



A Limited Liability Holding Company
101 RJ Corman Drive • PO Box 788 • Nicholasville, KY 40340-0788
(859) 881-7521 • Fax: (859) 885-7804 • www.rjcorman.com

March 28, 2018

Vendors,

RJ Corman Railroad Company / Carolina Lines has received funding from the NCDOT to perform signal work on our railroad line in Columbus County.

You are invited to submit a bid to provide a crossing materials package for the highway grade crossing listed below:

5th Street, Tabor City, NC, DOT# 629 407H, as shown on attached plans (*see ACH31026.pdf*)

Enclosed bid package also includes material requirements, as well as bidding guidelines. All bids must be submitted on company letterhead and received by **April 11, 2018 5PM EST**. Please submit via email to James.Kelley@RJCorman.com or by mail to PO Box 788, Nicholasville KY 40340, Attn: James Kelley.

If you have any questions regarding this bid request, please don't hesitate to contact me.

RJ Corman reserves the right to reject any and all bids.

Vendor to provide material delivery to 401 Enterprise Drive, Nicholasville, KY 40356.

RJ CORMAN WILL PROVIDE WIRING AND INSTALLATION.

Shipping to begin as soon as possible but no later than 90 days ARO.

Sincerely,

James Kelley
RJ Corman Railroad
PO Box 788
Nicholasville, KY 40340
O: 859-881-6637
www.rjcorman.com

Scope:

Vendor will provide material for the upgrade of LED flashing light signals and side lights with lightning arresters, Siemens MS-4000 Dual Single Track System with user reference manuals. Vendor will provide all necessary equipment, inside and outside, of the shelter per the drawing ACH31026.

General Design Guidelines:

1. Material shall comply with all applicable FRA and state regulations, and follow current AREMA C&S Manual for Recommended Practices.
2. All material provided shall be new.

Material Requirements:

1. Train detection will be provided by Siemens MS-4000 Dual Single Track System
2. Flasher control will be provided by the Siemens 40amp Crossing Controller. Provide associated Lightning/Surge Arrester panel(s). *See plans for details.*
3. Flashing light signals to be 12" LED heads (Miller Felpax) with new cross arms, aluminum visors and backgrounds.
4. Vendor to provide all field equipment, including track wire, shunts, rail bonding material, etc.
5. Jointed Rail to be Bonded within approaches please include all associated field materials required.
6. RJ Corman will be responsible for crossing surface replacement.

Performance & Bidding Guidelines:

Bids should be detailed in the following format:

LOCATION: _____

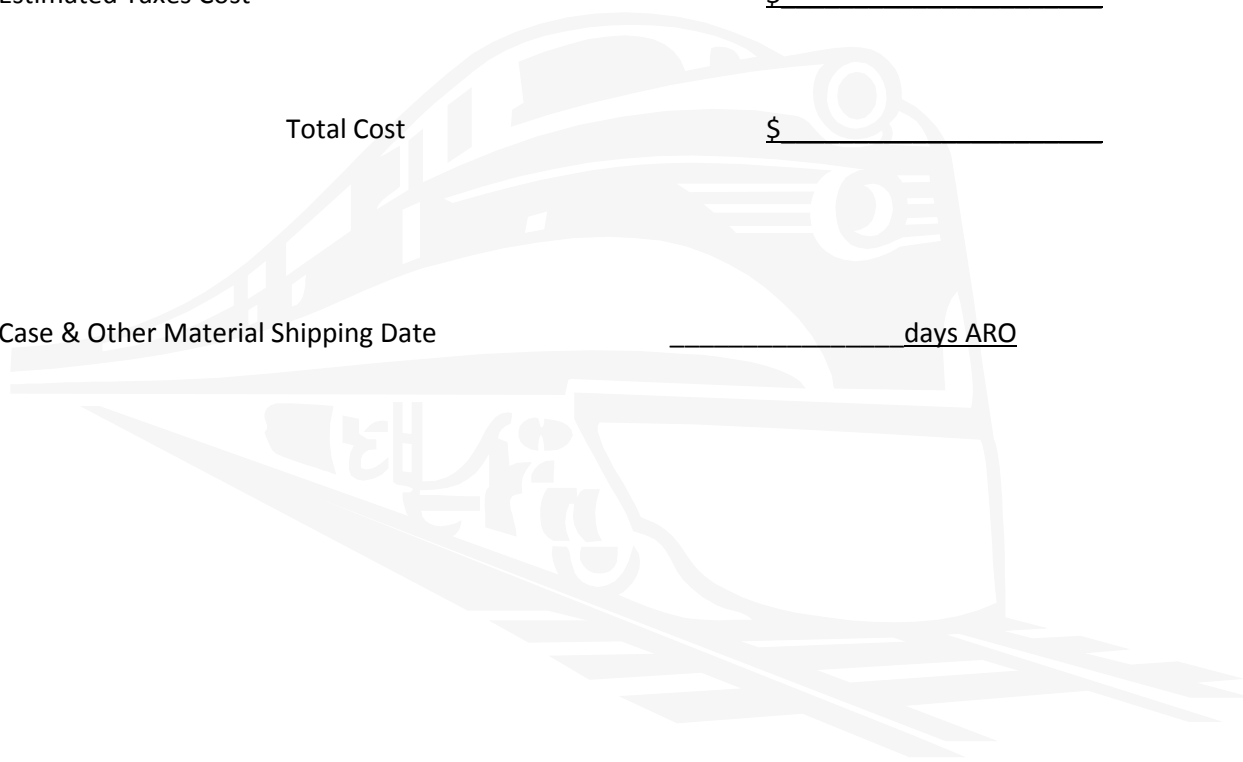
Material Cost \$ _____

Estimated Freight/Shipping Cost \$ _____

Estimated Taxes Cost \$ _____

Total Cost \$ _____

Case & Other Material Shipping Date _____ days ARO



SH. NO.	CONTENTS	REV
NX1	INDEX SHEET	1
1	TRACK PLAN	1
2	PROFILE	1
3	TRACK LAYOUT	1
4	MS 4000 GCP	1
5	CONNECTORS FOR TRACK MODULE	1
6	CROSSING CONTROLLER HOOK-UP	1
7	LIGHTING/SURGE PANEL HOOK-UP	1
8	FLASHING LIGHTS	1
9	POWER CENTER	1
10	HOUSE LAYOUT	1

DESIGNER'S NOTES:
 ALL SHEETS TO START ON REV. 1
 * = ORIGINAL ISSUE DATE
 # = DESIGNED BY INITIALS
 ★ = DRAWN BY INITIALS
 ** = CHECKED BY INITIALS
 ## = DRAWN BY INITIALS (AIS)
 ★★ = CHECKED BY INITIALS (AIS)

REVISIONS				
1	02-14-18	DEW	RJC	XXX
* # ★ ** PLAN REVISED ACCOUNT NEW CASE INSTALLED				
PROJECT: XXXX				
IN SERVICE: XX-XX-XX				
PER: XXX			##	★★
		XXX	XXX	

INDEX SHEET

RJ CORMAN RAILROAD



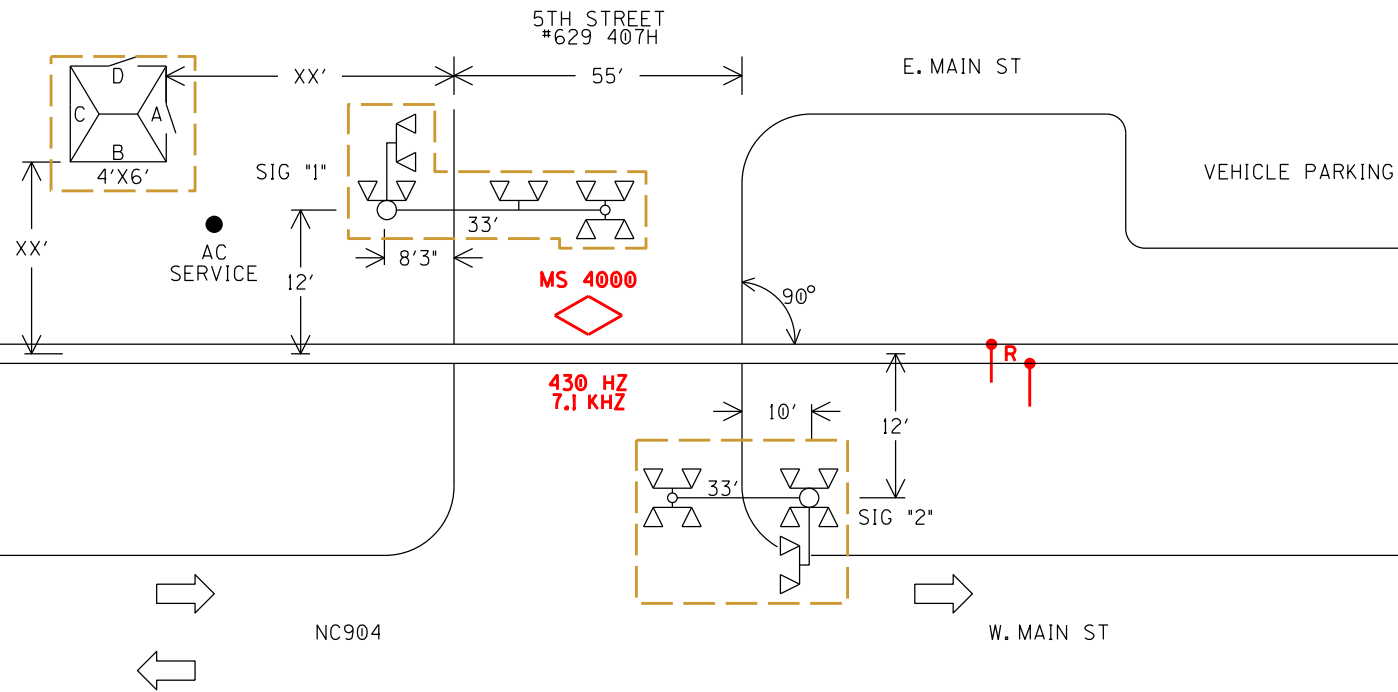
DESIGNED BY: DEW
 DIGITIZED BY: RJC
 CHECKED BY: XXX

5TH STREET
 TABOR CITY, NC
 CAROLINA SUBDIVISION

DATE: 02/14/18
 FILE: ACH31026.NX1
 SHEET NX1

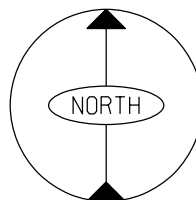
TO NE NEW YARD
(NORTH)
M.P. (DECREASING)

