

COLLEGE ROAD  
DOT 868 405 C  
MP G01.11

### WARNING!

HIGHWAY-RAIL GRADE CROSSING  
WARNING SYSTEM AND HIGHWAY  
TRAFFIC SIGNALS ARE  
INTERCONNECTED.

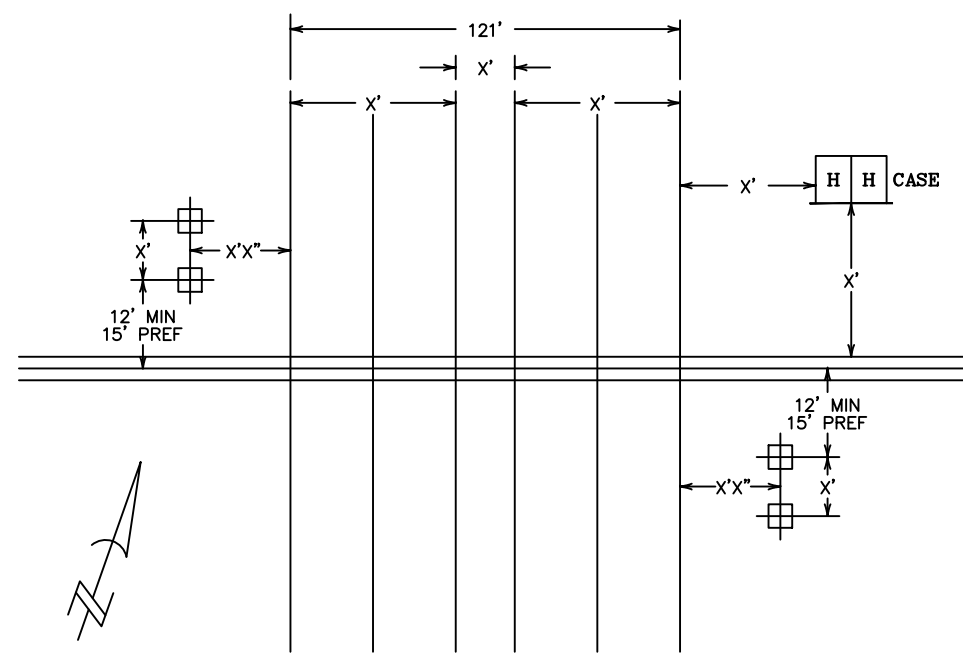
BEFORE MODIFICATION is made to any operation which connects to or controls the timing of an active railroad warning system and/or timing and phasing of a traffic signal the appropriate party(ies) shall be notified and, if necessary, a joint inspection conducted.

#### NOTES

- EQUIPMENT IS DESIGNED FOR 20 SECONDS MINIMUM WARNING TIME AT 15 MPH.
- APPROACHES WERE LENGTHENED 10 SECONDS FOR ACCELERATING TRAIN AND BALLAST CHANGES.
- APPROACHES WERE LENGTHENED 16 SECONDS FOR SIMULTANEOUS PRE-EMPTION.
- APPROACHES WERE LENGTHENED 5 SECONDS FOR REACTION TIME AND SPEED VARIANCE.
- GATE LAMPS TO BE 10V-18W. ALL OTHER LAMPS TO BE 10V-25W.
- ALL WIRES #16 AWG FLEX UNLESS OTHERWISE NOTED.
- ALL CANTILEVER FRONT LENS TO BE 30'-15" OR LED.
- ALL CANTILEVER BACK LENS TO BE 70' OR LED.

#### LEGEND

- ① HEAVY DUTY ARRESTER
- ② EQUALIZER
- ③ LINE ARRESTER
- △ 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
- XX BELL

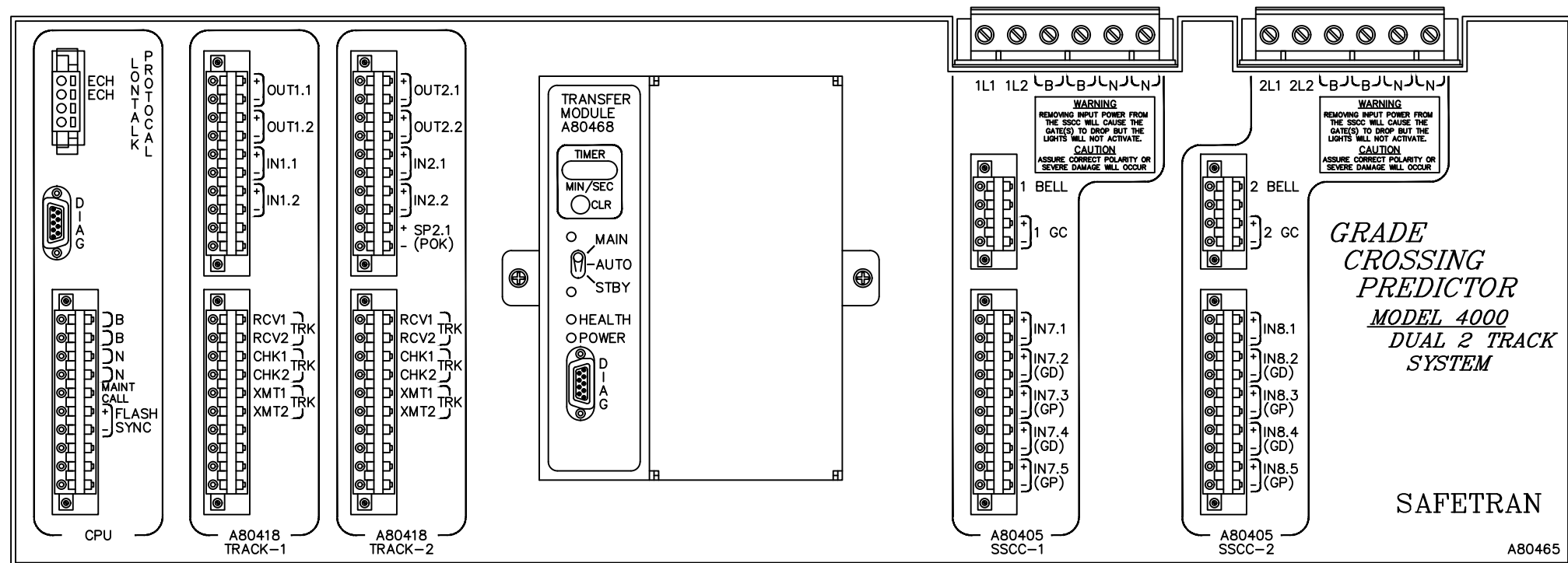


FOUNDATION PLACEMENT SKETCH  
NOT TO SCALE

The ALASKA RAILROAD CORPORATION  
SIGNAL ENGINEERING P.O. BOX 107500, ANCHORAGE, AK 99510-7500  
COLLEGE ROAD FAIRBANKS, AK.  
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM  
DOT 868 405 C M.P. G01.11

IN SERVICE DATE: 09-13-16 UPDATED	IN SERVICE DATE: 08-30-16 UPDATED	IN SERVICE DATE: 08-07-14 GCP-T6X-02-5.MCF ADDED DTMF & POWER PAGE	IN SERVICE DATE: 09-06-11 UPDATED	IN SVC 06-11-09 SEQ # CROSSING EQUIPMENT UPGRADE	REVISIONS
COR: GSE	COR: TRS	COR: SKJ	COR: TRR	DES: DSD/DWH COR: XRL/SSP	



DRAWN: DSD	DWG NO. 0G0111X	01 SHEET OF 15
DATE: 01-19-06		



THIS MINIMUM CHANGE FILE GENERATED BY USING SAFETRAN'S DIAGNOSTIC TERMINAL SOFTWARE SUITE AND IS NOT A COMPLETE PROGRAM LIST FOR THE SETUP AND/OR CUTOVER OF ANY GCP 4000 UNIT. IT IS MISSING THE CALIBRATION SEQUENCE FOR THE TRACK CIRCUITS AND SIGNALS CONNECTED TO THE UNIT IN THE FIELD APPLICATION. THE CUSTOMER SHOULD REFER TO THE GCP 4000 REFERENCE MANUAL SECTION 6 FOR THE PROPER CALIBRATION OF ALL TRACK CIRCUITS AND SIGNALS CONNECTED TO THE UNIT. THE ALASKA RAILROAD CORPORATION SHALL BE RESPONSIBLE FOR SITE SPECIFIC SETTINGS AND PROGRAMMING TO MEET THE LOCATION REQUIREMENTS FOR TESTING AND CUTOVER OF ANY SPECIFIC CROSSING.

**NOTES:**

- 1.) FOR ISLAND DISTANCE MEASURE THE DISTANCE BETWEEN THE TRANSMITTER AND RECEIVER LEADS - MUST BE 120' MINIMUM.
- 2.) SET TRANSFER JUMPER TO STG.  
SET TRANSFER SWITCH TO AUTO.  
SET TRANSFER TIME FOR 4 MIN.

