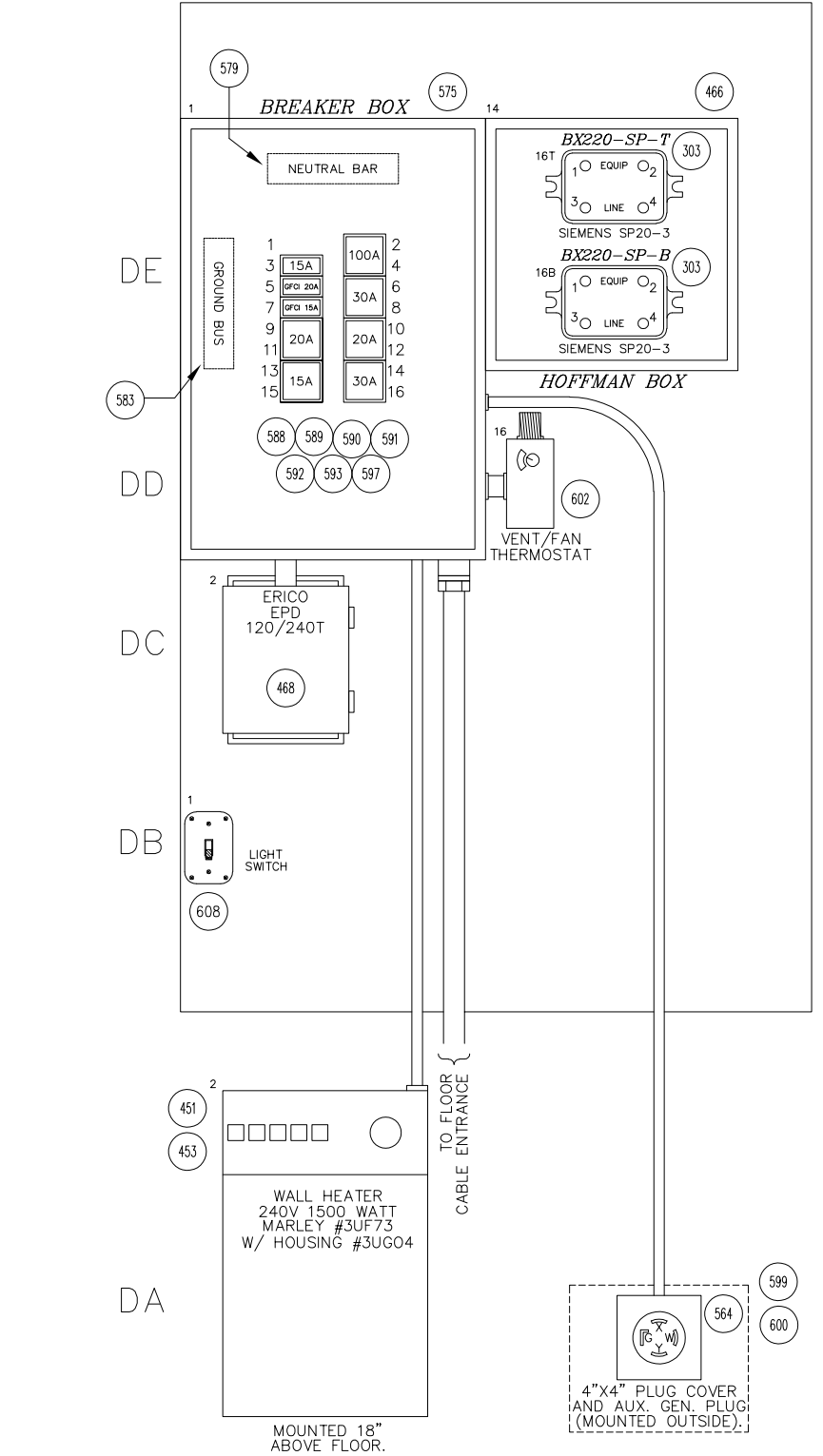
Burns BURNS ENGINEERING, INC. | 215 978-7700
TWO COMMENCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