TO END OF TRACK
(SOUTH)
M.P. (INCREASING)



- CONSTRUCTION NOTES:**
1. REUSE EXISTING SHELTER
 2. REUSE EXISTING CANTILEVERS
 3. REPLACE INCANDESCENT LAMPS WITH LEDs
 4. INSTALL NEW MS-4000, SSCC, AND SURGE PANEL

RED = IN
YELLOW = OUT



TRACK PLAN

RJ CORMAN RAILROAD



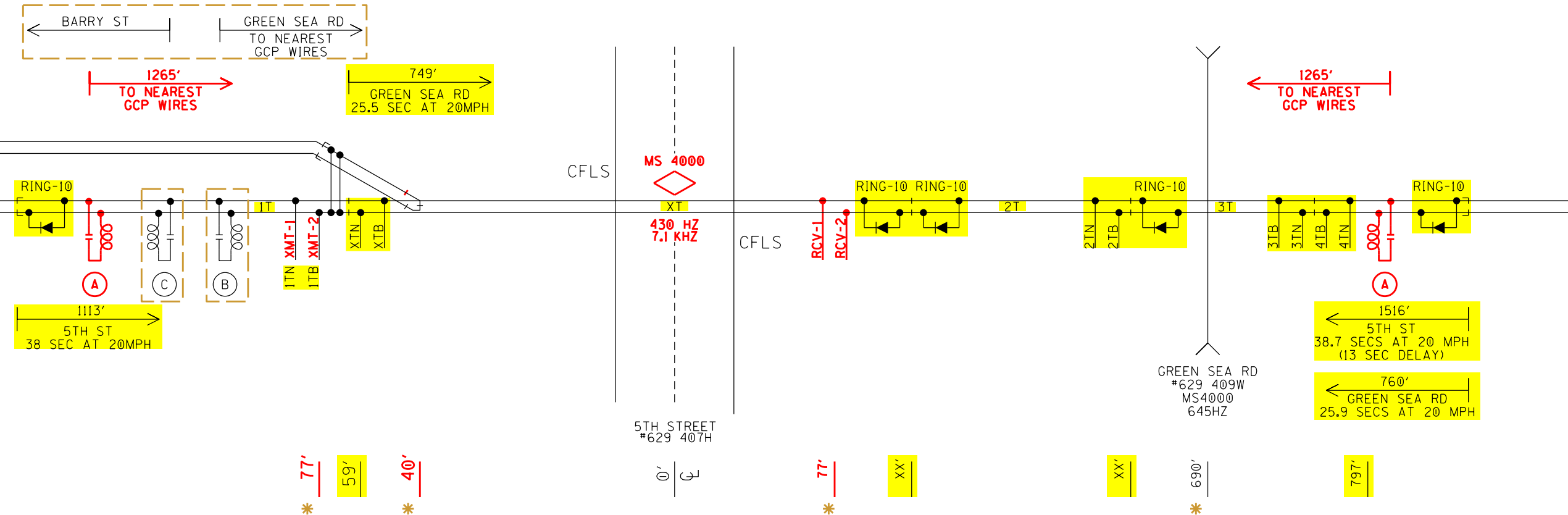
DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: DBA

5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

DATE: 02/14/18
FILE: ACH31026.01
SHEET 01

TO NE NEW YARD
(NORTH)
M.P. (DECREASING)

TO END OF TRACK
(SOUTH)
M.P. (INCREASING)



APPROACH CALCULATION INFORMATION	
STANDARD MINIMUM WARNING TIME IN SECONDS	25
CLEARANCE TIME IN SECONDS	0
CONTROL EQUIPMENT REACTION TIME IN SECONDS	5
SIMULTANEOUS PREEMPT TIME IN SECONDS	8
DESIGNED WARNING TIME IN SECONDS	38
TIME TABLE MAXIMUM TRAIN SPEED IN MILE PER HOUR	20
CALCULATED APPROACH	1265'

(A) - MF-62775-3497 (430HZ)

(B) - MF-62775-3497 (645HZ)

(C) - NBS (816HZ)

* = FIELD VERIFY

RED = IN
YELLOW = OUT

PROFILE

RJ CORMAN RAILROAD

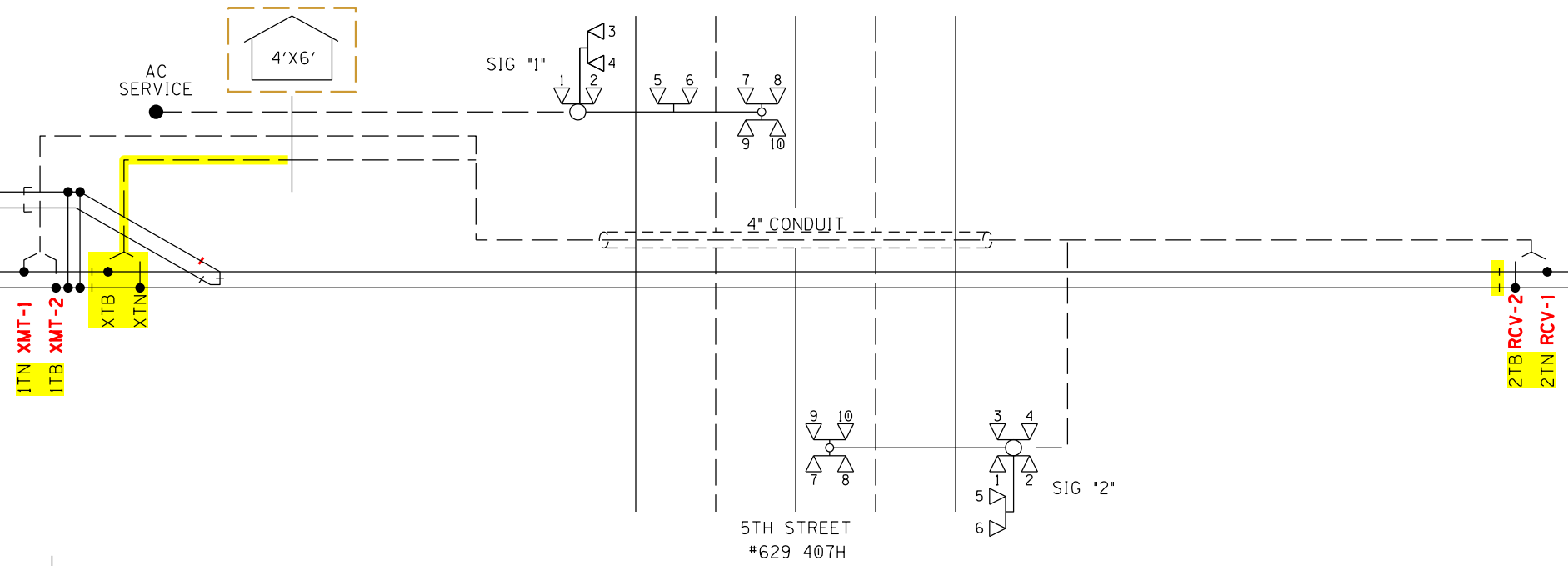


DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: DBA

5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

DATE: 02/14/18
FILE: ACH31026.02
SHEET 02

130' MINIMUM



5CUG #6 1EC 1EZ 1EB BELL-1 SPARE	3CUG #9 BX110 NX110 GND	TW. PR. #6 XMT-1 1TB XMT-2 1TN
5CUG #6 2EC 2EZ 2EB BELL-2 SPARE		TW. PR. #6 RCV-1 XTB RCV-2 XTN
		TW. PR. #6 3TB 3TN

LEGEND

- CONDUIT - MIN 36" DEEP
- UNDERGROUND CABLE - MIN 36" DEEP

NOTES:

- MATERIAL & INSTALLATION TO BE IN ACCORDANCE WITH MUTCD, STATE AND RAILROAD STANDARDS.
- ALL DIMENSIONS ARE APPROXIMATE AND MAY VARY DUE TO ACTUAL FIELD CONDITIONS.
- ALL FLASHING LIGHT SIGNALS AND GATE LIGHTS TO BE LIGHT EMITTING DIODE (LED) ASSEMBLIES.