ON MODULE A80468  
S3  
OPEN   
CLOSED   
MIN. 16 8 4 2 1

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COR: GSE		COR: TRS		COR: TRR					

Program Report

Location and SIN

DOT Number: 868405C
Milepost Number: G 1.11
Site Name: COLLEGE ROAD

SIN: 700510040516

MCF and Template Selection

MCF Name: GCP-T6X-02-6.mcf
MCF Revision: 26
MCFCRC: 494D2656

Template = 1A6 Trk BI (DCCN)

Check Numbers

Office Check Number: 4C5EE21C
Config. Check Number: 609D36D5
(Based on MCF Revision 26)

Program

BASIC: module configuration
Chassis Type = Dual Two Track (DCCN)
Track 1/PSD 1 Slot = Track (DCCN)
Track 2/RID 1 Slot = Not Used (DCCN)
SSCC-1 Slot = SSCC31 (DCCN)
SSCC-2 Slot = SSCC31 (DCCN)
SEAR Used = Yes (DCCN)

BASIC: MS/GCP operation
Track 1: MS/GCP Operation = Yes (DCCN)

BASIC: island operation
Track 1: Island Used = Internal (DCCN)

BASIC: preemption
Preempt Logic = Simult (DCCN)
Preempt Hlth IP Used = Yes (DCCN)

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

BASIC: Vital Comms links
Vital Comms link 1 Used = No (DCCN)
Vital Comms link 2 Used = No (DCCN)

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

GCP: track 1
Track 1: GCP Freq Category = Standard (Field)
Track 1: GCP Frequency = 525 Hz (DCCN,TCN)
Track 1: Approach Distance = 1124 ft (DCCN,TCN)
Track 1: Uni/BI/Sim-Bidirnl = Bidirnl (DCCN,TCN)
Track 1: GCP Transmit Level = Medium (Field,TCN)
Track 1: Island Connection = Isl 1 (DCCN)
Track 1: Directionally Wired = No (DCCN)
Track 1: Island Distance = 160 ft (Field,TCN)
Track 1: Computed Distance = 1219 ft (Field,TCN)
Track 1: Linearization Steps = 92 (Field,TCN)

GCP: track 1 enhanced det
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 (DCCN)
Track 1: Adv Appr Predn = No (DCCN)
Track 1: Cancel Pickup Delay = This Isl (DCCN)

GCP: track 1 BIDAX RX
Track 1: BIDAX To RX Appr = Not Used (DCCN)

GCP: track 1 BIDAX TX
Track 1: BIDAX To TX Appr = Not Used (DCCN)

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

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

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

ISLAND: track 1
Track 1: Isl Frequency = 8.3 kHz (DCCN)
Track 1: Pickup Delay (2s +) = 0 sec (DCCN)
Track 1: Isl Enable IP Used = No (DCCN)

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

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

ADVANCED: MS restart
MS/GCP Restart Used = No (DCCN)

ADVANCED: out of service
ODS Control = Display (DCCN)
ODS Timeout = No (DCCN)

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

ADVANCED: trk 1 overrides
Track 1: All Predictors Override Used = No (DCCN)

ADVANCED: OR logic
OR 1 Used = No (DCCN)
OR 2 Used = No (DCCN)
OR 3 Used = No (DCCN)
OR 4 Used = No (DCCN)

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

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

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

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

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

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

SSCC: 1
SSCC-1 Activation = AND 1 XR (DCCN)
SSCC-1 Gate Delay = 4 sec (DCCN)
SSCC-1 Number of GPs = 1 (DCCN)
SSCC-1 Number of GDs = 0 (DCCN)
SSCC 1: Flash Rate = 55 (DCCN)
SSCC 1: Low Battery Detection = No (Field)
SSCC 1: Flash Sync = master (DCCN)
SSCC 1: Invert Gate Output = No (DCCN)
SSCC 1: Lamp Neutral Test = Off (DCCN)
Aux-1 Xng Ctrl Used = No (DCCN)

SSCC: 2
SSCC-2 Activation = AND 1 XR (DCCN)
SSCC-2 Gate Delay = 4 sec (DCCN)
SSCC-2 Number of GPs = 0 (DCCN)
SSCC-2 Number of GDs = 0 (DCCN)
SSCC 2: Flash Rate = 55 (DCCN)
SSCC 2: Low Battery Detection = No (Field)
SSCC 2: Flash Sync = slave (DCCN)
SSCC 2: Invert Gate Output = No (DCCN)
SSCC 2: Lamp Neutral Test = Off (DCCN)
Aux-2 Xng Ctrl Used = No (DCCN)

OUTPUT: assignment page 1
OUT 1.1 = Sim Preempt (DCCN)
OUT 1.2 = Not Used (DCCN)

INPUT: assignment page 1
IN 1.1 = Preempt Health (DCCN)
IN 1.2 = Not Used (DCCN)

ID: assignment SSCC
OUT GC 1 = Gate Output 1 (DCCN)
OUT GC 2 = Gate Output 2 (DCCN)
IN 7.1 = Not Used (DCCN)
IN 7.2 = Not Used (DCCN)
IN 7.3 = Not Used (DCCN)
IN 7.4 = Not Used (DCCN)
IN 7.5 = GP 1.1 (DCCN)
IN 8.1 = AND 1 XR Enable (DCCN)
IN 8.2 = Not Used (DCCN)
IN 8.3 = Not Used (DCCN)
IN 8.4 = Not Used (DCCN)
IN 8.5 = Not Used (DCCN)

SEAR
SEAR Subnode = 99 (DCCN)
DI 1 = Gnd Flt Tester 1 (DCCN)
DI 2 = Not Used (DCCN)
Rly 1 = Ground Fault Test (DCCN)
Rly 2 = AC Control (DCCN)

SEAR: inputs
SP 2.1 = PDK 1 (DCCN)
SP 3.1 = Not Used (DCCN)
SP 4.1 = Not Used (DCCN)
SP 5.1 = Not Used (DCCN)
SP 6.1 = Not Used (DCCN)

SEAR: slot 1-4 inputs
IN 1.2 = Not Used (DCCN)
IN 2.1 = Not Used (DCCN)
IN 2.2 = PDK 2 (DCCN)
IN 3.1 = Not Used (DCCN)
IN 3.2 = Not Used (DCCN)
IN 4.1 = Not Used (DCCN)
IN 4.2 = Not Used (DCCN)

SEAR: inputs slot 5
IN 5.1 = Not Used (DCCN)
IN 5.2 = Not Used (DCCN)

SEAR: inputs slot 6
IN 6.1 = Not Used (DCCN)
IN 6.2 = Not Used (DCCN)

