

# Memo

To: Docketing Division  
From: Jill Henry, Rail Specialist, Rail Division  
Cc: PUCO Legal Department  
Date: 3/18/19

Re: PUCO Case No. 19-653-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices at the CSX Transportation Inc. Grade Crossing, DOT#513-731Y, on Vanzandt Rd/TR 37 in Hancock County, Ohio.

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On October 9, 2018, the Ohio Rail Development Commission (ORDC) authorized funding for CSX Transportation, Inc. (CSX) to install lights and gates at Vanzandt Road/TR 37, DOT#513-731Y in Hancock County, Ohio. The crossing was surveyed, on May 18, 2018, and was found to warrant the upgrade. The electric utility provider for this crossing is AEP-Ohio Power.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$289,151 have been approved with the actual reimbursable amount limited to \$275,924.02. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in nine months.** Staff requests that the following language be incorporated in the Finding & Order:

**It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:**

- Any ancillary work to make the warning devices function as designed and visible to the roadway user, and
- MUTCD compliance, including minor roadway work if necessary.

**Please serve the following parties of record:**

CSX Transportation, Inc.  
Amanda DeCesare  
CSX Public Projects  
500 Meijer Drive  
Suite 305  
Florence, KY 41042

Ohio Rail Development Commission  
Cathy Stout  
Safety Manager  
1980 West Broad Street  
Mail Stop #3140  
Columbus, OH 43223

Hancock County Engineer  
Douglas Cade  
County Engineer  
1900 Lima Avenue  
P.O. Box 828  
Findlay, OH 45840

Jackson Township  
Trustees  
16110 CR 26  
Arlington, OH 45814

AEP-Ohio Power

**OHIO RAIL DEVELOPMENT COMMISSION  
INTER-OFFICE COMMUNICATION**

**TO:** Randall Schumacher, Chief, Rail Division, PUCO

**FROM:** Cathy Stout, Manager, Safety Section, ORDC

**BY:** Don Damron, ORDC

**SUBJECT:** Hardin County, TR 37, Vanzandt Rd.  
DOT# 513731Y  
PID# 108554

**DATE:** February 27, 2019

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The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on 5/18/2018. The Public Utilities Commission of Ohio attended the review. The Diagnostic Team recommended the improvement of warning devices to flashing lights and roadway gates. Copies of the diagnostic review form and the plan and estimate are attached.

The plans and estimates have already been provided by the CSX. ORDC accepts the crossing layout plan and the cost estimates as provided. Please issue a 9-month construction-only order for the project outlined above. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:

- any ancillary work to make warning devices function as designed and visible to the roadway user, and
- MUTCD compliance – including minor roadway work if necessary.

Thank you for your assistance with these matters.

Attachment: Diagnostic Review  
Plan & Estimate

c: Jill Henry, Rail Specialist, PUCO  
ORDC Project Manager (file)



# OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223

John R. Kasich, Governor • James G. Bradley, Chairman

February 27, 2019

Amanda DeCesare  
Project Manager – Public Projects  
CSX Transportation  
500 Meijer Drive, Suite 305  
Florence, KY 41042

RE: Grade Crossing Warning Device Improvement – Construction Authorization  
Hancock County, TR 37, Vanzandt Rd.  
DOT# 513731Y  
PID# 108554  
CSX ACCT. CODE: OH1275

Dear Ms. DeCesare:

The plan and estimate dated 1/9/2019 for the referenced project has been reviewed and is acceptable. **Please note that the railroad must provide ORDC with a plan stamped by a professional engineer licensed in the State of Ohio prior to acceptance and close out of the project.** CSX Transportation may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan.

The estimate of \$289,151 is acceptable. Reimbursement of eligible actual cost is limited to \$275,924.02. Fuel cells system components are not included in the reimbursement amount and if installed are to be installed at CSX expense. This authorization is made with the stipulation and understanding that the approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Additional costs must be approved in writing by the Ohio Rail Development Commission (ORDC) prior to being incurred. Emergency verbal authorizations by ORDC may be permitted and will be confirmed by ORDC in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon CSX Transportation accepting the following instructions:

1. CSX's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Don Damron, ORDC, don.damron@dot.ohio.gov, or cell phone at 614-917-8466; and to the Public Utilities Commission of Ohio at jill.henry@puco.ohio.gov. The CSX project foreman will also notify the same of any stops and re-starts of the work activity and of the date work was completed for the project.
2. CSX will arrange for utilities to be located at the project site by the Ohio Utilities Protection Service (OUPS) prior to any construction activities at the site. Utilities that are not participating members of the service must be contacted directly by CSX.



[www.rail.ohio.gov](http://www.rail.ohio.gov)

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY



3. The CSX project foremen will notify Don Damron at 614-917-8466 (cell phone) or don.damron@dot.state.oh.us (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.

4. CSX will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.

5. CSX will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.

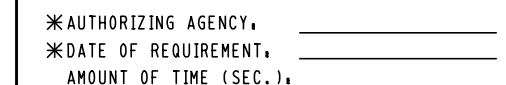
Thank you for your assistance with these matters.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald J. Damron", written in a cursive style.



Donald J. Damron  
Project Manager

C: Randall Schumacher, Chief, Rail Division, PUCO  
Jill Henry, Rail Specialist, PUCO  
ORDC (file)



POWER LINES IN SW QUAD WILL NEED  
TO BE RAISED OR RELOCATED TO  
ACCOMMODATE NEW GATE

# PRELIMINARY

FILE NAME, QT05002.H01	REVISION DATES	PRODUCED FOR,	PRODUCED BY,	LEGEND,	GUARD RAIL	METER SERVICE	GPS COORDINATES	STREET NAME, CR 37 (VANZANDT RD.)	
DATE DRAWN, 12-03-18	12-05-18	 RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS	 A Caterpillar Company	CSX ROW	O.H. POWER	POLE	N40°57'01"	CITY & STATE, ARLINGTON, (HANCOCK), OH	
DRAWN BY, RS	-			R/R POLELINE	FENCE	FIRE PLUG	W83°38'33"	DOT, 513731Y	PROPOSED CROSSING LAYOUT  SCALE = 20:1
CHECKED BY, SAF	-			GAS	WATER	SEWER CAP	ELEV, 836'	PROJECT #, 0H2018705	
PRS #, 34P000613	-			FIBER OPTIC	SEWER	GAS VENT	M.P. QT-50.02	OP #, 0H1275	

ESTIMATE SUBJECT TO REVISION AFTER: 6/9/2019

DOT NO.: 513731Y

CITY: Arlington

COUNTY: Hancock

STATE: OH

DESCRIPTION: CR 37 (Vanzandt Rd.) - Installation of FLS&amp;G.

REGION: Great Lakes

SUB-DIV: Toledo Branch

MILE POST: QT-50.02

AGENCY PROJECT NUMBER: PID # 108554

**PRELIMINARY ENGINEERING:**

212	Contracted & Administrative Engineering Services	\$	9,000
	<b>Subtotal</b>	<b>\$</b>	<b>9,000</b>

**CONSTRUCTION ENGINEERING/INSPECTION:**

212	Contracted & Administrative Engineering Services	\$	5,000
	<b>Subtotal</b>	<b>\$</b>	<b>5,000</b>

**FLAGGING SERVICE: (Contract Labor)**

70	Labor (Conductor-Flagman)	0	Days @	\$ 350.00	\$	-
50	Labor (Foreman/Inspector)	0	Days @	\$ 504.00	\$	-
70	Additive	153.20%	(Transportation Department)		\$	-
50	Additive	149.90%	(Engineering Department)		\$	-
230	Expenses		(Engineering Department)	0	Days @	\$ 75.00
230	Expenses		(Transportation Department)	0	Days @	\$ 45.00
	<b>Subtotal</b>				\$	-

<b><u>SIGNAL &amp; COMMUNICATIONS WORK:</u></b>	<b>\$</b>	<b>275,151</b>
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<b><u>TRACK WORK:</u></b>	<b>\$</b>	<b>-</b>
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<b><u>PROJECT SUBTOTAL:</u></b>	<b>\$</b>	<b>289,150.62</b>
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900	<b><u>CONTINGENCIES:</u></b>	0.00%	<b>\$</b>	<b>-</b>
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<b><u>PROJECT TOTAL:</u></b>	*****	<b>\$</b>	<b>289,150.62</b>
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<b><u>CURRENT AUTHORIZED BUDGET:</u></b>	*****	<b>\$</b>	<b>-</b>
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<b><u>TOTAL SUPPLEMENT REQUESTED:</u></b>	*****	<b>\$</b>	<b>289,150.62</b>
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**DIVISION OF COST:**

Agency	<u>100.00%</u>	\$	289,151
Railroad	<u>0.00%</u>	\$	-
		<b>\$</b>	<b>289,151</b>

**NOTE: Estimate is based on FULL CROSSING CLOSURE during work by Railroad Forces.**

This estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower and resource availability, and other factors known as of the date prepared. The actual cost for CSXT work may differ based upon the agency's requirements, their contractor's work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work

Office of Chief Engineer Public Projects--Jacksonville, Florida

Estimated prepared by: SE

Approved by: A/JD CSXT Public Project Group

DATE: 01/09/19 REVISED: 12/11/18 DATE: 01/22/19

# CSX TRANSPORTATION

## Outside Party Estimate

Warning Device Installation at Vanzandt Rd.

Arlington, Ohio

DOT: 513731Y

OP: OH1275

CSX Project: OH2018705

### Summary

Material .....	\$73,733
Sales Tax .....	\$5,309
Labor:	
Construction Labor (131 man-days) .....	\$49,780
Shop Labor (7 man-days) .....	\$2,660
Subsistence (0 man-days) .....	\$0
Railroad Engineering, Construction .....	\$7,467
Railroad Engineering, Preliminary .....	\$4,643
Additives to Construction Labor .....	\$74,620
Additives to Shop Labor .....	\$3,987
Additives to Track Labor .....	\$0
Additives to Engineering .....	\$0
Equipment Expense (0 work days) .....	\$0
Waste Management (27 work days) .....	\$324
Contract Engineering .....	\$24,004
Freight .....	\$5,624
Poleline Removal .....	\$0
AC Power Service .....	\$15,000
Salvage .....	\$0
VAC TRUCK .....	\$8,000

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TOTAL ESTIMATE COST .....	\$275,151
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Date: 01/04/2019

Estimated By: Adam Ronsick

Note: This estimate should be considered void one year from date of estimate.

# CSX TRANSPORTATION

## Signal Project Estimation

**Shop Material List for CSX Project: OH2018705 (Effective: 01/04/2019)**

**QT 50.02 - Location - Vanzandt Rd. (CR 37)**

[illegible]

**Total Cost: \$ 20,600.80**

# CSX TRANSPORTATION

## Signal Project Estimation

Field Material List for CSX Project: OH2018705 (Effective: 01/04/2019)  
QT 50.02 - Location - Vanzandt Rd. (CR 37)



CATALOG_NUM	QTY	Unit Price	COST	SHORT_DESC
014.8006169.1	2	9.80	19.60	SIGN PERMANENT EMERGENCY NOTIFICATION (VEHICLE BLOCKING RD CRSSING) ALUM BLADE WHI HIGH INTENSITY PRISMATIC LTRS ON BLU BACKGROUND COMPLETE W/DOT ID AND MP PER CSX DWG 2719 ENTER DOT ID & MP IN REQ NOTE TO SUPPLIER USE 014.8006170.1
020.0010447.1	2	9.92	19.84	BOX GROUND ROD CONNECTION ENCLOSURE COMPLETE WITH 7" COVER TWO HEX HEAD 3/8" SS BOLTS AND 10" X 9" ENCLOSURE WITH 2 KNOCKOUTS FOR GROUND WIRE ENTRY AND EXIT PENCELL P/N PE-6HDHK-BLA
020.0013375.1	16	5.60	89.60	BOND FROG LEG (MAIN) RAIL PLUG 10" X 3/16" SINGLE BARE CONDUCTOR ERICO P/N SBPMJ310, D&W P/N BSB-6CH-10
020.0013686.1	2	78.94	157.88	BOOTLEG KIT CSX RAIL CONN W/15 FT 3/16 IN BDSTRAND 6/64 IN JKT 2 TK CONN ERICO SBPAC3-A/2 CLIP ERICO SBA248A 4 RL PT CDWELD STPL 3/8 X 1 3/4 IN 2 ERICO SBA2363 SLVES 2 RAYCHEM OR AMP 6 IN TUBIN 2 PLEXICO 3408 DWG&WILSON P/N BLTS-8-80B
020.0013908.1	400	7.19	2876.00	CABLE UG COMPOSITE 19 CONDUCTOR INCLUDES 13 CONDUCTOR #14 AWG SOLID AND 6 CONDUCTOR #6 AWG SOLID CSX SS360 SHOW LENGTH ON EACH REEL FURNISH IN 1000 FT LENGTHS OKONITE P/N 206-11-6283
020.0025145.1	2	365.31	730.62	SHUNT ENCLOSURE WAYSIDE MOUNT ASSEMBLY COMPLETE WITH LOCK AND LABELS, DOES NOT INCLUDE ARRESTERS, SEE SS227 TERRAIL P/N IRS-SEC8
020.0052475.1	4	11.03	44.12	ARM EXTENSION 10-1/2" ALUM WITH 3/8" DIAMETER MOUNTING HOLES INCLUDES 1 EA 5/16"-18 X 1" SS BOLT AND NUT 2 EA SS FLAT WASH 1 EA SS LK WASH USE TO OFFSET SIGN FROM MAST CSX SS225 DETAIL 225XX KORMAN P/N CCSX2473
020.0053220.1	150	2.60	390.00	CABLE POWER UG 3 COND NO 6 AWG - SHOW LENGTH ON EACH REEL - FURNISH IN 1000 FT LENGTHS - OKOSEAL
020.0054075.1	2	989.66	1979.32	GATE SAVER COMPLETE WITH SHEAR PIN AND RETURN SPRING USE WITH 18' TO 32' GATE ARMS RIGHT OR LEFT
020.0055421.1	6	23.59	141.54	BRACKET SIGN 4" OR 5" MAST W/1/2" U-BOLT FOR ALL SIGNS REQUIRING 5/16" BOLT L&W P/N 7A1041-1X1
020.0056674.1	2	6146.16	12292.32	SIGNAL 0220-L GCWD GATE ASSY DWG SS222 INCLS 18 FBRGL ARM W/3 LIGHTS 2-WAY MAIN IND 12" LIGHTS
020.0056823.1	1	17.57	17.57	TAPE UG RED CABLE MARKER IMPRINT TO READ "CAUTION BURIED SIGNAL CABLE BELOW CSX
020.0057275.1	400	1.21	484.00	WIRE UG TRACK TWISTED PAIR NO. 6 AWG SOLID CONDUCTOR WITH ONE RED AND ONE BLACK NEOPRENE
020.1040322.1	20	118.29	2365.80	BATTERY SAFT SPL165, 165 AH POCKET PLATE NICKEL CADMIUM BATTERY FEATURING ULTRA LOW
020.1040324.1	9	183.65	1652.85	BATTERY SAFT SPL250, 250 AH POCKET PLATE NICKEL CADMIUM BATTERY FEATURING ULTRA LOW
020.1040540.1	1	31.00	31.00	TRAY BATTERY FIBER CO 82687-1-P 12" WIDTH 24" LONG CSX DWG 82687 USE IN 4X6 HOUSE SEE SS390
020.1040550.1	3	45.39	136.17	TRAY BATTERY FIBER CO 82687-3-P 12" WIDTH 38" LENGTH CSX DWG 82687 FOR USE WITH FLOODED (NON-
020.1150750.1	300	1.05	315.00	BOND STRAND 3/16" DIA 7 STRANDS OF 19 STR EACH 6 WITH 12 STRS TINNED OUTER WIRES AROUND 7 NOT
020.1304014.1	20	6.45	129.00	KIT BOND, CADWELD PLUS WEB OF RAIL BOND 3/16 DIA. 4" LARGE TAB STYLE 100 EACH INCLUDES 5 EA. 4-1/2"
020.1360014.1	1	841.60	841.60	PACKAGE FOREMANS CARE FOR ALUMINUM TYPICAL BOM FOR USE ON ALL MAJOR HIGHWAY CROSSING SIGNAL
020.1360016.1	1	24.41	24.41	PACKAGE SAFETY FOR BURCO CONTAINERS COMPLETE WITH ONE EACH SAFETY LOCK TAG 3-1/4" X 4-1/4"
020.1360104.1	1	1559.40	1559.40	LAYOUT AC METER SERVICE WITH 30' POLE CSX DWG SS351 SH 2 ITEMS 1 TO 40 W/100A LOAD CTR WITH UP TO
020.2500625.1	2	258.93	517.86	SHUNT SAFETRAN 62775-285 NARROW BAND 285HZ
020.3901895.1	2	99.35	198.70	TIP FLEX HWY CROSSING GATE 24 IN LONG ENGINEERING GRADE RED & WHITE STRIPES W/2 MTG BOLTS &
020.3920200.1	2	176.01	352.02	BELL GCWD ELECTRONIC 4" OR 5" MAST 8 TO 13 VOLTS DC GSI PN EB-3-360-5 ASC PN 81848
020.3930010.1	2	3.70	7.40	KIT GATE ARM WARNING STICKER KIT INCLUDES 1-EA 5"X3" STICKER 1-EA 5"X3" PADLOCK TAG 2-EA 11"X3"
020.4200340.1	25	1.74	43.50	LINK TEST ASSEMBLY 1" CENTERS YELLOW INSULATOR ON OFFSET LINK DOES NOT REQUIRE BRASS TEST NUT,
020.4200900.1	6	0.18	1.08	CONNECTOR SHEATHING AMP 329860 FOR NO. 14 WIRE
020.4201042.1	20	0.13	2.60	NUT HEX BINDING (RSA NUT) AAR 14.1.11-6 14-24 NS-2 THD CONE SHAPE BRASS NICKLE PLATED FOR AAR
020.4201043.1	150	0.09	13.50	NUT HEX CLAMP (FLAT NUT) AAR 14.1.11-7 14-24 NS-2 THD FLAT BRASS NICKEL PLATED FOR AAR BINDING POST
020.4201044.1	100	0.08	8.00	WASHER AAR 14.1.11 ROUND COPPER NICKEL PLATED FOR AAR NO 14 BINDING POST SAFETRAN 023834 TDH
020.7300030.1	2	187.08	374.16	BRACKET BELL FITS SAFETRAN JUNCTION BOX MOUNT, 5" BENT ALUM PIPE, TDH SOLUTIONS P/N 730-0030
020.9999991.1	1	100.00	100.00	BLOCKING AND BRACING FOR PROJECTS BURCO DIST
022.0400013.1	1	12756.98	12756.98	KIT, GENSURE HYDROGEN FUEL CELL SYSTEM, DUAL GEN2 E200 W/EXTENDED RUN CABINET, ARMS P/N 40-0013
022.1300440.1	1	470.00	470.00	FOUNDATION CONCRETE FOR E200 GEN2 HYDROGEN FUEL CELL, DIXIE PRECAST P/N DP-HCE4X4
250.0001836.1	1	15.05	15.05	BREAKER CIRCUIT SQ D QO260
250.0012228.1	3	3.80	11.40	TAPE BLACK ELECTRIC 3/4" X 66' 3M "SUPER 33 PLUS"
360.0006100.1	1	33.60	33.60	STOOL STEP WOOD 14"X 20" SIGNAL MAINTAINERS CSXT DRAWING SKSS91-01
360.0800145.1	1	7.12	7.12	BROOM WAREHOUSE CORN HVY DUTY 1-1/8" DIA HANDLE
470.0060313.1	1	27.75	27.75	FOAM SEALANT CF812 FOR HILTI CP120-P2 DISPENSER SINGLE 23 OZ CAN HILTI CF-128 P/N 338255
Total Cost: \$				41,238.36

