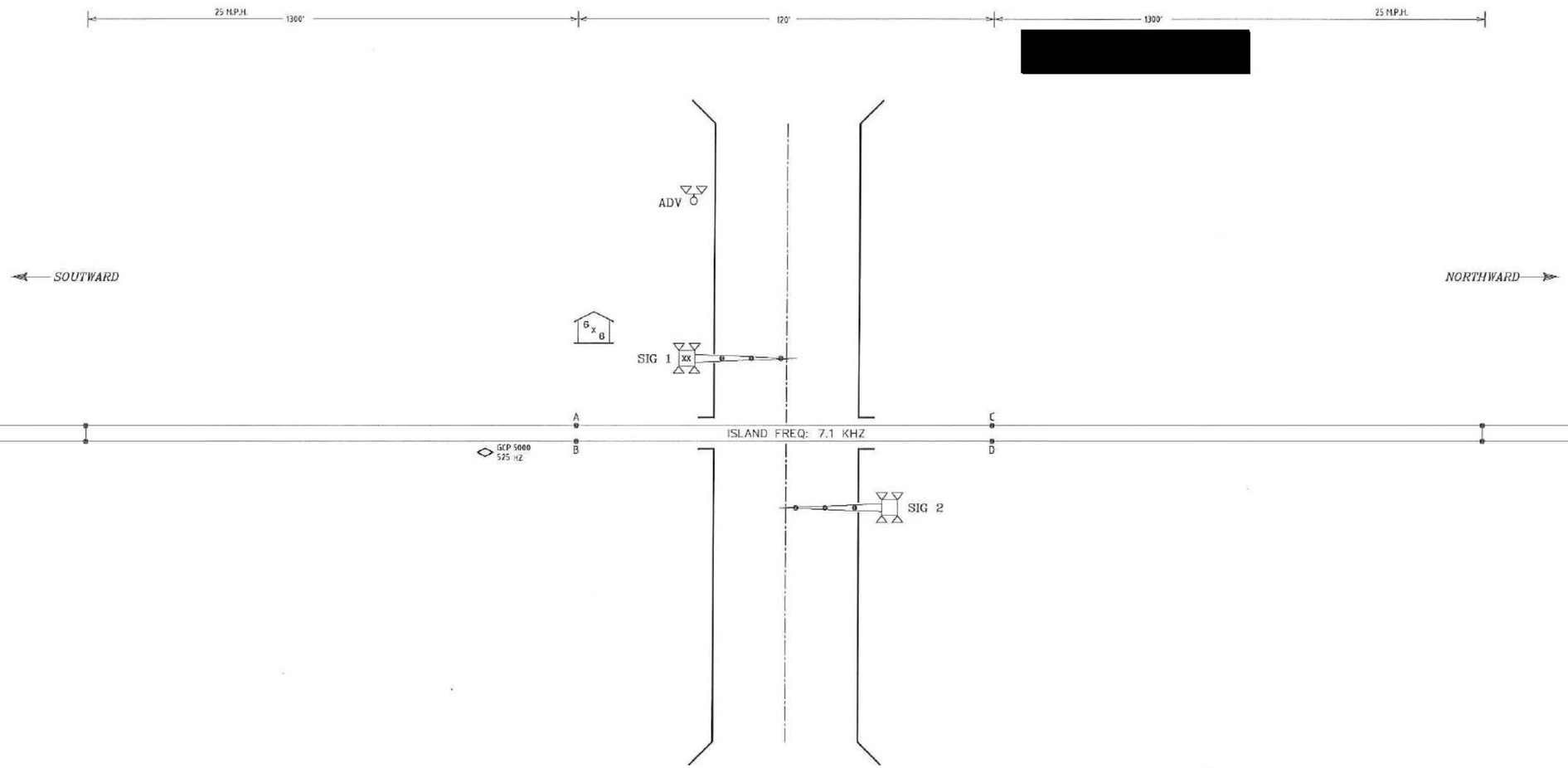


NOTES:

1. ALL WIRING TO BE #16 AWG FLEX TEFZEL UNLESS OTHERWISE NOTED.
2. ALL CROSSING CONTROL EQUIPMENT IS DESIGNED TO PROVIDE A MINIMUM WARNING TIME OF 25 SECONDS AT THE MAXIMUM AUTHORIZED TRAIN SPEED FOR EACH MAIN TRACK APPROACH.
3. CROSSING APPROACHES WERE LENGTHENED 5 SECONDS TO COMPENSATE FOR ACCELERATING TRAINS AND BALLAST CHANGES.
4. CROSSING APPROACHES WERE LENGTHENED 5 SECONDS FOR EQUIPMENT REACTION TIME.

[redacted]

LEGEND

6 TWISTED WIRE TWO TURNS PER FOOT

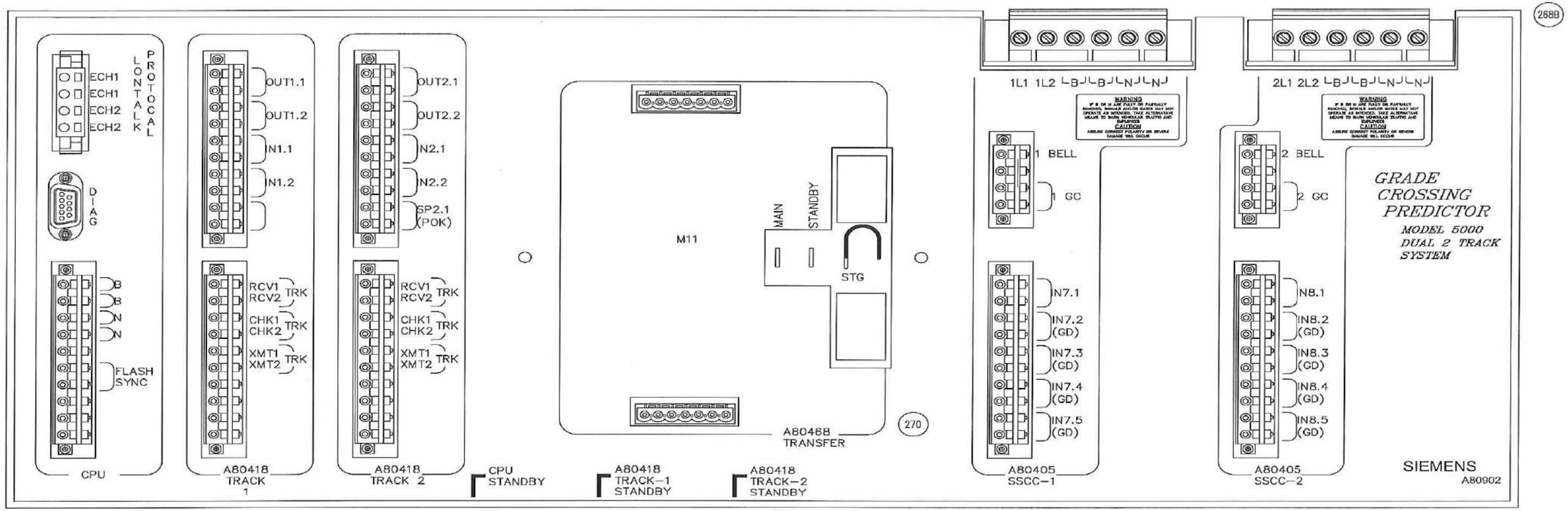
REVISIONS

					AS DESIGNED-0.00 07-11-19 NEW XING BUNGALOW INSTALLTION DES: SMI/KDF CHK: SMI/DAD

The ALASKA RAILROAD CORPORATION

SIGNAL ENGINEERING — P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

LAT:	63.736	DOT 868350S	DENALI PARK RD MP 348.20 RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM
LONG:	-148.915		
DRAWN:	SMI	DWG NO.	868350S
DATE:	07-11-19		SHEET 2 OF 22



Minimum Program Steps Report

Creation Date: Wednesday July 31 2019
Creation Time: 14:47:20 Alaska

Location and SIN
==========
Site Name : 868350S
DOT Number : 868350S
Milepost Number : 348.20

SIN : 7.005.100.363.16 *
* Parameter is part of office configuration check number calculation.

MCF and Template Selection
==========
MCF Name : gcp5k–02–3.mcf
MCF Revision : 023
MCFCRC : 0EA1F809
Template = 1A:6 Trk Bi (OCCN) *
* Parameter is part of office configuration check number calculation

Minimum Program Steps
==========

(1.2) Module Selection
Chassis Type = Dual Two Track (Set in Field)

(1.6) Out of Service
OOS Timeout = No (OCCN) *

(2.1.1) Trk 1: GCP Frequency
Track 1 : GCP Frequency = 525 Hz (OCCN,TCN) *
Track 1 : Approach Distance = 1300 ft (OCCN,TCN) *

(2.1.2) Trk 1: Island Frequency
Track 1 : Isl Frequency = 7.1 kHz (OCCN) *

(2.1.8) Trk 1: GCP Miscellaneous
Track 1 : Train Line Speed = 25 mph (OCCN) *

(4.1) SSCC Configuration
Bell On Gate Rising = Yes (OCCN) *
Mute Bell On Gate Down = Yes (OCCN) *

(4.3) SSCC 1 Configuration (2F)
SSCC–1 Number of GDs = 0 (OCCN) *

(5.2.4) I/O: Input Slot SSCC 1
IN 7.2 = Not Used (OCCN) *
IN 7.4 = Not Used (OCCN) *
* Parameter is part of office configuration check number calculation

Check Numbers:
Office Configuration Check Number: 32DA274B
Config. Check Number: 7818C996

Parameters not part of office configuration check number calculation:
Chassis Type = Dual Two Track (Set in Field)

Non Vital Configuration

Site Information

Site Name : 868350S
DOT Number : 868350S
Mile Post : 348.20
Time Zone : Alaska (GMT–9:00)
ATCS – Railroad : 5
ATCS – Group : 363

SEAR Configuration
==========

SEAR Programming – IO Assignment

Digital Inputs:

SEAR Digital Input SP 2_1
Name : POK1
Tag : POK1
Off State Name : Deenergized
On State Name : Energized

SEAR Digital Input IN 7.2
Algorithm : MTSS

SEAR Digital Input IN 7.4
Algorithm : MTSS

SEAR Digital Input IN 7.5
Name : GP 1.1
Tag : GP 1.1
Off State Name : Deenergized
On State Name : Energized

SEAR Digital Input 1GC
Name : Gate Output 1
Tag : Gate Output 1
Off State Name : Deenergized
On State Name : Energized

SEAR Digital Input 2GC
Name : Gate Output 2
Tag : Gate Output 2
Off State Name : Deenergized
On State Name : Energized

SEAR Digital Input Extern DI1
Name : Gnd Flt Testr 1
Algorithm : GFT
Tag : GFT1

Non–Vital Outputs:

SEAR Output 7
Name : Ground Flt Test
Tag : GndFltTest
Off State Name : Deenergized
On State Name : Energized

SEAR Programming – Communication

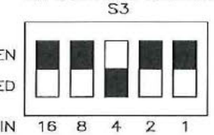
Site Type : Collector
Office (WAMS) ATCS Addr : 2.005.01.9100
Modem Phone Number : 1–907–265–2285
Radio ATCS Addr : 7.005.100.363.00.01

NOTES:

1 .FOR ISLAND DISTANCE MEASURE THE DISTANCE BETWEEN THE TRANSMITTER AND RECEIVER LEADS – MUST BE 128' MINIMUM

2. SET TRANSFER JUMPER TO STG.
SET TRANSFER SWITCH TO AUTO.
SET TIME FOR 4 MIN.

ON MODULES A80902
S3



[redacted]