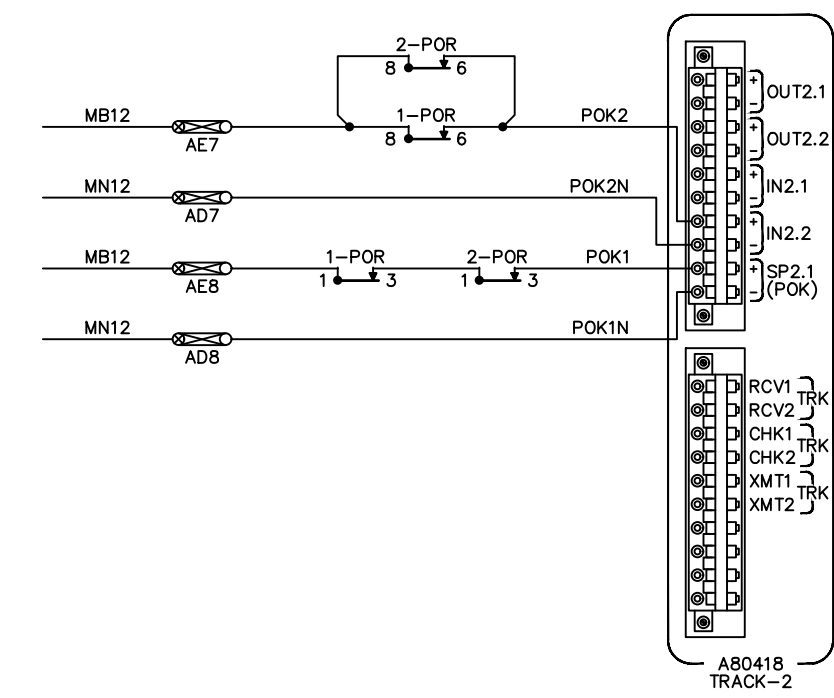
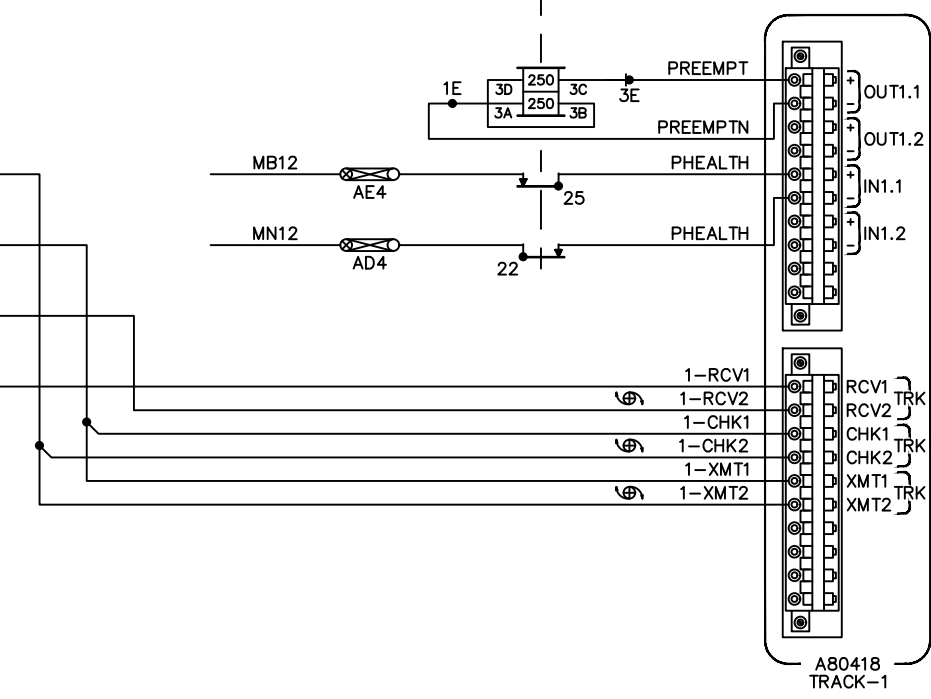
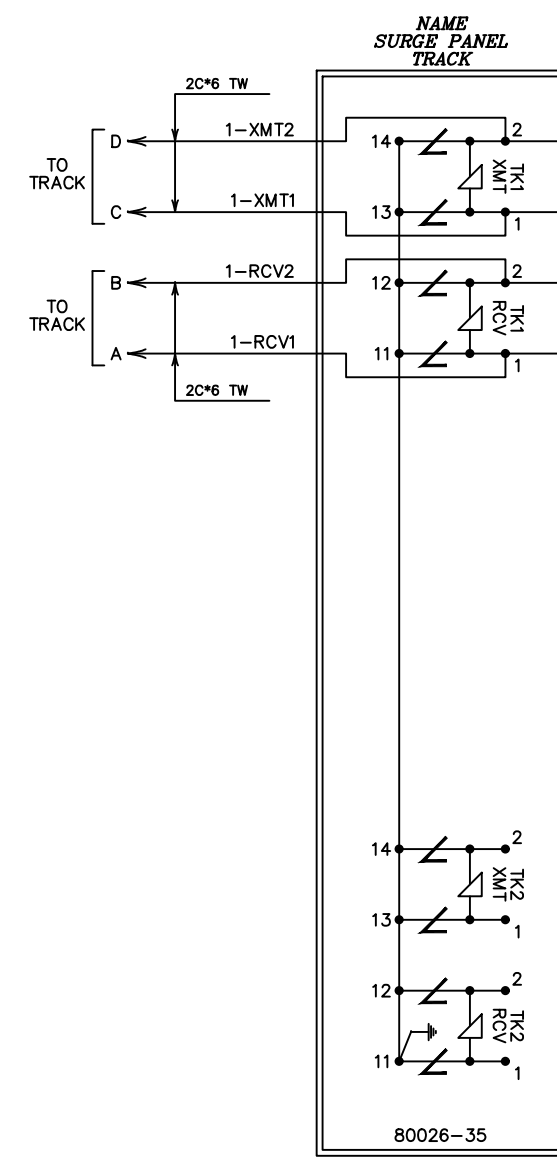
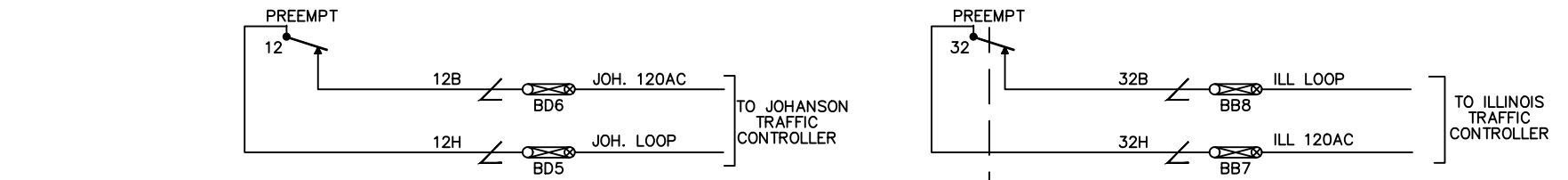
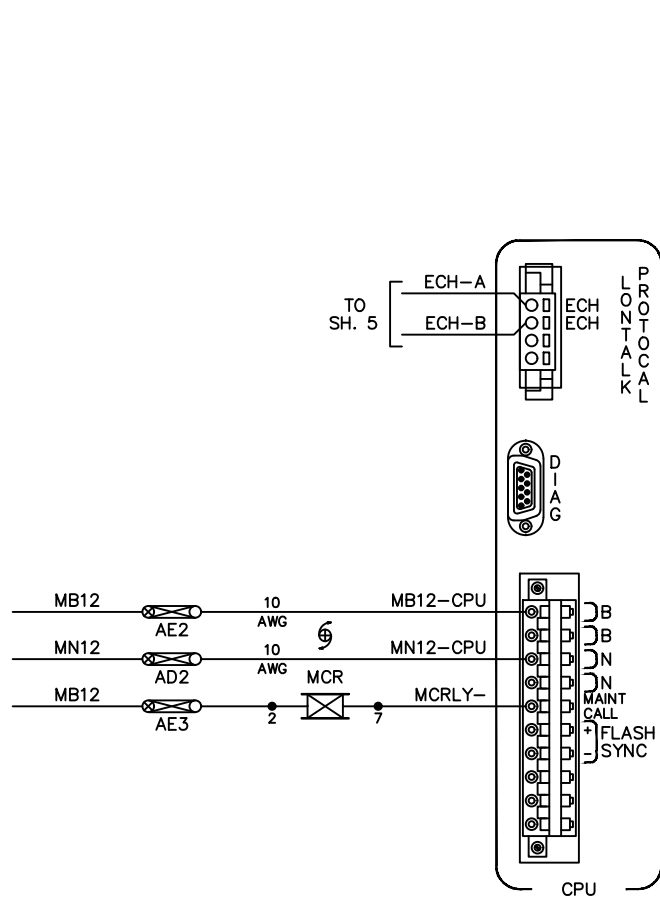
SEAR: slot 7-8 inputs
IN 7.1 = Not Used (DCCN)
IN 7.2 = TSS 1 (DCCN)
IN 7.3 = Not Used (DCCN)
IN 7.4 = TSS 2 (DCCN)
IN 8.2 = General 1 (DCCN)
IN 8.3 = Not Used (DCCN)
IN 8.4 = Not Used (DCCN)
IN 8.5 = Not Used (DCCN)