☐ = REUSED
 RED = IN
 YELLOW = OUT

TRACK LAYOUT

<h1>RJ CORMAN RAILROAD</h1>		
DESIGNED BY: DEW DIGITIZED BY: RJC CHECKED BY: DBA	5TH STREET TABOR CITY, NC CAROLINA SUBDIVISION	DATE: 02/14/18 FILE: ACH31026.03 SHEET 03



MAIN PROGRAM MENU

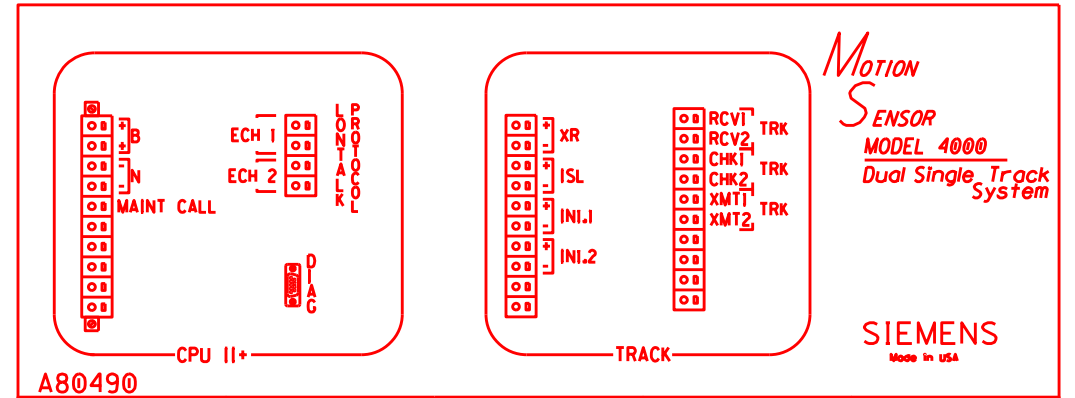
**	PARAMETER	VALUE
1	TEMPLATE	↓ MTF-MS MOTION SENSOR
1A	SET TEMPLATE DEFAULTS	(YES ON INITIAL SETUP)
MS 4000 CONFIGURATION		
2	APPR FREQUENCY	↓ 430 HZ
3	APPR TRANSMIT LEVEL	# ☆ HIGH
4	UNI/BI/SEM-BIDIRNL	↓ BIDIRNL
5	DIRECTIONALLY WIRED	↓ ☆ NO
6	MS PICKUP DELAY	↓ ☆ 15 SEC
7	UAX USED	↓ NO
7A	* PRIME UAX PICKUP	↓ ☆
8	ISLAND USED	↓ ☆ INTERNAL
8A	* ISL FREQUENCY	↓ 7.1 KHZ
8B	* ISL PICKUP DELAY	↓ (2s+) 3 SECONDS
9	IN 1.1	↓ OUT OF SERVICE IP 1
10	IN 1.2	↓ NOT USED
11	PRIME MS/GCP MODE	↓ PRED
11A	* PRIME WARNING TIME	↓ 38 SEC
ADVANCED		
12	POSITIVE START	↓ ☆ OFF
13	SUDDEN SHUNT DET USED	↓ ☆ NO
14	LOW EZ DET USED	↓ ☆ NO
15	MS SENSITIVITY LEVEL	# ☆ 36
16	COMPENSATION LEVEL	# ☆ 1300
17	LOW EX ADJUSTMENT	# ☆ 39
18	INBOUND PS SENSITIVITY	# ☆ HIGH
19	SPEED LIMITING USED	# ☆ YES
20	OUTBOUND FALSE ACT LVL	# ☆ NORMAL
OTHER		
21	OOS TIMEOUT	# ☆ 1 HRS
22	DAYLIGHT SAVINGS TIME	# ☆ ON
23	EZ/EX LOGGING	# ☆ CHANGE
24	EZ/EX POINT CHANGE	# ☆ 3
25	ATCS SITE ID	↓ ☆ 76201010016

CONTINUE MAIN PROGRAM MENU

**	PARAMETER	VALUE
26	LOCATION	
26A	* DOT NUMBER	# 629407H
26B	* MILE POST	# 310.26
26C	* SITE NAME	# 5TH STREET

MCF AND OCCN	
MCF NAME	GCP-T6X-02-8.mcf
OCCN	-----

SHOP TO FILL IN OCCN ON AS WIRED.
VERIFY MCF IS AS NOTED.
IF OTHERWISE CONTACT ENGINEERING.



CPU II+ Module A80403	TRACK Module A80418	TRANSFER Module A80406	CPU II+ Module A80403	TRACK Module A80418
<div style="border: 1px solid black; padding: 2px;"> <p>0000</p> <p>SEL</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>NAV</p> <p>1002 8</p> <p>3004 9</p> <p>5006 10</p> <p>7008 11</p> <p>90010 12</p> <p>110012 13</p> <p>130014 14</p> <p>150016 15</p> <p>16</p> <p>RX/TX</p> <p>OO ECH LAN</p> <p>OO DSPL COMM</p> <p>OO DIAG COMM(CP)</p> <p>OO VLP/CP COMM</p> <p>OO BACKPLANE COMM</p> <p>O VLP HEALTH</p> <p>O CP HEALTH</p> <p>O POWER</p> <p>V L P</p> <p>D I A G</p> <p>SIEMENS Made in USA</p> </div>	<div style="border: 1px solid black; padding: 2px;"> <p>0000</p> <p>SI</p> <p>O PRIME</p> <p>O DAX A</p> <p>O DAX B</p> <p>O DAX C</p> <p>O DAX D</p> <p>O DAX E</p> <p>O DAX F</p> <p>O DAX G</p> <p>O PRE-EMPT</p> <p>O MOTION</p> <p>O ISLAND</p> <p>O OUT 1</p> <p>O OUT 2</p> <p>O IN 1</p> <p>O IN 2</p> <p>O HEALTH</p> <p>O POWER</p> <p>D I A G</p> <p>SIEMENS Made in USA</p> </div>	<div style="border: 1px solid black; padding: 2px;"> <p>TIMER</p> <p>0000</p> <p>MIN/SEC</p> <p>CLR</p> <p>O MAIN</p> <p>O AUTO</p> <p>O STBY</p> <p>O HEALTH</p> <p>O POWER</p> <p>D I A G</p> <p>SIEMENS Made in USA</p> </div>	<div style="border: 1px solid black; padding: 2px;"> <p>0000</p> <p>SEL</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>NAV</p> <p>1002 8</p> <p>3004 9</p> <p>5006 10</p> <p>7008 11</p> <p>90010 12</p> <p>110012 13</p> <p>130014 14</p> <p>150016 15</p> <p>16</p> <p>RX/TX</p> <p>OO ECH LAN</p> <p>OO DSPL COMM</p> <p>OO DIAG COMM(CP)</p> <p>OO VLP/CP COMM</p> <p>OO BACKPLANE COMM</p> <p>O VLP HEALTH</p> <p>O CP HEALTH</p> <p>O POWER</p> <p>V L P</p> <p>D I A G</p> <p>SIEMENS Made in USA</p> </div>	<div style="border: 1px solid black; padding: 2px;"> <p>0000</p> <p>SI</p> <p>O PRIME</p> <p>O DAX A</p> <p>O DAX B</p> <p>O DAX C</p> <p>O DAX D</p> <p>O DAX E</p> <p>O DAX F</p> <p>O DAX G</p> <p>O PRE-EMPT</p> <p>O MOTION</p> <p>O ISLAND</p> <p>O OUT 1</p> <p>O OUT 2</p> <p>O IN 1</p> <p>O IN 2</p> <p>O HEALTH</p> <p>O POWER</p> <p>D I A G</p> <p>SIEMENS Made in USA</p> </div>

RED = IN

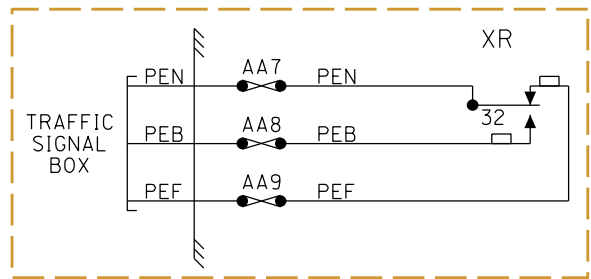
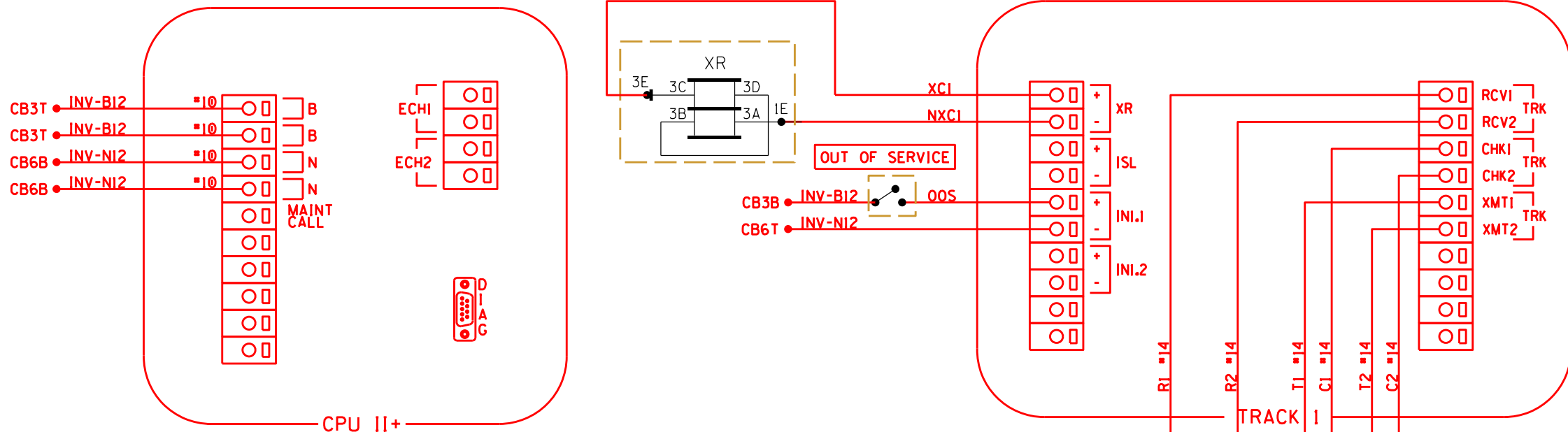
- NOTES:
- * AVAILABLE WHEN PRIOR PARAMETER SELECTED
 - # SET BY FIELD AS REQUIRED
 - ☆ DEFAULT SETTING
 - ↓ IMPACTS OCCN
 - ** STEP SEQUENCE WHEN USING DIAGNOSTIC TERMINAL (DT) VER. 5.7.3 TO SET PROGRAM PARAMETERS. ALPHA NUMERIC STEPS ARE SUB MENUS OF PREVIOUS STEP.