**Consumable Material List for CSX Project: OH2018705 (Effective: 01/04/2019)**  
**QT 50.02 - Location - Vanzandt Rd. (CR 37)**

**Total Cost: \$ 11,893.36**

# INDEX CONTENTS

SH. NO.		REVISION NO.								
		1	2	3	4	5	6	7	8	9
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S01	TRACK AND SIGNAL PLAN									
E01	POWER DISTRIBUTION									
C01	CROSSING DETECTION CIRCUITRY									
C02	DETECTION DEVICE PROGRAM									
C03	CROSSING WARNING DEVICE GATE CIRCUITRY									
C04	CROSSING WARNING DEVICE LIGHT CIRCUITRY									
C05	SEAR II CIRCUITS									
C06	SEAR II CONFIGURATION AND FUNCTIONS									
C07	SEAR II CHANNELS									
C08	WAYSIDE ACCESS GATEWAY									

 = DESIGN COMPLETED  
 = REVISION COMPLETED

## PRELIMINARY

THIS PLAN DOES ☐ DOES NOT ☒  
SUPERSEDE PLAN DATED 08-15-13  
CSX PROJECT # 0H2013052



DATE: 12/05/18  
CSX # 0H2018705  
PRS/TDF/SAF

THIS PLAN DOES ☐ DOES NOT ☒  
SUPERSEDE PLAN DATED 08-14-13  
CSX PROJECT # 0H2013053



DATE: 08/15/13  
CSX # 0H2013052  
PRS/SAF/JTV

THIS PLAN DOES ☐ DOES NOT ☒  
SUPERSEDE PLAN DATED 04/01/14  
CSX PROJECT # 0H2014006



DATE: 08/14/13  
CSX # 0H2013053  
PRS/SAF/JTV

## NEW WORK

SII #: JXXD04168  
CSX #: OH2014006  
DATE: 04-01-14  
INITIALS: SII/JWB/SWS

## SIEMENS

 = NOTE

3000ND2WSR.101  
REV. 03-05-14

DESIGN DATE  
04-01-14

REV. NO.  
1

DESIGNED SII/JWB	DIGITIZED SII/JWB	CHECKED SII	DATE 04-01-14
DRAWING -----	SHEET NO. -----	FILE 0704850	SHEET 101

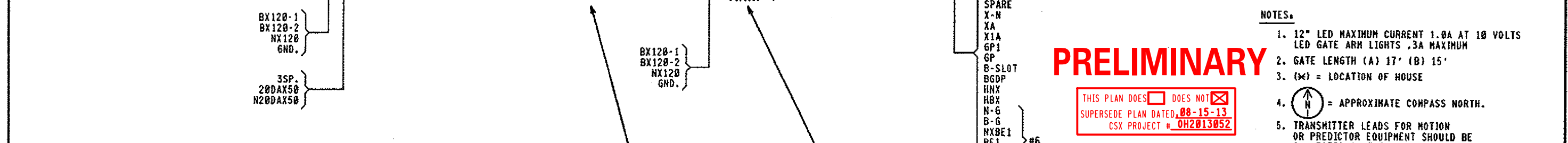
REVISIONS				
REV. NO.	PROJECT NO.	DESIGN DATE	IN SERVICE DATE	REVISION DATE
1	0H2014006	04-01-14		
2	0H2013053	08-14-13		
3	0H2013052	08-15-13		
4	0H2018705	12-05-18		

TO BE COMPLETED  
ON A.I.S.

TO BE COMPLETED  
ON A.I.S.

12-05-18 08-15-13 08-14-13 02 03 4





\* AUTHORIZING AGENCY. NONE  
\* DATE OF REQUIREMENT. NONE  
\* AMOUNT OF TIME (SEC.). NONE

THIS PLAN DOES ☐ DOES NOT ☒  
SUPERSEDE PLAN DATED, 08-14-13  
CSX PROJECT # 0H2013053

THIS PLAN DOES ☐ DOES NOT ☒  
SUPERSEDE PLAN DATED, 04/01/14  
CSX PROJECT # 0H2014006

A Caterpillar Company

$\text{---} \times \text{---} \times \text{---} = \text{OUT}$   
 $\text{---} \square \text{---} \square \text{---} = \text{IN}$

A Caterpillar Company

$\text{---} \times \text{---} \times \text{---} = 0U$   
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THIS PLAN DOES ☐ DOES NOT ☒  
SUPERSEDE PLAN DATED, 08-15-13  
CSX PROJECT # 0H201305


A Caterpillar Company

DATE.12/05/1  
CSX#.0H201870  
PRS/TDF/SA

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SI #: JXXD04168  
CSX #: OH2014000  
DATE: 04-01-14  
INITIALS: SI/JWB/SWS

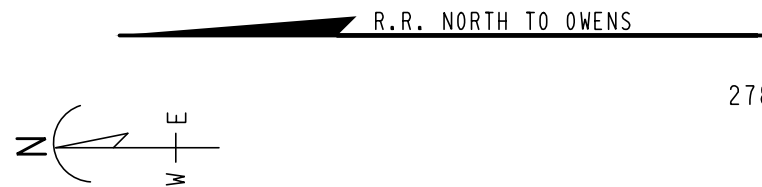
**SIEMENS**

1. 12" LED MAXIMUM CURRENT 1.0A AT 10 VOLTS  
LED GATE ARM LIGHTS .3A MAXIMUM
2. GATE LENGTH (A) 17' (B) 15'
3. {X} = LOCATION OF HOUSE
4.  = APPROXIMATE COMPASS NORTH.
5. TRANSMITTER LEADS FOR MOTION  
OR PREDICTOR EQUIPMENT SHOULD BE  
CONNECTED ON THE BUNGALOW OR SHORT  
LEAD SIDE OF THE CROSSING.
6. ISLAND TRACK LEADS SHOULD BE CONNECTED  
50 FEET FROM ROAD EDGE BUT ON NARROW  
ROADS (20' OR LESS) ISLAND LENGTH  
SHALL BE 120 FEET.
7. WARNING SYSTEM APPROACH CIRCUIT  
DISTANCES ARE TO BE MEASURED FROM THE  
ISLAND TRACK CONNECTIONS.