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

Configuration Package File

Filename: MAINCONFIG-868405C-2016Jul14.pac
Path: C:\Users\EdwardsG\Desktop\CROSSINGS\G0111X868405C\_COLLEGERD\
Date/Time: 7/14/2016 13:35:19
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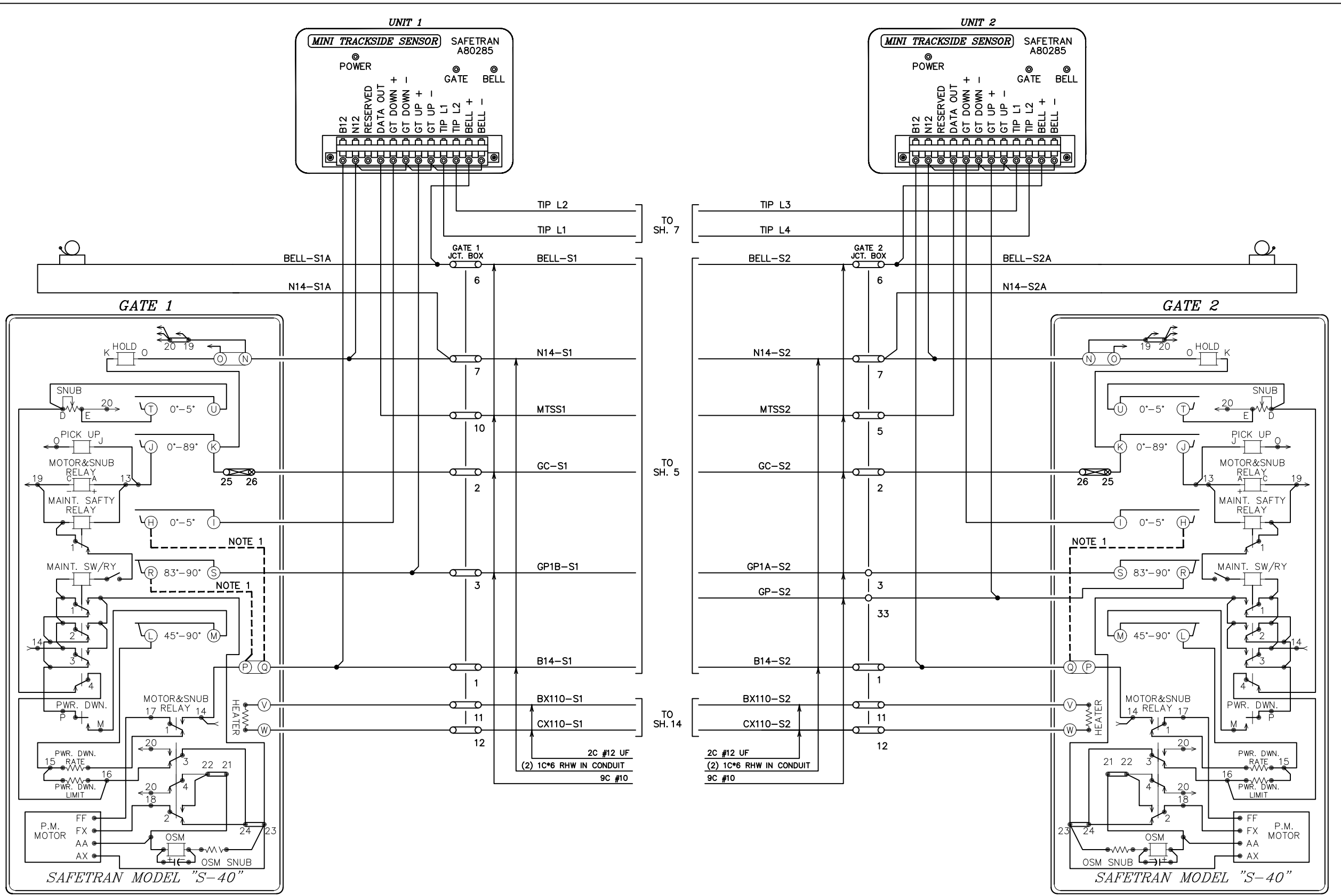
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COLLEGE ROAD FAIRBANKS, AK
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM
DOT 868 405 C M.P. G01.11
DRAWN: DSD DWG NO. OG0111X SHEET 03 OF 15
DATE: 01-19-06



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COR: GSE	CHK:	COR: TRS	CHK:	COR: TRR	CHK:			

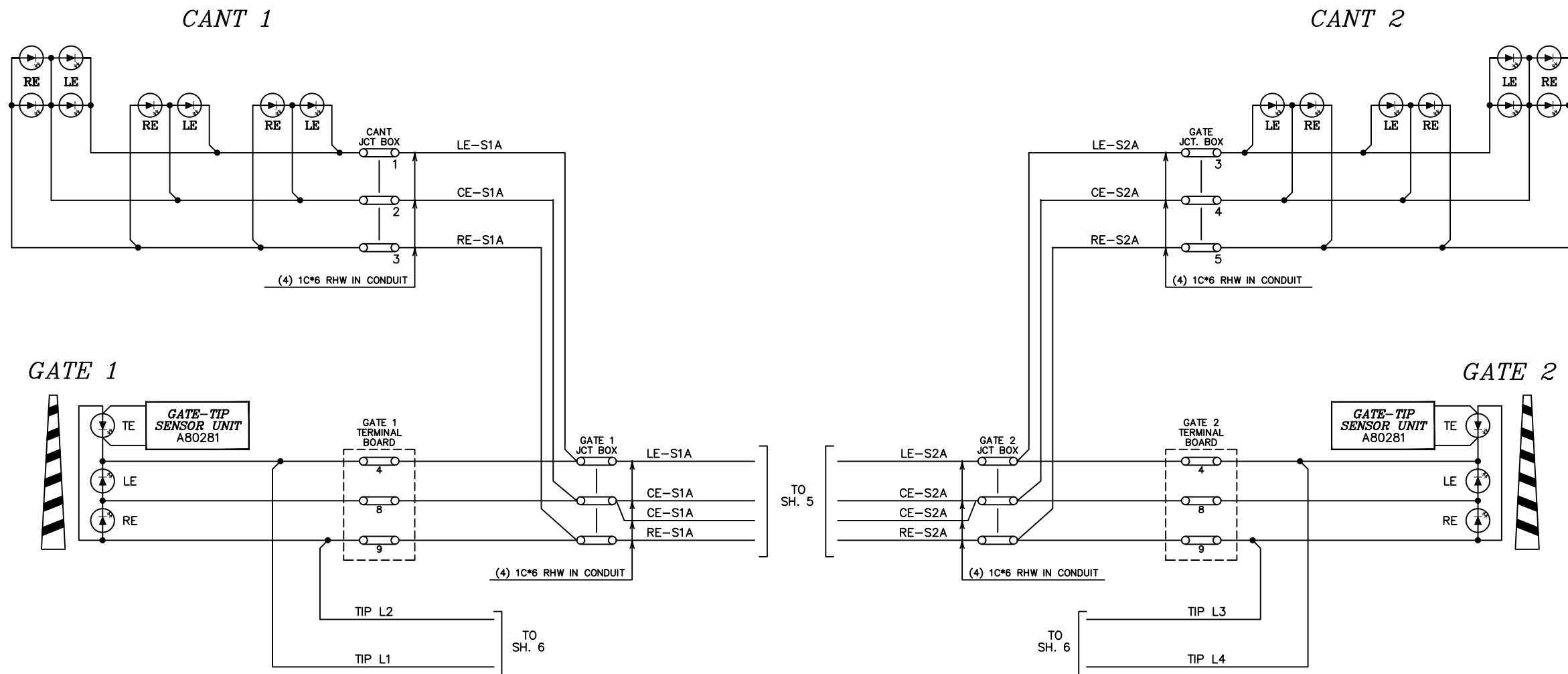




- NOTES:**
- JUMPERS MUST BE ADDED TO EACH GATE AS SHOWN.
  - MINI TRACKSIDE SENSORS MOUNTED IN GATE MECHANISMS.

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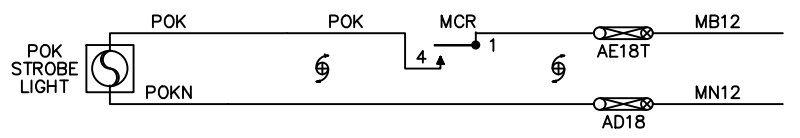
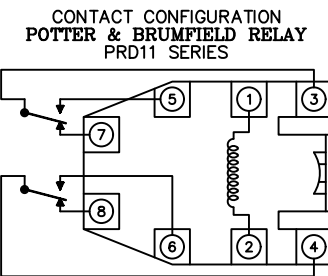
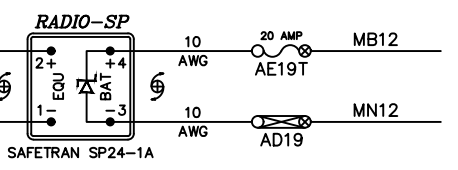
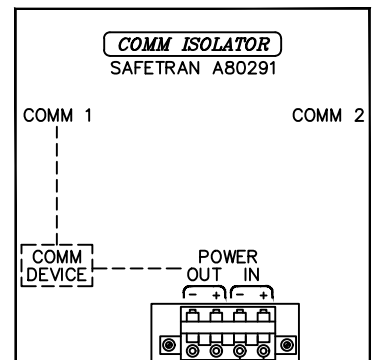
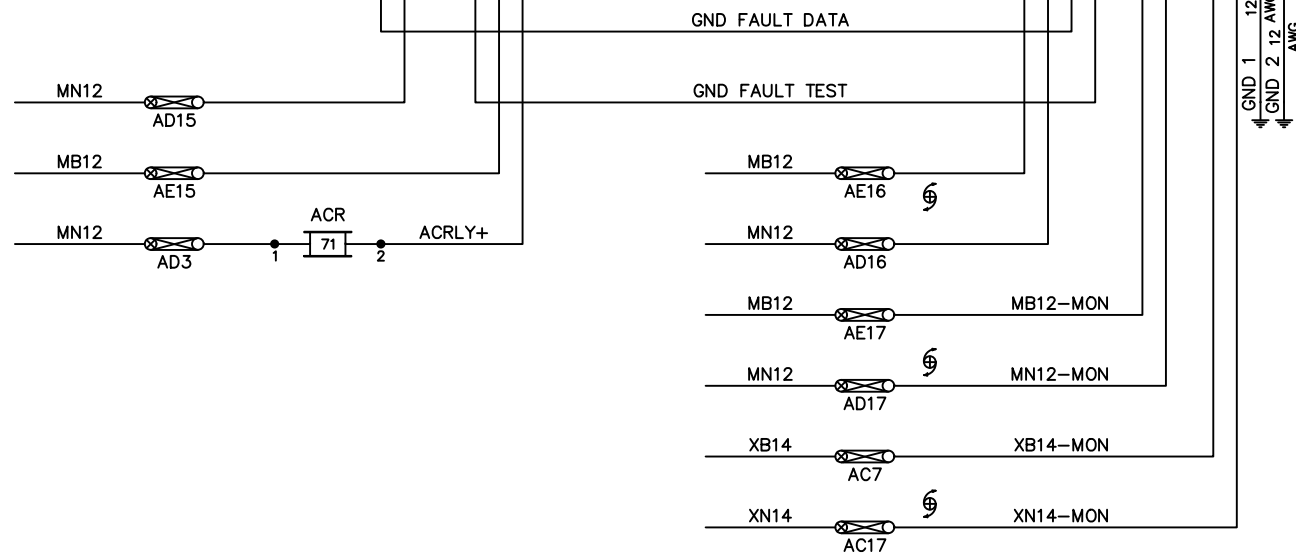
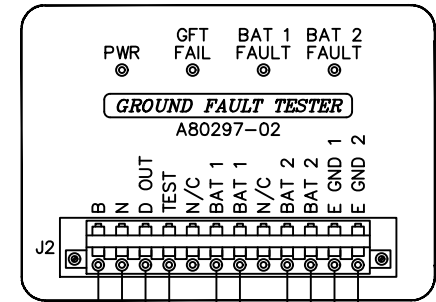
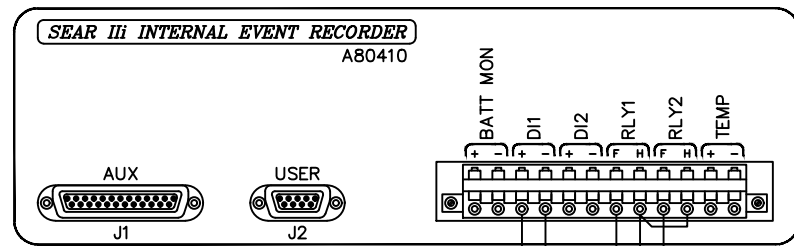
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COR: GSE	CHK:	COR: TRS	CHK:	COR: SKJ	CHK:	DES: DSD/DWH	COR: XRL/SSP	



