

Memo

To: Docketing Division

From: Jill Henry, Chief, Rail Division

Cc: PUCO Legal Department

Date: 3/23/2022

Re: PUCO Case No. 22-242-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 474-354D, at Timken Place in Stark County, Ohio.

On December 20, 2021, the Ohio Rail Development Commission (ORDC) authorized funding for Wheeling & Lake Erie Railroad (WE) to install lights and gates at Timken Place (DOT#474-354D) in Stark County, Ohio. The crossing was surveyed, on August 5, 2021, and was found to warrant the upgrade. The electric utility provider for this crossing is AEP-Ohio.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$264,869.42 have been approved. 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:

Wheeling & Lake Erie Railway Company
Tim Andrews
Signals & Communications Supervisor
100 E. First Street
Brewster, Ohio 44613

Ohio Rail Development Commission
Alan Bell
Manager, Grade Crossing Programs
1980 West Broad Street
Mail Stop #3140
Columbus, OH 43223

City of Canton, Stark County
City Engineer
2436 30th Street NE
Building A
Canton, OH 44702

AEP-Ohio

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

TO: John Williams, Transportation Director, PUCO
FROM: Allen Bell, Manager, Safety Section, ORDC
BY: James Tucker, Project Manager, ORDC JT
SUBJECT: Stark County, Timken Place, Wheeling & Lake Erie
DOT#474-354D, PID#114049
DATE: February 28, 2022

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on August 5, 2021. The Diagnostic Team recommended that the existing warning devices will be relocated if necessary and upgraded to flashing lights and roadway gates. Copies of the diagnostic review form and the plan and estimate are attached.

PE has already been provided by the railroad. ORDC approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above for nine months. This construction 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.

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
Letter Agreement
PE Authorization

c: Jill Henry, Rail Division Chief, PUCO
Heather Hamilton, ORDC
ORDC Project Manager (file)



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

February 28, 2022

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 East First Street
Brewster, OH 44613

RE: Grade Crossing Warning Device Improvements
Stark County, Timken Place, DOT#474-354D, PID#114049.

Dear: Mr. Andrews

The plan dated December 22, 2021, and estimate dated February 2, 2022, for the referenced project has been reviewed and is acceptable. The Wheeling & Lake Erie (WLE) may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan. 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. Reimbursement of eligible actual cost is limited to \$264,869.42. 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 but must be confirmed in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon WLE accepting the following instructions:

1. WLE's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to James Tucker, ORDC, email james.tucker@dot.ohio.gov, and to the Public Utilities Commission of Ohio, email jill.henry@puco.ohio.gov. WLE's 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. WLE 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 WLE. **If it is known that there are utilities that need to be relocated the WLE needs to start that coordination work as soon as possible in order to avoid project delays.**
3. WLE's project foremen will notify James Tucker at 614-398-6897 (telephone) or james.tucker@dot.ohio.gov (email) of any changes in the scope of work, cost overruns, material

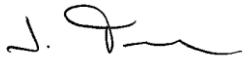


changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.

4. Open cut of roadways is *not permitted* except in unusual circumstances and must be coordinated with the local highway authority and preapproved by ORDC.
5. WLE shall send copies of each partial bill to ORDC.Invoice@dot.ohio.gov. Please find the enclosed Purchase Order to reference when billing.
6. WLE 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.
7. This installation will include any ancillary work to make the warning devices function as designed and meet MUTCD.

Thank you for your assistance with these matters.

Sincerely,



James Tucker
Project Manager

Attachment: ODOT P.O.

C: John Williams, Director, Transportation Department, PUCO
Jill Henry, Rail Division Chief, PUCO
Heather Hamilton, ORDC
ORDC (file)

WHEELING & LAKE ERIE RAILWAY COMPANY

Tim Andrews
Signal & Communication Supervisor
Tel. 330-767-7255

tandrews@wlerwy.com

100 East First Street
Brewster, OH 44613
Fax: 330-767-3213

February 2, 2022

Ohio Rail Development Commission
Mr. James Tucker
1980 West Broad Street, Room 2B
Columbus, OH 43223

Estimate for Railroad Crossing Warning System at Timken Place 474-354D

Dear Mr. Tucker,

I am providing this estimate for the crossing package and installation at Timken Place. Installation and ordering of material will be performed under our continuing construction agreement with Rio Tech. You will also see circuit changes due to the closure at 19th ST. This will allow for a more stable circuit.