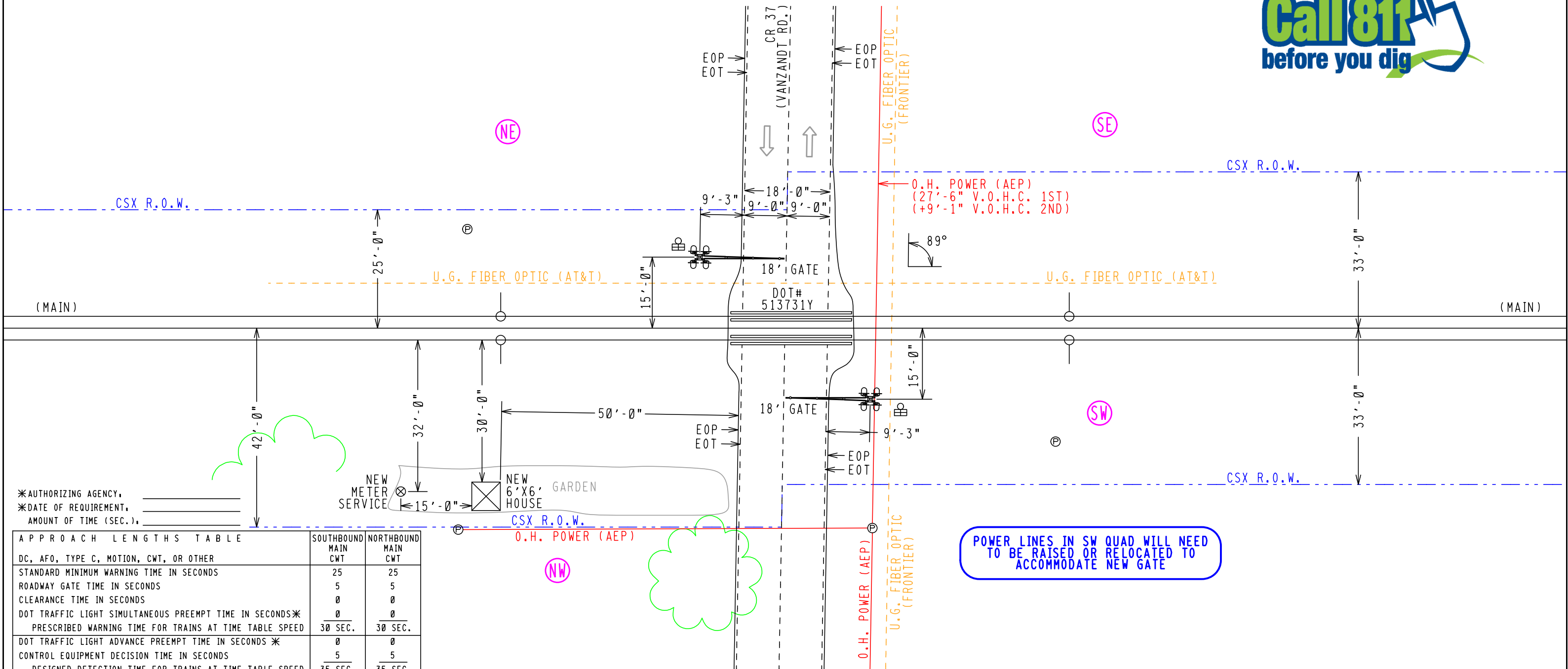
TR-168 (YATES RD.) 5137286

TRACK AND SIGNAL PLAN  
FINDLAY, OH M.P. QT-40.50

DESIGNED SII/JWB	DIGITIZED SII/JWB	CHECKED SII	DATE 04-01-14
DRAWING -----	SHEET NO -----	FILE 0T04850	SHEET S01



2787 FT. 60 FT. 2643+55.6 60 FT. 2787 FT.

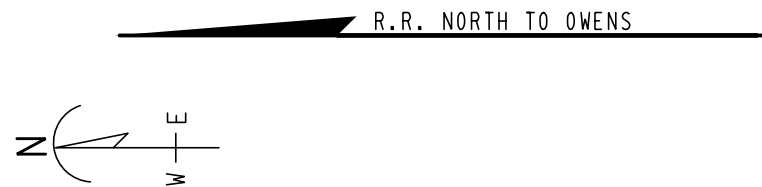


\*AUTHORIZING AGENCY, \_\_\_\_\_  
\*DATE OF REQUIREMENT, \_\_\_\_\_  
AMOUNT OF TIME (SEC.), \_\_\_\_\_

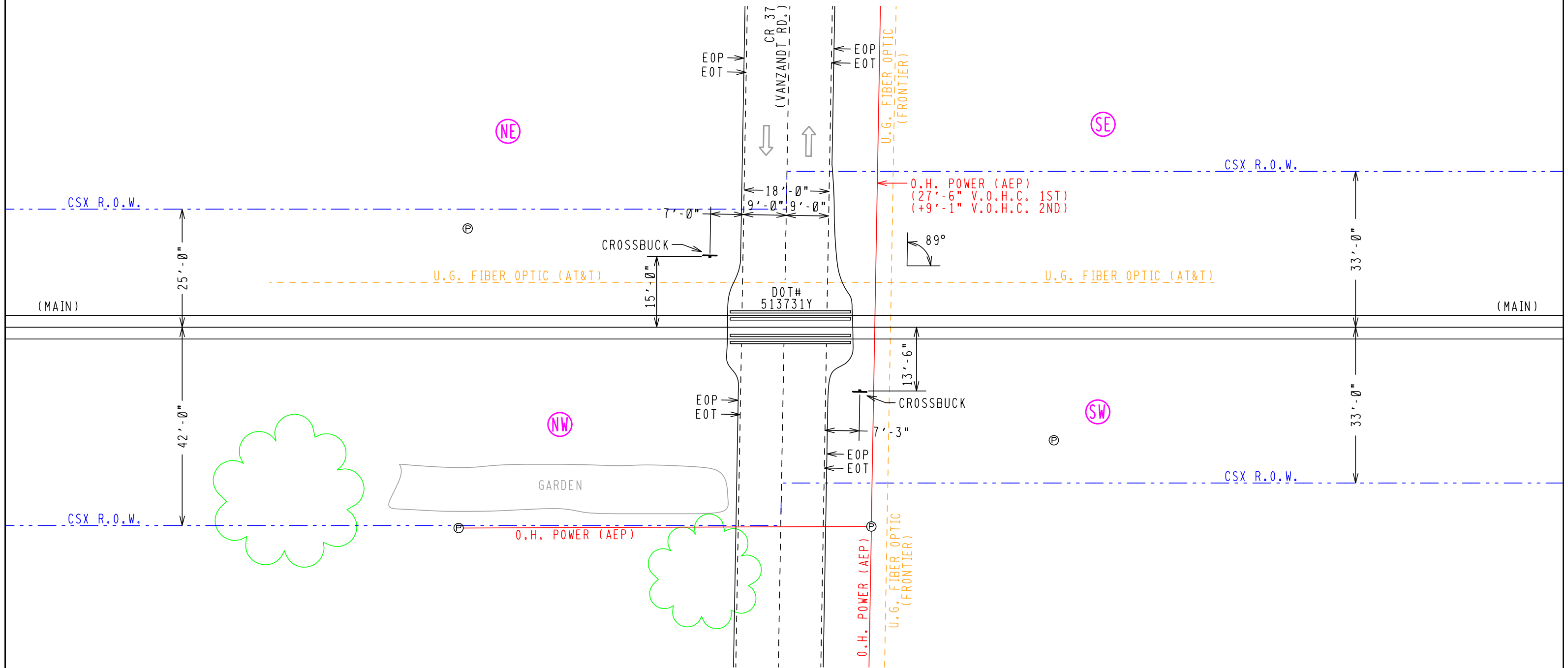
APPROACH LENGTHS TABLE	SOUTHBOUND MAIN CWT	NORTHBOUND MAIN CWT
DC, AFO, TYPE C, MOTION, CWT, OR OTHER		
STANDARD MINIMUM WARNING TIME IN SECONDS	25	25
ROADWAY GATE TIME IN SECONDS	5	5
CLEARANCE TIME IN SECONDS	0	0
DOT TRAFFIC LIGHT SIMULTANEOUS PREEMPT TIME IN SECONDS*	0	0
PRESCRIBED WARNING TIME FOR TRAINS AT TIME TABLE SPEED	30 SEC.	30 SEC.
DOT TRAFFIC LIGHT ADVANCE PREEMPT TIME IN SECONDS *	0	0
CONTROL EQUIPMENT DECISION TIME IN SECONDS	5	5
DESIGNED DETECTION TIME FOR TRAINS AT TIME TABLE SPEED	35 SEC.	35 SEC.
TIME TABLE MAXIMUM TRAIN SPEED IN MILES PER HOUR	50	50
BUFFER SPEED IN MILES PER HOUR	5	5
TOTAL WARNING SYSTEM DESIGN SPEED IN MILES PER HOUR	55	55
APPROACH DISTANCE TO ISLAND EDGE IN FEET	2787	2787
HALF WIDTH OF ISLAND IN FEET	60	60
APPROXIMATE MILE POSTS FOR APPROACH CIRCUIT	49.49	50.57

FILE NAME, QT05002.H01	REVISION DATES	PRODUCED FOR,	PRODUCED BY,	LEGEND,	GUARD RAIL	METER SERVICE	GPS COORDINATES	STREET NAME, CR 37 (VANZANDT RD.)
DATE DRAWN, 12-03-18	12-05-18			CSX ROW	O.H. POWER	POLE	N40°57'01"	CITY & STATE, ARLINGTON, (HANCOCK), OH
DRAWN BY, RS	-			R/R POLELINE	FENCE	FIRE PLUG	W83°38'33"	DOT, 513731Y
CHECKED BY, SAF	-			GAS	WATER	SEWER CAP	ELEV, 836'	PROJECT #, OH2018705
PRS #, 34P000613	-			FIBER OPTIC	SEWER	GAS VENT	M.P. QT-50.02	OP #, OH1275
								PROPOSED CROSSING LAYOUT
								SCALE = 20:1


PRELIMINARY

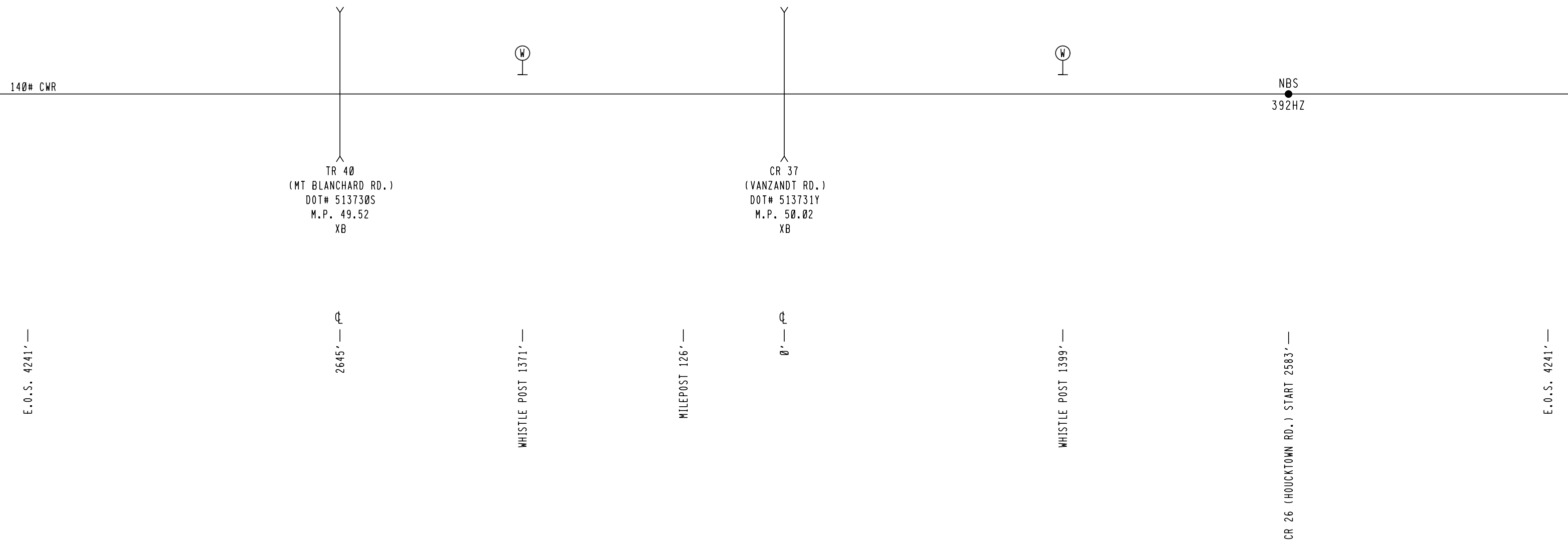
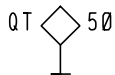
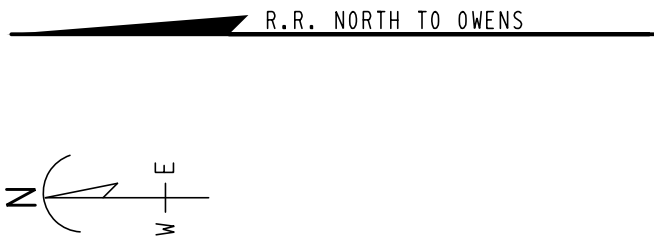


2643+55.6



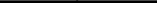















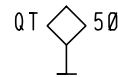
PRELIMINARY

FILE NAME, QT05002.H02	REVISION DATES	PRODUCED FOR,	PRODUCED BY,	LEGEND,	GUARD RAIL	METER SERVICE	GPS COORDINATES	STREET NAME, CR 37 (VANZANDT RD.)		
DATE DRAWN, 11-26-18	- -	 RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS	 A Caterpillar Company	CSX ROW - - - - -	O.H. POWER - - - - -	POLE	N40°57'01"	CITY & STATE, ARLINGTON, (HANCOCK), OH		
DRAWN BY, RS	- -			R/R POLELINE - - - - -	FENCE * * * * *	FIRE PLUG	W83°38'33"	DOT, 513731Y	EXISTING CROSSING LAYOUT SCALE = 20:1	
CHECKED BY, SAF	- -			GAS - - - - -	WATER - - - - -	SEWER CAP	ELEV, 836'	PROJECT #, 0H2018705		
PRS #, 34P000613	- -			FIBER OPTIC - - - - -	SEWER - - - - -	GAS VENT	M.P. QT-50.02	OP #, 0H1275		



**PRELIMINARY**



FILE NAME, QT05002.H03	REVISION DATES	<div>PRODUCED FOR,</div> <div></div> <div>RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS</div>	<div>PRODUCED BY,</div> <div></div> <div>A Caterpillar Company</div>	LEGEND,	GUARD RAIL 	METER SERVICE 	GPS COORDINATES	STREET NAME, CR 37 (VANZANDT RD.)	
DATE DRAWN, 11-26-18	- -			CSX ROW 	O.H. POWER 	POLE 	N40°57'01"	CITY & STATE, ARLINGTON, (HANCOCK), OH	
DRAWN BY, SAF	- -			R/R POLELINE 	FENCE 	FIRE PLUG 	W83°38'33"	DOT, 513731Y	EXISTING TRACK LAYOUT
CHECKED BY, SAF	- -			GAS 	WATER 	SEWER CAP 	ELEV, 836'	PROJECT #, 0H2018705	
PRS #, 34P000613	- -			FIBER OPTIC 	SEWER 	GAS VENT 	M.P. QT-50.02	OP #, 0H1275	



FILE NAME, QT05002.H04	REVISION DATES	PRODUCED FOR,	PRODUCED BY,	LEGEND,	GUARD RAIL	METER SERVICE	GPS COORDINATES	STREET NAME, CR 37 (VANZANDT RD.)	
DATE DRAWN, 12-03-18	01-04-18	 <b>RAIL TRANSPORT GROUP ENGINEERING</b> <b>COMMUNICATIONS AND SIGNALS</b>	 <b>PROGRESS</b> <b>RAIL SERVICES</b> <small>A Caterpillar Company</small>	CSX ROW	0.H. POWER	POLE	N40°57'01"	CITY & STATE, ARLINGTON, (HANCOCK), OH	
DRAWN BY, RS	-			R/R POLELINE	FENCE	FIRE PLUG	W83°38'33"	DOT, 513731Y	
CHECKED BY, SAF	-			GAS	WATER	SEWER CAP	ELEV, 836'	PROJECT #, 0H2018705	
PRS #, 34P000613	-			FIBER OPTIC	SEWER	GAS VENT	M.P. QT-50.02	PROJECT #, 0H1275	
								PROPOSED TRACK LAYOUT	

INDEX  
CONTENTS

SH. NO.		REVISION NO.								
		1	2	3	4	5	6	7	8	9
I01	INDEX AND REVISIONS									
S01	TRACK AND SIGNAL PLAN									
P01	MINIMUM PROGRAM STEPS REPORT CWE-02									
E01	POWER DISTRIBUTION									
C01	DETECTION DEVICE CONSIST CWE-02									
C02	DETECTION CIRCUITRY CWE-02									
C03	DETECTION CIRCUITRY CWE-02									
C04	CROSSING WARNING DEVICE GATE CIRCUITRY									
C05	CROSSING WARNING DEVICE LIGHT CIRCUITRY									
C06	CROSSING WARNING DEVICE CIRCUITRY									
C07	SEAR II: CONFIGURATION & FUNCTIONS									

 = PLANS SENT TO FIELD (DISTRIBUTED)  
 = PLANS AS-IN-SERVICED (UP TO DATE)

PRELIMINARY

 = NOTE



PROGRESS  
RAIL SERVICES

A Caterpillar Company

NEW WORK

DATE: 12/05/18

CSX# 0H2018705

PRS/TDF/SAF

REVISIONS

REV. NO.	PROJECT NO.	DESIGN DATE	IN SERVICE DATE	REVISION DATE
1	0H2018705	12-05-18		

TO BE COMPLETED ON A.I.S.



RAIL TRANSPORT GROUP ENGINEERING  
COMMUNICATIONS AND SIGNALS

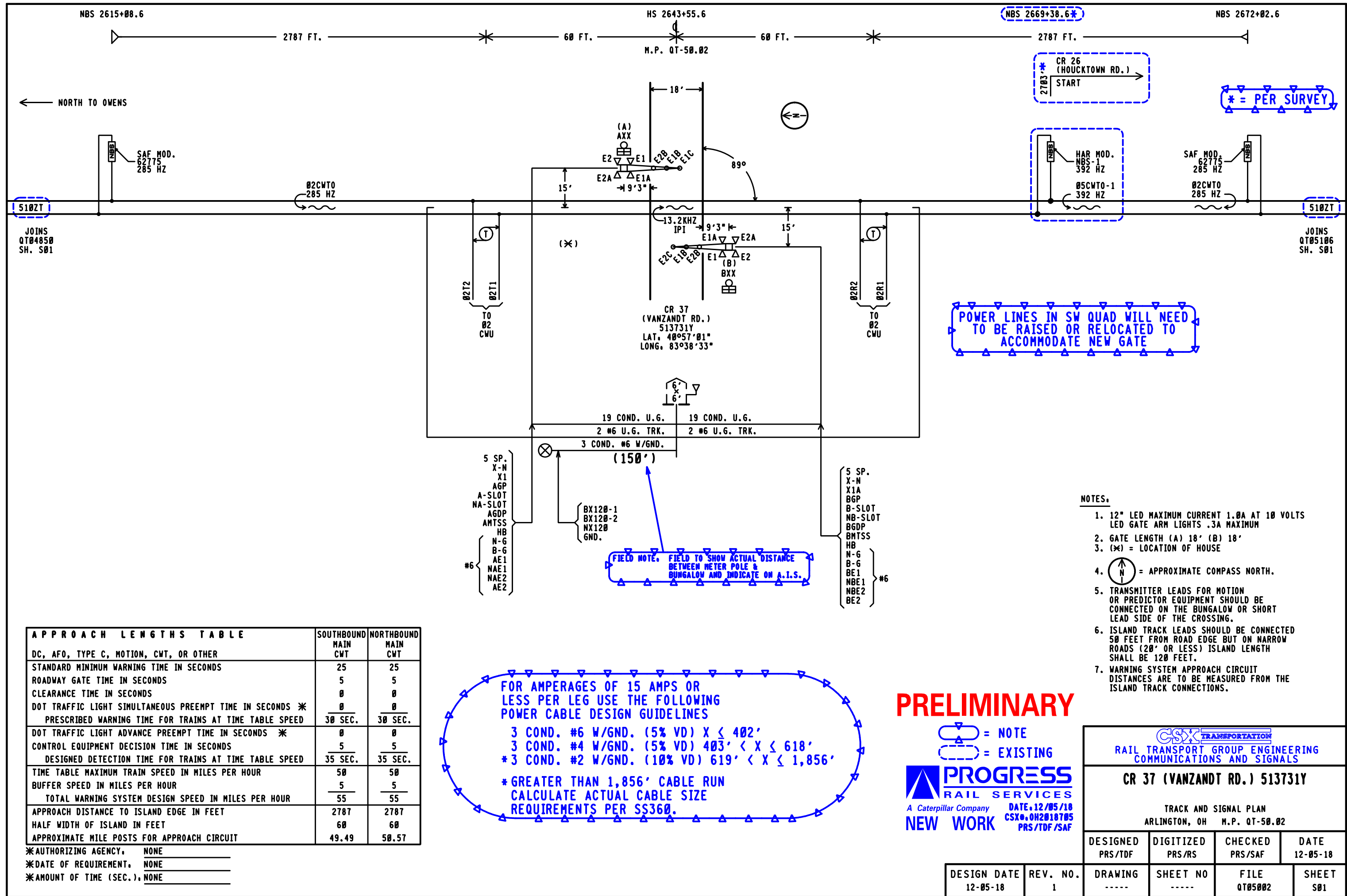
CR 37 (VANZANDT RD.) 513731Y

INDEX AND REVISIONS  
ARLINGTON, OH H.P. QT-50.02

DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DRAWING -----	SHEET NO -----	FILE QT05002	SHEET 101

DESIGN DATE  
12-05-18

REV. NO.  
1



PRELIMINARY



CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 37 (VANZANDT RD.) 513731Y			
TRACK AND SIGNAL PLAN ARLINGTON, OH M.P. QT-50.02			
DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DRAWING -----	SHEET NO -----	FILE QT05002	SHEET S01



Minimum Program Steps Report

Location and SIN

DOT Number: 513731Y  
Milepost Number: QT-50.02  
Site Name: CR 37 (VANZANDT RD)

SIN: 712543105616 \*

\* Parameter is part of office check number calculation.