NOTES:  
 1. GATE TIP SENSORS MOUNTED  
 IN TIP LIGHTS.

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COR: GSE	CHK:	COR: TRS	CHK:	COR: TRR	CHK:			



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

### SEAR III PROGRAMMING

PROGRAM MENU QUESTIONS	OPTIONS / RANGE	PROGRAM
DATE/TIME?	CURRENT DATE/TIME	
AUTOMATIC DST ADJUSTMENT?	YES / NO	YES
TIME ZONE?	EASTERN,CENTRAL,MOUNTAIN, PACIFIC,ALASKA,HAWAII, ATLANTIC,SASKATCHEWAN, NEW FOUNDLAND	ALASKA
SITE NAME?	STREET NAME	COLLEGE ROAD
MILE POST?	MILEAGE	G 01.11
DOT/CROSSING ID #?		868 405 C
TESTER TYPE?	CROSSING, WAYSIDE	CROSSING
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	7.005.100.405.99.01
OFFICE ATCS ADDRESS?	2.RRR.NN.DDDD	2.005.01.9101
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	GEN/ATCS
WAMS/XID? (WHEN SITE TYPE = COLLECTOR)	YES, NO	NO
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	AUX
MCM ADDRESS (WHEN OFFICE COMM DEVICE = MCM)		N/A
OFFICE PHONE NUMBER (WHEN OFFICE COMM DEVICE = DIAL MODEM)	PHONE NUMBER OF WAMS	166.209.7.146
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

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

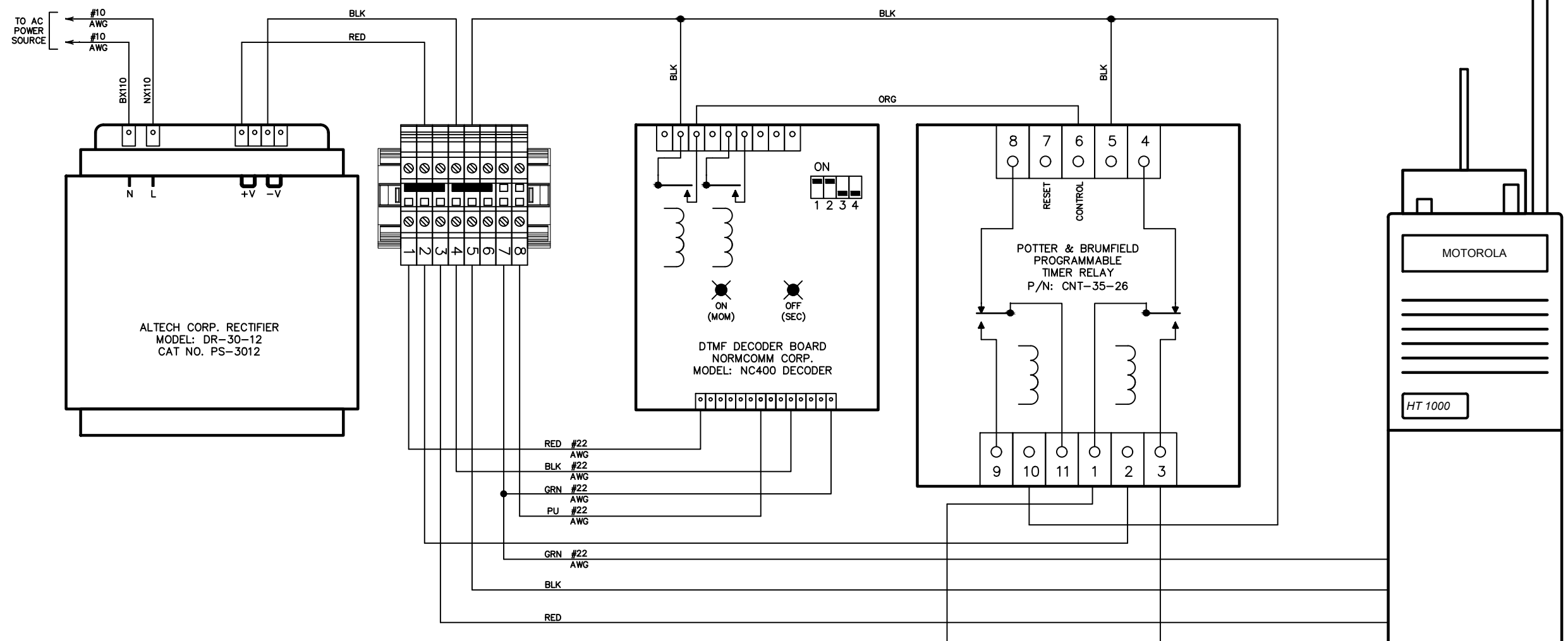
PROGRAM MENU QUESTIONS	OPTIONS / RANGE	PROGRAM SEAR III
RESET NAMES/MODULES?	YES / NO	NO*
RAILROAD NUMBER	1-999	005
CROSSING CONFIGURATION ?	NORMAL SPLIT GATE DUAL CROSSING EXT. ENTRANCE GATE CONTROLLER(S)	NORMAL
ENTRANCE GATES	0-8	2
GATE POSITION FAIL TIME (SECONDS)	10-60	15
GATES NOT STARTING TIME (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	NA
ACTIVATION TIMEOUT(SEC)	1-600	60
ILOD MODULES	0-4	2
ANY LED BULBS USED	NO / YES	YES
AUTO INSPECTIONS	YES / NO	NO
BELL SENSORS	0-4	1
BELL SENSOR TSS1	NO / YES	YES
BELL SENSOR TSS2	NO / YES	NO
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	DO NOT ACTIVATE

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

NOTE \* The first time the unit is  
programed you must reset  
names/modules

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**COLLEGE ROAD FAIRBANKS, AK.**  
RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM  
DOT 868 405 C M.P. G01.11

IN SERVICE DATE: 09-13-16 UPDATED	IN SERVICE DATE: 08-30-16 UPDATED	IN SERVICE DATE: 08-07-14 GCP-T6X-02-5.MCF ADDED DTMF & POWER PAGE COR: SKJ	IN SERVICE DATE: 09-06-11 UPDATED	IN SVC 06-11-09 SEQ # CROSSING EQUIPMENT UPGRADE DES: DSD/DWH COR: XRL/SSP	REVISIONS	DRAWN: DSD DATE: 01-19-06	DWG NO. OG0111X	09 SHEET OF 15
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**REMOTE CONTROL OPERATION**

THE DTMF DECODER BOARD HAS TWO SWITCHES LOCATED AT SW1 THAT NEED TO BE LEFT IN THE ON POSITION. SWITCH 1 IS FOR PROGRAMMING THE DECODER ( OFF POSITION ) AND FOR DECODER OPERATION ( ON POSITION ), SWITCH 2 IS FOR AUDIO INPUT LEVEL POSITION AND SHOULD BE LEFT IN THE ON POSITION TO MATCH THE RADIO OUTPUT 10 MVRMS TO 350 MVRMS.