Engineering Services/Labor, RioTech(breakout attached)	\$223,032.95
Preliminary Installation Services, Crosier (breakout attached)	\$26,436.47
Electric Service	\$4,500.00
WLE Direct Signal Labor	\$7,500.00
Galvanized signal foundations	\$3,400.00
 TOTAL	 \$264,869.42

Please contact me if additional details are required.

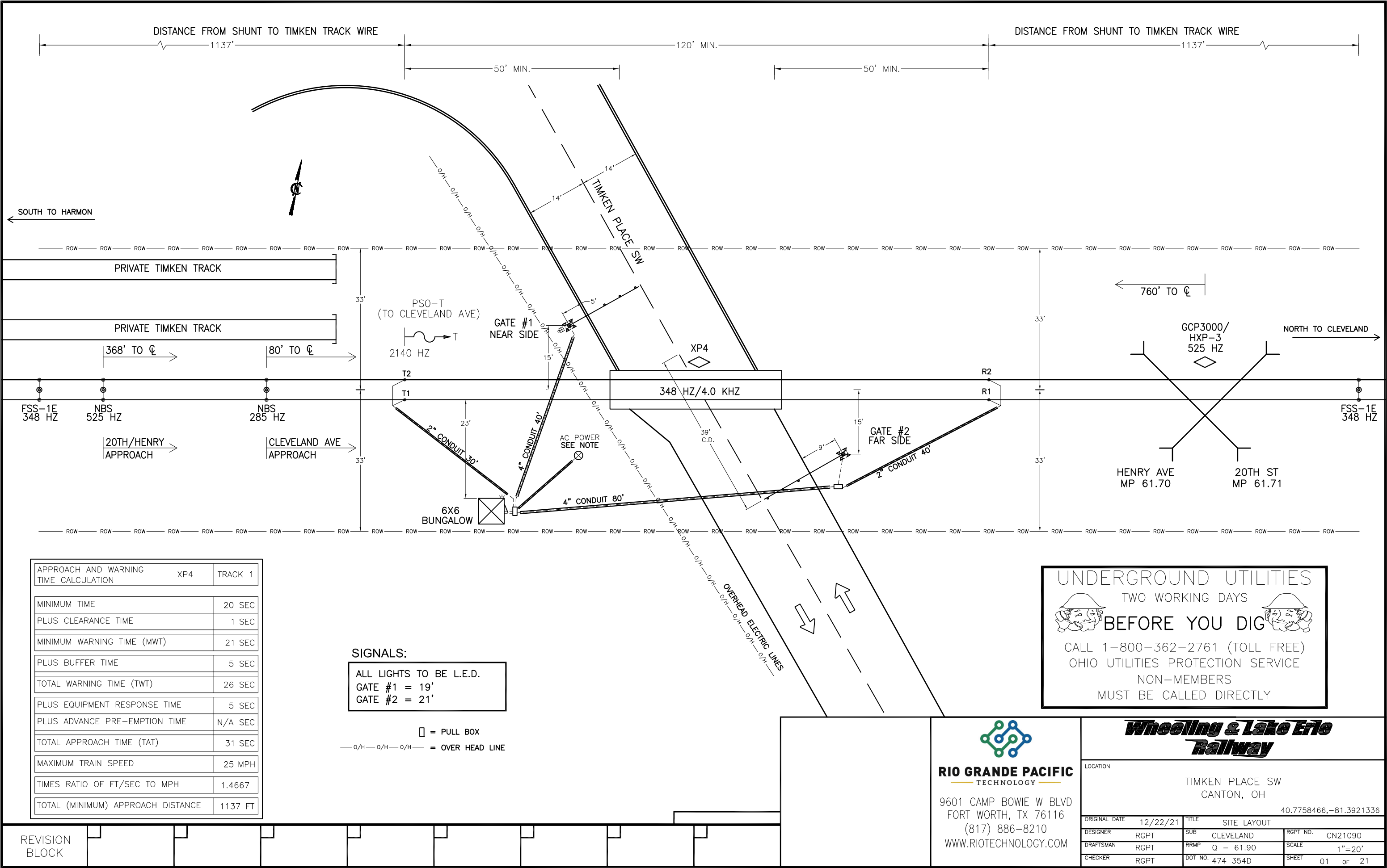
Respectfully,



Tim Andrews

Notes

1: Direct purchase from Fabricated Metals, 60' galvanized gate foundation,
\$1700.00 ea.