REVISIONS

AS DESIGNED–0.00 07–11–19
NEW XING BUNGALOW
INSTALLTION
DES: SMI/KDF CHK: SMI/DAD

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

LAT: 63.736
LONG: –148.915

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM

DRAWN: *SMI*
DATE: 07–11–19

DWG NO. 868350S

SHEET 3 OF 22

Program Report

Creation Date: Wednesday July 31 2019
Creation Time: 14:47:23 Alaska

Location and SIN
==========
Site Name : 868350S
DOT Number : 868350S
Milepost Number : 348.20

SIN : 7.005.100.363.16

MCF and Template Selection
==========
MCF Name : gcp5k-02-3.mcf
MCF Revision : 023
MCFCRC : 0EA1F809
Template = 1A:6 Trk BI (OCCN)

Check Numbers:
Office Configuration Check Number: 52116C7C
Config. Check Number: 7818C996

Program
==========

(1.1) Set Template
Template = 1A:6 Trk BI (OCCN)

(1.2) Module Selection
Track 1 Slot = Track (OCCN)
Track 2/RIO 1 Slot = Not Used (OCCN)
SSCC-1 Slot = SSCC3I (OCCN)
SSCC-2 Slot = SSCC3I (OCCN)
SEAR Used = Yes (OCCN)
Chassis Type = Dual Two Track (Field)

(1.3) Preemption
Preempt Logic = No (OCCN)
Second Trn Logic Used = No (OCCN)

(1.4) MS/Restart
MS/GCP Restart Used = No (OCCN)

(1.5) Vital Comms Links
Vital Comms link 1 Used = No (OCCN)
Vital Comms link 2 Used = No (OCCN)
Vital Comms link 3 Used = No (OCCN)
Vital Comms link 4 Used = No (OCCN)

(1.6) Out of Service
OOS Control = Display (OCCN)
OOS Timeout = No (OCCN)

(2.1.1) Trk 1: GCP Frequency
Track 1 : MS/GCP Operation = Yes (OCCN)
Track 1 : GCP Freq Category = Standard (Field)
Track 1 : GCP Frequency = 525 Hz (OCCN,TCN)
Track 1 : GCP Transmit Level = Medium (Field,TCN)
Track 1 : Uni/Bi/Sim-Bidirnl = Bidirnl (OCCN,TCN)
Track 1 : Approach Distance = 1300 ft (OCCN,TCN)
Track 1 : Directionally Wired = No (OCCN)
Track 1 : Island Connection = Isl 1 (OCCN)
Track 1 : Computed Distance = 9999 ft (Field,TCN)
Track 1 : Linearization Steps = 100 (Field,TCN)

(2.1.2) Trk 1: Island Frequency
Track 1 : Island Used = Internal (OCCN)
Track 1 : Isl Frequency = 7.1 kHz (OCCN)
Track 1 : Pickup Delay (2s +) = 0 sec (OCCN)
Track 1 : Isl Enable IP Used = No (OCCN)
Track 1 : Island Distance = 120 ft (Field,TCN)

(2.1.3) Trk 1: Predictors
Track 1 : Prime Used = Yes (OCCN)
Track 1 : Dax A Used = No (OCCN)
Track 1 : Dax B Used = No (OCCN)
Track 1 : Dax C Used = No (OCCN)
Track 1 : Dax D Used = No (OCCN)
Track 1 : Dax E Used = No (OCCN)
Track 1 : Dax F Used = No (OCCN)
Track 1 : Dax G Used = No (OCCN)

(2.1.3.1) Trk 1 Predictor: Prime
Track 1 : Prime Used = Yes (OCCN)
Track 1 : Prime Warning Time = 35 sec (OCCN)
Track 1 : Prime Offset Distance = 0 ft (OCCN)
Track 1 : Switch MS EZ Level = 10 (OCCN)
Track 1 : Prime MS/GCP Mode = Pred (OCCN)
Track 1 : Prime Pickup Delay = 15 sec (OCCN)
Track 1 : Prime UAX = No (OCCN)

(2.1.4) Trk 1: Enhanced Detection
Track 1 : Inbound PS Sensitivity = High (Field)
Track 1 : Speed Limiting Used = Yes (Field)
Track 1 : Outbound False Act Lvl = Normal (Field)
Track 1 : Outbound PS Timer = 20 sec (Field)
Track 1 : Trailing Switch Logic = On (Field)
Track 1 : Post Joint Detn Time = 15 sec (OCCN)
Track 1 : Cancel Pickup Delay = This Isl (OCCN)
Track 1 : Adv Appr Predictn = No (OCCN)

(2.1.5) Trk 1: Positive Start, Low EZ
Track 1 : Positive Start = Off (OCCN)
Track 1 : Sudden Shnt Det Used = No (OCCN)
Track 1 : Low EZ Detection Used = No (OCCN)

(2.1.6) Trk 1: MS Control
Track 1 : MS/GCP Ctrl IP Used = No (OCCN)
Track 1 : MS Sensitivity Level = 0 (Field)
Track 1 : MS/GCP Restart EZ Level = 80 (Field)

(2.1.7) Trk 1: Wraps and Overrides
Track 1 : Wrap Used = No (OCCN)
Track 1 : All Predictors Override Used = No (OCCN)

(2.1.8) Trk 1: GCP Miscellaneous
Track 1 : Low EX Adjustment = 39 (Field)
Track 1 : False Act on Train Stop = No (Field)
Track 1 : EX Limiting Used = Yes (Field)
Track 1 : EZ Correction Used = Yes (Field)
Track 1 : Compensation Level = 1300 (Field,TCN)
Track 1 : Warn Time-Ballast Comp = High (Field,TCN)
Track 1 : Train Line Speed = 25 mph (OCCN)

(3.1) Logic: Track ANDing
AND 1 XR Used = Yes (OCCN)
AND 2 Used = No (OCCN)
AND 3 Used = No (OCCN)
AND 4 Used = No (OCCN)

(3.1.1) Logic: AND 1 XR
AND 1 XR Track 1 = Prime (OCCN)
AND 1 Wrap Used = No (OCCN)
AND 1 Enable Used = No (OCCN)

(3.2) Logic: AND Gates
AND 5 Used = No (OCCN)
AND 6 Used = No (OCCN)
AND 7 Used = No (OCCN)
AND 8 Used = No (OCCN)
AND 9 Used = No (OCCN)
AND 10 Used = No (OCCN)
AND 11 Used = No (OCCN)
AND 12 Used = No (OCCN)

(3.3) Logic: OR Gates
OR 1 Used = No (OCCN)
OR 2 Used = No (OCCN)
OR 3 Used = No (OCCN)
OR 4 Used = No (OCCN)

(3.4) Logic: Controls
Emergency Activate IP = No (OCCN)
Maint Call Rpt IP Used = No (OCCN)
Pass Thrus = No (OCCN)

(3.5.1) Internal I/O 1-4
Int.1 Sets = Not Used (OCCN)
Int.1 Set by = Not Used (OCCN)
Int.2 Sets = Not Used (OCCN)
Int.2 Set by = Not Used (OCCN)
Int.3 Sets = Not Used (OCCN)
Int.3 Set by = Not Used (OCCN)
Int.4 Sets = Not Used (OCCN)
Int.4 Set by = Not Used (OCCN)

(3.5.2) Internal I/O 5-8
Int.5 Sets = Not Used (OCCN)
Int.5 Set by = Not Used (OCCN)
Int.6 Sets = Not Used (OCCN)
Int.6 Set by = Not Used (OCCN)
Int.7 Sets = Not Used (OCCN)
Int.7 Set by = Not Used (OCCN)
Int.8 Sets = Not Used (OCCN)
Int.8 Set by = Not Used (OCCN)

(3.5.3) Internal I/O 9-12
Int.9 Sets = Not Used (OCCN)
Int.9 Set by = Not Used (OCCN)
Int.10 Sets = Not Used (OCCN)
Int.10 Set by = Not Used (OCCN)
Int.11 Sets = Not Used (OCCN)
Int.11 Set by = Not Used (OCCN)
Int.12 Sets = Not Used (OCCN)
Int.12 Set by = Not Used (OCCN)

(3.5.4) Internal I/O 13-16
Int.13 Sets = Not Used (OCCN)
Int.13 Set by = Not Used (OCCN)
Int.14 Sets = Not Used (OCCN)
Int.14 Set by = Not Used (OCCN)
Int.15 Sets = Not Used (OCCN)
Int.15 Set by = Not Used (OCCN)
Int.16 Sets = Not Used (OCCN)
Int.16 Set by = Not Used (OCCN)

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

(4.3) SSCC 1 Configuration
SSCC-1 Activation = AND 1 XR (OCCN)
SSCC-1 Gate Delay = 4 sec (OCCN)
SSCC-1 Number of GPs = 1 (OCCN)
SSCC-1 Number of GDs = 0 (OCCN)

(4.3.1) SSCC 1 Extended Parameters
SSCC 1 : Flash Rate = 50 (OCCN)
SSCC 1 : Flash Sync = master (OCCN)
SSCC 1 : Invert Gate Output = No (OCCN)
SSCC 1 : Lamp Neutral Test = Off (Field)
SSCC 1 : Lamp 1 Voltage = 100 dV (Field)
SSCC 1 : Lamp 2 Voltage = 100 dV (Field)
Aux-1 Xng Ctrl Used = No (OCCN)

(4.4) SSCC 2 Configuration
SSCC-2 Activation = AND 1 XR (OCCN)
SSCC-2 Gate Delay = 4 sec (OCCN)
SSCC-2 Number of GPs = 0 (OCCN)
SSCC-2 Number of GDs = 0 (OCCN)

(4.4.1) SSCC 2 Extended Parameters
SSCC 2 : Flash Rate = 50 (OCCN)
SSCC 2 : Flash Sync = slave (OCCN)
SSCC 2 : Invert Gate Output = No (OCCN)
SSCC 2 : Lamp Neutral Test = Off (Field)
SSCC 2 : Lamp 1 Voltage = 100 dV (Field)
SSCC 2 : Lamp 2 Voltage = 100 dV (Field)
Aux-2 Xng Ctrl Used = No (OCCN)

(5.1.1) I/O: Output Slot 1-2
OUT 1.1 = Not Used (OCCN)
OUT 1.2 = Not Used (OCCN)

(5.1.4) I/O: Output Slot SSCC
OUT GC 1 = Gate Output 1 (OCCN)
OUT GC 2 = Gate Output 2 (OCCN)

(5.2.1) I/O: Input Slot 1-2
IN 1.1 = Not Used (OCCN)
IN 1.2 = Not Used (OCCN)

(5.2.4) I/O: Input Slot SSCC 1
IN 7.1 = Not Used (OCCN)
IN 7.2 = Not Used (OCCN)
IN 7.3 = Not Used (OCCN)
IN 7.4 = Not Used (OCCN)
IN 7.5 = GP 1.1 (OCCN)

(5.2.5) I/O: Input Slot SSCC 2
IN 8.1 = Not Used (OCCN)
IN 8.2 = Not Used (OCCN)
IN 8.3 = Not Used (OCCN)
IN 8.4 = Not Used (OCCN)
IN 8.5 = Not Used (OCCN)

[redacted]