THE OFF POSITION IS FOR AUDIO LEVELS FROM 350 MVRMS TO 650 MVRMS. THE RADIO NEEDS TO BE TURNED ON AND THE VOLUME POTENTIOMETER CAN BE SET TO ANY POSITION (RADIO STRAPPED FOR MINIMUM RECEIVE LEVEL AT ALL POSITIONS).

THE POWER SUPPLY HAS A GREEN LED THAT LIGHTS WHEN POWER IS APPLIED, THE DECODER

BOARD HAS THREE LEDS TO INDICATE CONDITION CHANGES WHEN DTMF TONES ARE CORRECTLY DECODED. THE FIRST LED ON THE LEFT LABELED MOM WILL LIGHT FOR ONE SECOND AFTER THE CORRECT CODE HAS BEEN RECEIVED.

WHEN THE MOM LED LIGHTS FOR THE TURN ON COMMAND, A RELAY ON THE DECODER BOARD CLOSES FOR ONE SECOND, DURING THIS TIME A GROUND COMPLETES THE PATH THROUGH THE RELAY CONTACTS AND IS WIRED OVER TO THE "CONTROL" INPUT ON THE PROGRAMMABLE RELAY. WITH THE PROGRAMMABLE RELAY SET TO FUNCTION G ON ITS THUMB WHEEL AND TIME FRAME SET, THE PROGRAMMABLE RELAY WILL ENERGIZE BOTH OF ITS BUILT IN RELAYS AND HOLD THESE RELAYS ENERGIZED UNTIL THE TIME RUNS OUT.

**PROGRAM DECODER**

ATTACH AMERITEC LEADS TO THE BLACK WIRES AT TOP OF GRAY DIN RAIL CONNECTORS: AUDIO INPUT LEAD AND GROUND TO AMERITEC TRANSMIT LEADS, TONE ALERT LEAD AND GROUND TO AMERITEC RECEIVE LEADS.

PROGRAM THE FOLLOWING:

PRIMARY ADDRESS:

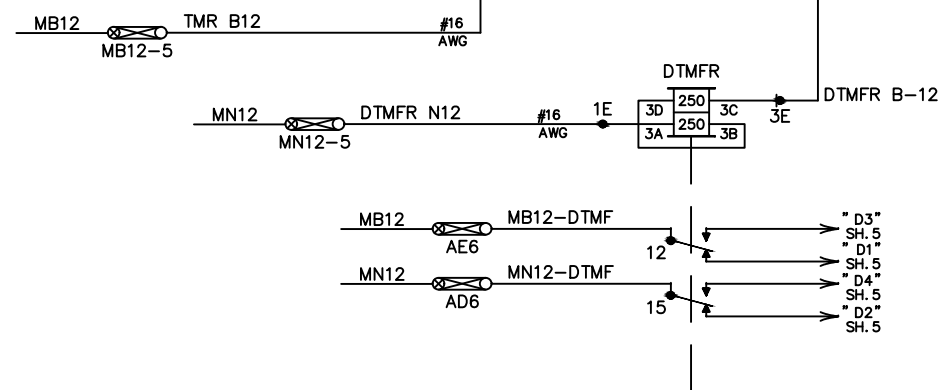
\*1#\_ \_

PRIMARY LATCHED OUTPUT MODE:

\*8#10\_ \_ \_ \_ \_

**NOTES:**

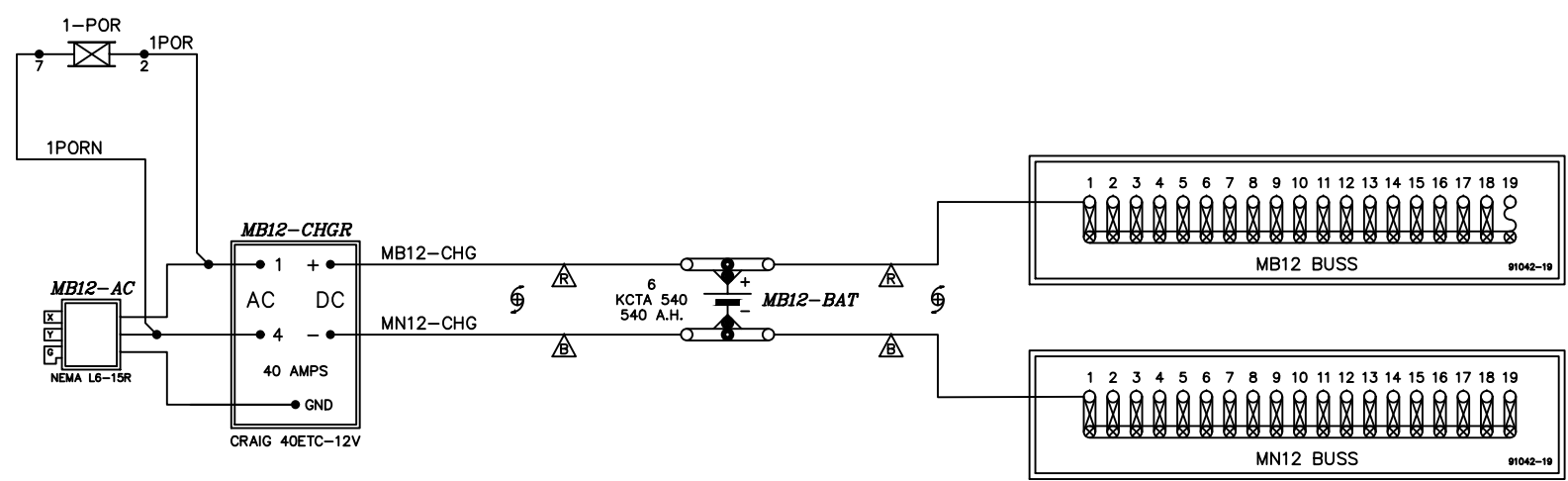
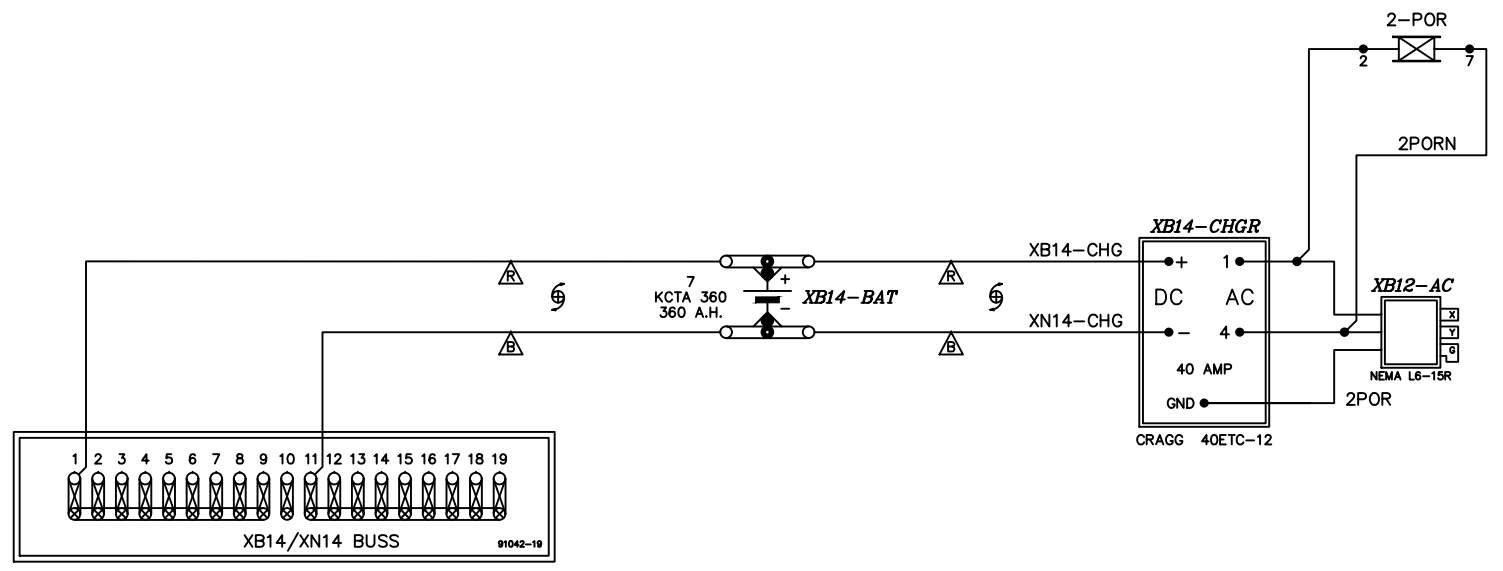
- ALL WIRING TO BE #20 AWG UNLESS OTHERWISE NOTED.