APPROACH AND WARNING TIME CALCULATION	XP4	TRACK 1
MINIMUM TIME	20 SEC	
PLUS CLEARANCE TIME	1 SEC	
MINIMUM WARNING TIME (MWT)	21 SEC	
PLUS BUFFER TIME	5 SEC	
TOTAL WARNING TIME (TWT)	26 SEC	
PLUS EQUIPMENT RESPONSE TIME	5 SEC	
PLUS ADVANCE PRE-EMPTION TIME	N/A SEC	
TOTAL APPROACH TIME (TAT)	31 SEC	
MAXIMUM TRAIN SPEED	25 MPH	
TIMES RATIO OF FT/SEC TO MPH	1.4667	
TOTAL (MINIMUM) APPROACH DISTANCE	1137 FT	

SIGNALS:

ALL LIGHTS TO BE L.E.D.
GATE #1 = 19'
GATE #2 = 21'

☐ = PULL BOX
— O/H — O/H — O/H — = OVER HEAD LINE

UNDERGROUND UTILITIES

TWO WORKING DAYS

BEFORE YOU DIG

CALL 1-800-362-2761 (TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE

NON-MEMBERS

MUST BE CALLED DIRECTLY



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Wheeling & Lake Erie
Railway

LOCATION

TIMKEN PLACE SW
CANTON, OH
40.7758466,-81.3921336

ORIGINAL DATE	12/22/21	TITLE	SITE LAYOUT
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	Q - 61.90
CHECKER	RGPT	DOT NO.	474 354D
		RGPT NO.	CN21090
		SCALE	1"=20'
		SHEET	01 of 21

CONSTRUCTION NOTES

- 1.) INSTALL NEW 6' X 6' BUNGALOW IN SOUTHWEST QUADRANT.
- 2.) INSTALL (2) NEW FLASHING LIGHTS WITH GATES.
- 3.) METER POLE LOCATION SHOWN ON THE PLAN IS SUBJECT TO CHANGE WITHIN RAILROAD RIGHT-OF-WAY IF UNDERGROUND OBSTRUCTIONS PREVENT THE INSTALLATION OF THE POLE IN THE LOCATION SHOWN.
- 4.) BUNGALOW AND SIGNAL LOCATIONS SHOWN ON THE PLAN ARE SUBJECT TO CHANGE WITHIN RAILROAD RIGHT-OF-WAY IF UNDERGROUND OBSTRUCTIONS PREVENT THE INSTALLATION OF THE BUNGALOW/SIGNALS IN THE LOCATION SHOWN.