SHEET NUMBER REF.
41

DRAWING NUMBER REF.
007450-007490

BURNS PROJECT REF.
2017-159

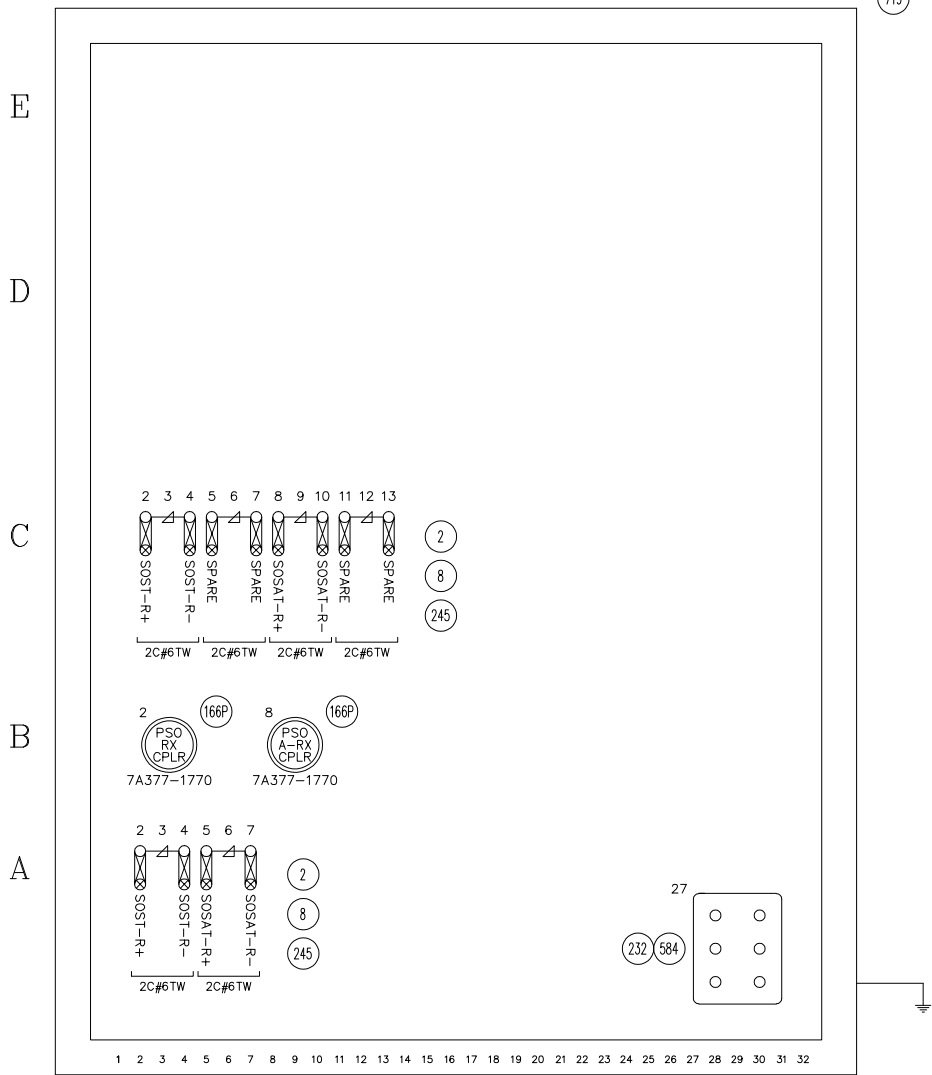




REVISIONS AS DESIGNED-0.00 PTC OS INSTALLATION	SCALE:			AS DESIGNED-0.01 PTC OS INSTALLATION	SCALE:		
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	CHECKED:	SLF	08-17-17		CHECKED:	WDW	10-12-17
	BACK-CHECKED:	WAW	08-17-17		BACK-CHECKED:	SLF	10-12-17
	CORRECTED:	WAW	08-17-17		CORRECTED:	SLF	10-12-17
	VERIFIED:	SLF	08-17-17		VERIFIED:	WDW	10-12-17