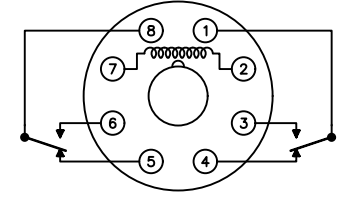
WAGO TERMINAL ASSIGNMENTS		
TERM #:	T/B	CIRCUIT NAME:
1	T	B12 - SPARE
1	B	B12 - DTMF BOARD
2	T	B12 - LOAD
2	B	B12 - TIMER RELAY
3	T	B12 - SPARE
3	B	B12 - RADIO
4	T	N12 - LOAD
4	B	N12 - DTMF BOARD
5	T	N12 - DTMF BOARD/TIMER RELAY
5	B	N12 - RADIO
6	T	N12-SPARE
6	B	N12-SPARE
7	T	SPARE
7	B	PROGRAMMING AUDIO INPUT
8	T	SPARE
8	B	TONE ALERT AUDIO OUTPUT

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COR: GSE	CHK:	COR: TRS	CHK:			

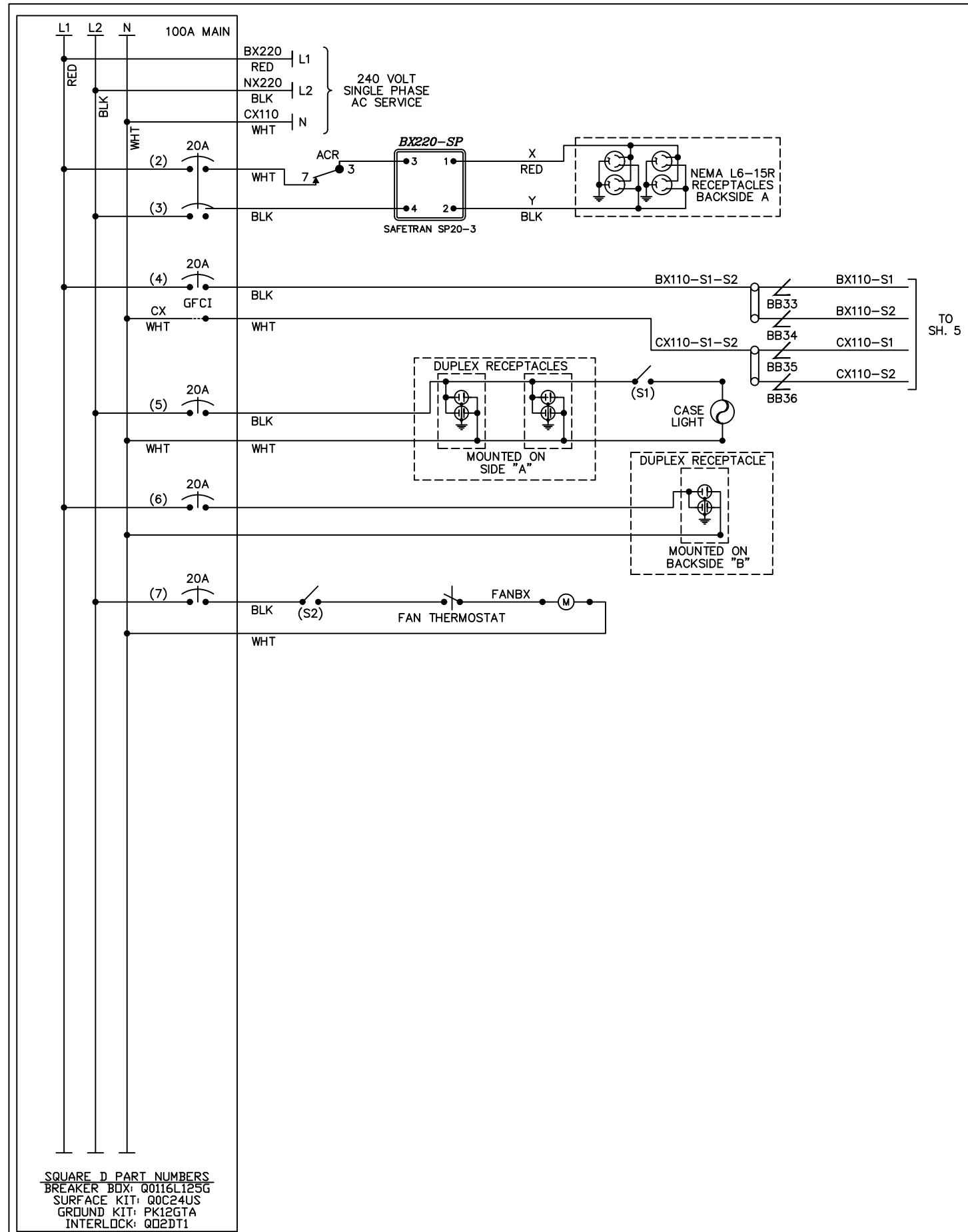


CONTACT CONFIGURATION  
POTTER & BRUMFIELD RELAY  
KRPA11 SERIES



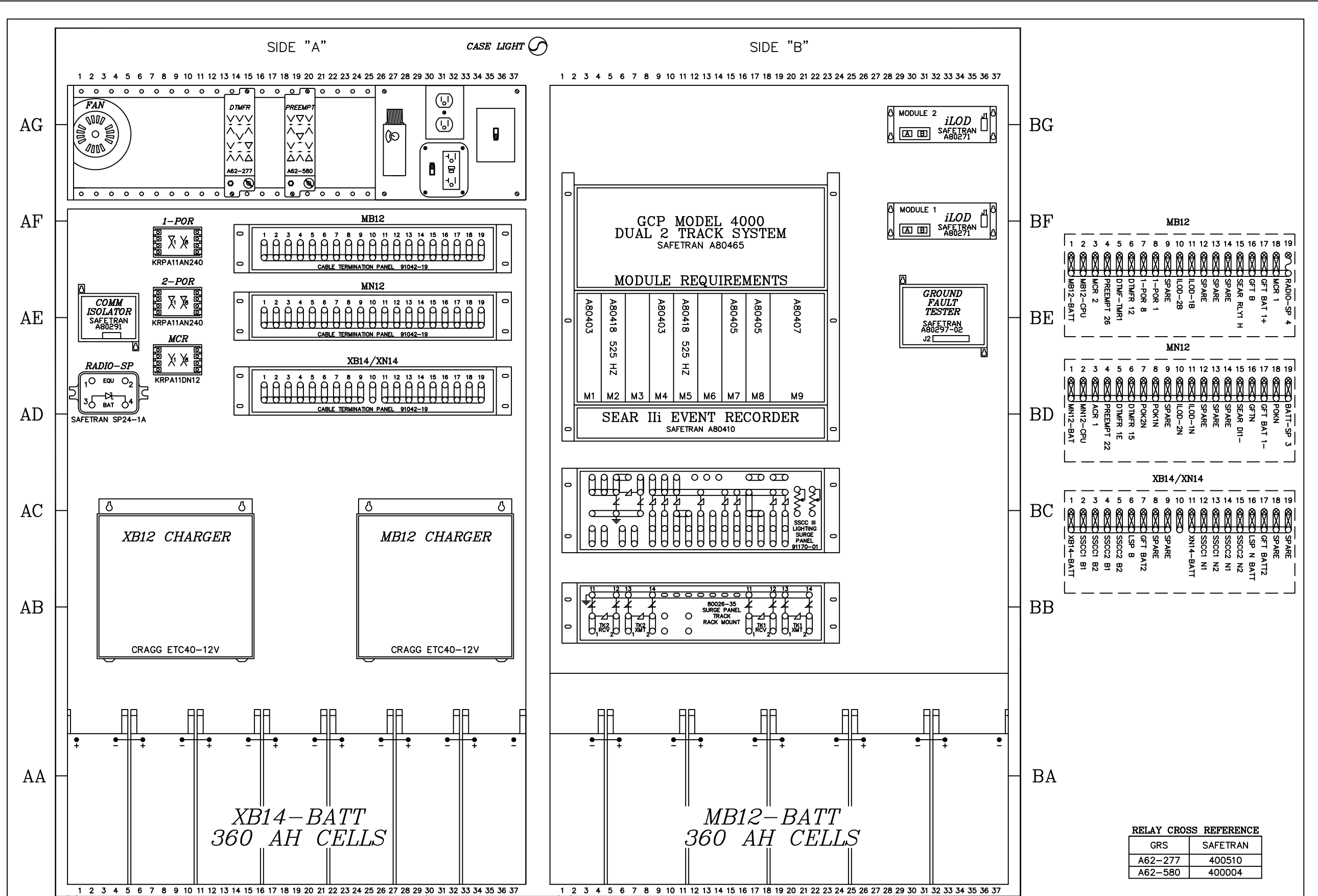
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COR: GSE	CHK:	COR: TRS	CHK:	COR: TRR	CHK:			



- NOTES:
- 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.
  - = WIRE NUT
  - 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
  - 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.
  - ALL GROUND WIRES RUN TO BREAKER BOX GROUND BUS.