PRELIMINARY



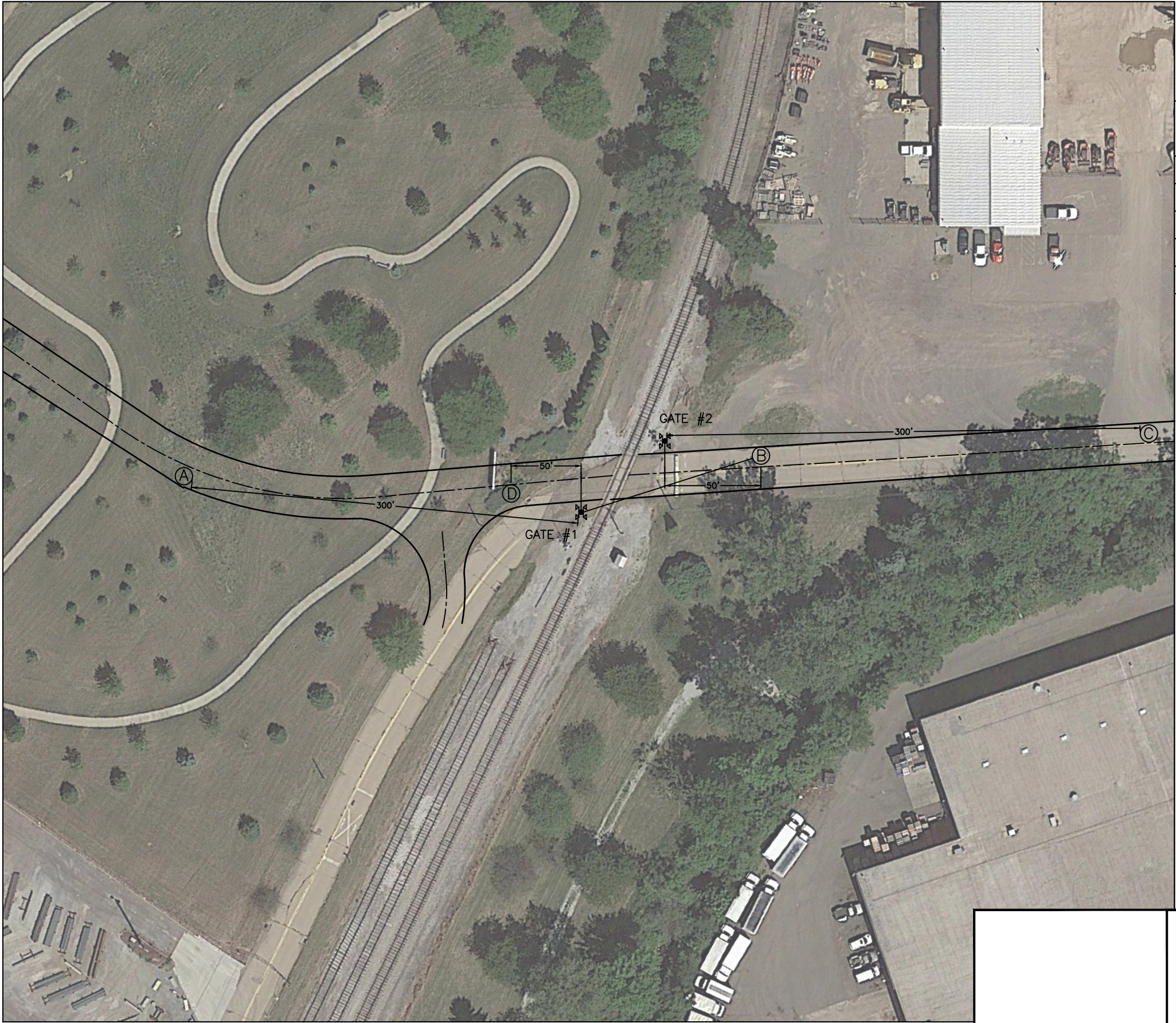
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Wheeling & Lake Erie Railway

LOCATION		TIMKEN PLACE SW CANTON, OH		40.7758466,-81.3921336
ORIGINAL DATE	12/22/21	TITLE		CONSTRUCTION NOTES
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO. CN21090
DRAFTSMAN	RGPT	RRMP	Q - 61.90	SCALE N.T.S.
CHECKER	RGPT	DOY NO.	474 354D	SHEET 01A OF 21

REVISION
BLOCK



CROSSING SIGNAL ALIGNMENT

LEGEND

Ⓐ	CANT #1 FRONT MAST LIGHTS
Ⓑ	GATE #1 BACK MAST LIGHTS
Ⓒ	GATE #2 FRONT MAST LIGHTS
Ⓓ	GATE #2 BACK MAST LIGHTS

ALIGNMENT

FRONT LIGHTS
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5FT. 6IN. ABOVE PAVEMENT AT SELECTED ALIGNMENT DISTANCE. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

ADJUST LIGHT UNIT HORIZONTALLY TO ALIGN AXIS OF BEAM TO CENTER OF APPROACH LANE IN APPROACH TO SIGNAL AT SELECTED ALIGNMENT DISTANCE, MAINTAINING VERTICAL ALIGNMENT. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

BACK LIGHTS
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5 FT. 6 IN. ABOVE PAVEMENT AT A POINT 50 FT. IN APPROACH TO THE SIGNAL ON OPPOSITE SIDE OF TRACK.