MS 4000 GCP

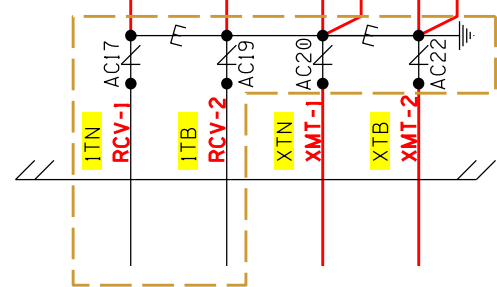
RJ CORMAN RAILROAD

DESIGNED BY: DEW	5TH STREET TABOR CITY, NC	DATE: 02/14/18
DIGITIZED BY: RJC	CAROLINA SUBDIVISION	FILE: ACH31026.04
CHECKED BY: DBA		SHEET 04





KEEP THIS CIRCUIT REDRAWN TO NEW SHEET



[] = REUSED
 RED = IN
 YELLOW = OUT

CONNECTORS FOR TRACK MODULE

RJ CORMAN RAILROAD

DESIGNED BY: DEW
 DIGITIZED BY: RJC
 CHECKED BY: DBA

5TH STREET
 TABOR CITY, NC
 CAROLINA SUBDIVISION

DATE: 02/14/18
 FILE: ACH31026.05
 SHEET 05

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

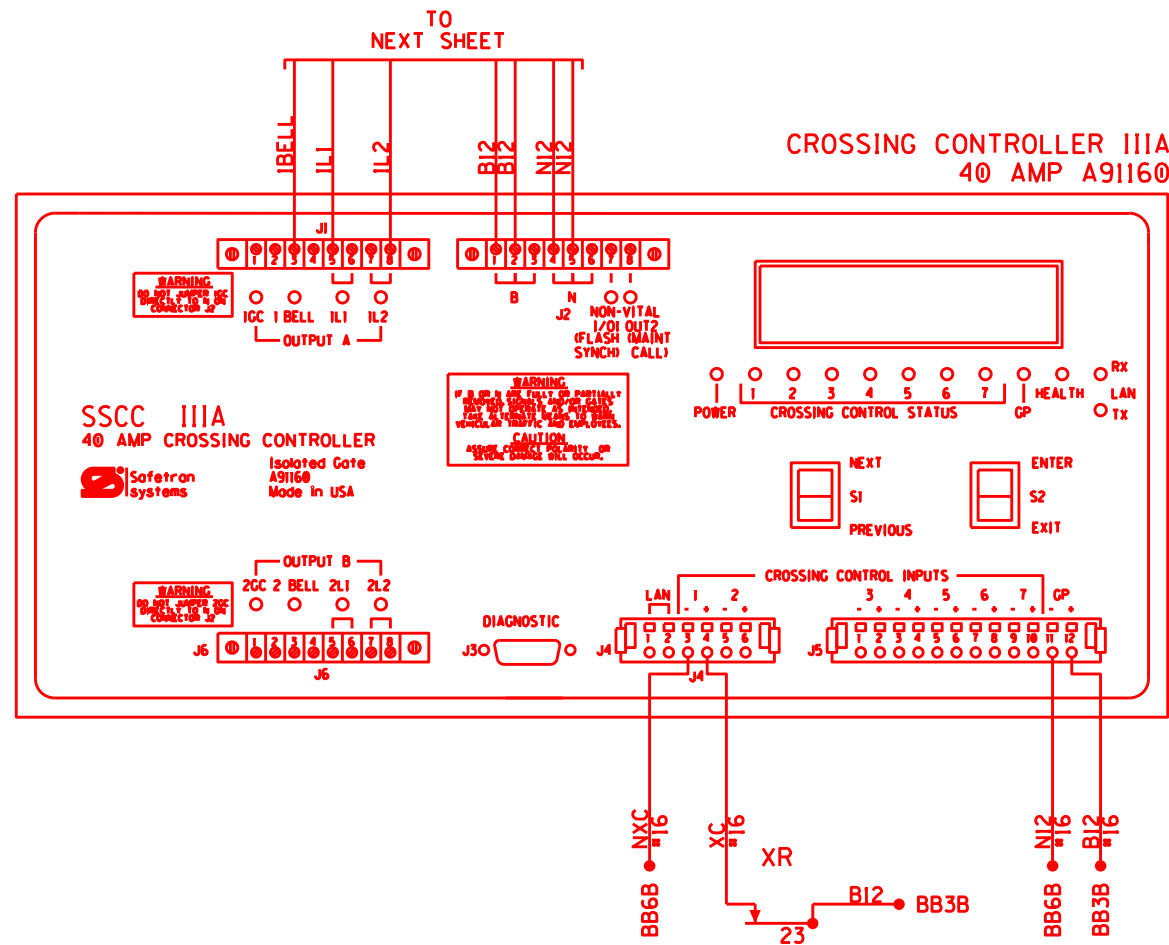


PROGRAM	
FLASHER RATE	50
1 GC DELAY	4 SEC.
2 GC DELAY	SEC.
BELL-ON GATE RISING	NO
ENABLE INPUTS	I THRU I
ENABLE OUTPUTS	A AND B
LOW BATT	DISABLED
SET TO DEFAULT	SKIP
TIME	
DATE	
DAYLIGHT SAVINGS	ON
PASSWORD	DISABLED

SETUP LAMP VOLTAGE #
SETUP OUTPUT 1L1 XX.X VOLTS
SETUP OUTPUT 1L2 XX.X VOLTS
SETUP OUTPUT 2L1 XX.X VOLTS
SETUP OUTPUT 2L2 XX.X VOLTS

CONSTRUCTION TO MARK VOLTAGE SETTINGS FOR AS BUILT REVISION.

NOTES:
ALL WIRING TO BE #10AWG UNLESS NOTED OTHERWISE.



RED = IN

CONNECTORS FOR TRACK MODULE

RJ CORMAN RAILROAD

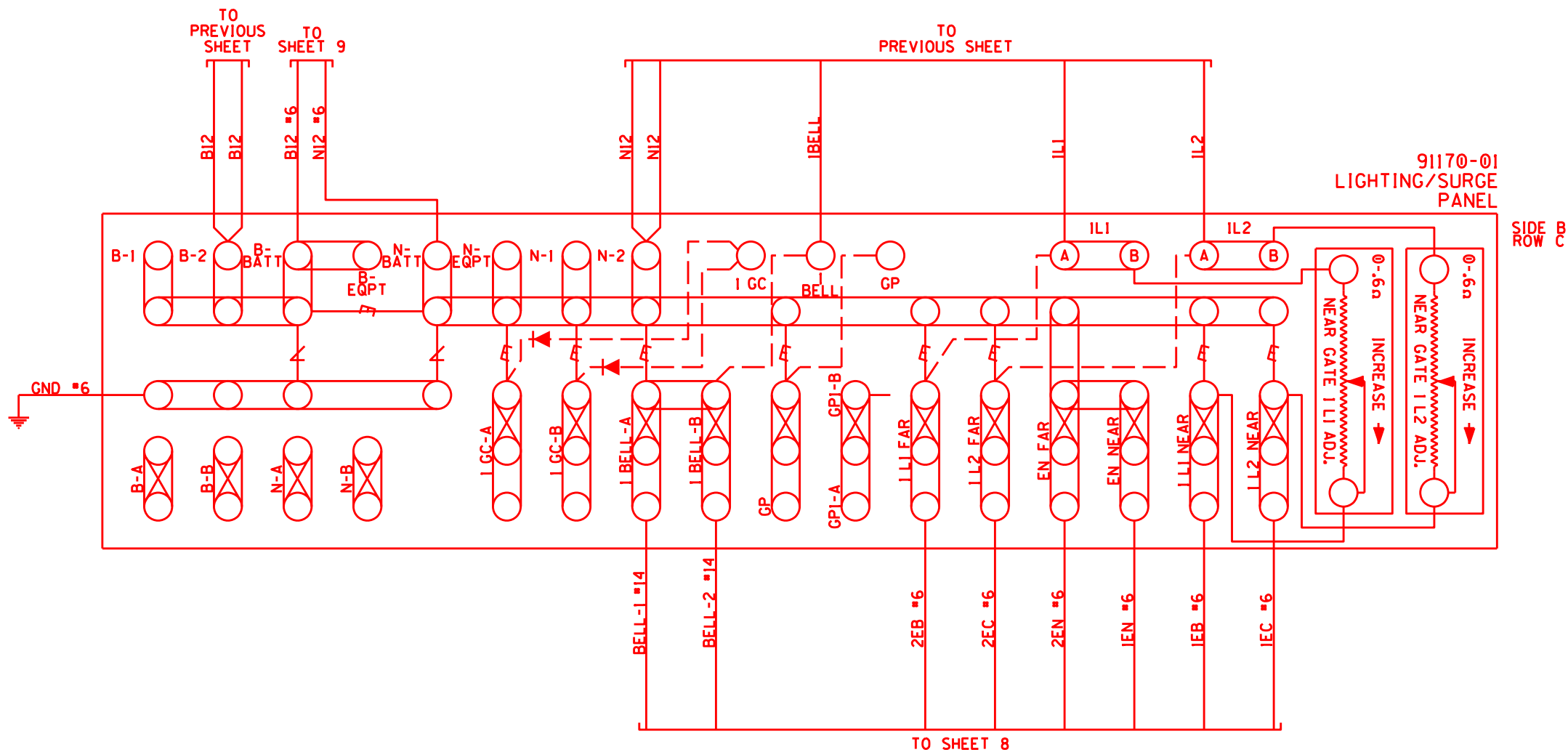


101 RJ CORMAN DRIVE
NICHOLASVILLE, KY 40356

DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: DBA

5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

DATE: 02/14/18
FILE: ACH31026.06
SHEET 06



RED = IN

LIGHTING/SURGE PANEL HOOK-UP

NOTE:

- E- = HEAVY DUTY EQUALIZER 022700-1X
- ∠ = HEAVY DUTY CLEARVIEW ARRESTER 022585-1X
- 1. ALL WIRING TO BE #10AWG UNLESS NOTED OTHERWISE.

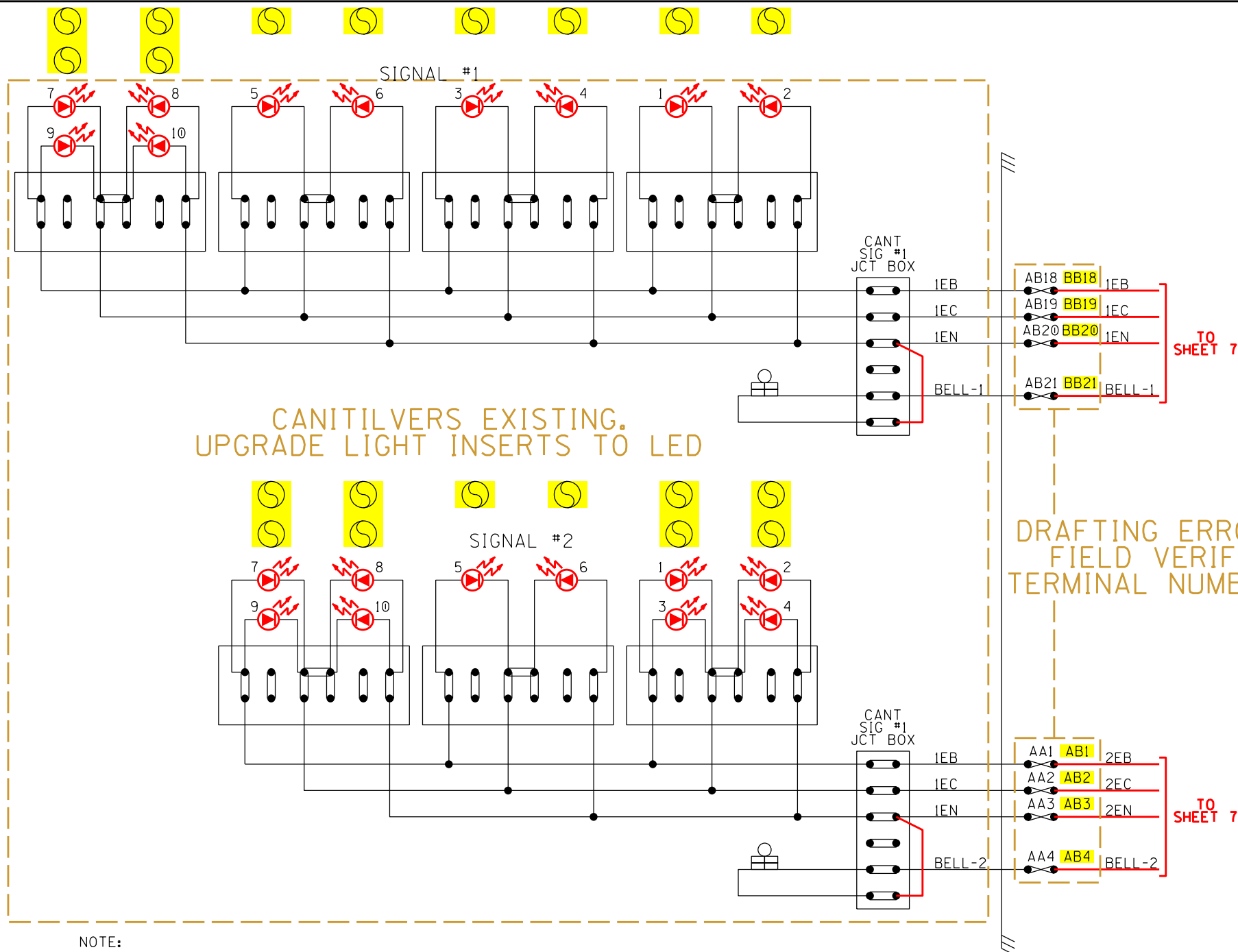
RJ CORMAN RAILROAD



DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: DBA

5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

DATE: 02/14/18
FILE: ACH31026.07
SHEET 07



CANITILVERS EXISTING.
UPGRADE LIGHT INSERTS TO LED

DRAFTING ERRORS
FIELD VERIFY
TERMINAL NUMBERS

TO SHEET 7

TO SHEET 7

RED = IN
YELLOW = OUT

LIGHTING CIRCUITS

RJ CORMAN RAILROAD

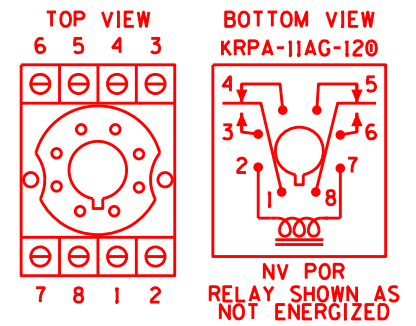
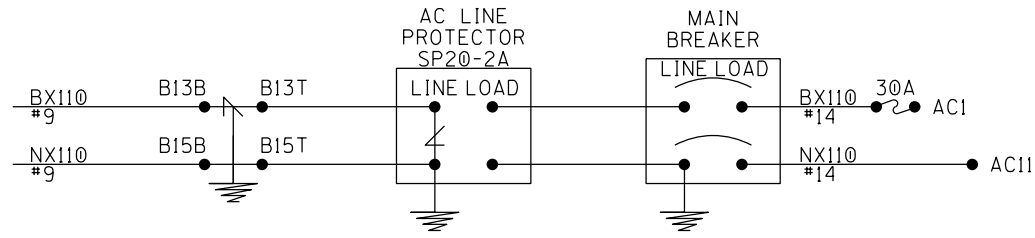
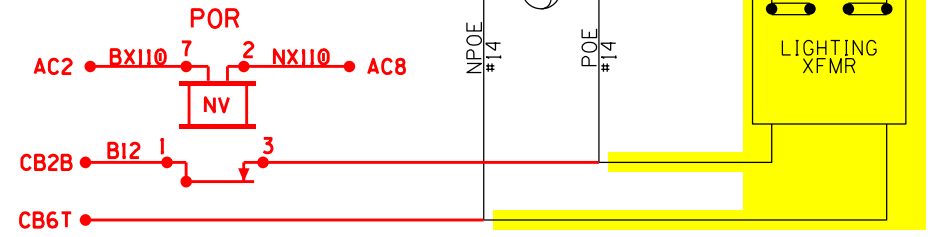
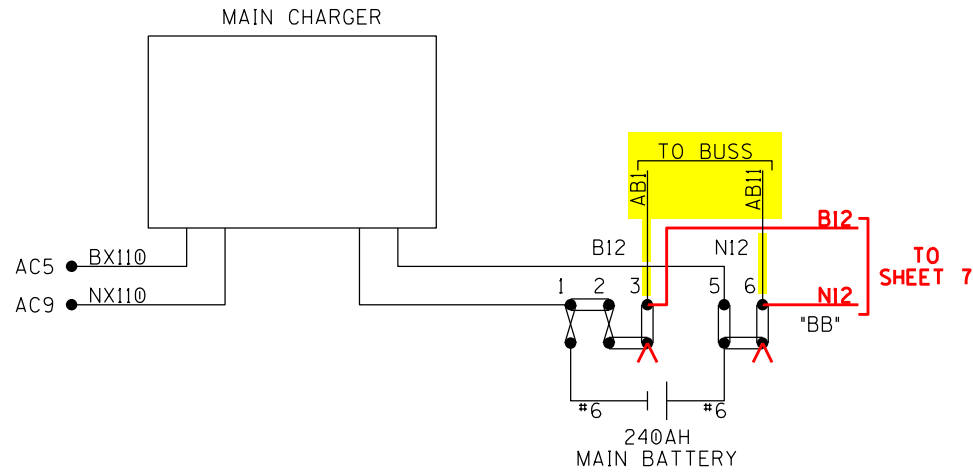
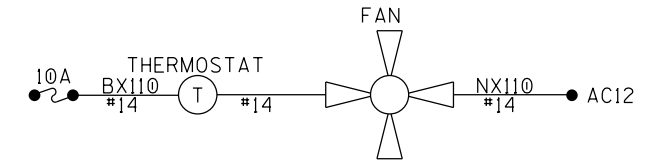
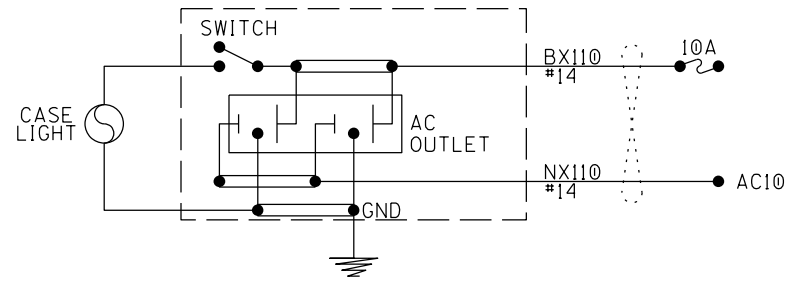
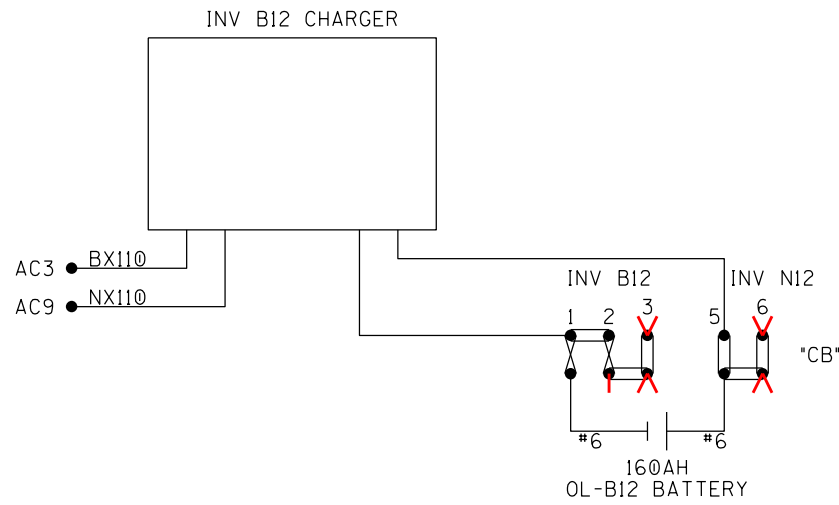
NOTE:
ALL WIRE THIS SHEET #10 AWG
UNLESS OTHERWISE NOTED



DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: DBA

5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

DATE: 02/14/18
FILE: ACH31026.08
SHEET 08



RED = IN
YELLOW = OUT

POWER CIRCUITS

RJ CORMAN RAILROAD

NOTE:
ALL WIRE THIS SHEET #10 AWG
UNLESS OTHERWISE NOTED

○ = TWIST



DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: DBA

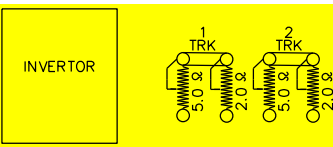
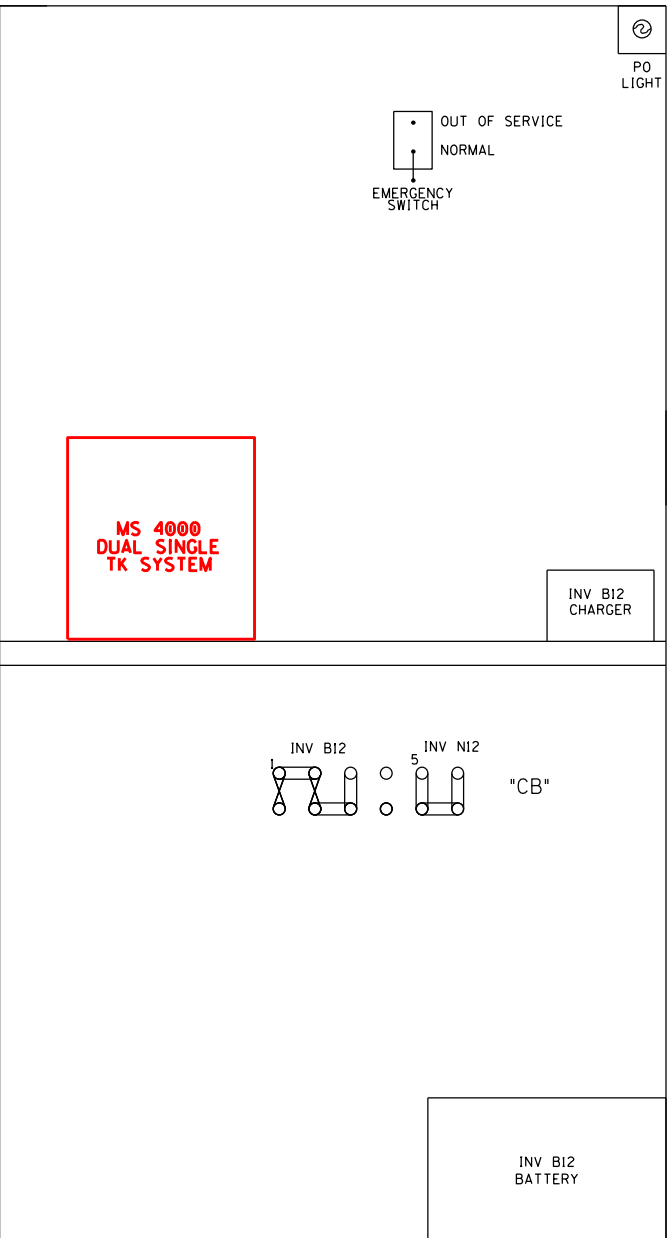
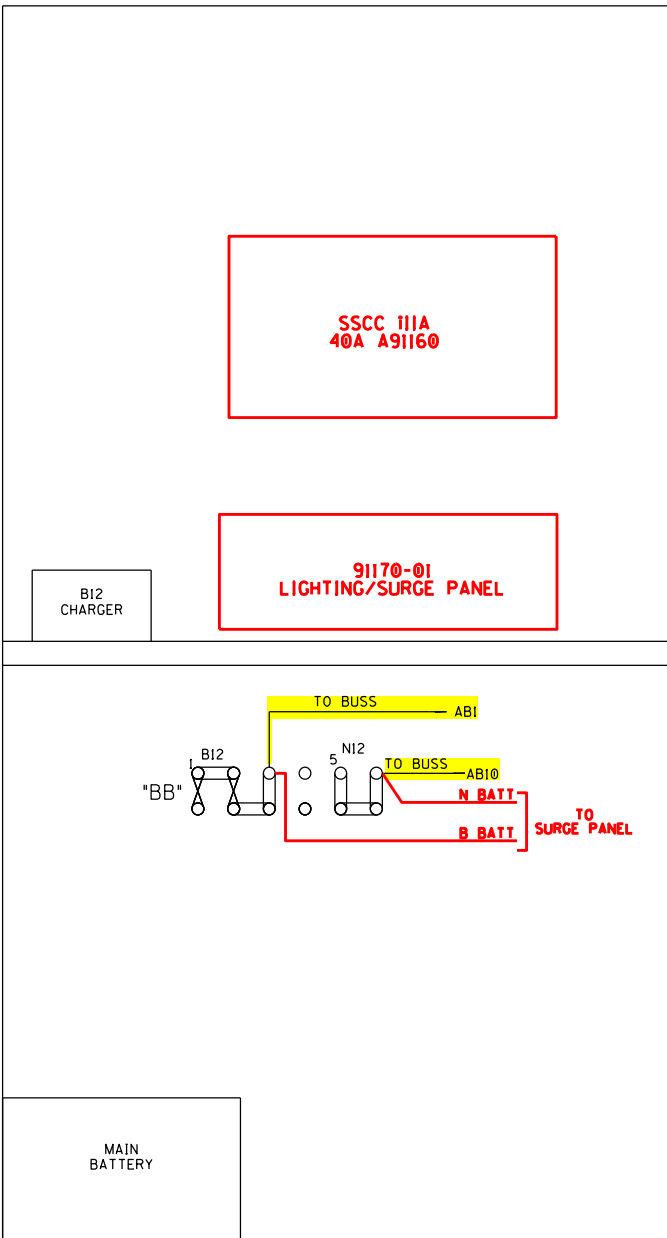
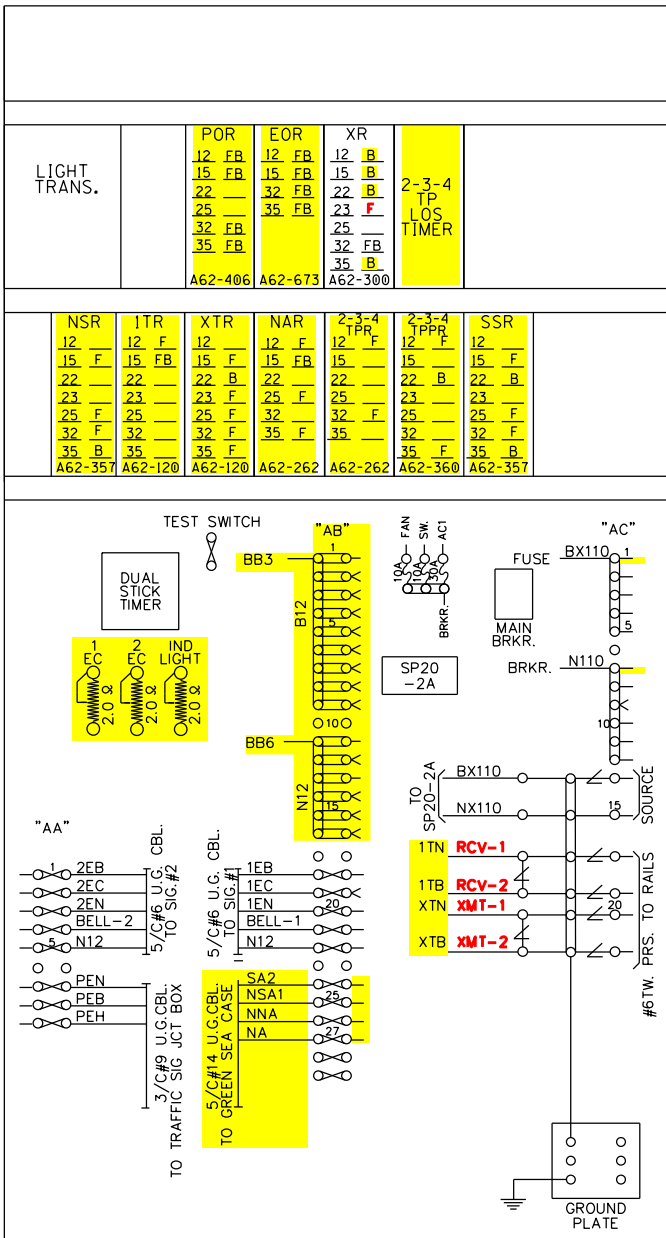
5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