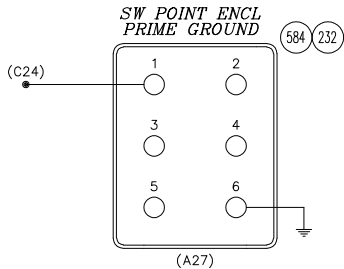
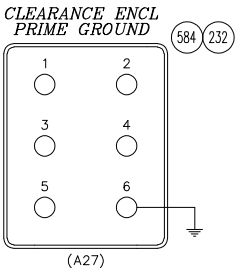
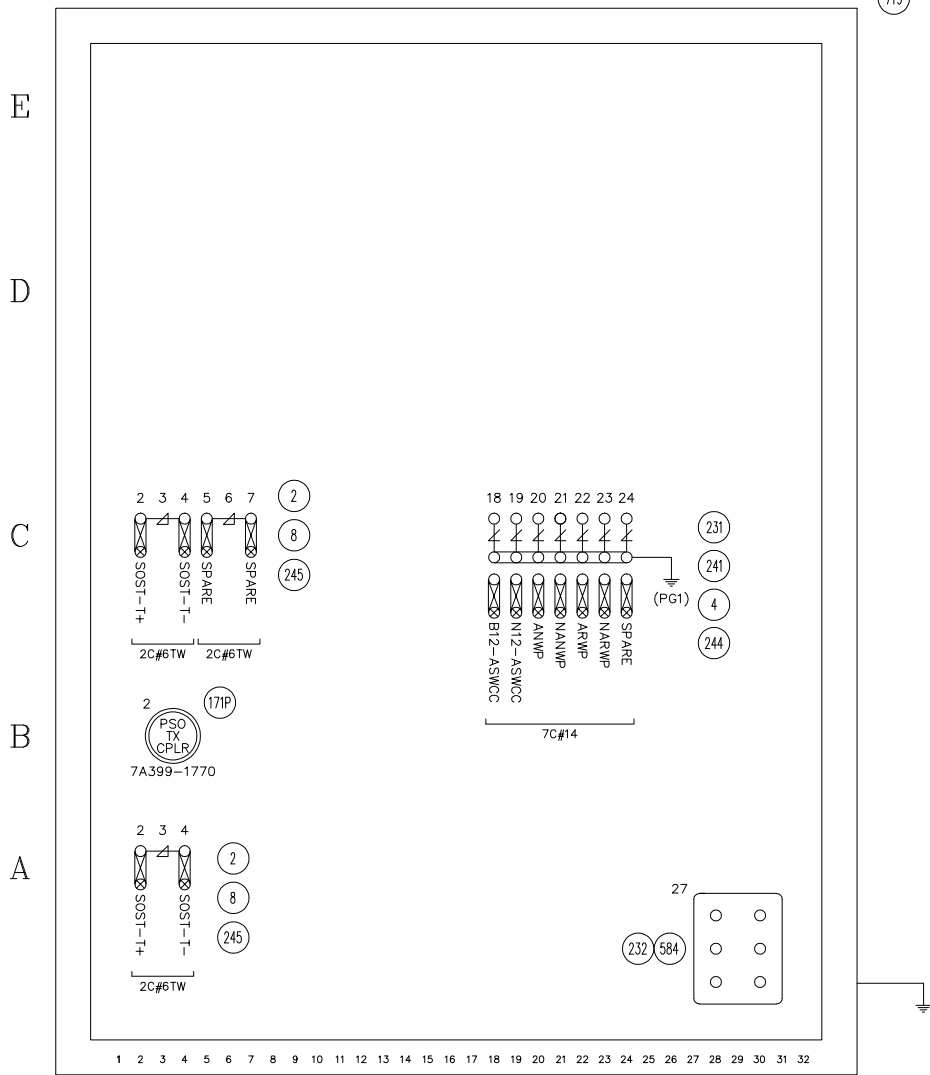
SSS CLEARANCE ENCLOSURE

ENCLOSURE TYPE: NEMA 3R
SIZE: 48H X 36W X 16D



SSS SWITCH POINT ENCLOSURE

ENCLOSURE TYPE: NEMA 3R
SIZE: 48H X 36W X 16D



NOTES:

- ALL GROUND WIRES TO BE #6 AWG GREEN TEFLON UNLESS OTHERWISE NOTED.
- FROM GROUND PLATE TO GROUND ROD SOFT DRAWN #6.

ALL NEW

REVISIONS

AS DESIGNED-0.00 08-16-17
INSTALL IETMS
PTC SYSTEM
DES:BE/WAW CHK:BE/SLF

DRAWN: BE
DATE: 08-16-17

The ALASKA RAILROAD CORPORATION
SIGNAL ENGINEERING P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

GIRDWOOD
SSS GIRDWOOD M.P. 74.50 | NSS GIRDWOOD M.P. 74.90

MANUAL MONITORED SWITCH

DWG NO. 007450-007490

46 SHEET OF 56

BURNS ENG.

REVISIONS

SCALE:	INITIAL	DATE
DESIGNED:	WAW	08-16-17
CHECKED:	SLF	08-17-17
BACK-CHECKED:	WAW	08-17-17
CORRECTED:	WAW	08-17-17
VERIFIED:	SLF	08-17-17

SCALE:	INITIAL	DATE
DESIGNED:	SLF	10-10-17
CHECKED:	WDW	10-12-17
BACK-CHECKED:	SLF	10-12-17
CORRECTED:	SLF	10-12-17
VERIFIED:	WDW	10-12-17

GIRDWOOD

Burns BURNS ENGINEERING, INC. | 215 878-7700
TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600
PHILADELPHIA, PA 19103

SHEET NUMBER REF.
46

DRAWING NUMBER REF.
007450-007490

BURNS PROJECT REF.
2017-159

BURNS, ENG. REVISIONS	AS DESIGNED-000 PTC OS INSTALLATION 007450-000WQ-08-16-17	SCALE:			AS DESIGNED-001 PTC OS INSTALLATION 007450-000WQ-08-16-17	SCALE:			GIRDWOOD	Burns BURNS ENGINEERING, INC. 215 879-7700 TWO COMMERCE SQUARE, 2001 MARKET ST, SUITE 600 PHILADELPHIA, PA 19108	SHEET NUMBER REF. 50
		DESIGNED:	WAW	08-16-17		DESIGNED:	SLF	10-10-17			DRAWING NUMBER REF. 007450-007490
		CHECKED:	SLF	08-17-17		CHECKED:	WDW	10-12-17			
		BACK-CHECKED:	WAW	08-17-17		BACK-CHECKED:	SLF	10-12-17			
		CORRECTED:	WAW	08-17-17		CORRECTED:	SLF	10-12-17			BURNS PROJECT REF. 2017-159
		VERIFIED:	SLF	08-17-17		VERIFIED:	WDW	10-12-17			