ADJUST LIGHT UNIT HORIZONTALLY TO ALIGN AXIS OF BEAM TO A POINT 50 FT. IN APPROACH TO THE SIGNAL ON OPPOSITE SIDE OF TRACK AND IN CENTER OF APPROACH TRAVEL WAY.



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Wheeling & Lake Erie
Railway

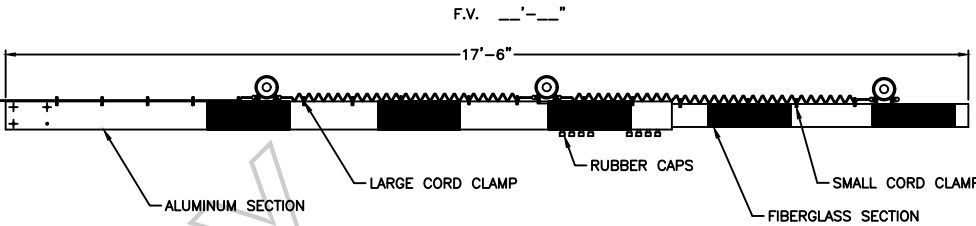
LOCATION			TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336		
ORIGINAL DATE	12/22/21	TITLE	CROSSING SIGNAL ALIGNMENT		
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN21090
DRAFTSMAN	RGPT	RRMP	Q - 61.90	SCALE	N.T.S.
CHECKER	RGPT	DOT NO.	474 354D	SHEET	02 of 21