<i>The ALASKA RAILROAD CORPORATION</i>	
SIGNAL ENGINEERING	P.O. BOX 107500, ANCHORAGE, AK 99510-7500
COLLEGE ROAD RAILROAD-HIGHWAY GRADE CROSSING WARNING SYSTEM DOT 868 405 C	FAIRBANKS, AK. M.P. G01.11
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IN SERVICE DATE: 08-07-14 GCP-T6X-02-5.MCF ADDED DTMF & POWER PAGE COR: SKJ      CHK:	<b>REVISIONS</b> DRAWN: <i>ARRC</i> DATE: 08-07-14
DWG NO. <b>OG0111X</b>	SHEET <b>12</b> OF <b>15</b>



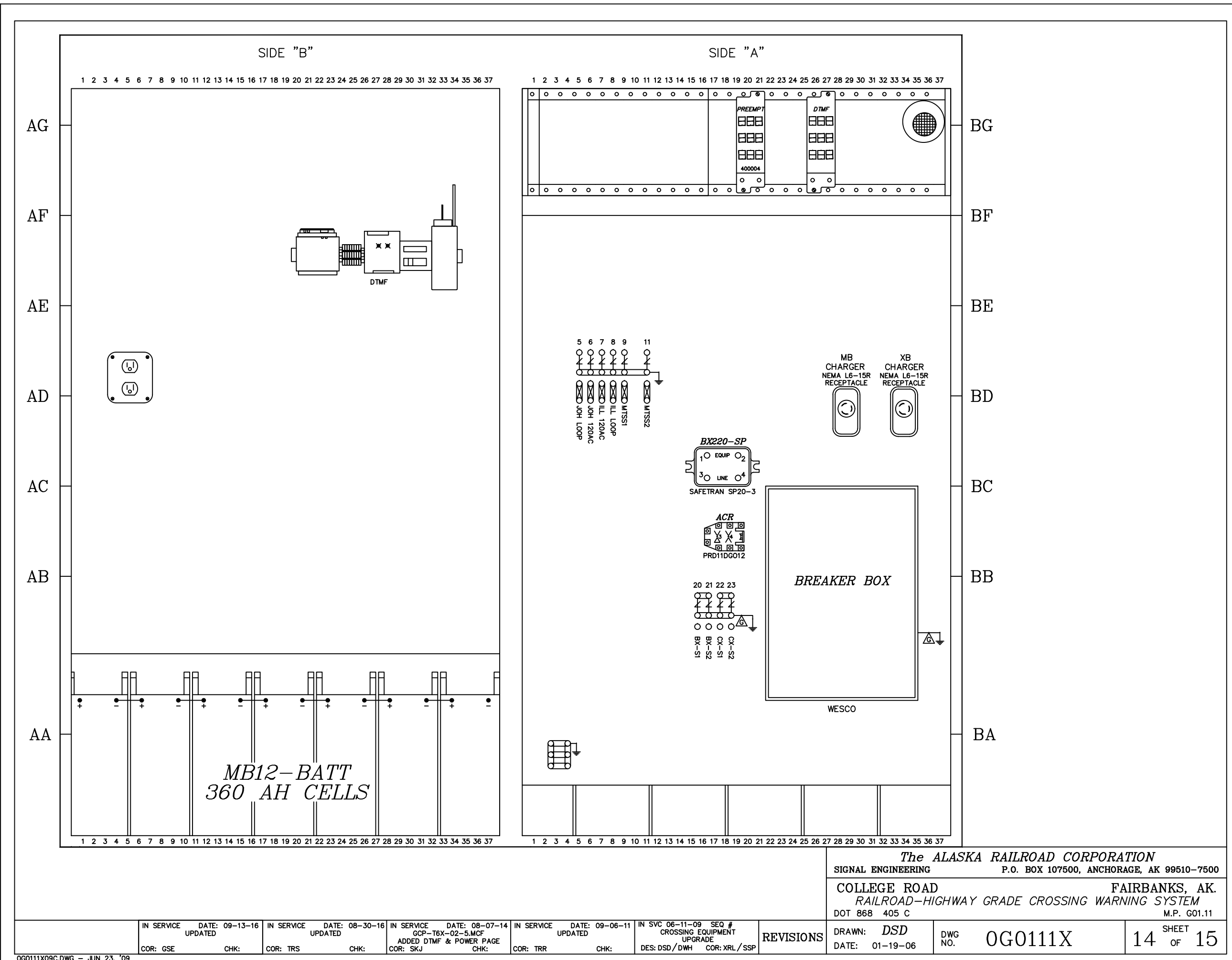
1. SHELVES AND BACKBOARDS ARE DRAWN TO A SCALE OF 1" = 0.20".

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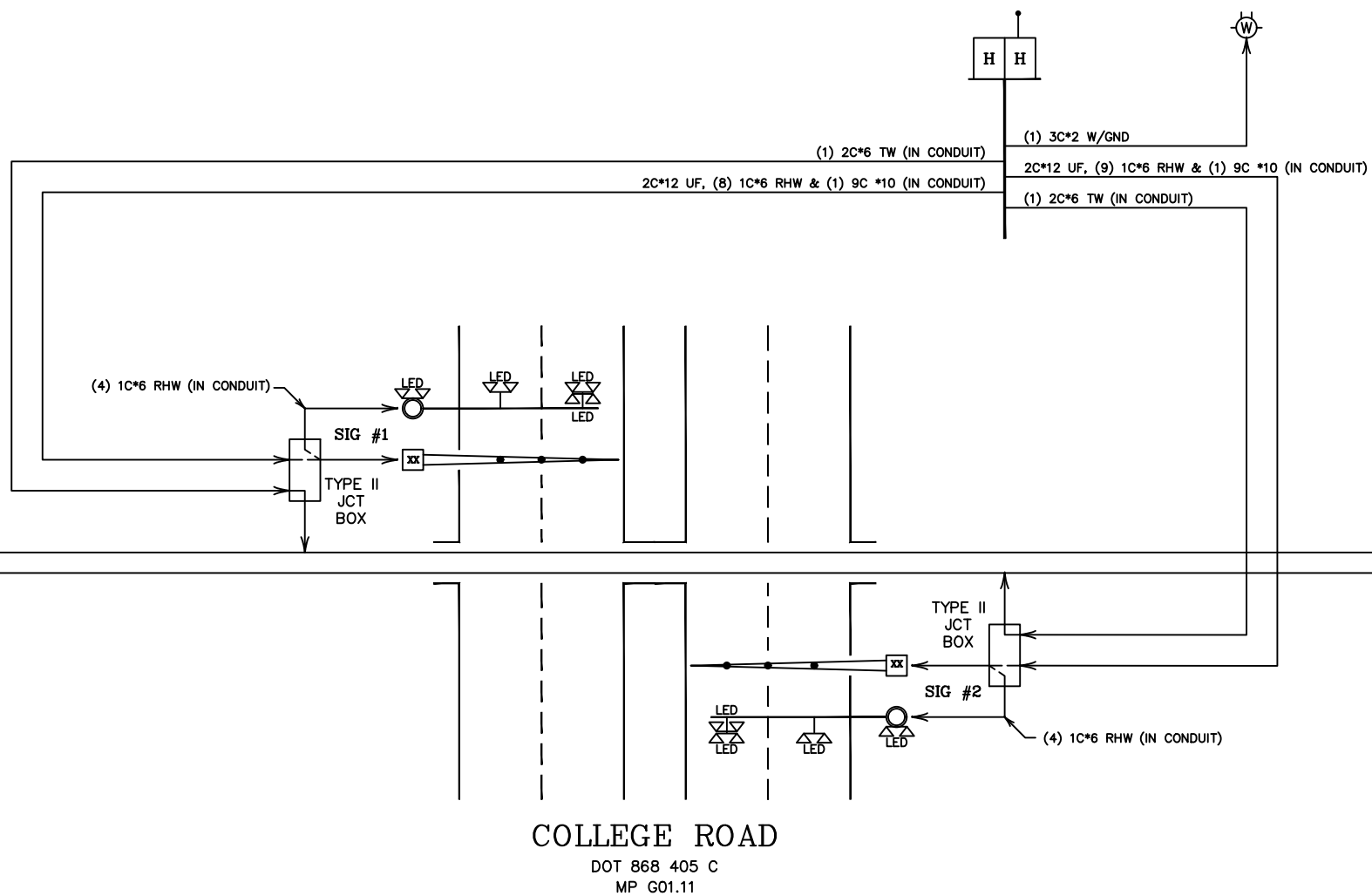
DRAWN: **DSD** DWG NO. **OG0111X** 13 SHEET OF 15  
DATE: 01-19-06



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UPDATED		UPDATED		UPDATED		UPDATED		CROSSING EQUIPMENT		
COR: GSE	CHK:	COR: TRS	CHK:	ADDED DTMF & POWER PAGE	COR: SKJ	CHK:		UPGRADE		
								DES: DSD/DWH	COR: XRL/SSP	

REVISIONS	DRAWN: DSD	DWG NO. 0G0111X	DATE: 01-19-06	SHEET 14 OF 15
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COLLEGE ROAD  
 DOT 868 405 C  
 MP G01.11

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REVISIONS

DRAWN: DSD  
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DWG NO. 0G0111X

15 SHEET OF 15