REVISIONS

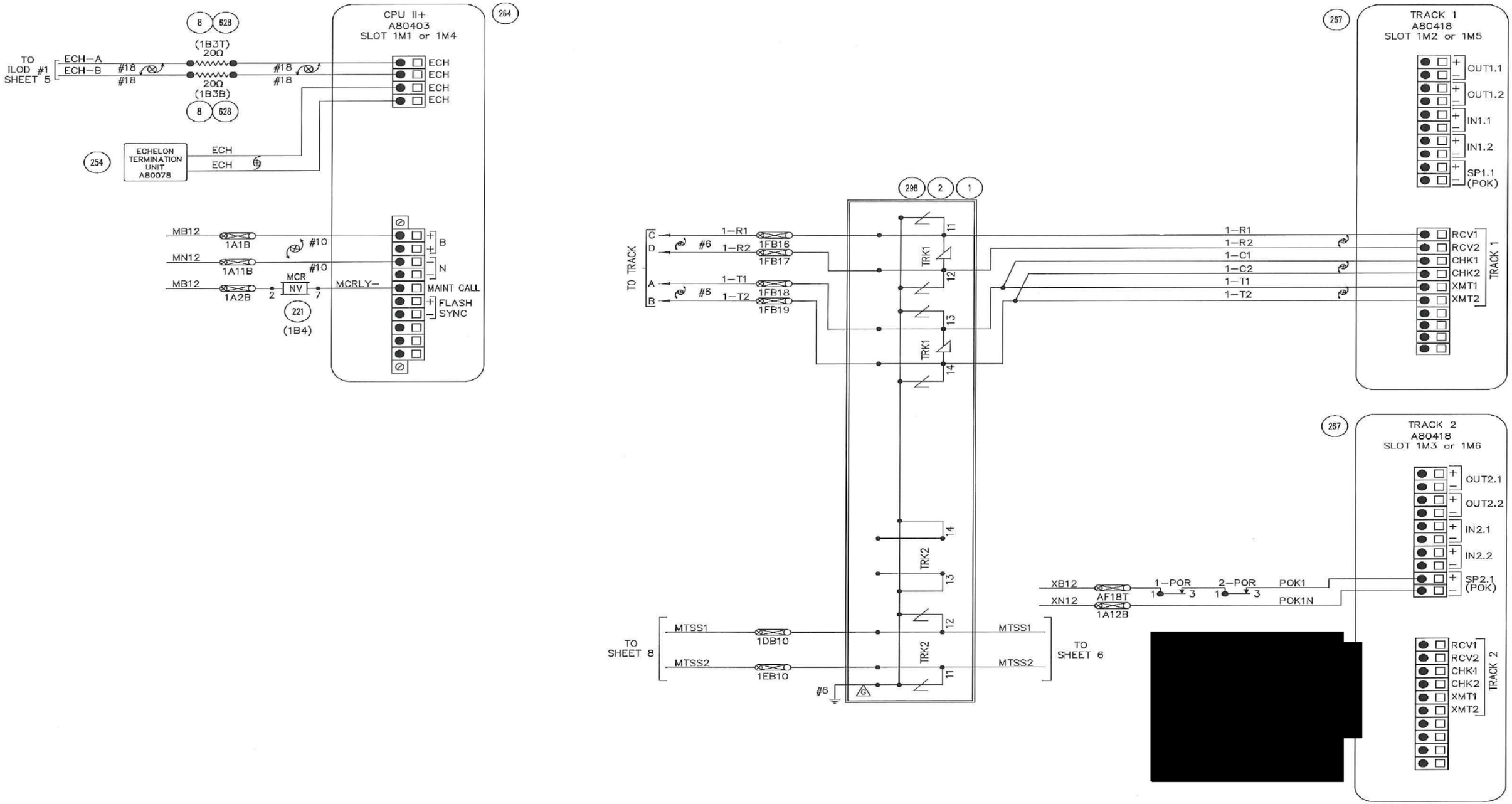
				AS DESIGNED-0.00 07-11-19 NEW XING BUNGALOW INSTALLTION DES: SMI/KDF CHK: SMI/DAD

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

LAT: 63.736
LONG: -148.915
DRAWN: SMI
DATE: 07-11-19

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S



NOTES:

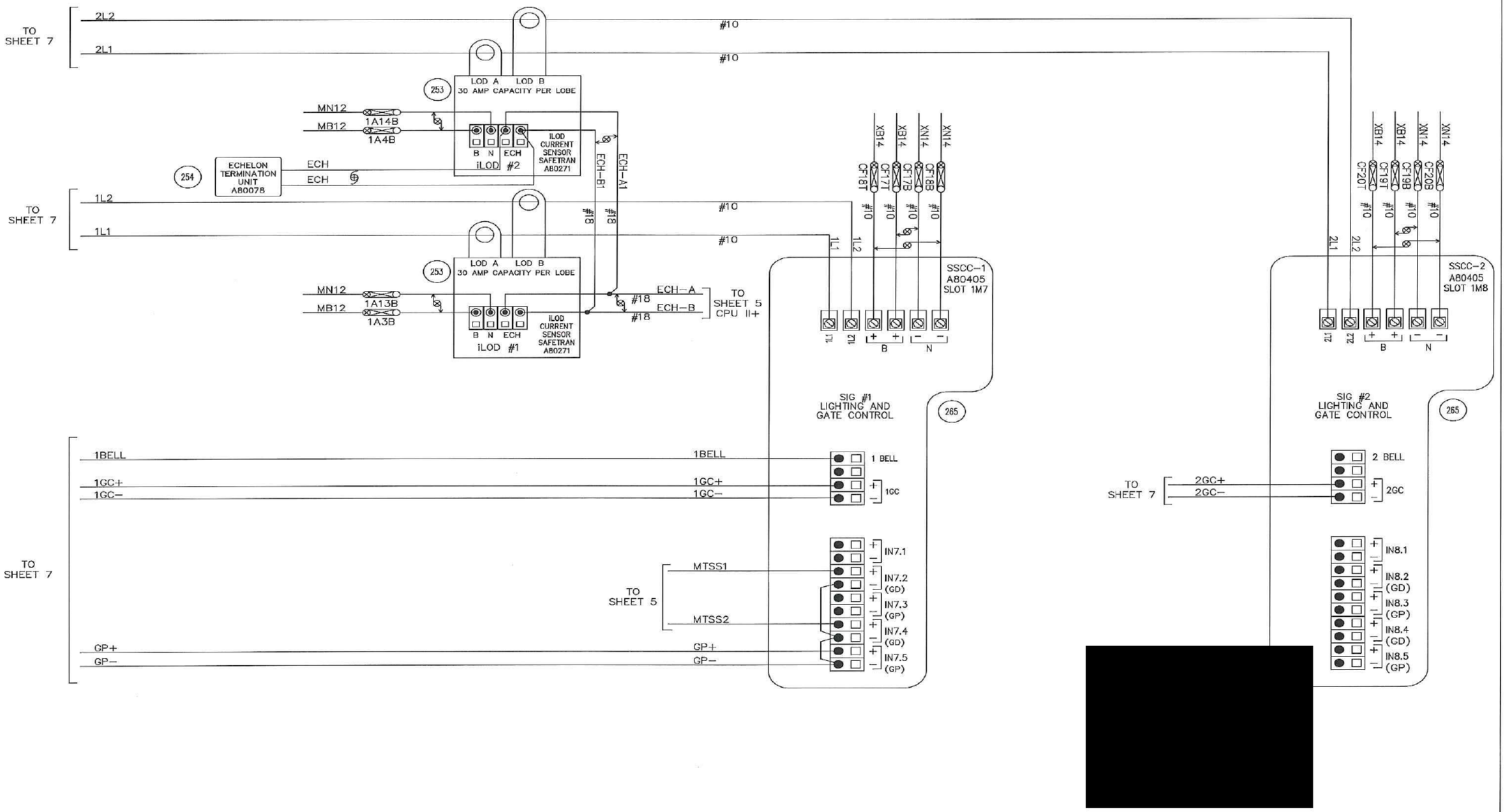
1. ALL WIRING TO BE #16 AWG FLEX TEFZEL UNLESS OTHERWISE NOTED.
6. TWISTED WIRE TWO TURNS PER FOOT

REVISIONS

AS DESIGNED–0.00	07–11–19
NEW XING BUNGALOW INSTALLTION	
DES: SMI/KDF	CHK: SMI/DAD

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

LAT: 63.736	DOT 868350S
LONG: –148.915	DENALI PARK RD
	MP 348.20
DRAWN: SMI	RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM
DATE: 07–11–19	DWG NO. 868350S — SHEET 5 OF 22



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NOTES:

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

TWISTED WIRE TWO TURNS PER FOOT

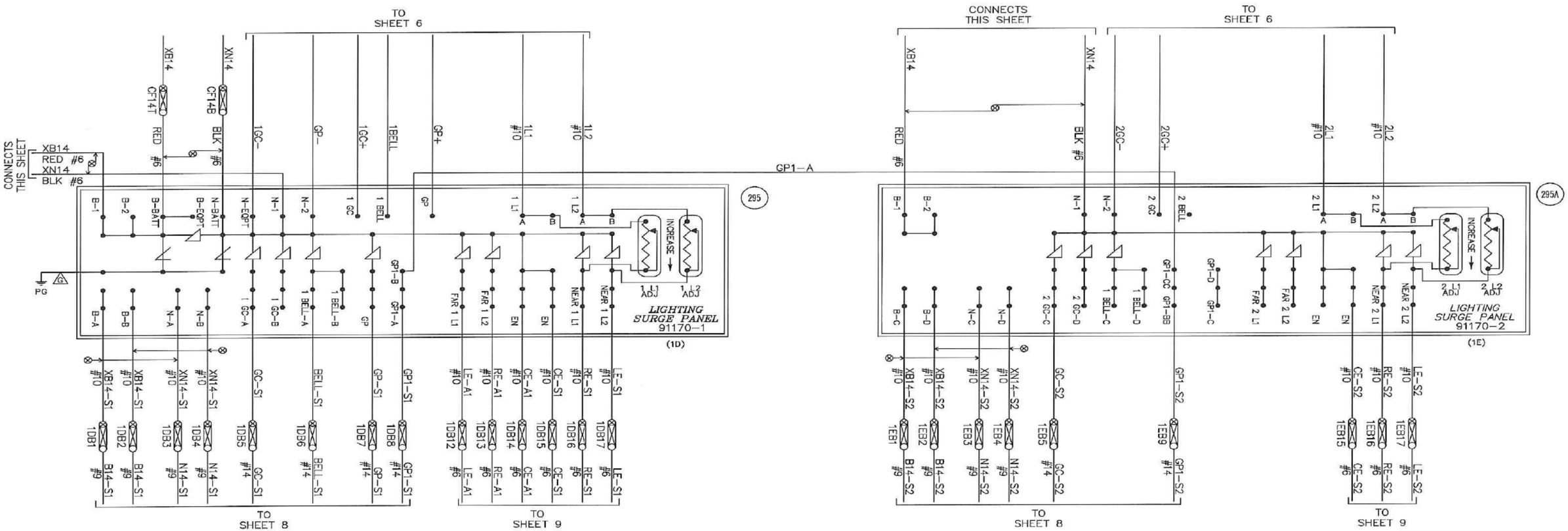
REVISIONS

				AS DESIGNED-0.00 07-11-19 NEW XING BUNGALOW INSTALLTION DES: SMI/KDF CHK: SMI/DAD

The ALASKA RAILROAD CORPORATION

SIGNAL ENGINEERING — P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

LAT: 63.736	DOT 868350S DENALI PARK RD
LONG: -148.915	MP 348.20
DRAWN: SMI	RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM
DATE: 07-11-19	DWG NO. 868350S — SHEET 6 OF 22



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NOTES:

1. ALL WIRING TO BE #16 AWG FLEX TEFZEL UNLESS OTHERWISE NOTED.
2. ALL GROUND WIRES TO BE #6 AWG GREEN TEFZEL UNLESS OTHERWISE NOTED.