MCF and Template Selection

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

Template = 1A.6 Trk B1 (OCCN) \*

\* Parameter is part of office check number calculation.

Minimum Program Steps

MS4000 configuration

Track 1 : GCP Frequency = 285 Hz (OCCN,TCN) (Hidden) \*  
Track 1 : Isl Frequency = 13.2 kHz (OCCN) (Hidden) \*

MS4000 Predictor

Track 1 : Prime Warning Time = 30 sec (OCCN) (Hidden) \*

BASIC: module configuration  
Chassis Type = Dual Two Track (OCCN) \*

GCP: track 1  
Track 1 : GCP Frequency = 285 Hz (OCCN,TCN) \*  
Track 1 : Approach Distance = 2787 ft (OCCN,TCN) \*  
Track 1 : Island Distance = 120 ft (Set in Field,TCN)

GCP: track 1 prime  
Track 1 : Prime Warning Time = 30 sec (OCCN) \*

ISLAND: track 1  
Track 1 : Isl Frequency = 13.2 kHz (OCCN) \*

ADVANCED: out of service  
OOS Control = Display+OOS IPs (OCCN) \*

ADVANCED: site options  
Daylight Savings = 0n (Set in Field)

SSCC: 1  
SSCC-1 Gate Delay = 5 sec (OCCN) \*  
SSCC-1 Number of GDs = 1 (OCCN) \*  
SSCC 1 : Flash Rate = 55 (OCCN) \*

SSCC: 2  
SSCC-2 Gate Delay = 5 sec (OCCN) \*  
SSCC-2 Number of GPs = 1 (OCCN) \*  
SSCC-2 Number of GDs = 1 (OCCN) \*  
SSCC 2 : Flash Rate = 55 (OCCN) \*

IO: assignment SSCC  
IN 7.2 = Not Used (OCCN) \*  
IN 8.2 = Out Of Service IP 1 (OCCN) \*  
IN 8.4 = GD 2.1 (OCCN) \*  
IN 8.5 = GP 2.1 (OCCN) \*

SEAR  
DI 1 = Gnd Flt Tester 1 (OCCN) \*  
DI 2 = Gnd Flt Tester 2 (OCCN) \*  
RI 1 = Ground Fault Test (OCCN) \*  
RI 2 = AC Control (OCCN) \*

SEAR: slot 7-8 inputs  
IN 7.1 = TSS 1 (OCCN) \*  
IN 8.1 = TSS 2 (OCCN) \*  
IN 8.3 = POK 2 (OCCN) \*

Express: MS4000 configuration  
Track 1 : GCP Frequency = 285 Hz (OCCN,TCN) (Hidden) \*

Express: MS4000 Predictor  
Track 1 : Prime Warning Time = 30 sec (OCCN) (Hidden) \*

\* Parameter is part of office check number calculation.

Check Numbers

Office Check Number: 76075AAC  
Config. Check Number: 3C8C71E8  
(Based on MCF Revision 26)

Parameters not part of office check number calculation:

Track 1 : Island Distance = 120 ft (Set in Field)  
Daylight Savings = 0n (Set in Field)

Comments

<none>

PRELIMINARY



A Caterpillar Company  
NEW WORK

DATE: 12/05/18  
CSX# 0H2018705  
PRS/TDF/SAF

CSX TRANSPORTATION  
RAIL TRANSPORT GROUP ENGINEERING  
COMMUNICATIONS AND SIGNALS

CR 37 (VANZANDT RD.) 513731Y

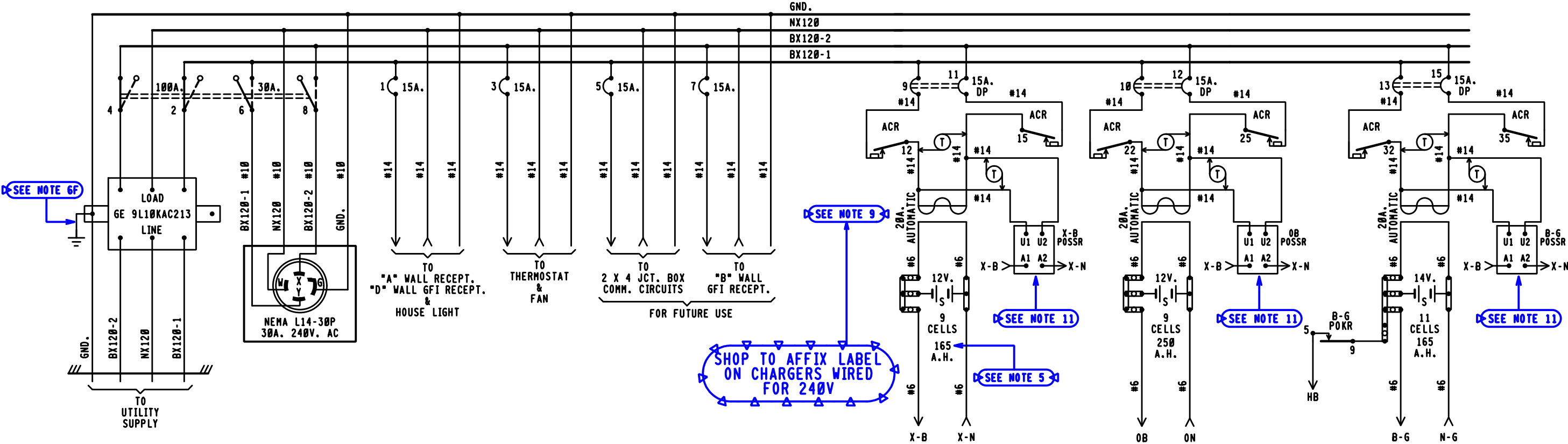
MINIMUM PROGRAM STEPS REPORT CWE-02  
ARLINGTON, OH H.P. QT-50.02

DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DRAWING -----	SHEET NO -----	FILE QT05002	SHEET P01

DESIGN DATE 12-05-18	REV. NO. 1
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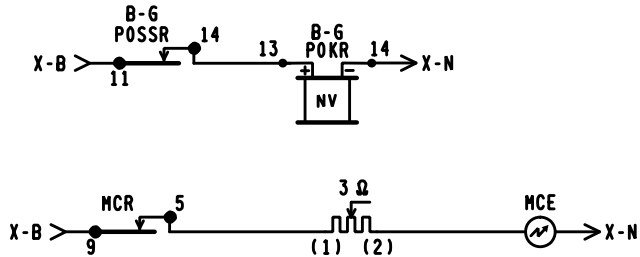


	<u>ACR</u>		<u>MCR</u>											
	<u>12</u>	<u>B</u>	B77	<u>9</u>								<u>F</u>	<u>11</u>	N41
	<u>15</u>	<u>B</u>		<u>10</u>								<u>—</u>	<u>12</u>	
	<u>22</u>	<u>B</u>	<u>C30</u>											<u>C49</u>
	<u>25</u>	<u>B</u>												
	<u>32</u>	<u>B</u>	<u>B-6 POKR</u>											
	<u>35</u>	<u>B</u>		<u>9</u>								<u>F</u>	<u>11</u>	<u>—</u>
			<u>10</u>	<u>F</u>	<u>12</u>	<u>—</u>	<u>C48</u>							



BX120-1	BX120-2
11.0 AMPS	11.0 AMPS
MAXIMUM LOAD CALCULATED PER SS360	

- NOTES:
- REFERENCES ARE PER SCMS-13.
  - ARRESTERS ARE PER SS302.
  - SHELF RELAY PLACEMENT ON CONSIST CHART HAS NO SIGNIFICANCE.
  - PLUG-IN RELAYS ARE VIEWED FROM THE FRONT OF RACK.
  - BATTERY A.H. CAPACITY SHOWN IS THE MINIMUM REQUIREMENT.
  - WIRING
    - FEED TO ALL BUSSES, LIGHT CIRCUITS, MOTOR CIRCUITS TO BE #10 FLEX.
    - 120-VOLT FEED FROM ENTRANCE TO POWER BUSS TO BE #10 FLEX.
    - ALL TRACK WIRES TO BE #10 FLEX.
    - ALL OTHERS TO BE #16 FLEX UNLESS NOTED.
    - ALL BATTERY OUTPUTS TO BE #6 PER SS360.
    - GROUND WIRE NOT NECESSARY WHEN GE ARRESTER IS MOUNTED ON GROUND PLANE OR METAL ENCLOSURE AFFIXED DIRECTLY TO BUNGALOW METALLIC STRUCTURAL MEMBER.
  - CIRCUIT INTERRUPTERS 2 & 4 ARE MECHANICALLY INTERLOCKED WITH CIRCUIT INTERRUPTERS 6 & 8.
  - LABEL ALL PRIMARY POWER WIRES WITH RED TAGS.
  - CHARGERS WIRED FOR 240VAC
  - CIRCUIT BREAKERS PANEL- Q0124L125G (24 SPACES)
  - SOLID STATE VOLTAGE MONITOR BENDER MOD. VME 420-DW-1 DIN RAIL MOUNTED. OUTPUTS CONFIGURED NORMALLY CLOSED(NC). UNDERVOLTAGE SENSING MINIMUM OF 210 VOLTS AC.



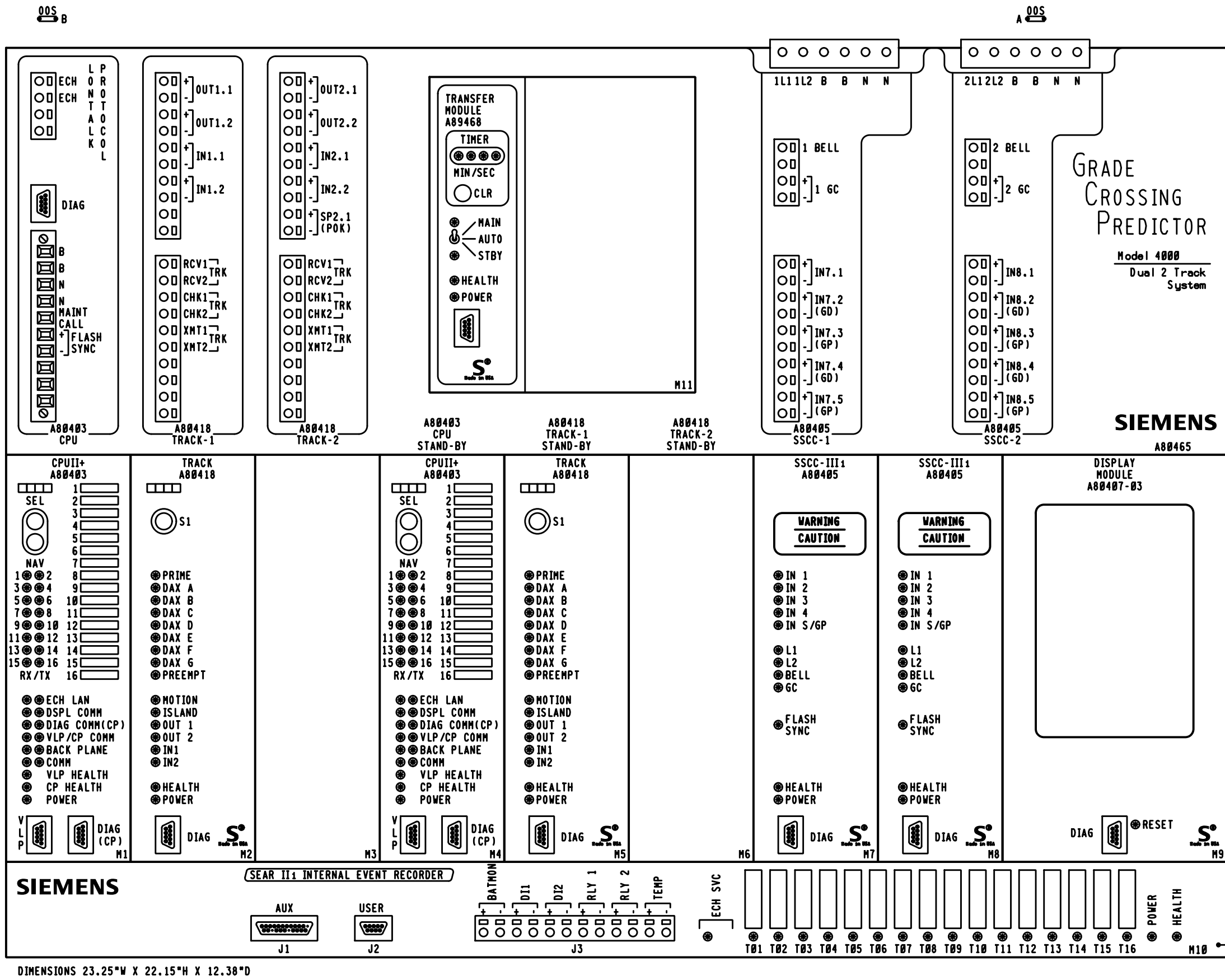
X-B POSSR					OB POSSR					B-G POSSR				
11	F	21	F	N70	11	F	21	F	N70	11	F	21	F	N70

WALL/DIN RAIL MOUNTED

**PRELIMINARY** 6'X 6' PTC CROSSING HOUSE

**PROGRESS**  
RAIL SERVICES  
A Caterpillar Company  
NEW WORK  
DATE: 12/05/18  
CSX# 0H2018705  
PRS/TDF/SAF

RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 37 (VANZANDT RD.) 513731Y			
POWER DISTRIBUTION ARLINGTON, OH M.P. QT-50.02			
DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DRAWING -----	SHEET NO -----	FILE QT05002	SHEET E01



GCP 4000 APPLICATION NOTES:

1. THE GRADE CROSSING PREDICTOR (GCP) IS A MODULAR MICROPROCESSOR CONTROLLED SYSTEM THAT IS DEPLOYED TO CONTINUALLY MONITOR THE APPROACHES TO RAILROAD GRADE CROSSINGS AND TO CONTROL THE LAMPS, GATES AND BELLS ASSOCIATED WITH THOSE CROSSINGS. WHEN EQUIPPED WITH THE SEAR II<sub>1</sub> MODULE THE GCP 4000 WILL RECORD EVENTS AND REPORT ALARMS WHEN CONNECTED TO AN OFFICE SYSTEM.