DATE: 02/14/18
FILE: ACH31026.09
SHEET 09

SIDE "A"

SIDE "B"

SIDE "C"



RED = IN
YELLOW = OUT

HOUSE LAYOUT

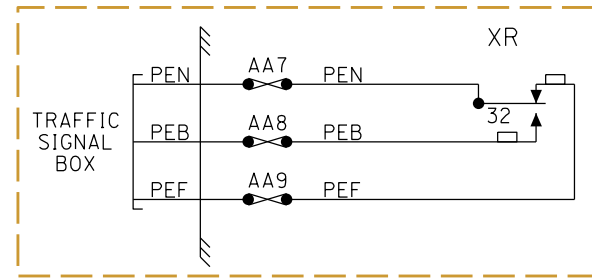
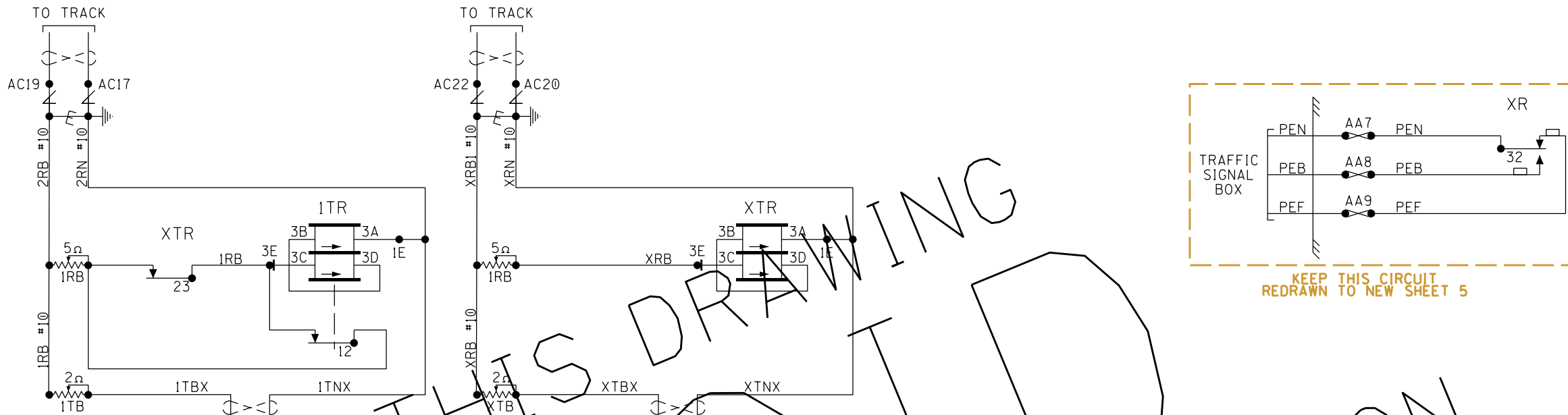
RJ CORMAN RAILROAD



DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: DBA

5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

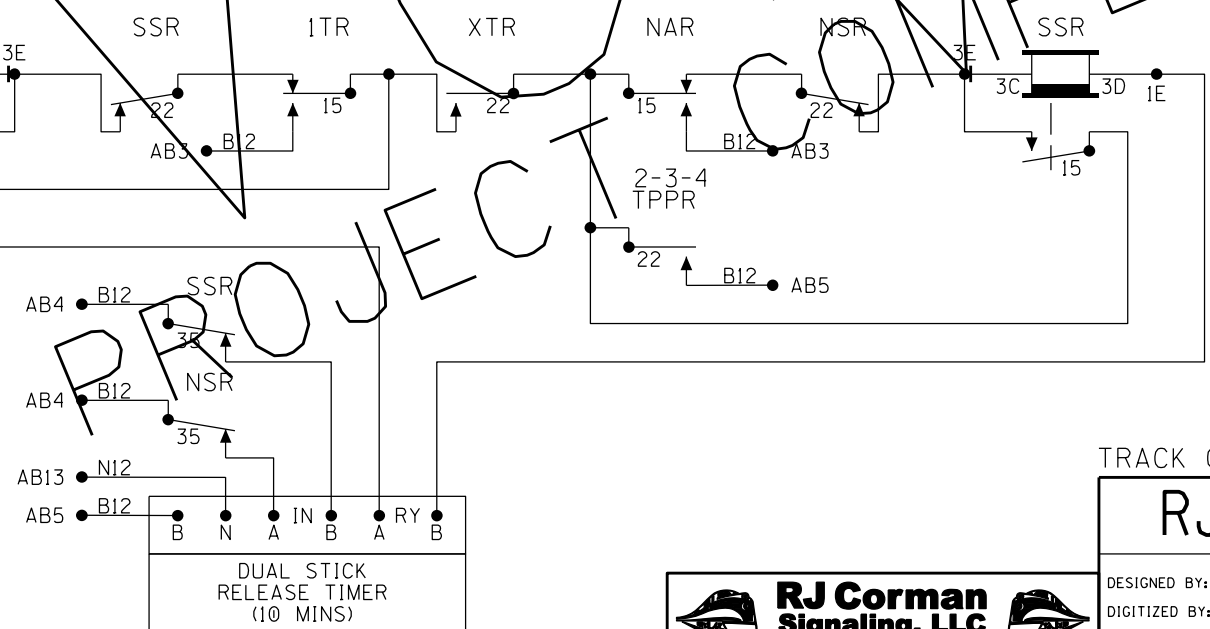
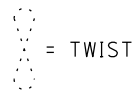
DATE: 02/14/18
FILE: ACH31026.10
SHEET 10



KEEP THIS CIRCUIT REDRAWN TO NEW SHEET 5

ON PROJECT COMPLETION THIS DRAWING

NOTES:
1. ALL WIRING TO BE #14AWG UNLESS NOTED OTHERWISE.



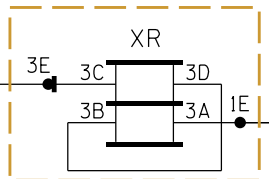
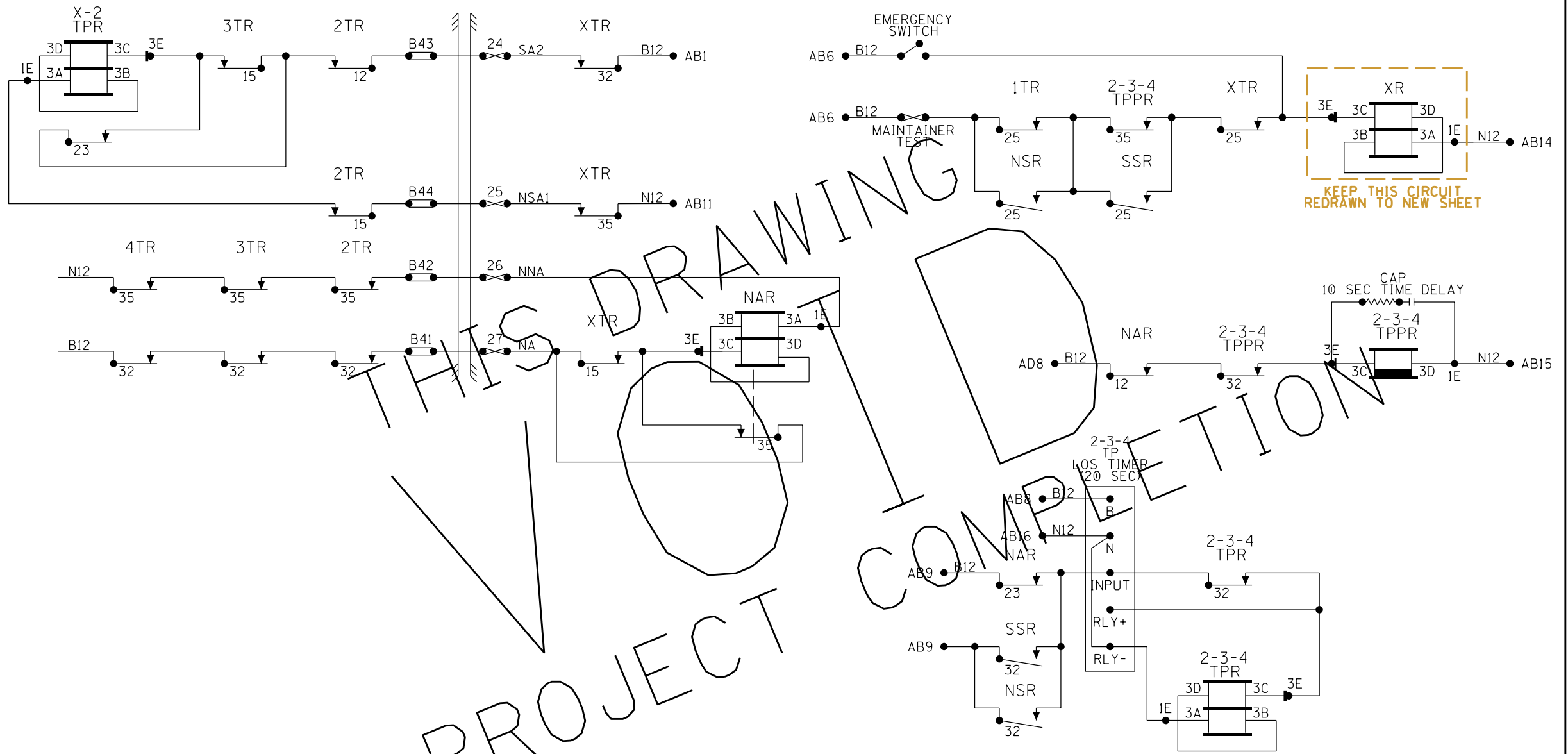
TRACK CIRCUITS
RJ CORMAN RAILROAD