TWISTED WIRE TWO TURNS PER FOOT

REVISIONS

AS DESIGNED–0.00 07–11–19
NEW XING BUNGALOW INSTALLTION
DES: SMI/KDF CHK: SMI/DAD

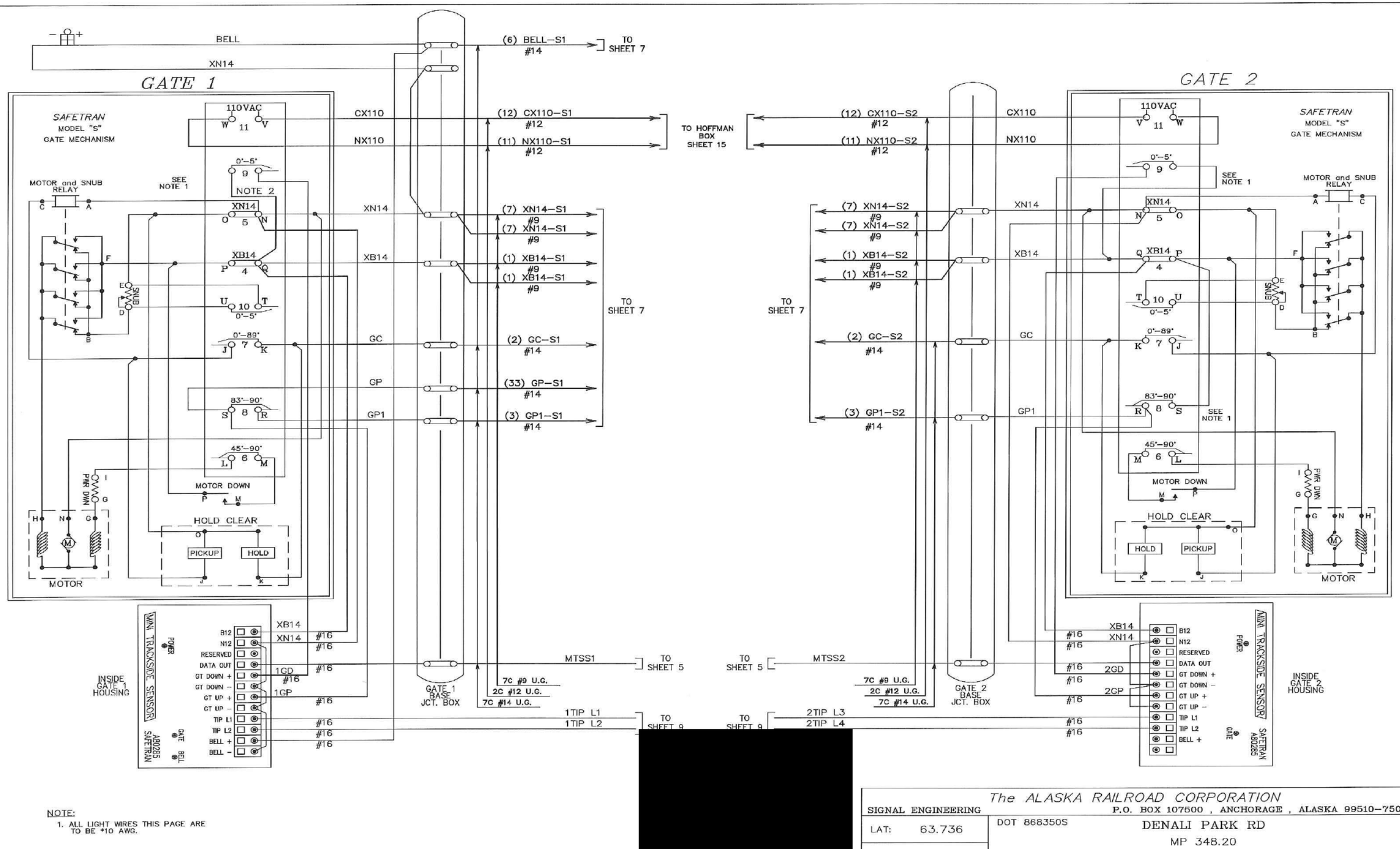
The ALASKA RAILROAD CORPORATION
SIGNAL ENGINEERING
P.O. BOX 107500 , ANCHORAGE , ALASKA 99510–7500

LAT: 63.736
LONG: –148.915
DRAWN: SMI
DATE: 07–11–19

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 7 OF 22



NOTE:

1. ALL LIGHT WIRES THIS PAGE ARE TO BE #10 AWG.

REVISIONS

AS DESIGNED–0.00 07–11–19
NEW XING BUNGALOW INSTALLTION
DES: SMI/KDF CHK: SMI/DAD

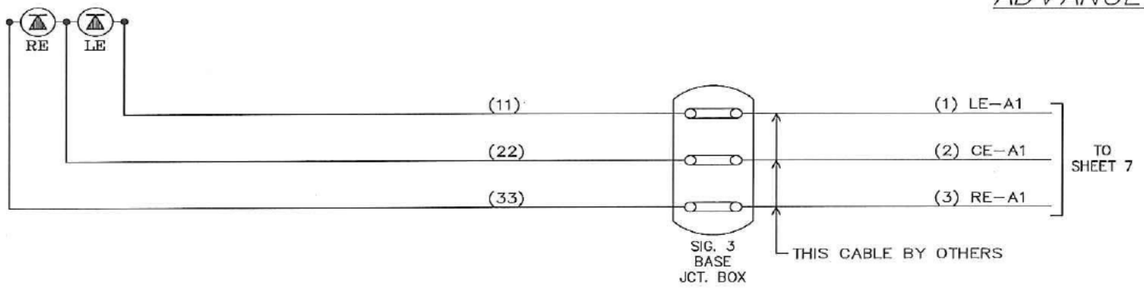
The ALASKA RAILROAD CORPORATION

SIGNAL ENGINEERING — P.O. BOX 107500 , ANCHORAGE , ALASKA 99510–7500

LAT: 63.736	DOT 868350S
LONG: –148.915	DENALI PARK RD
DRAWN: *SMI*	MP 348.20
DATE: 07–11–19	RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM
DWG NO. 868350S	SHEET 8 OF 22

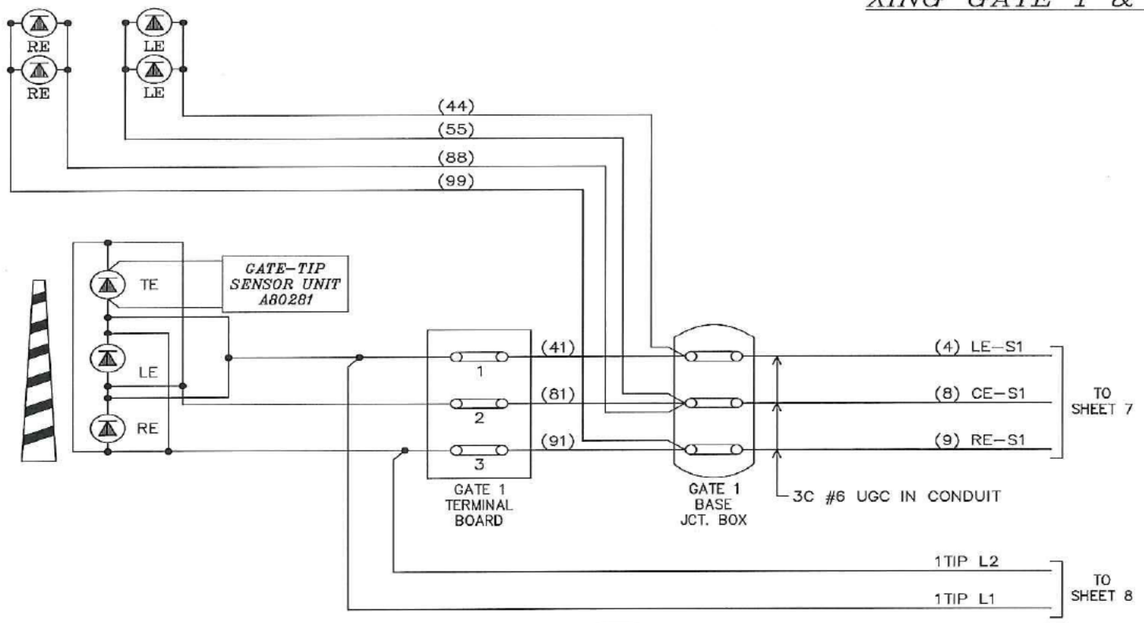
ADVANCE SIGNAL #1

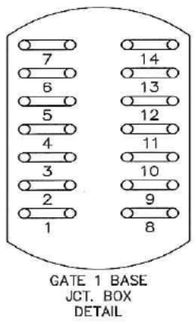
SIG. 3



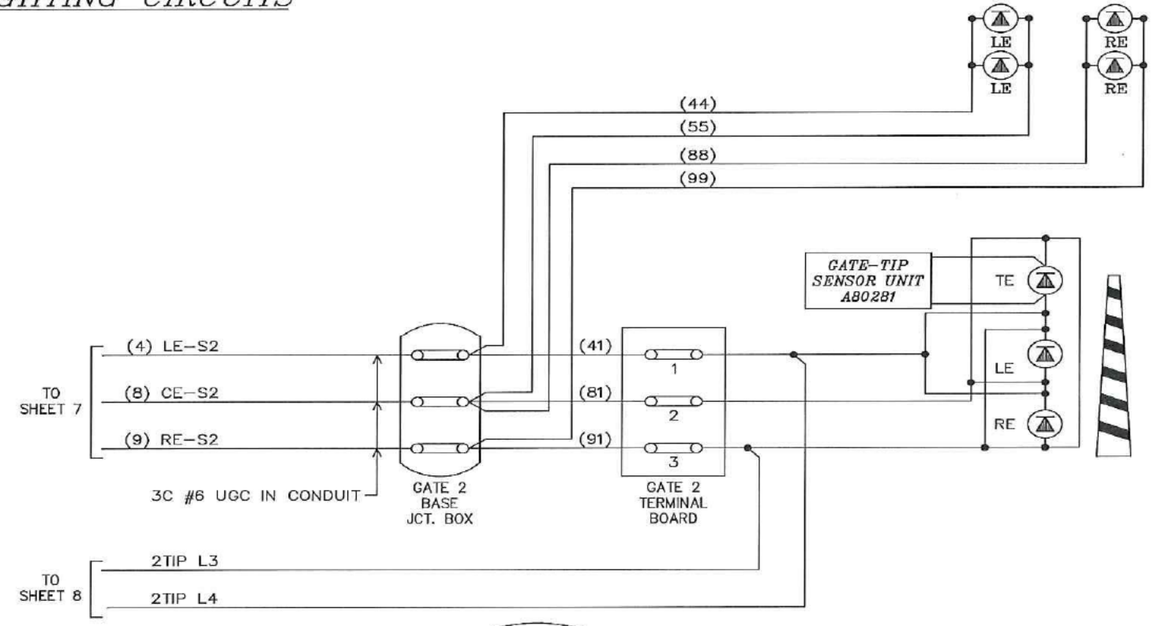
XING GATE 1 & 2 LIGHTING CIRCUITS

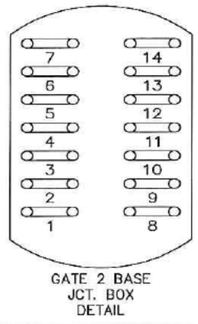
GATE 1





GATE 2





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NOTES:

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

REVISIONS

AS DESIGNED–0.00 07–11–19
NEW XING BUNGALOW INSTALLTION
DES: SMI/KDF CHK: SMI/DAD

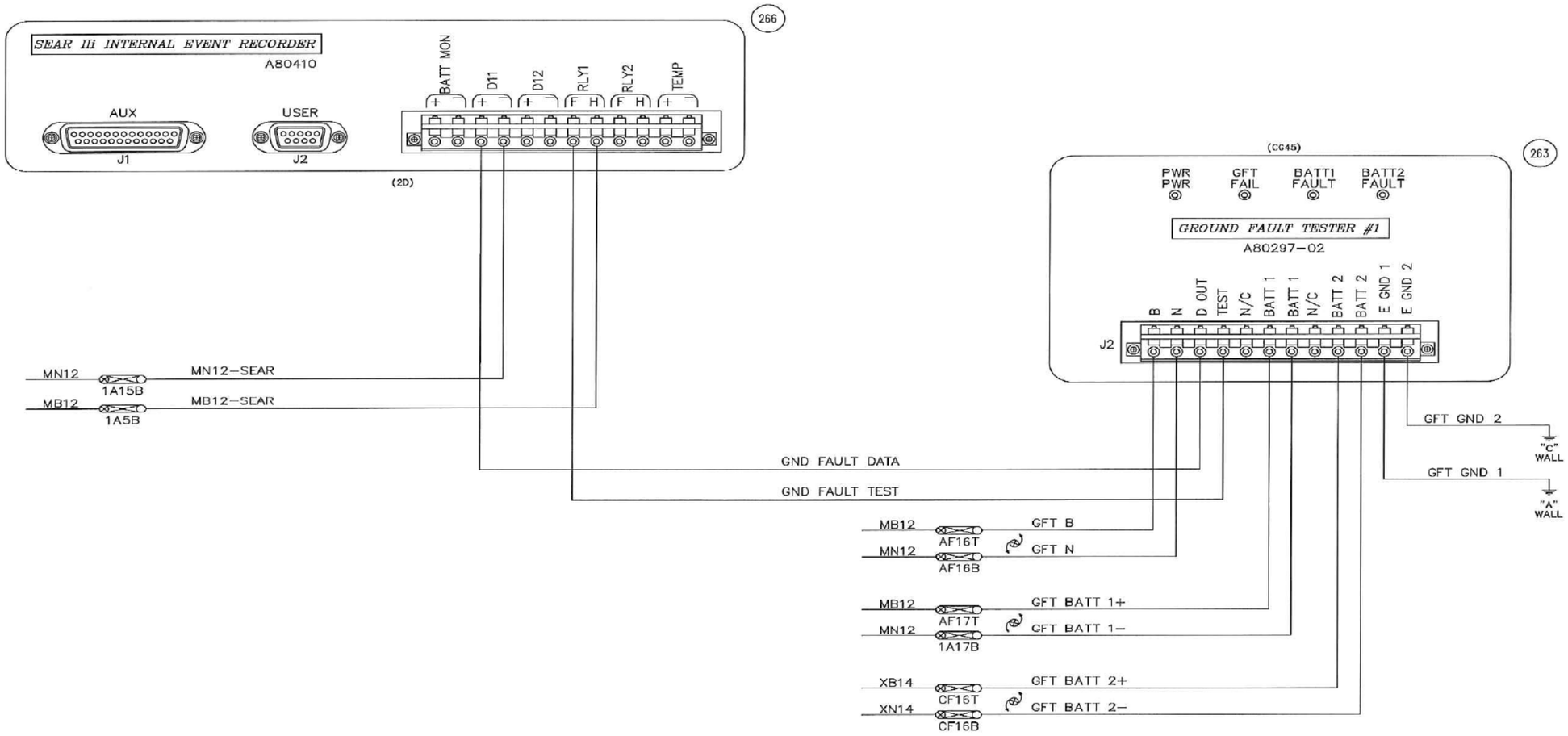
The ALASKA RAILROAD CORPORATION
SIGNAL ENGINEERING
P.O. BOX 107500 , ANCHORAGE , ALASKA 99510–7500

LAT: 63.736
LONG: –148.915
DRAWN: SMI
DATE: 07–11–19

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 9 OF 22



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NOTES:

1. ALL WIRING TO BE #16 AWG FLEX TEFZEL UNLESS OTHERWISE NOTED.
2. ALL GROUND WIRES TO BE #12 AWG GREEN TEFZEL UNLESS OTHERWISE NOTED.

TWISTED WIRE TWO TURNS PER FOOT

REVISIONS

AS DESIGNED-0.00 07-11-19
NEW XING BUNGALOW INSTALLTION
DES: SMI/KDF CHK: SMI/DAD

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

LAT: 63.736
LONG: -148.915
DRAWN: SMI
DATE: 07-11-19

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 10 OF 22

SEAR IIi PROGRAMMING

TO CONFIGURE SEAR II & SEAR IIi PRESS SITE SETUP KEY. USE ARROW KEYS TO MAKE SELECTION, PRESS ENTER AFTER SELECTION HAS BEEN MADE.

PROGRAM MENU QUESTIONS	OPTIONS / RANGE	PROGRAM
SITE NAME?	STREET NAME	DENALI PARK RD
MILE POST?	MILEAGE	348.20
DOT/CROSSING ID #?		868 350 S
TESTER TYPE?	CROSSING, WAYSIDE	CROSSING
AUTOMATIC DST ADJUSTMENT?	YES / NO	YES
TIME ZONE?	EASTERN,CENTRAL,MOUNTAIN, PACIFIC,ALASKA,HAWAII, ATLANTIC,SASKATCHEWAN, NEW FOUNDLAND	ALASKA
GMT OFFSET		N/A
DATE/TIME?	CURRENT DATE/TIME	
DATE FORMAT?	mm-dd-yyy, dd-mm-yyyy	dd-mm-yyyy
TEMPERATURE FORMAT?	FAHRENHEIT,CELSIUS	FAHRENHEIT
INDICATE HOLDOFF		0
SITE TYPE?	NO COM, BULLHORN,DIALUP, NODE,COLLECTOR	COLLECTOR
SITE ATCS ADDRESS?	7.RRR.LLL.GGG.99.01	7.005.100.363.99.01
OFFICE ATCS ADDRESS?	2.RRR.NN.DDDD	2.005.01.9100
OFFICE SITE ATCS ADDRESS? (WHEN SITE TYPE = NODE)	7.RRR.LLL.GGG.99.01	N/A
BACKUP SITE ATCS ADDRESS 1 (WHEN SITE TYPE = NODE)	7.RRR.LLL.GGG.99.01	N/A
BACKUP SITE ATCS ADDRESS 2 (WHEN SITE TYPE = NODE)	7.RRR.LLL.GGG.99.01	N/A
POLL ID? (WHEN SITE TYPE = COLLECTOR)	1-99	1
GEN/ATCS MODE? (WHEN SITE TYPE = COLLECTOR)	NORMAL, EXTENDED	EXTENDED
XID DISABLED? (WHEN SITE TYPE = COLLECTOR)	YES, NO	YES
OFFICE COMM. DEVICE? (WHEN SITE TYPE = COLLECTOR)	DIRECT (RS232) MCM (RS232) MCM (ECHELON) SPREAD SPEC (ECHELON) DIAL MODEM (RS232) S200 RADIO (RS422)	DIAL MODEM (RS232)
OFFICE COMM. PORT (WHEN SITE TYPE = RS232 OR RS422)	AUX, COMM	COMM
MCM ADDRESS (WHEN OFFICE COMM DEVICE = MCM)		N/A
OFFICE PHONE NUMBER (WHEN OFFICE COMM DEVICE = DIAL MODEM)	PHONE NUMBER OF WAMS	907-265-2285
INIT STRING (WHEN OFFICE COMM DEVICE = DIAL MODEM)	OPTIONAL HAYES MODEM INITIALIZATION STRING	N/A
FIELD COMM. DEVICE?	VHF COMM. (ECHELON), VHF COM.(RS232), SPREAD SPECTRUM(ECH), SPREAD SPECTRUM(RS232)	N/A
USER PORT	BAUD,DATA BITS,PARITY, STOP BITS,FLOW CONTROL	57600,8,N,1,N
AUX PORT	BAUD,DATA BITS,PARITY, STOP BITS,FLOW CONTROL	9600,8,N,1,N
COMM PORT BAUD?	BAUD,DATA BITS,PARITY, STOP BITS,FLOW CONTROL	9600,8,N,1,N

YOU WILL NOW SEE A MESSAGE "PLEASE WAIT COMPILING STAGE 1"
CONTINUE TO NEXT PROGRAM MENU QUESTIONS.

PROGRAM MENU QUESTIONS	OPTIONS / RANGE	PROGRAM SEAR IIi
RESET NAMES/MODULES?	YES / NO	YES
RAILROAD NUMBER	1-999	005
CROSSING CONFIGURATION ?	NORMAL SPLIT GATE DUAL CROSSING EXT. ENTRANCE GATE CONTROLLER(S)	NORMAL
ENTRANCE GATES	0-8	2
GATE POSITION FAIL TIME (SECONDS)	10-60	10
GATES NOT STARTING TIME (SECONDS)	10-20	10
CROSSING ACTIVE TIME (MINUTES)	20-30	20
RING THRU TIME (SECONDS)	10-15	10
BATTERY BANKS	1-3	2
BATT MON USED	NO / YES	NO
INTERNAL CROSSING CONTROLLERS	0-2	2
EXTERNAL CROSSING CONTROLLERS	0-2	0
VHF COMMUNICATOR	YES / NO	NO
DTMF ACTIVATION	YES / NO	NO
ACTIVATION CODE	1-999	N/A
ACTIVATION TIMEOUT(SEC)	1-600	N/A
ILOD MODULES	0-4	2
ANY LED BULBS USED	NO / YES	YES
AUTO INSPECTIONS	YES / NO	NO
BELL SENSORS	0-4	2
BELL SENSOR TSS1	NO / YES	YES
BELL SENSOR TSS2	NO / YES	YES
BELL SENSOR TSS3	NO / YES	N/A
BELL SENSOR TSS4	NO / YES	N/A
BELL SENSOR TSS5	NO / YES	N/A
BELL SENSOR TSS6	NO / YES	N/A
BELL SENSOR TSS7	NO / YES	N/A
BELL SENSOR TSS8	NO / YES	N/A
BELL ON	GATES LOWERING, GATES MOVING, ALWAYS	ALWAYS
GFT'S	YES / NO	YES
BATTERIES ON GFT'S	1-2	2
GATE TIP SENSORS	YES / NO	YES
RTU	NO / YES	NO
VHF VOICE CHANNEL	1-8	N/A
VHF DATA CHANNEL	1-8	N/A
USE NON-CRITICAL FEATURE	NO / YES	NO
FULL APPROACH MOVE ALARMS	ACTIVATE, DO NOT ACTIVATE	ACTIVATE

YOU WILL NOW SEE A MESSAGE "PLEASE WAIT COMPILING STAGE 2"
CONTINUE TO NEXT PROGRAM MENU QUESTIONS.