2. THE GCP 4000 GCP (A80465) IS A TWO TRACK REDUNDANT UNIT CAPABLE OF DRIVING 4 INDEPENDENT FLASHER AND GATE SIGNALS AND RECORDING EVENTS AND REPORTING ALARMS. THIS A80465 INCLUDES THE FOLLOWING MODULES:

SLOT	MODULE	FUNCTION	PART NO.
M1	CPU-II+	MAIN	A80403
M2	TRACK-1	MAIN	A80418
M3	PANEL	NONE	D39325
M4	CPU-II+	STANDBY	A80403
M5	TRACK-1	STANDBY	A80418
M6	PANEL	NONE	D39325
M7	SSCC-III <sub>1</sub>	A SIGNAL	A80405
M8	SSCC-III <sub>1</sub>	B SIGNAL	A80405
M9	DISPLAY MODULE		A80407-03
TOP CENTER	TRANSFER UNIT		A89468
LOWER BAY	SEAR II <sub>1</sub>	RECORDER	A80410

3. EACH TRACK MODULE HAS TWO PROGRAMMABLE INPUTS AND TWO PROGRAMMABLE OUTPUTS.

4. THE SEAR II<sub>1</sub> INTERNAL EVENT RECORDER HAS INPUTS FOR ONE BATTERY MONITOR, TWO NON-VITAL INPUTS AND TWO PROGRAMMABLE RELAY DRIVES (HEEL/Front).

5. LOCATED ON THE FRONT OF EACH MODULE THERE ARE LED LIGHTS TO INDICATE THE ACTIVITY OF CERTAIN FUNCTIONS OCCURRING INSIDE THE GCP.

6. BETWEEN SLOT 1 & 2 THERE IS A CHASSIS IDENTIFICATION CHIP (CIC) SOCKET AND AN ECD CONNECTOR (DB-25 FEMALE).

7. UPON THE FAILURE OF A MODULE IN SLOTS M1-M3 THE AUTOMATIC TRANSFER UNIT SWITCHES TO THE STANDBY MODULES IN SLOTS M4-M6.

8. THE GCP 4000 GCP (A80465) MAY USE RIO MODULES IN SLOTS M3 AND M6.

**PRELIMINARY**

**PROGRESS**  
RAIL SERVICES  
A Caterpillar Company

**NEW WORK**

DATE: 12/05/18  
CSX# 0H2018705  
PRS/TDF/SAF

**CSX TRANSPORTATION**  
RAIL TRANSPORT GROUP ENGINEERING  
COMMUNICATIONS AND SIGNALS

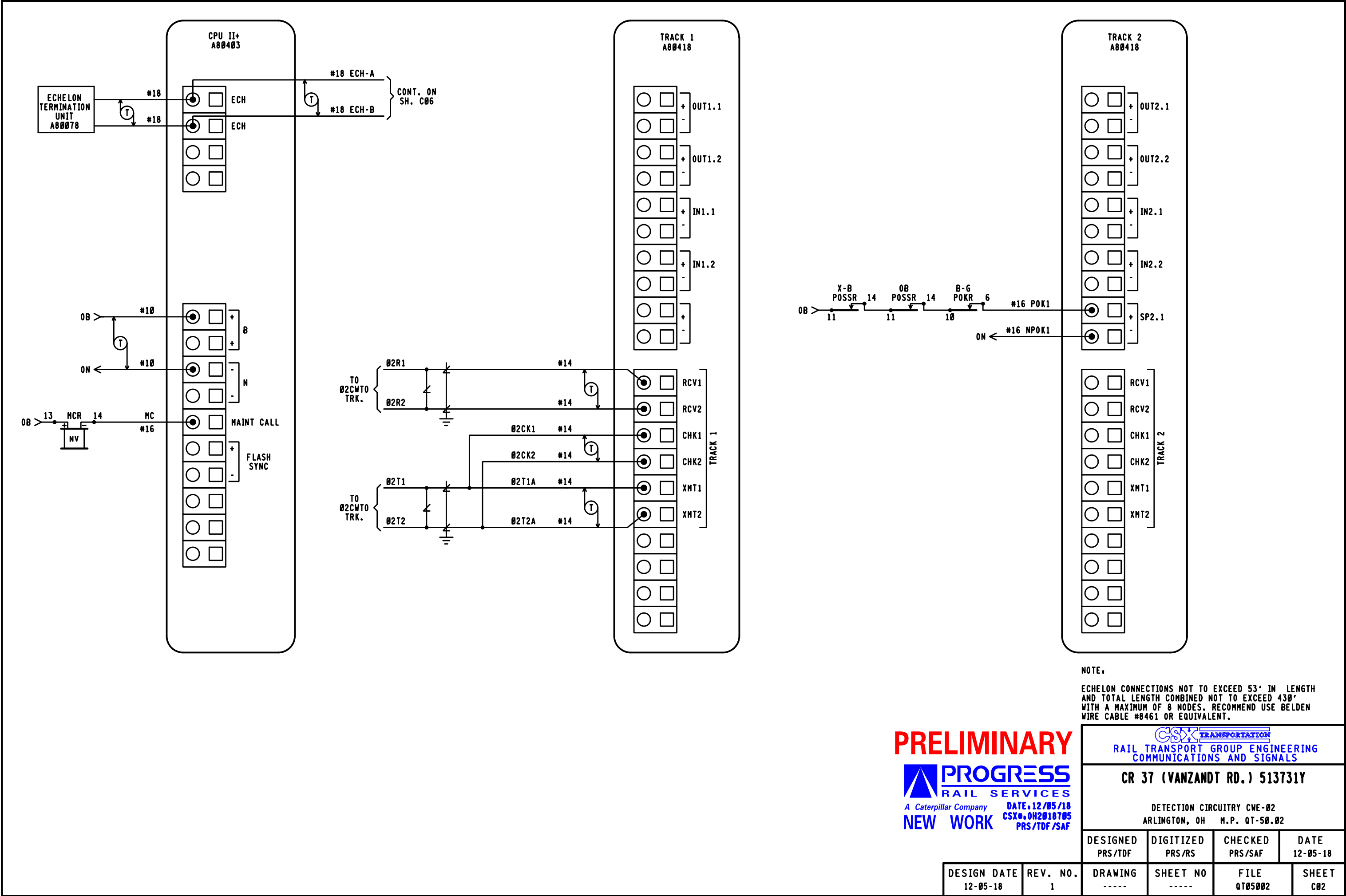
**CR 37 (VANZANDT RD.) 513731Y**

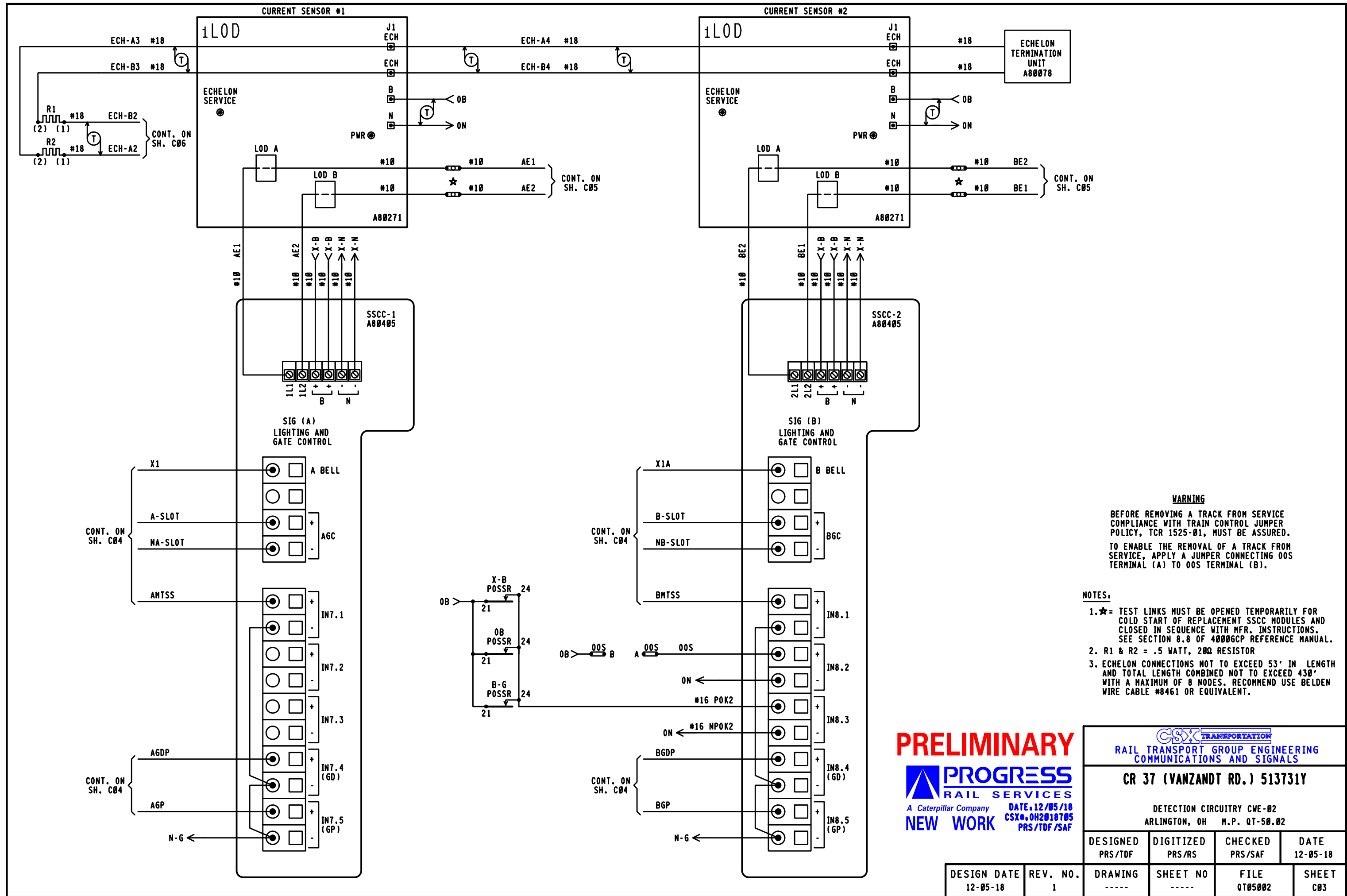
DETECTION DEVICE CONSIST CWE-02  
ARLINGTON, OH M.P. QT-50.02

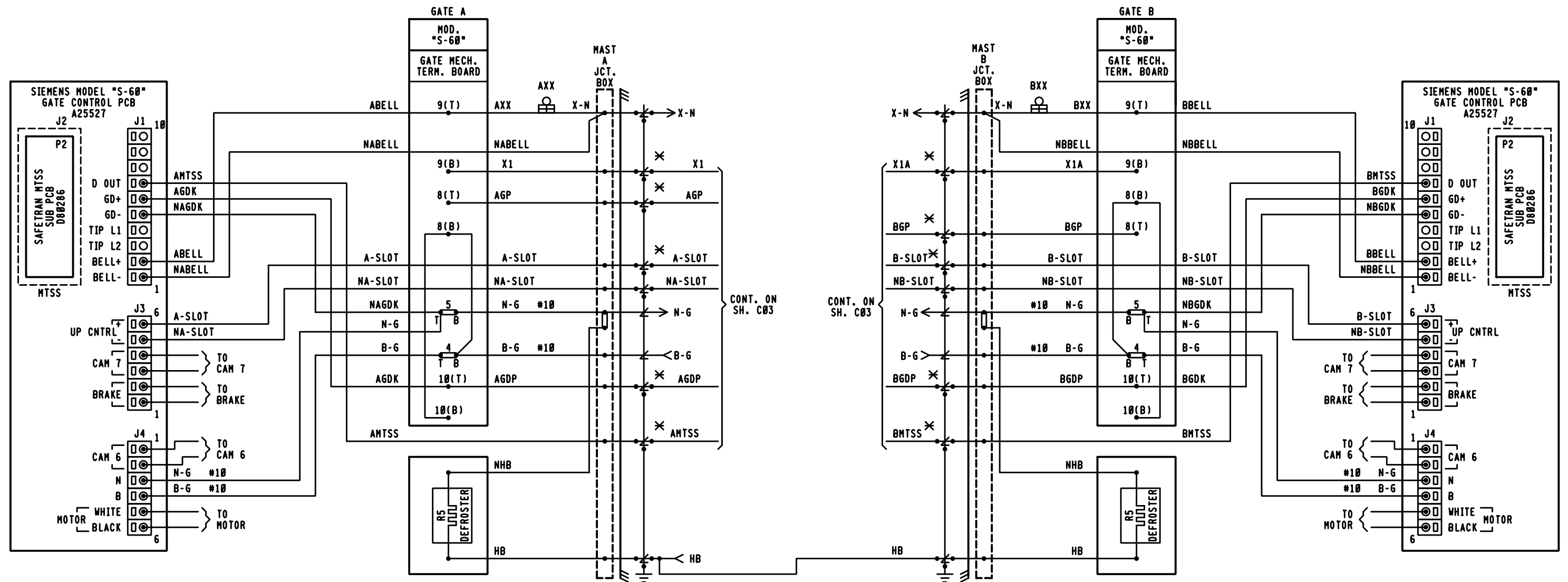
DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DRAWING -----	SHEET NO -----	FILE QT05002	SHEET C01

DESIGN DATE 12-05-18	REV. NO. 1
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DIMENSIONS 23.25"W X 22.15"H X 12.38"D







- NOTES:
- ✕ = TEST LINKS MUST BE OPEN TEMPORARILY FOR COLD START OF REPLACEMENT SSCC MODULES AND CLOSED IN SEQUENCE WITH MFR. INSTRUCTIONS. SEE SECTION 8.8 OF 40006CP REFERENCE MANUAL.
  - ⬢ = TERMINAL IN JCT. BOX BASE
  - ALL WIRING #16 UNLESS NOTED OTHERWISE.
  - HLVA2-1675-01 HYBRID LOW VOLTAGE ARRESTER, UNLESS NOTED.