DESIGNED BY: DEW
DIGITIZED BY: RJC
CHECKED BY: XXX

5TH STREET
TABOR CITY, NC
CAROLINA SUBDIVISION

DATE: 02/14/18
FILE: ACH31026.04X
SHEET 04X



KEEP THIS CIRCUIT REDRAWN TO NEW SHEET

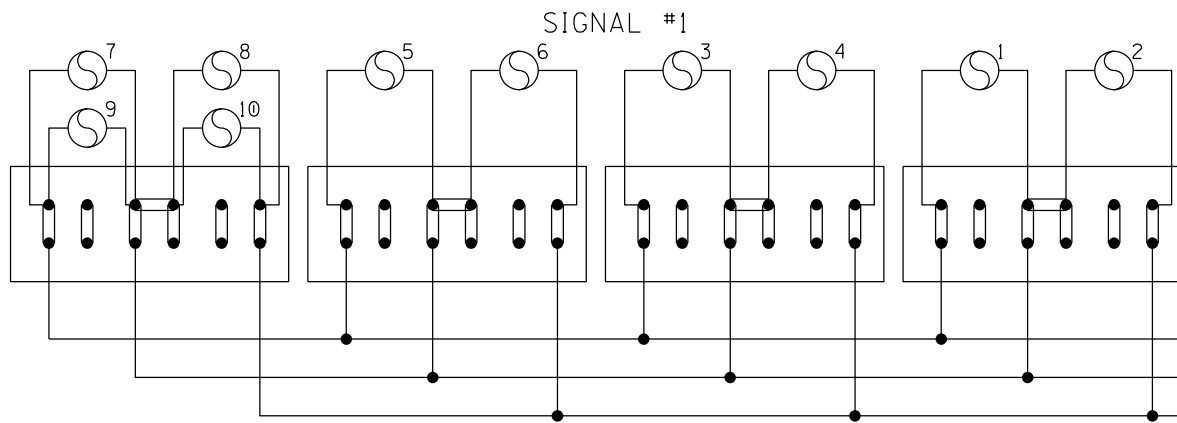
THIS DRAWING IS UNDER COMPETITION

ON PROJECT

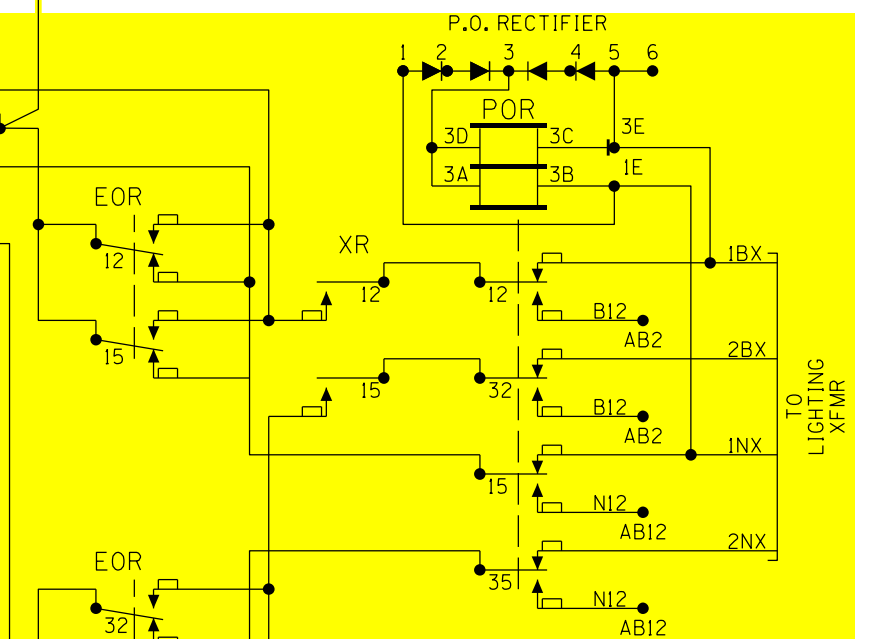
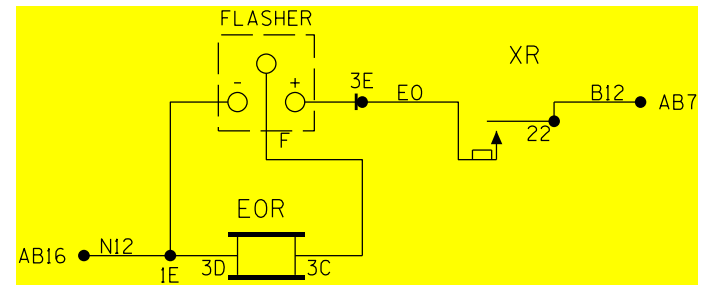
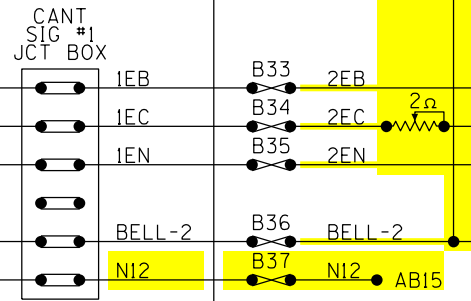
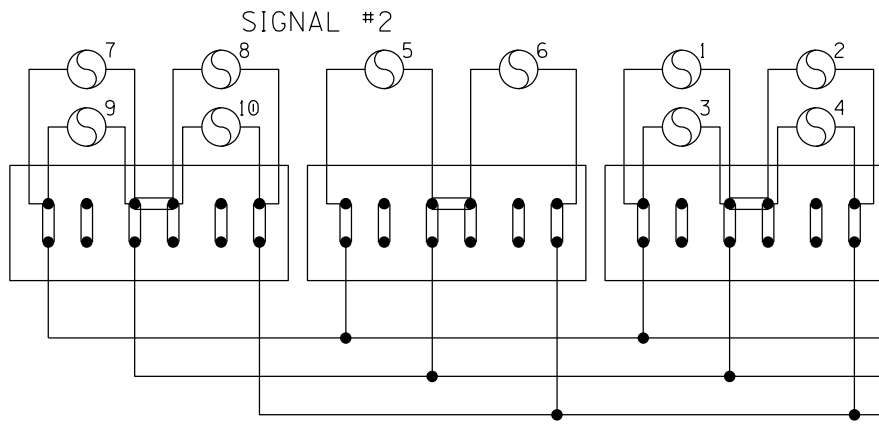
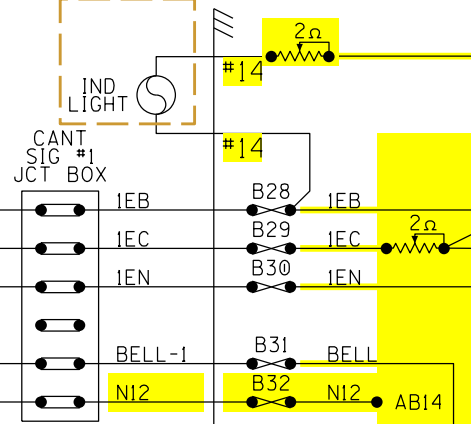
STICK CIRCUITS

<h2 style="margin: 0;">RJ CORMAN RAILROAD</h2>		
DESIGNED BY: DEW DIGITIZED BY: RJC CHECKED BY: XXX	5TH STREET TABOR CITY, NC CAROLINA SUBDIVISION	DATE: 02/14/18 FILE: ACH31026.05X SHEET 05X





FIELD VERIFY
IF EXISTING



SEE NEW SHEET 8

YELLOW = OUT

LIGHTING CIRCUITS

RJ CORMAN RAILROAD

DESIGNED BY: DEW	5TH STREET	DATE: 02/14/18
DIGITIZED BY: RJC	TABOR CITY, NC	FILE: ACH31026.06X
CHECKED BY: XXX	CAROLINA SUBDIVISION	SHEET 06X

NOTE:
ALL WIRE THIS SHEET #10 AWG
UNLESS OTHERWISE NOTED