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

[redacted]

REVISIONS

AS DESIGNED-0.00 07-11-19
NEW XING BUNGALOW INSTALLTION
DES: SMI/KDF CHK: SMI/DAD

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

LAT: 63.736
LONG: -148.915
DRAWN: SMI
DATE: 07-11-19

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 11 OF 22

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REVISIONS

					AS DESIGNED–0.00 07–11–19 NEW XING BUNGALOW INSTALLTION DES:SMI/KDF CHK:SMI/DAD

SIGNAL ENGINEERING	The ALASKA RAILROAD CORPORATION P.O. BOX 107500 , ANCHORAGE , ALASKA 99510–7500	
LAT: 63.736	DOT 868350S DENALI PARK RD MP 348.20	
LONG: –148.915	RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM	
DRAWN: *SMI* DATE: 07–11–19	DWG NO. 868350S	12 SHEET OF 22

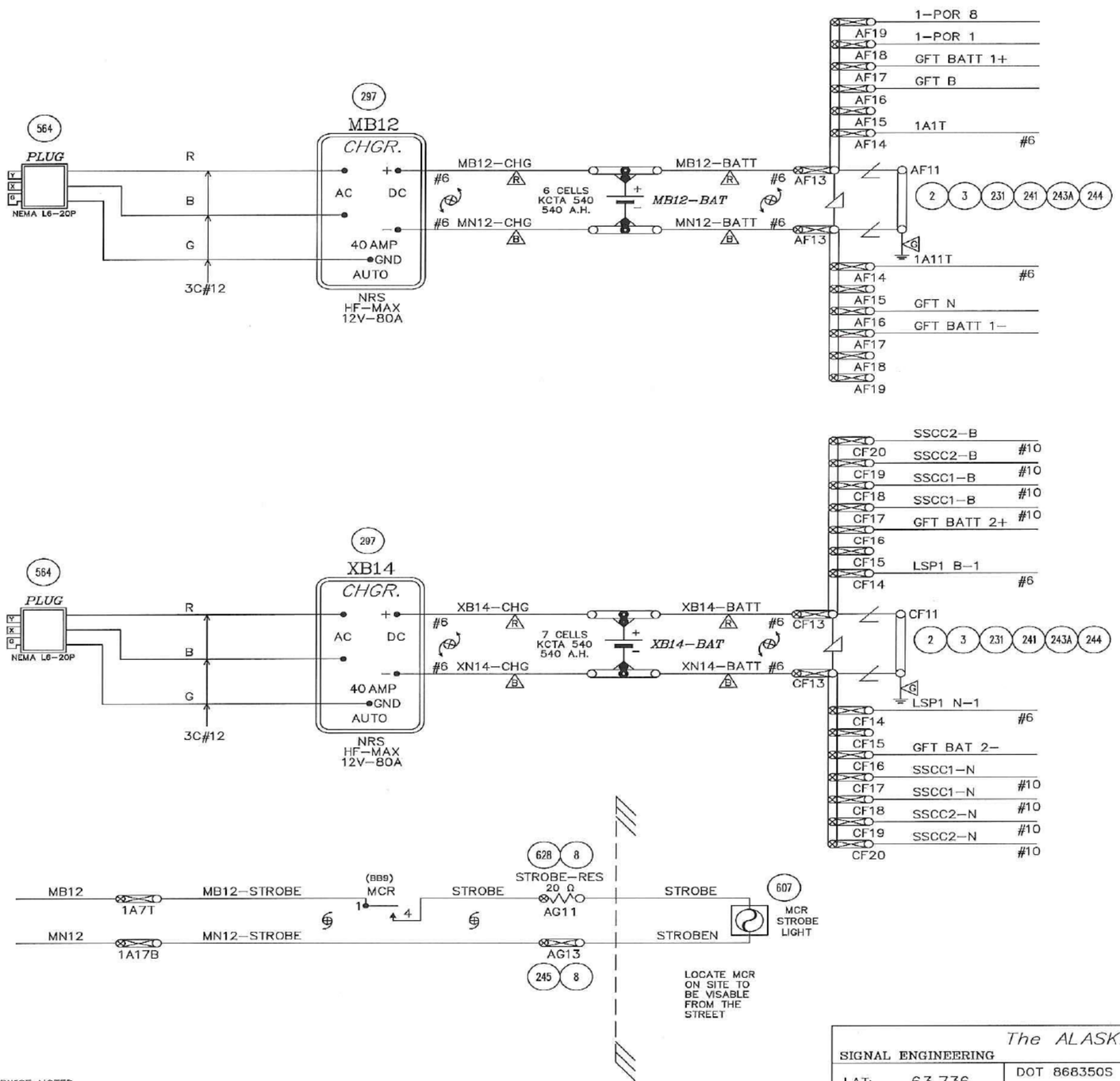
THIS SHEET INTENTIONALY LEFT BLANK

[redacted]

SIGNAL ENGINEERING	The ALASKA RAILROAD CORPORATION P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500		
LAT: 63.736	DOT 868350S DENALI PARK RD MP 348.20		
LONG: -148.915	RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM		
DRAWN: SMI DATE: 07-11-19	DWG NO.	868350S	13 SHEET OF 22

REVISIONS

					AS DESIGNED-0.00 07-11-19 NEW XING BUNGALOW INSTALLTION DES:SMI/KDF CHK:SMI/DAD



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NOTES:

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

⑨ TWISTED WIRE TWO TURNS PER FOOT

REVISIONS

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The ALASKA RAILROAD CORPORATION

SIGNAL ENGINEERING — P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

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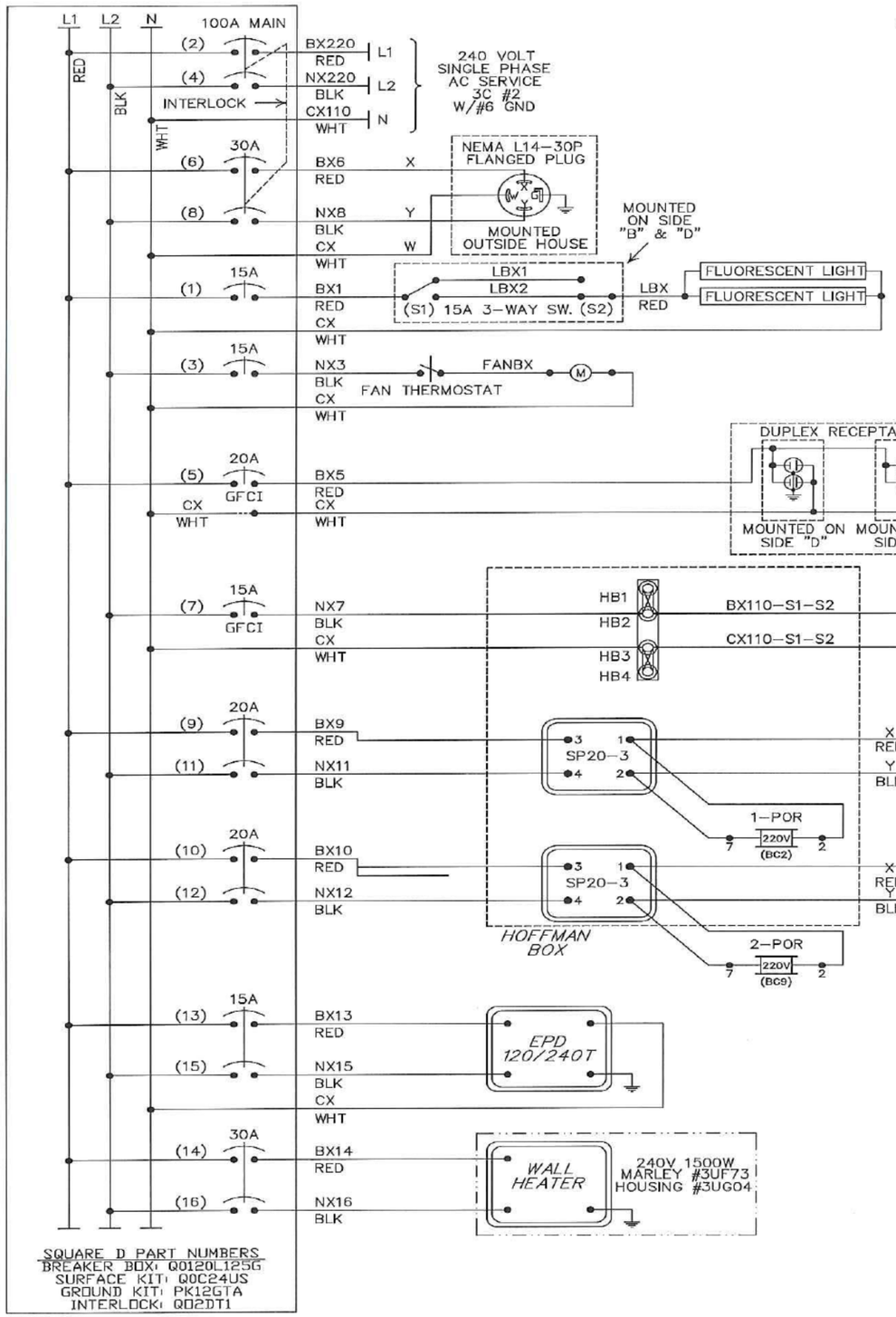
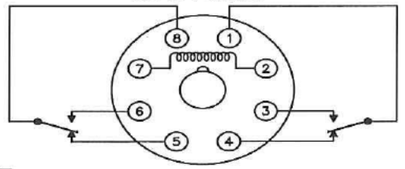
LONG: -148.915	DRAWN: SMI DATE: 07-11-19	DWG NO. 868350S — SHEET 14 OF 22



NOTES:

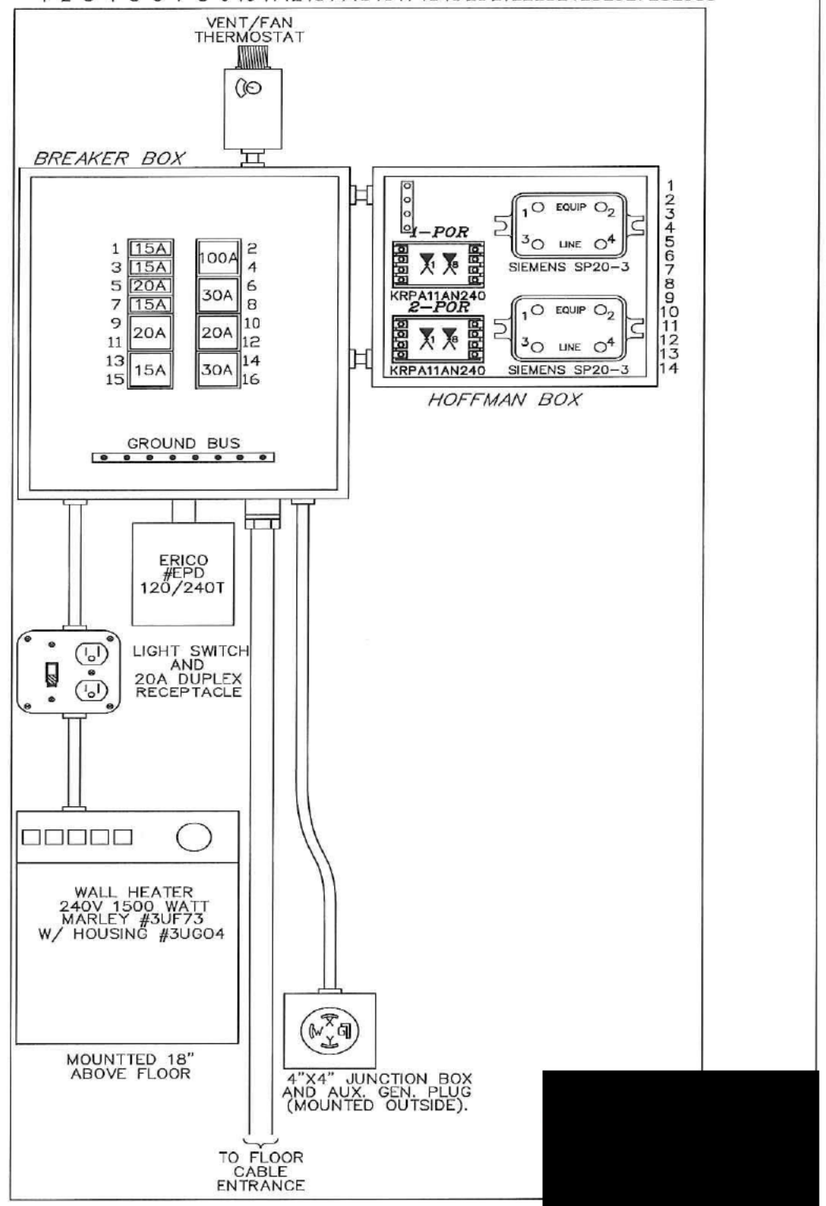
1. USE THE FOLLOWING COLOR CODE:
   GRN – GREEN – SAFETY EQUIPMENT GROUND
   WHT – WHITE – CX110 (NEUTRAL)
   BLK – BLACK – NX220 (L2)
   RED – RED – BX220 (L1)
   EXCEPTIONS TO THE ABOVE COLOR CODE ARE THE PRE-WIRED, SEALED ARRESTOR UNITS MOUNTED ON THE BREAKER BOX WHICH HAVE TWO BLACK AND ONE WHITE WIRE EACH.
2. ■ = WIRE NUT
3. MINIMUM WIRE SIZE:
   10 AMP – NO. 14 AWG THHN OR THWN SOLID
   20 AMP – NO. 12 AWG THHN OR THWN SOLID
   30 AMP – NO. 10 AWG THHN OR THWN SOLID
4. GROUND FAULT INTERRUPT (GFCI) MUST BE USED ON ALL CIRCUITS SERVING CONVENIENCE OUTLETS AND ANY EQUIPMENT OUTSIDE THE BUNGALOW. RECEPTACLE MOUNTED GFCI MAY BE USED INSTEAD OF BREAKER TYPE.
5. ALL GROUND WIRES RUN TO BREAKER BOX GROUND BUS.