**PRELIMINARY**

**PROGRESS**  
RAIL SERVICES  
A Caterpillar Company

**NEW WORK**

DATE: 12/05/18  
CSX# 0H2018705  
PRS/TDF/SAF

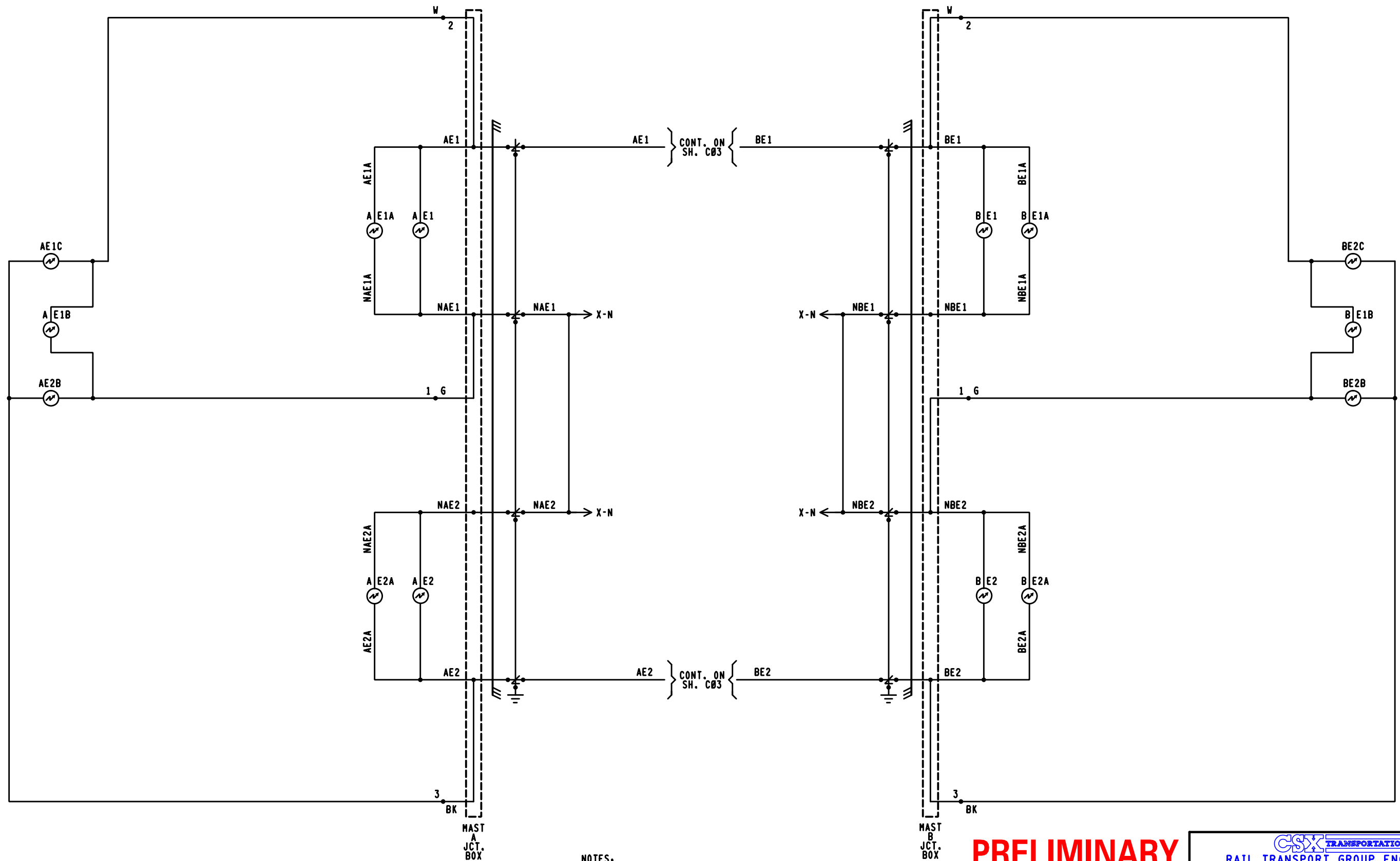
**CSX TRANSPORTATION**

RAIL TRANSPORT GROUP ENGINEERING  
COMMUNICATIONS AND SIGNALS

**CR 37 (VANZANDT RD.) 513731Y**

CROSSING WARNING DEVICE GATE CIRCUITRY  
ARLINGTON, OH H.P. QT-50.02

DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DESIGN DATE 12-05-18	REV. NO. 1	DRAWING -----	SHEET NO -----
FILE QT05002		SHEET C04	



# NOTES:

1. = TERMINAL IN JUNCTION BOX
2. WHEN 7 OR MORE LIGHTS ON A SINGLE STRUCTURE REFER TO SS382 FOR REQUIRED ARRESTERING
3. FEEDS TO ALL BUSES AND LIGHT CIRCUITS ARE #10 FLEX
4. UNLESS NOTED ALL OTHER WIRING #16
5. CABLING SPECIFICATIONS SHOWN ON SH. S01
6. = HLVA2-1675-01 HYBRID LOW VOLTAGE ARRESTER, UNLESS NOTED.

**PRELIMINARY**

**PROGRESS**  
RAIL SERVICES  
A Caterpillar Company

**NEW WORK**

DATE: 12/05/18  
CSX# 0H2018705  
PRS/TDF/SAF

**CSX TRANSPORTATION**  
RAIL TRANSPORT GROUP ENGINEERING  
COMMUNICATIONS AND SIGNALS

**CR 37 (VANZANDT RD.) 513731Y**

CROSSING WARNING DEVICE LIGHT CIRCUITRY  
ARLINGTON, OH H.P. QT-50.02

DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DRAWING -----	SHEET NO -----	FILE QT05002	SHEET C05

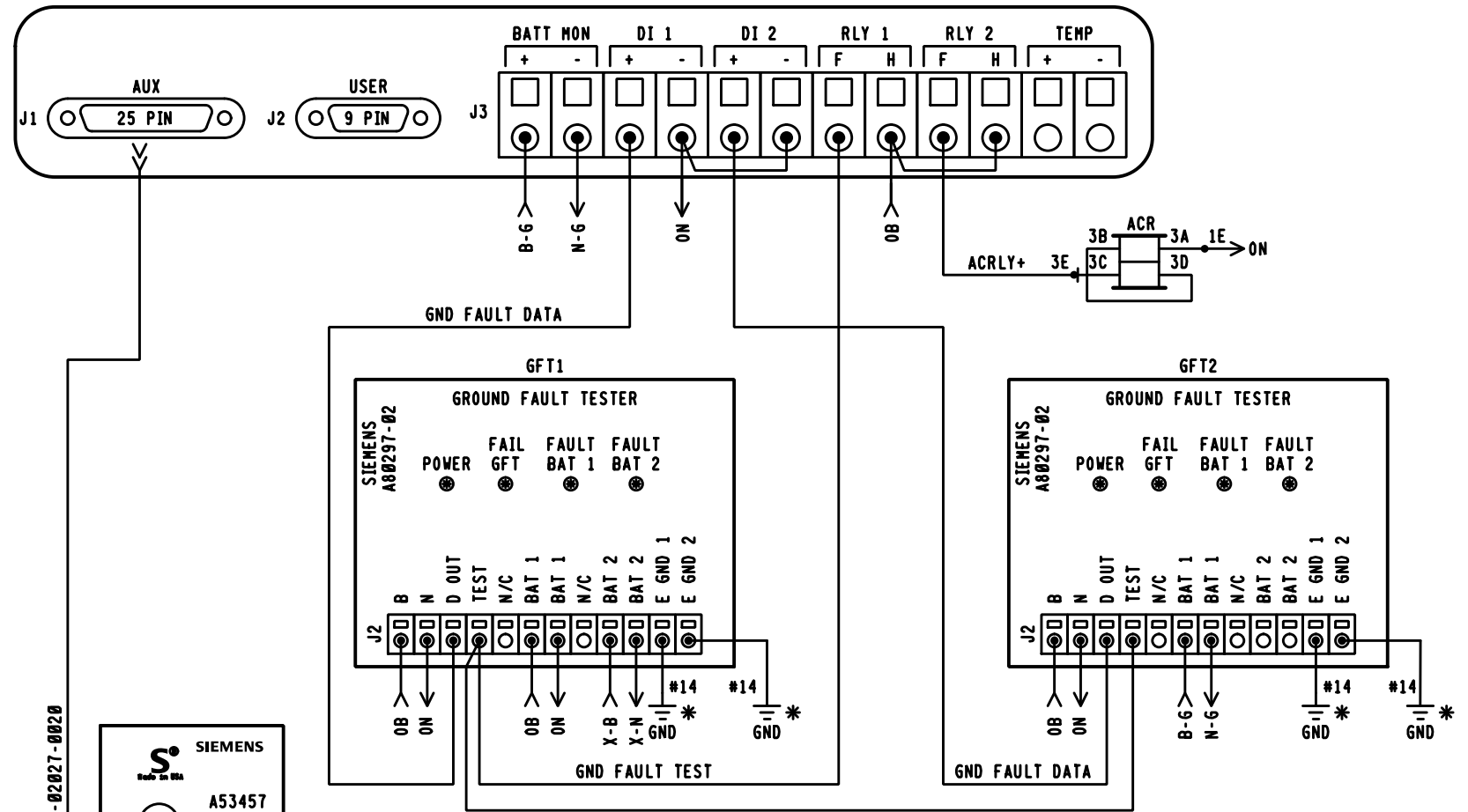
DESIGN DATE 12-05-18	REV. NO. 1
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WAYSIDE ACCESS GATEWAY CONFIGURATION	
SITE ATCS ADDRESS	7.125.431.056.07.01 7.125.LLL.666.SS.DD
SERIAL INTERFACE	38,400,NONE,8,1/NOFLOW
SERIAL FORMAT	RAW
WAG TEST MODE	DISABLED
ECHOLON ADDRESS	01.07
UDP PORTS	5000, 5001, 5002, 5003
ROUTE TABLE EXPIRY	5400 SEC
BROADCAST MEDIUM	IP ETHERNET
TCP PORTS	23, 10023, 6001, 6002
DHCP SERVER	DISABLED
IP ADDRESS	192.168.13.1
TYPE 7 ROUTE LENGTH	12--7RRLL666SS
IP NETWORK MASK	255.255.255.0
WAG CIRCUIT ID	DISABLE
ROUTING REGION DOMAIN 1	OC6SERVER1.JAX.COM
ATCS SERVER UDP PORT NUMBER	6001
TELNET NUMBERS	WAG 6002, SERIAL 10023
DEFAULT GATEWAY IP	192.168.013.031

NOTE TO INSPECTOR:  
AT INSTALLATION OF WAG,  
OR UPDATE OF THE  
CONFIGURATION, OR UPDATE  
OF THE EXECUTIVE PROGRAM,  
MARK-UP CONFIGURATION  
TABLE FOR AS IN SERVICE  
PLANS

SEAR II<sub>1</sub> INTERNAL EVENT RECORDER I/O



GCP PROGRAMMING FOR VHF RADIO

REMOTE DTMF CROSSING ACTIVATION  
(ACTIVATES ENTIRE CROSSING)

TO ACTIVATE PRESS, 731#

TO DE-ACTIVATE PRESS, 731#

(ACTIVATION WILL TIME OUT AFTER 60 SEC.)

- NOTES:
1. ALL WIRING #16 UNLESS NOTED OTHERWISE.
  2. \* = EARTH GROUND REF. TERMINALS REQUIRED FOR DETECTION. DO NOT JUMPER TERMINALS. MUST BE CONNECTED TO DIFFERENT POINTS OF BUNGALOW.
  3. \*\* = TO BE PROVIDED BY COMMUNICATIONS
  4. LOOP WIRE THROUGH FERRITE BEAD TWICE.

CSX TRANSPORTATION RAIL TRANSPORT GROUP ENGINEERING COMMUNICATIONS AND SIGNALS			
CR 37 (VANZANDT RD.) 513731Y			
CROSSING WARNING DEVICE CIRCUITRY ARLINGTON, OH M.P. QT-50.02			
DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
DRAWING -----	SHEET NO -----	FILE QT05002	SHEET C06

- COMM NOTES:
1. WAG J3A PINOUTS:  
4 & 5 = +12VDC RADIO OUT  
7 & 8 = GND RADIO RETURN
  2. WAG AND SEARII<sub>1</sub> ECHOLON COMM THROUGH GCP4000 LONTALK PROTOCOL CONNECTION
  3. REFER TO WAG INSTALLATION AND SETUP IN APPENDIX "A" GCP4000 SYSTEM CUT OVER TEST PROCEDURE AND CHECK OFF SHEET.

**PRELIMINARY**

**PROGRESS**  
RAIL SERVICES  
A Caterpillar Company

DATE: 12/05/18  
CSX# 0H2018T05  
PRS/TDF/SAF

DESIGN DATE 12-05-18	REV. NO. 1
-------------------------	---------------

DEFAULTS AND/OR STYLE		FIELD RECORD
SEAR II <sub>1</sub> EXECUTIVE PROGRAM	VERSION: 9V725A01	VERSION: _____
APPLICATION PROGRAM (IF LOADED)	VERSION: 9V864A01	VERSION: _____
SITE SET UP MENU		
FUNCTION	LED DISPLAY	
DATE/TIME	XX-XX-XXXX XX:XX:XX	
AUTOMATIC DST ADJUSTMENT	YES	
TIME ZONE	EASTERN	
SITE NAME	CR 37 (VANZANDT RD.)	
MILEPOST	QT-50.02	
DOT NUMBER	513731Y	
TESTER TYPE	CROSSING	
DATE FORMAT	MM-DD-YYYY	
TEMP FORMAT	FAHRENHEIT	
INDICATE HOLD (SEC)	0	
INDICATE REFRESH (SEC)	60	
SITE ATCS ADDRESS	7.125.431.056.99.01 (7.RRR.LLL.GGG.99.01)	
SITE TYPE	COLLECTOR	
OFFICE ADDRESS	2.125.00.0000 (2.RRR.NN.DDDD)	
POLL ID	1	
MODE	GEN/ATCS	
WAMS XID	DISABLED	
OFFICE COMM. DEVICE	<input checked="" type="checkbox"/> WAG (ECHELON) <input type="checkbox"/> DIRECT (RS232) <input type="checkbox"/> MCM (ECHELON) <input type="checkbox"/> MCM (RS232) <input type="checkbox"/> DIAL MODEM <input type="checkbox"/> S200 RADIO (RS422)	
RADIO ATCS ADDR	7.125.431.056.07.01 (7.RRR.LLL.GGG.NN.01)	
FIELD COMM. DEVICE	<input type="checkbox"/> WAG (ECHELON) <input checked="" type="checkbox"/> NONE <input type="checkbox"/> VHF COMM. (ECHELON) <input type="checkbox"/> VHF COMM. (RS232) <input type="checkbox"/> SPREAD-SPECTRUM (RS232)	
USER PORT BAUD	57,600	
USER PORT DATA BITS	8	
USER PORT PARITY	NONE	
USER PORT STOP BITS	1	
USER PORT FLOW CONTROL	NONE	
AUX PORT BAUD	38,400	
AUX PORT DATA BITS	8	
AUX PORT PARITY	NONE	
AUX PORT STOP BITS	1	
AUX PORT FLOW CONTROL	NONE	

NOTE TO INSPECTOR,  
AT IN SERVICE OF SEAR II<sub>1</sub> OR UPDATE  
OF ITS INTERNAL EXECUTIVE PROGRAM  
OR ITS CSXT APPLICATION PROGRAM,  
NOTE THE VERSION NUMBER OF EACH  
PROGRAM MUST IN THE BLANK FIELDS.

INSPECTOR NOTE,  
CURRENT VALUES MAY VARY DEPENDANT ON FIELD  
CONDITIONS. MARK UP PER ACTUAL READINGS FOR  
IN-SERVICE REVISION.

LIT BULB COUNT ON EACH CIRCUIT	NO.	TYPE OF BULB	CURRENT READING IN AMP. AT APPROX. 10.0 V ARRAY VOLTAGE
CURRENT SENSOR (1) AE1, LAMP SET UP	4	<input type="checkbox"/> BULBS <input checked="" type="checkbox"/> LED	X.X
CURRENT SENSOR (1) AE2, LAMP SET UP	4	<input type="checkbox"/> BULBS <input checked="" type="checkbox"/> LED	X.X
CURRENT SENSOR (2) BE1, LAMP SET UP	4	<input type="checkbox"/> BULBS <input checked="" type="checkbox"/> LED	X.X
CURRENT SENSOR (2) BE2, LAMP SET UP	4	<input type="checkbox"/> BULBS <input checked="" type="checkbox"/> LED	X.X

INSPECTOR NOTE,  
VHF RADIO CHANNEL AND DATA  
CHANNEL = ENGINEERING CHANNEL.  
CHOOSE PROPER FREQUENCY FROM  
VHF RADIO CHANNELS.