CONTACT CONFIGURATION
POTTER & BRUMFIELD RELAY
KRPA11 SERIES



SIDE D

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



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REVISIONS

AS DESIGNED-0.00 07-11-19 NEW XING BUNGALOW INSTALLTION DES: SMI/KDF CHK: SMI/DAD	LAT: 63.736 LONG: -148.915 DRAWN: SMI DATE: 07-11-19	The ALASKA RAILROAD CORPORATION SIGNAL ENGINEERING P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500 DOT 868350S DENALI PARK RD MP 348.20 RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM DWG NO. 868350S SHEET 15 OF 22

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

AF

AE

AD

AC

AB

AA

NEMA L6-20R RECEPTACLE

MB12 BATT
1A1T
GFT B
GFT BATT 1+
1-POR 1
1-POR 8

GND #6 (GRN)

MN12 BATT
1A11T
GFT N
GFT BATT 1-

GROUND FAULT TESTER

NEMA L6-20R RECEPTACLE

MB12 CHARGER

MB12 BATTERY

KCTA 540 KCTA 540 KCTA 540 KCTA 540 KCTA 540 KCTA 540

HOUSE FLOOR

SIDE "A"

[redacted]

REVISIONS

AS DESIGNED-0.00 07-11-19 NEW XING BUNGALOW INSTALLTION DES: SMI/KDF CHK: SMI/DAD				

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

LAT: 63.736	DOT 868350S	DENALI PARK RD MP 348.20 RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM
LONG: -148.915		
DRAWN: SMI DATE: 07-11-19	DWG NO. 868350S	SHEET 16 OF 22

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

CF

CE

CD

CC

CB

CA

NEMA L6-20R RECEPTACLE

XB14 BATT
LSP1 B-1
GFT BATT 2+
SSCC1-B
SSCC1-B
SSCC2-B
SSCC2-B

GND #6 (GRN)

XN14 BATT
LSP1 N-1
GFT BATT 2-
SSCC1-N
SSCC1-N
SSCC2-N
SSCC2-N

NEMA L6-20R RECEPTACLE

XB14 CHARGER

XB14

XN14

XB14 BATTERY

KCTA 540 KCTA 540 KCTA 540 KCTA 540 KCTA 540 KCTA 540 KCTA 540

HOUSE FLOOR

SIDE C

[redacted]

REVISIONS

AS DESIGNED-0.00 07-11-19
NEW XING BUNGALOW INSTALLTION
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The ALASKA RAILROAD CORPORATION
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DENALI PARK RD
MP 348.20
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 17 OF 22

84"

RACK 1 BACK

1DB XING 1 CABLE TERMINATION — SAFETRAN 91042-19 CABLE TERMINATION PANEL (299)

1EB XING 2 CABLE TERMINATION — SAFETRAN 91042-19 CABLE TERMINATION PANEL (299)

1FB TRACK PANEL CABLE TERMINATION — SAFETRAN 91042-19 CABLE TERMINATION PANEL (299)

MB12 / MN12

AF14B
- MN12-STROBE
- IN2.2-
- SEAR DI1-
- ILOD-2 N
- ILOD-1 N
- SP2.1-
- CPU N
- MB12-STROBE
- SEAR RLY1 H
- ILOD-2 B
- ILOD-1 B
- MCR 1

AF14T
- CPU B

XING 1 CABLE TERMINATION

LE-S1	LE-S1
RE-S1	RE-S1
CE-S1	CE-S1
CE-A1	CE-A1
RE-A1	RE-A1
LE-A1	LE-A1
MTSS1	MTSS1
GP1-S1	GP1-S1
GP-S1	GP-S1
BELL-S1	BELL-S1
GC-S1	GC-S1
N14-S1	N14-S1
N14-S1	N14-S1
B14-S1	B14-S1
B14-S1	B14-S1

XING 2 CABLE TERMINATION

LE-S2	LE-S2
RE-S2	RE-S2
CE-S2	CE-S2
MTSS2	MTSS2
GP1-S2	GP1-S2
GC-S2	GC-S2
N14-S2	N14-S2
N14-S2	N14-S2
B14-S2	B14-S2
B14-S2	B14-S2

TRACK PANEL CABLE TERMINATION

T2	1-T2
T1	1-T1
R2	1-R2
R1	1-R1
	BX110-S1
	BX110-S2
	CX110-S1
	CX110-S2

PRIME GROUND PLATE (REAR OF RACK) (300) — 1C, 1D, 1F — TO GROUND RODS

3" | 4" | 3" | 8" | 3" | 22" | 3" | 7" | 3" | 7" | 3" | 5" | 1"

RACK 1 FRONT

1A MB12 / MN12 — SAFETRAN 91042-19 CABLE TERMINATION PANEL (299)

1B SIG #2 ILOD — MCR — KRPA11DN12 RES.#1 20Ω 3T, RES.#2 20Ω 3B — SIG #1 ILOD (2668)

1C GRADE CROSSING PREDICTOR MODEL 5000 DUAL 2 TRACK SYSTEM A80902 — TRANSFER MODULE A80468 1M11

DISPLAY MODULE	A80485	1M9
SSCC IIIi	A80405	1M8
SSCC IIIi	A80405	1M7
BLANK PLATE SLOT NOT USED		1M6
TRACK 1 MAIN 348HZ. ISL. 5.9KHZ.	A80418	1M5
CPU II+	A80403	1M4
BLANK PLATE SLOT NOT USED		1M3
TRACK 1 MAIN 348HZ. ISL. 5.9KHZ.	A80418	1M2
CPU II+	A80403	1M1

SEAR III INTERNAL EVENT RECORDER SAFETRAN A80410 (266)

1D XING 1 LIGHTING SURGE PANEL — SAFETRAN 91170-01 LIGHTING SURGE PANEL (295) — INCREASE → 1LU ADJ, 1L2 ADJ

1E XING 2 LIGHTING SURGE PANEL — SAFETRAN 91170-02 LIGHTING SURGE PANEL (295) — INCREASE → 1LU ADJ, 1L2 ADJ

1F (295) — TK1 XMT 14, TK1 RCV 11 12 13, TK2 XMT 14, TK2 RCV 11 12 13 (238) (229)

[redacted]

REVISIONS

				AS DESIGNED-0.00 07-11-19 NEW XING BUNGALOW INSTALLTION DES: SMI/KDF CHK: SMI/DAD

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

LAT: 63.736
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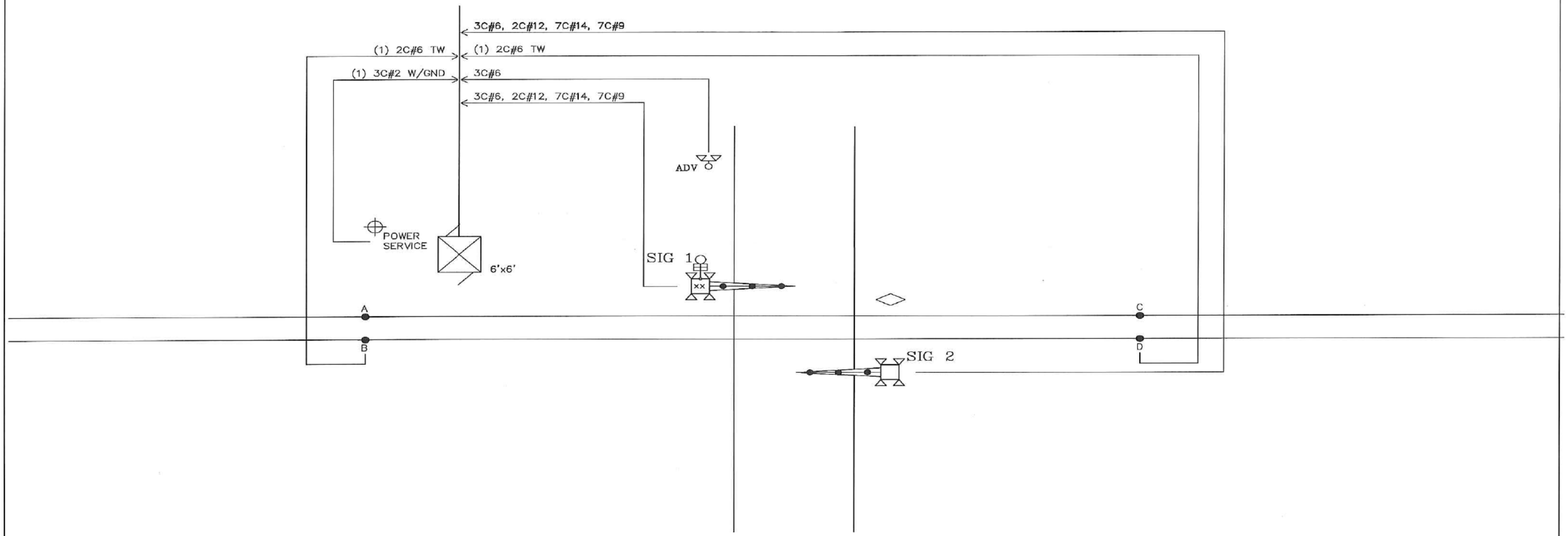
DATE: 07-11-19

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 18 OF 22



DENALI PARK
DOT 868 350S
MP 348.20

[redacted]

					REVISIONS		
					AS DESIGNED–0.00 07–11–19 NEW XING BUNGALOW INSTALLTION DES: SMI/KDF CHK: SMI/DAD		

SIGNAL ENGINEERING	*The ALASKA RAILROAD CORPORATION* P.O. BOX 107500 , ANCHORAGE , ALASKA 99510–7500		
LAT: 63.736	DOT 868350S	DENALI PARK RD MP 348.20 RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM	
LONG: –148.915			
DRAWN: *SMI* DATE: 07–11–19	DWG NO.	868350S	19 SHEET OF 22