VHF RADIO CHANNELS			
1	161.130	5	161.550
2	160.710	6	160.785
3	160.560	7	160.785
4	160.860	8	160.785

NOTE 7 {

MENU → CONFIGURATION →	
MODULES → ADD MODULE	
MODULE TYPE	WAG
MODULE NAME	DEFAULT
WAG ECHELON NODE	7

NOTE,  
REFER TO WAG INSTALLATION AND  
SETUP IN APPENDIX "A" GCP4000 SYTEM  
CUT OVER, TEST PROCEDURE AND CHECK  
OFF SHEET.

MEASURE BATTERY VOLTAGE AT INPUT		
BATTERY VOLTAGE	0B	_____ VOLTS
BATTERY VOLTAGE	X-B	_____ VOLTS
BATTERY VOLTAGE	B-6	_____ VOLTS

NOTE 6 {

PROGRAM MENU SELECT	
EDIT DIGITAL INPUTS	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT BATTERIES	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT RELAYS	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT TEST LED'S	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT ILOD1 SENSOR ★	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT ILOD2 SENSOR ★	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT ILOD3 SENSOR ★	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT ILOD4 SENSOR ★	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
EDIT VHF SETTINGS	<input checked="" type="checkbox"/> NO <input type="checkbox"/> YES
GCP4K ATCS SUBNODE	16

★ STAR = OPTIONS SHOWN DEPENDANT ON  
NUMBER OF ILODS SELECTED

NOTE 9 -

NOTE 8 -

NOTE 1 {

NOTE 2 -

NOTE 3 {

NOTE 4 -

NOTE 5 {

CONTROL SYSTEM CONFIGURATION MENU QUESTIONS	
OPTION	SELECTION
RESET NAMES / MODULES	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
RAILROAD NUMBER	125
CROSSING CONFIGURATION	NORMAL <input checked="" type="checkbox"/> SPLIT GATE <input type="checkbox"/> EXTERNAL ENTRANCE GATE CONTROLLER(S) <input type="checkbox"/>
AND1 USED AS XR	NO <input type="checkbox"/> YES <input checked="" type="checkbox"/>
AND2 USED AS XR	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
AND3 USED AS XR	NO <input type="checkbox"/> YES <input type="checkbox"/>
AND4 USED AS XR	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
AND5 USED AS XR	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
AND6 USED AS XR	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
AND7 USED AS XR	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
AND8 USED AS XR	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
ENTRANCE GATES*	0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/>
GATE POSITION FAIL*	20 SECS.
BATTERY BANKS*	1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/>
BATT MON USED*	NO <input type="checkbox"/> YES <input checked="" type="checkbox"/>
OB RESOLUTION*	0.2 <input type="checkbox"/> 0.5 <input type="checkbox"/> 1.0 <input checked="" type="checkbox"/>
X-B RESOLUTION*	0.2 <input type="checkbox"/> 0.5 <input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> NOT PRESENT <input type="checkbox"/>
X-B2 RESOLUTION*	0.2 <input type="checkbox"/> 0.5 <input type="checkbox"/> 1.0 <input type="checkbox"/> NOT PRESENT <input checked="" type="checkbox"/>
BATT MON RESOLUTION*	0.2 <input type="checkbox"/> 0.5 <input type="checkbox"/> 1.0 <input checked="" type="checkbox"/> NOT PRESENT <input type="checkbox"/>
INTERNAL CROSSING CONTROLLERS*	0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/>
EXTERNAL CROSSING CONTROLLERS*	0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/>
VHF COMMUNICATOR*	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
DTMF ACTVATION*	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
ACTIVATION CODE	731
ACTIVATION TIMEOUT	(60 SEC)
ILOD MODULES*	0 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>
ANY LED BULBS USED*	NO <input type="checkbox"/> YES <input checked="" type="checkbox"/>
AUTO INSPECTIONS*	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
BELL SENSORS*	0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/>
BELL SENSOR TSS 1*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL SENSOR TSS 2*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL SENSOR TSS 3*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL SENSOR TSS 4*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL SENSOR TSS 5*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL SENSOR TSS 6*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL SENSOR TSS 7*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL SENSOR TSS 8*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
BELL ON*	GATES LOWERING <input checked="" type="checkbox"/> GATES MOVING <input type="checkbox"/> ALWAYS <input type="checkbox"/>
GFT'S	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
BATTERIES ON GFT1	1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/>
GATE TIP SENSORS*	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
RTU	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
VHF VOICE CHANNEL	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/>
VHF DATA CHANNEL	1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/>
USE NON-CRITICAL FEATURE*	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>
FULL APPROACH MOVE ALARMS*	ACTIVATE <input checked="" type="checkbox"/> DO NOT ACTIVATE <input type="checkbox"/>
ENABLE PASSWORD	NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>

NOTES.

- OPTION AVAILABLE IF VHF COMMUNICATOR = YES  
LAST 3 DIGITS OF DOT NUMBER.
- OPTION AVAILABLE IF ILODS.
- OPTION AVAILABLE IF BELL SENSORS.
- OPTION AVAILABLE IF GATES.
- OPTION AVAILABLE IF VHF RADIO.
- ONLY YES IN SPECIAL CIRCUMSTANCES.
- SELECT "MENU" THEN "CONFIGURATION" FROM SEAR II  
INTERFACE KEYPAD TO ACCESS MODULE CONFIGURATION  
MENU.
- BATTERY BANKS\* = NUMBER OF BANKS EXCLUDING  
THE BANK APPLIED TO THE BAT MON SEAR INPUT
- YES ON INITIAL SETUP

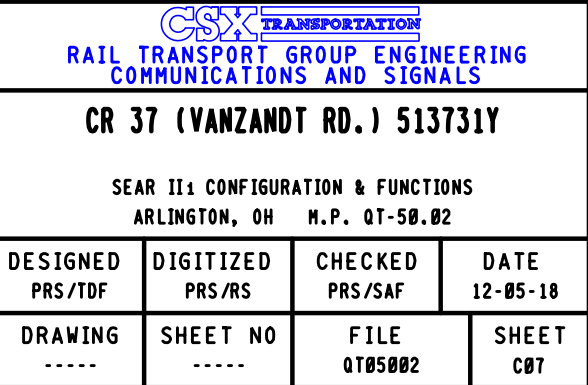


**PROGRESS**  
RAIL SERVICES  
A Caterpillar Company

DATE: 12/05/18  
CSX# 0H2018705  
PRS/TDF/SAF

**PRELIMINARY**

DESIGN DATE	REV. NO.	DRAWING	SHEET NO	FILE	SHEET
12-05-18	1	-----	-----	QT05002	C07



**CSX TRANSPORTATION**  
RAIL TRANSPORT GROUP ENGINEERING  
COMMUNICATIONS AND SIGNALS

**CR 37 (VANZANDT RD.) 513731Y**

SEAR II<sub>1</sub> CONFIGURATION & FUNCTIONS  
ARLINGTON, OH M.P. QT-50.02

DESIGNED PRS/TDF	DIGITIZED PRS/RS	CHECKED PRS/SAF	DATE 12-05-18
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SH. NO.	INDEX CONTENTS	REVISION NO.								
		1	2	3	4	5	6	7	8	9
I01	TITLE, NOTES, INDEX & REVISIONS	✓	✓							
S01	TRACK & SIGNAL PLAN	✓	✓							
P01	ELECTROLOGIXS PROGRAM	✓								
E01	POWER DISTRIBUTION (6'X6' HOUSE)	✓								
E02	ELECTROLOGIXS MODULE CONFIGURATION	✓								
E03	POWER DISTRIBUTION (XING HOUSE)	✓								
C01	ELECTROLOGIXS CIRCUITS	✓								
C02	ELECTROLOGIXS TRACK CIRCUITS	✓								
C03	SIGNAL LIGHTING CIRCUITS	✓								
C04	CROSSING DETECTION CIRCUITRY (XING HOUSE)	✓								
C05	DETECTION DEVICE PROGRAM 05CWU-1 (XING HOUSE)	✓								
C06	DETECTION DEVICE PROGRAM 05CWU-2 (XING HOUSE)	✓								
C07	CROSSING WARNING DEVICE (XING HOUSE)	✓								
C08	CROSSING WARNING DEVICE CIRCUITRY (XING HOUSE)	✓								
C09	RECORDER CIRCUITS (XING HOUSE)	✓								
C10	RECORDER PROGRAM (XING HOUSE)	✓								

 = DESIGN COMPLETED  
 = REVISION COMPLETED

PRELIMINARY

THIS PLAN DOES ☐ DOES NOT ☒  
SUPERSEDE PLAN DATED 08-15-13  
CSX PROJECT # 0H2013052



A Caterpillar Company

DATE: 12/05/18  
CSX #: 0H2018705  
PRS/TDF/SAF

OUT IN



A Caterpillar Company

DATE: 08/15/13  
CSX #: 0H2013052  
PRS/SAF/JTW

NEW WORK

REVISIONS				
REV. NO.	PROJECT NO.	DESIGN DATE	IN SERVICE DATE	REVISION DATE
1	0H2013052	08-15-13		

TO BE COMPLETED ON A.I.S.

2	0H2018705	12-05-18		
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TO BE COMPLETED ON A.I.S.

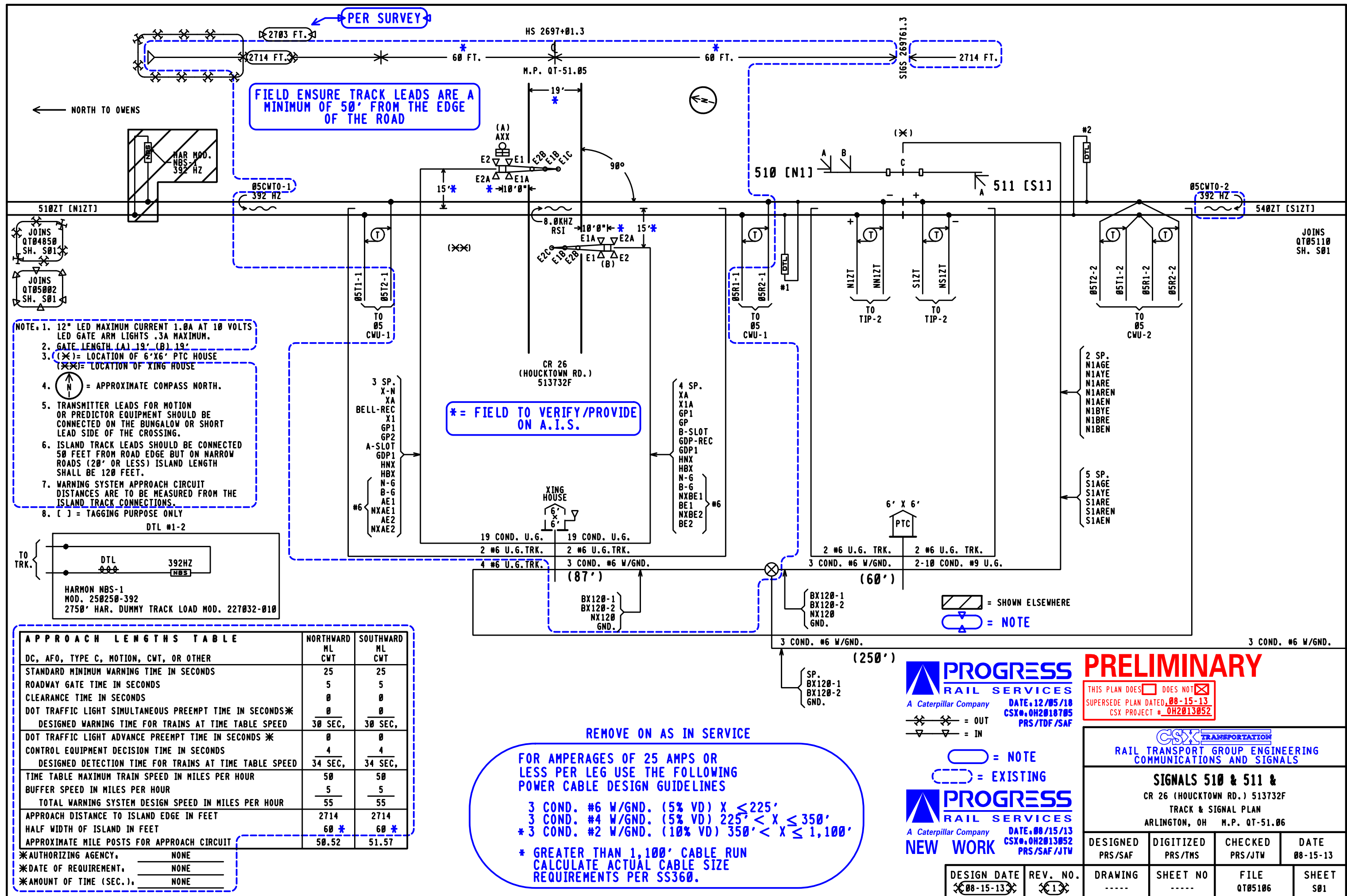
CSX TRANSPORTATION

RAIL TRANSPORT GROUP ENGINEERING  
COMMUNICATIONS AND SIGNALS

SIGNALS 510 & 511 &  
CR 26 (HOUCTOWN RD.) 513732F  
TITLE, NOTES, INDEX & REVISIONS  
ARLINGTON, OH H.P. QT-51.06

DESIGNED PRS/SAF	DIGITIZED PRS/TMS	CHECKED PRS/JTW	DATE 08-15-13
DRAWING -----	SHEET NO -----	FILE QT05106	SHEET 101

DESIGN DATE: 12-05-18 REV. NO.: 2





# OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223

John R. Kasich, Governor • James G. Bradley, Chairman

October 9, 2018

Amanda DeCesare  
Project Manager – Public Projects  
CSX Transportation  
500 Meijer Drive, Suite 305  
Florence, KY 41042

RE: Authorization for Plans and Estimates for Grade Crossing Warning Device Upgrade  
Hancock County, Vanzandt Rd.  
DOT# 513731Y  
PID# 108554

Dear Ms. DeCesare:

A diagnostic review was held at the above grade crossing on 5/18/2018. The crossing has been recommended for the installation of lights and gates.

CSX Transportation, Inc. is authorized to proceed with the design, site plans and cost estimates (PE) for this project. This authorization is made with the stipulation and understanding that any field work needs prior approval before work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

The ORDC is not requesting that the PUCO issue an Order at this time. When the ORDC receives the PE it will be evaluated and a construction-only Order will be requested from PUCO. Please submit the PE to ORDC within 90 days of receipt of this letter.

The diagnostic review form is attached. Please note any recommendations (page 5), if any, made by the team with regard to requirements for this location. Any minor roadway work necessary for MUTCD compliance should be incorporated into the PE and such costs will flow through the railroad reimbursement process

The ORDC Project Manager for this project is Don Damron. Don can be reached at 614-466-2509 (office), or 614-917-8466 (cell), or [don.damron@dot.state.oh.us](mailto:don.damron@dot.state.oh.us), if you have any questions.

Sincerely,

Donald J. Damron  
Project Manager

C: Randall Schumacher, Chief, Rail Division, PUCO  
Jill Henry, Rail Specialist, PUCO  
ORDC (file)

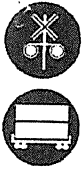
Attachments: Diagnostic Review Team Survey form dated 5/18/2018  
ORDC Letter Agreement dated 8/27/2018



[www.rail.ohio.gov](http://www.rail.ohio.gov)

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY



# OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223

John R. Kasich, Governor • Mark Policinski, ORDC Chairman

August 27, 2018

CSX Transportation  
Ms. Amanda DeCesare  
Project Manager – Public Projects  
500 Meijer Drive  
Suite 305  
Florence, KY 41042

Subject: Grade Crossing Warning Device Improvements  
Hancock County, TR 37/Vanzandt Road, DOT # 513731Y, PID 108554

Dear Ms. DeCesare:

A diagnostic review was conducted at the subject grade crossing on 5/18/2018. As a result of the review, the devices will be upgraded to automatic flashing lights and roadway gates.