MAT. REF. NO.	MANUFACTURERS PART NO.	DESCRIPTION	MANUFACTURER	QTY	REMARKS
1	4000446150000	HD ARRESTOR W/ 3 POST PORCELAIN	SIEMENS	4	80026-35
2	4000447000000	HD EQUALIZER	SIEMENS	4	OR APPROVED EQUAL
3	4000444850000	ARRESTOR	SIEMENS	4	OR APPROVED EQUAL
8	023612-5X	BAKELITE TERMINAL BLOCK	SIEMENS	4	BLOCK FOR ARRESTORS, RESISTORS & EQUALIZERS
220A	27E123	RELAY BASE - NV SCREW TERM (KRPA14)	TE	1	
221	KRPA-11DN-12	RELAY - NV, 10A 12VDC, DPDT	TE	1	
221B	27E122	RELAY BASE - NV SCREW TERM (KRPA11)	TE	3	
223	KRPA-11AN-240	RELAY - NV, 10A 240VDC, DPDT	POTTER & BRUMFIELD	2	
229	003314-T10527	EQUIPMENT RACK - 24" STANDARD	SIEMENS	1	OR APPROVED EQUAL
231	023390-11X	TERM. - UNIVERSAL 390 (12 POST)	SIEMENS	9	80026-35
					OR APPROVED EQUAL
234	23408-23X	INSULATED NUT (1-1/16")	SIEMENS	48	OR APPROVED EQUAL
240	023839-2	BUSS CONNECTOR - 1"	SIEMENS	12	OR APPROVED EQUAL
241	023839-5	BUSS CONNECTOR - 1" (ORDER TO LENGTH)	SIEMENS	13	OR APPROVED EQUAL
243A	023839-1	BUSS CONNECTOR - 2 3/8"	SIEMENS	2	OR APPROVED EQUAL
244	024620-1X	STRAIGHT INSULATED LINK - 1"	SIEMENS	182	INCLUDES SPECIAL NUT & NUT CLAMP
245	024620-4X	STRAIGHT INSULATED LINK - 2 3/8"	SIEMENS	1	INCLUDES SPECIAL NUT & NUT CLAMP
247	027614-1X	FUSE BLOCK - BAKELITE MODEL 614	SIEMENS	1	
253	A80271	ILOD CURRENT SENSOR	SIEMENS	2	
254	A80078	ECHELON TERMINAL UNIT	SIEMENS	2	
257	A80281	GATE TIP SENSOR	SIEMENS	2	
260	A80285	MINI TRACKSIDE SENSOR	SIEMENS	2	FOR S GATE MECH
263	A80297-02	GROUND FAULT SENSOR	SIEMENS	1	
264	A80403	GCP - CPU	SIEMENS	1	
265	A80405	GCP - SSCC III	SIEMENS	2	
266	A80410	GCP - SEAR III INTERNAL EVENT RECORDER	SIEMENS	1	
268B	A80902	GCP 5000 - REDUNDANT 2-TRACK CHASSIS	SIEMENS	1	
267	A80418	GCP - TRACK MODULE	SIEMENS	2	
270	A80468	GCP - TRANSFER MODULE	SIEMENS	1	
272A	A80485-1	GCP 5000 - DISPLAY MODULE	SIEMENS	1	
295	91170-01	LIGHTING SURGE PANEL	SIEMENS	1	
295A	91170-02	LIGHTING SURGE PANEL	SIEMENS	1	
297	NRS	BATTERY CHARGER - HF-MAX	SIEMENS	2	
298	80026-35	TRACK SURGE PANEL	SIEMENS	1	
299	91042-19	CABLE TERMINATION PANEL	SIEMENS	4	
300	093999-T00188	PRIME GROUND PLATE	SIEMENS	1	
308	005314-T09894	TIE BAR, 23" RACK	SIEMENS	10	

[redacted]

REVISIONS

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The ALASKA RAILROAD CORPORATION

SIGNAL ENGINEERING — P.O. BOX 107500 , ANCHORAGE , ALASKA 99510-7500

LAT: 63.736

LONG: -148.915

DRAWN: SMI

DATE: 07-11-19

DOT 868350S

DENALI PARK RD

MP 348.20

RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 20 OF 22

MAT. REF. NO.	MANUFACTURERS PART NO.	DESCRIPTION	MANUFACTURER	QTY	REMARKS
420	KCTA-540	BATTERY - 540 A.H. LEAD CALCIUM	C&D TECHNOLOGIES	13	
427		BATTERY TRAY		2	
451	3UF73	240v 1500 WATT WALL HEATER	MARLEY	1	
453	3UG04	WALL HEATER HOUSING	MARLEY	1	
466	AHE-12X12X6	HOFFMAN ENCLOSURE	HOFFMAN	1	OR APPROVED EQUAL
468	EPD120/240T	SURGE PROTECTOR - AC PRIMARY	ERICO	1	
470	DGXZ+15NMNF-A	SURGE PROTECTOR - 800 TO 2,500 MHZ	POLYPHASE	1	
477	FRN-R-20	FUSE - 20 AMP	BUSSMAN	1	
532	NC400				
563A	L6-20R	NEMA L6-20R RECEPTACLE		4	OR APPROVED EQUAL
564	L6-20P	NEMA L6-20P FLANGED PLUG		1	OR APPROVED EQUAL
575	QO120L125G	HOUSE BREAKER BOX	SQUARE D/SCHNEIDER	1	OR APPROVED EQUAL
579	PK12GTA	BREAKER BOX GROUND PAR KIT	SQ D	1	OR APPROVED EQUAL
583	PK7GTA	BREAKER BOX GROUND BUSS	SQ D	1	OR APPROVED EQUAL
584A	GB-HKU	UNIVERSAL GROUND BAR KIT	ANDREW	1	
584B	GB-0210.01	COPPER GROUND BUSS BAR	ANDREW	1	
585	Q02DT1	INTERLOCK	SQ D	1	OR APPROVED EQUAL
588	QO115	C/B - 15 AMP (SINGLE POLE)	SQ D	2	OR APPROVED EQUAL
589	QO220	C/B - 20 AMP (DOUBLE POLE)	SQ D	2	OR APPROVED EQUAL
590	QO215	C/B - 15 AMP (DOUBLE POLE)	SQ D	1	OR APPROVED EQUAL
591	QO230	C/B - 30 AMP (DOUBLE POLE)	SQ D	2	OR APPROVED EQUAL
592	QO115GFI	C/B - 15 AMP - GFCI - (SINGLE POLE)	SQ D	1	OR APPROVED EQUAL
593		C/B - 20 AMP - GFCI - (SINGLE POLE)	SQUARE D/SCHNEIDER	1	OR APPROVED EQUA
597	QO230	C/B - 100 AMP	SQ D	1	OR APPROVED EQUAL
599	5036-0	RAYNTITE WEATHERPROOF COVER	HUBBELL	1	
600		HOUSE JUNCTION BOX - S1 (4X4)		1	
602	1UHH4	HOUSE VENT FAN THERMOSTAT	GRAINGER	1	
604	1TDR3	HOUSE VENT FAN	GRAINGER	1	
607		HOUSE STROBE LIGHT		1	
608		HOUSE LIGHT SNAP SWITCH		2	
610		GFI OUTLETS		2	
614		HOUSE FLUORESCENT LIGHTS		2	
628		FIXED RESISTOR (20 OHMS)	SIEMENS	3	

[redacted]

REVISIONS

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NEW XING BUNGALOW INSTALLTION
DES: SMI/KDF CHK: SMI/DAD

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

LAT: 63.736
LONG: -148.915
DRAWN: SMI
DATE: 07-11-19

DOT 868350S
DENALI PARK RD
MP 348.20
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 21 OF 22

MAT. REF. NO.	MANUFACTURERS PART NO.	DESCRIPTION	MANUFACTURER	QTY	REMARKS
680	825011	TERMINAL BLOCK MARKING (END CLAMP)	PHOENIX CONTACT	2	
682	824992	TERMINAL BLOCK MARKING (UT 4)	PHOENIX CONTACT	1	
730		BUNGALOW – 6'X6'	PTMW	1	OR APPROVED EQUAL
780		S GATE MECH (5 CONTACTS) – COMPLETE ASSY	SIEMENS	1	
780A		S GATE MECH (5 CONTACTS) – COMPLETE ASSY	SIEMENS	1	
785		GATE ARM, ALUM COMBO ARM 16'– 32' EZ–GATE UHI		4	W/ 3 LED 4" LIGHTS
785A		GATE ARM, ALUM COMBO ARM 16'– 32' EZ–GATE UHI		2	W/ 3 LED 4" LIGHTS
791	035903–500X	CROSSING FOUNDATION – PYRAMID TYPE	SIEMENS	6	

[redacted]

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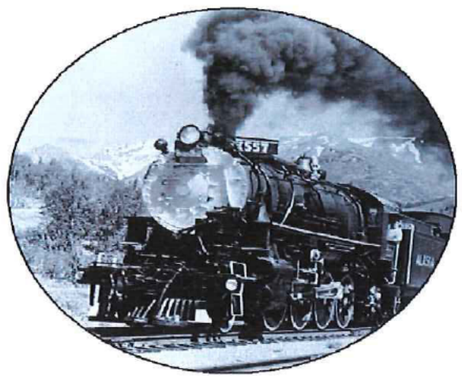
SHEET 22 OF 22

ALASKA RAILROAD CORPORATION

DENALI PARK RD

M.P. 348.20

DOT 868350S



[redacted]

LEGEND:

- EQUALIZER
- LINE ARRESTER
- (R) NO 6 AWG THNN/THWN FLEX WIRE WITH RED SHEATH (B12)
- (B) NO 6 AWG THNN/THWN FLEX WIRE WITH BLACK SHEATH (N12)
- (G) NO 6 AWG THNN/THWN FLEX WIRE WITH GREEN SHEATH (SAFETY GROUND)
- TWISTED WIRE TWO TURNS PER FOOT
- (#) MATERIAL REFERENCE IDENTIFICATION NUMBER

COLORED PLANS

REVISIONS

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RAILROAD–HIGHWAY GRADE CROSSING WARNING SYSTEM

DWG NO. 868350S

SHEET 0 OF 22

DRAWING NO.	DESCRIPTION	REVISION DATE								
868350S–00	TITLE SHEET									
868350S–01	INDEX									
868350S–02	CROSSING LAYOUT									
868350S–03	GCP 5000 LAYOUT									
868350S–04	GCP 5000 PROGRAMMING									
868350S–05	GCP 5000 TRACK 1, 2 TRACK & CPU BOARDS									
868350S–06	GCP 5000 SSCC–1, SSCC–2, ILOD–1 & ILOD–2 CIRCUITS									
868350S–07	LIGHTING SURGE PANELS DETAIL – 91170–1 & 91170–2									
868350S–08	XING GATES #1 & #2 MECHANISM WIRING									
868350S–09	XING GATES 1, 2 & ADVANCED SIGNAL LIGHTING CIRCUITS									
868350S–10	SEAR IIi EVENT RECORDER & GROUND FAULT TESTER									
868350S–11	SEAR IIi PROGRAMMING									
868350S–12	BLANK SHEET FOR FUTURE USE									
868350S–13	BLANK SHEET FOR FUTURE USE									
868350S–14	MB12 & XB14 BATTERY CIRCUITS									
868350S–15	BUNGALOW SIDE "D" LAYOUT									
868350S–16	BUNGALOW SIDE "A" LAYOUT									
868350S–17	BUNGALOW SIDE "C" LAYOUT									
868350S–18	RACK 1 LAYOUT									
868350S–19	UNDERGROUND CABLE LAYOUT									
868350S–20	BILL OF MATERIALS									
868350S–21	BILL OF MATERIALS									
868350S–22	BILL OF MATERIALS									

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SHEET 1 OF 22