This project shall be completed in compliance with Agreement No. 17427, dated May 3, 2013, entered into by the State of Ohio and CSX Transportation (CSX) and incorporated as if fully rewritten herein. This construction shall also meet the general terms and conditions under the Fixing America's Surface Transportation Act and subsequent amendments and the State of Ohio's Federally Funded Warning Device Program.

Preliminary engineering (PE) and construction costs shall be borne one hundred percent (100%) by ORDC. Reimbursable costs will be limited by the ORDC based on approved estimates and bid tabulations, if applicable. These limits will be quantified by the ORDC in its construction authorization to CSX and may be amended by the ORDC based on revised estimates and bid tabulations.

This Letter Agreement and the approved plans constitute the scope of the project. CSX shall notify ORDC in writing of any changes in the scope of work which are not in the approved plans and estimates and secure approval in writing of same before the work is performed.

PE will not be commenced by CSX prior to ORDC issuing a PE authorization. PE will be submitted by CSX to ORDC within ninety (90) days or other time specified by ORDC in the PE authorization. Construction will not be commenced by CSX prior to ORDC issuing a construction authorization. Construction will be completed by CSX within nine (9) months or other time specified in the time specified by ORDC in the construction authorization.

Please indicate your acceptance of the terms and conditions of this Letter Agreement by signing and returning one (1) copy to me at the address listed above and retain a copy for your files. This Agreement may be executed in one or more counterparts, each of which shall be deemed to be a duplicate original, but all of which taken together shall be deemed to constitute a single Agreement.

Sincerely,

Matthew Dietrich  
Executive Director



[www.rail.ohio.gov](http://www.rail.ohio.gov)

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

CSX Transportation:

By: Tony C. Bellamy  
Tony C. Bellamy  
Title: Director Project Management - Public Projects  
Date: 9/12/18

HAN TR37 Vanzandt RD 513731Y CSX PID 108554





## Diagnostic Review Team Survey

**Reason for Survey:**  
(e.g. formula, accident, constituent, etc.)

Stop Sign

**Date:** 5/18/2018

### Location Data

Street or Road Name: Vanzandt Road

Route/Road Number  
(i.e. Twp., Co., SR or US) TR 37

US DOT No.: 513731Y

County: HAN

Township:

City:  
(In or Near)

Near Arlington

Railroad  
Name: CSX Transportation

Railroad  
Division: Chicago

Branch/Line  
Name: Toledo

Nearest RR  
Timetable Station: Arlington

RR Milepost: 50.02

### On-Site Review Team

(Include: Name – Organization – Phone Number – Email)

1. DON DAMRON, ORDC, 614-917-8466, don.damron@dot.ohio.gov
2. Rick Stacy Twp Trustee 419-721-4071 dw6510@yahoo.com
3. Jersey Gibson PWC 419 234-8416 jersey.gibson@pwc.oh.us
4. Dale Cornwell Twp Trustee 419-721-2460 dcornwell56@gmail.com
5. Steve Dickinson CSX 419 344 6794 stephen\_dickinson@CSX.com
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \*NO CSX REPRESENTATION (ARRIVED AT 10:45 AM)

### Existing Traffic Control Devices

Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
'Stop' Signs	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	STOP SIGNS ON XBUCK POST
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Pavement Markings (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Number of Tracks Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Inventory Tags	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Cantilever Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number:
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

**Safety Data (Obtain crash reports, if possible, prior to review)**

	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	0	
Hazard Ranking	2708	Date Run: 3/31/2018 <i>1347 5/30/18</i>

**Railroad Data**

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	6	<i>12-15 / DAY</i>
< 1 per day		
Day thru trains	1	<i>3</i>
Night thru trains	4	<i>7</i>
Daytime switching movements	1	<i>1</i>
Nighttime switching movements		<i>FRA database</i>
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks		
Maximum train speed	50	<i>50 MPH OK</i>
Typical train speed	50	<i>OK</i>
Amtrak		

If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) ☒ Yes ☐ No

If multiple tracks, can two trains occupy crossing at the same time? ☐ Yes ☒ No

Can one train block the motorists' view of another train at crossing? ☐ Yes (Explain below) ☒ No

Can one or more tracks be eliminated through the crossing? ☐ Yes ☒ No

Are there other track(s) crossing this same roadway within 100 ft of this crossing? ☐ Yes ☒ No

If yes, Crossing DOT #(if different) \_\_\_\_\_

If yes, distance \_\_\_\_\_ (take measurement between track centerlines at closest point along roadway)

**Roadway Data**

Local Highway Authority: Hancock County

Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	132 (2007) <i>MAY BE LOW</i>	<i>USED AS OUT-THROUGH TO 180<sup>OR</sup></i>
Highway paved	X Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: <input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____		
Roadway width: <i>18</i> ft.		
Number of highway lanes	2	
Urban or Rural	Rural	
Vehicle Speed: <i>55</i> MPH		
School Bus Operation: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <i>2</i> Amount <i>AT LEAST 1 AM / 1 PM</i>		
Hazardous Materials Trucks: <input type="checkbox"/> No X Yes <i>.05</i> Amount		
Shoulders: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is the shoulder surfaced? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is there existing guardrail along roadway in crossing vicinity? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is stopping site distance adequate? (See Table 2) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, deficient approach(es) _____		



Quadrant <u>SW</u> Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None	Quadrant <u>NE</u> Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None
---	---

Pedestrians: ☒ No    ☐ Yes  
 Is sidewalk present? ☒ No    ☐ Yes  
 Is there a nearby intersection that could cause queuing over the crossing? ☒ No    ☐ Yes  
 If yes,  
 Distance \_\_\_\_\_  
 Is this intersection signalized? ☒ No    ☐ Yes  
 Are the signals currently interconnected with the existing crossing warning devices? ☒ No    ☐ Yes  
 Is there a 'Do not Stop on Track' sign? ☒ No    ☐ Yes  
 Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? ☐ No    ☒ Yes "RESURFACE W CHIP/SEAL IN 2-3 YEARS"  
 If yes,  
 Improvement type RESURFACE    Lead Agency TWP    Timeline/completion - 2-3 YRS

Is it the consensus of the Diagnostic Review Team that this is a potential closure project: ☒ No    ☐ Yes  
 Explain reasons: SR 37 TO CORT RANSON NEEDED AS PART OF ROADWAY NETWORK

Type of Development	
<input checked="" type="checkbox"/> Open Space <input type="checkbox"/> Institutional <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Residential	Location of nearby schools: <u>SOUTH OF CROSSING</u> <u>HAROLD ARLINGTON SCHOOL DISTRICT</u>

Utility Information	
Is commercial power available? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Utility Provider (Company Name) <u>AEP/HANCOCK WOOD</u> Phone Number _____ Nearest Available Power Source <u>AT-SITE</u>	
What other utilities are present? (add locations to sketch) <input type="checkbox"/> Gas <input type="checkbox"/> Cable <input type="checkbox"/> Telephone <input checked="" type="checkbox"/> Fiber Optic Cable <input type="checkbox"/> Petroleum <input type="checkbox"/> Water <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Other _____	
Is(are) there potential utility conflict(s) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown Comments: <u>UG FIBER LOCATED IN NE + SW QUADS</u>	



## Potential Red Flags / Project Challenges

Traffic Signal Preemption (include traffic signal intersection name and LHA with jurisdiction over traffic signal, if known):

NA

Crossing Consolidation or Closure:

NA

Real Estate or ROW:

Roadway = ?  
RR = ?

Culverts / Drainage / Ballast Conditions:

NA

Roadway and/or Sidewalks:

NA

Circuitry (e.g. reaches out to other crossings, specific needs, etc.):

NA

Environmental:

NA

Other:

## Diagnostic Team Recommendations

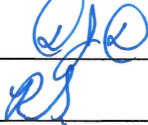
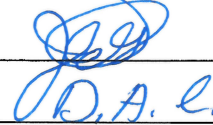

	Quadrants Needed
<input checked="" type="checkbox"/> Install/upgrade active devices	
<input type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input checked="" type="checkbox"/> AFLS / Gates	
<input type="checkbox"/> AFLS / Gates / Cants	
<input checked="" type="checkbox"/> Bells / number	
<input type="checkbox"/> Upgrade circuitry / type	
<input type="checkbox"/> Sidelights	
<input type="checkbox"/> Guardrail Needed	
<input type="checkbox"/> Install/Replace curb	
<input type="checkbox"/> Bungalow placement & offset from rail & highway	
<input type="checkbox"/> Other (define)	

Comments:

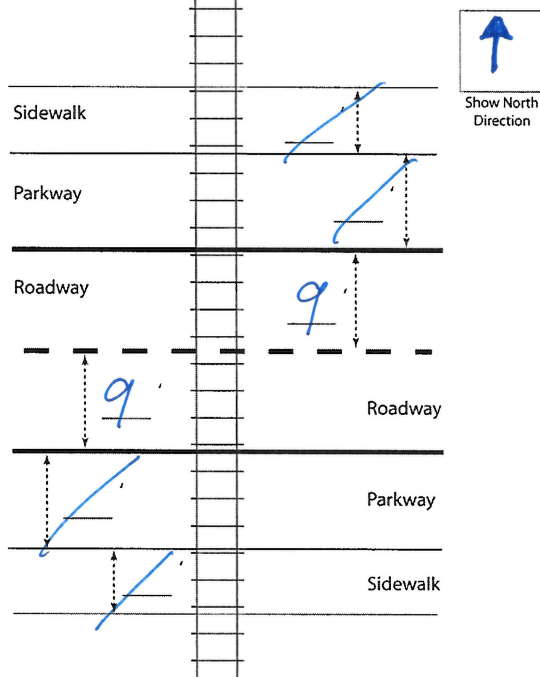
RE-RUN RANK W/ HIGHER TRAIN COUNT AND HIGHER ADT.  
TEAM RECOMMENDS UPGRADE TO FLASHING LIGHTS AND GATES

<input type="checkbox"/> Install/upgrade traffic signal preemption	
<input type="checkbox"/> No improvements needed	
<input type="checkbox"/> Other (define)	

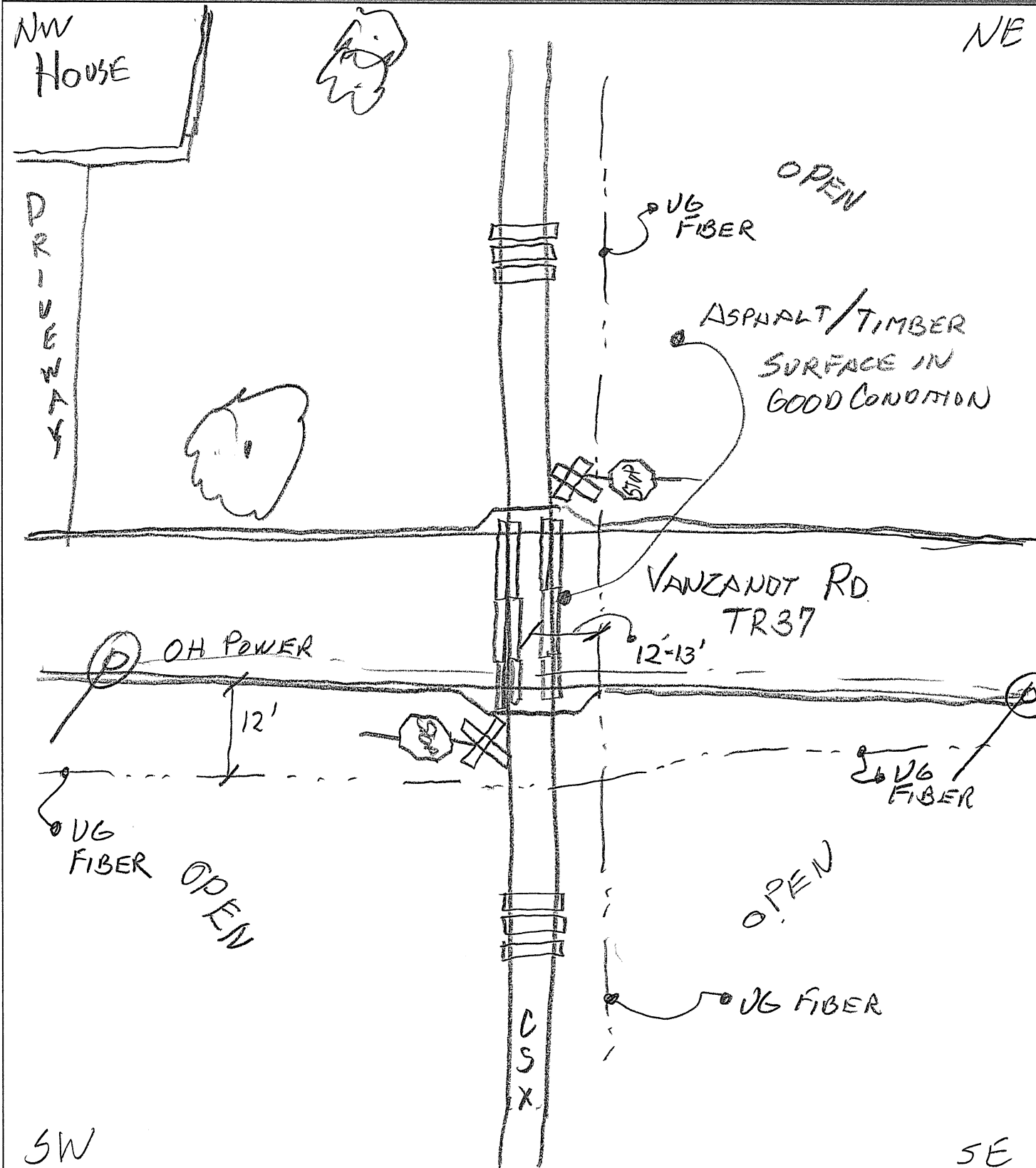
Acknowledgement of Recommendations (each entity represented at the diagnostic must have at least one signature acknowledgement):

## Field Dimensions

	
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## Field Sketch



Crossing Angle ☐ 0-29° ☐ 30-59° ☒ 60-90° Measured in SW Quadrant?

Sketch by: DJO

5-17-18

Table 1

## Clearing Sight Distances

Maximum Authorized Train Speed	Distance (dT) Along Railroad from Crossing (ft)
1 - 10	240
15	360
20	480
25	600
30	720
35	840
40	960
45	1080
50	1200
55	1320
60	1440
65	1560
70	1680
75	1800
80	1920
85	2040
90	2160

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

## Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers and level single track 90 degree crossings; and may need to be adjusted for multiple tracks, skewed crossings or approaches on grades.

Clearing Sight Distance is to be measured in each vehicle travel direction at non-gated crossings as viewed from a point 25 feet from centerline of nearest track in the center of whichever travel lane is nearest the direction along track being measured.

Table 2

## Stopping Sight Distances

Highway Vehicle Speed	Distance (dH) Along Roadway from Crossing (ft)
0	n/a
5	50
10	70
15	105
20	135
25	180
30	225
35	280
40	340
45	410
50	490
55	570
60	660
65	760
70	865

Source: R-H Grade Crossing Handbook Table 36 (pp. 132-133)

## Notes:

All calculated distances are rounded up to the next higher 5-foot increment.

Distances indicated are for 65-ft double bottom semi-tractor trailers on dry level pavements.

Stopping Sight Distance is to be measured on each roadway approach to crossing from stop bar.

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**3/18/2019 4:54:25 PM**

**in**

**Case No(s). 19-0653-RR-FED**

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices at the CSX Transportation Inc. Grade Crossing, DOT#513-731Y, on Vanzandt Rd/TR 37 in Hancock County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division