REVISION
BLOCK

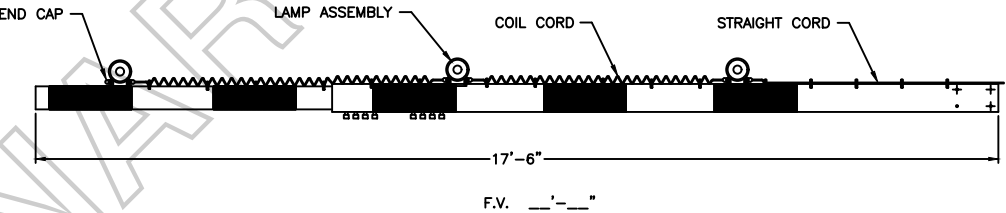
SITE LAYOUT NOTES

1.) CROSSING IS LOCATED: LATITUDE 40.7758466
 LONGITUDE -81.3921336

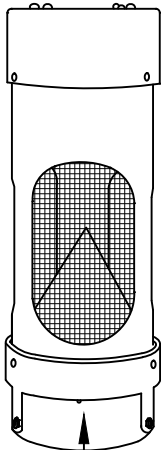
GATE #1



GATE #2



ELECTRONIC CROSSING BELL
GSI MODEL EB-3-360-5



THIS SIDE FACING
ROADWAY

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CHANGE FROM TYPICAL: N



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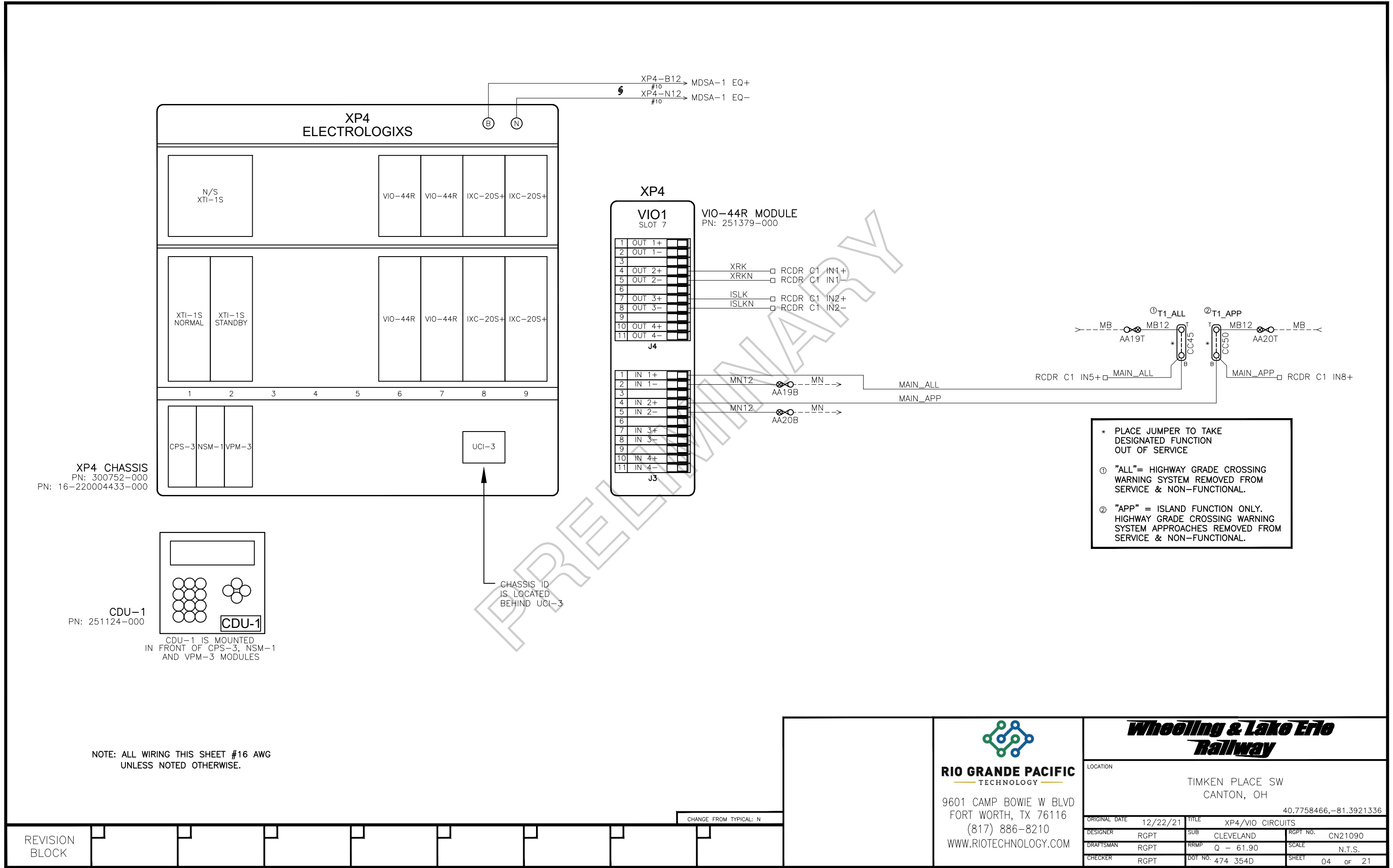
**Whoollng & Lake Erie
Railway**

LOCATION

TIMKEN PLACE SW
CANTON, OH

40.7758466,-81.3921336

ORIGINAL DATE	12/22/21	TITLE	SITE LAYOUT NOTES			
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN21090	
DRAFTSMAN	RGPT	RRMP	Q - 61.90	SCALE	N.T.S.	
CHECKER	RGPT	DOT NO.	474 354D	SHEET	03	OF 21



ADJUSTMENT NAME		MDR1				MDR2			
NAME		HIGHWAY CROSSING				HIGHWAY CROSSING			
WARNING TIME		26 SEC				25 SEC			
CW/MD		CW				CW			
AP TIME		00 SEC				00 SEC			
CWE-WT		00 SEC				00 SEC			
AUX RECOVERY DELAY		05 SEC				05 SEC			
		TK1	TK2	TK3	TK4	TK1	TK2	TK3	TK4
TRACK ASSIGNED		ASSIGN				ASSIGN			
OFFSET DISTANCE		0 FT				0 FT			
MD RESTART		*				*			
SUDDEN SHUNT ZONE		*				*			
POSITIVE START	PSEN	DISABLE				DISABLE			
	PSRX	NA				NA			
	PST	NA				NA			
POST JOINT DETECT	PJEN	DISABLE				DISABLE			
	PJRX	NA				NA			
	PJDT	NA				NA			

BASIC TRACK SETUP				
	TK1	TK2	TK3	TK4
FREQUENCY	348			
MASTER/SLAVE	MASTER			
RX ADJUST	100			
TCA	*			
DIRECTION MODE	BI			
LIA	*			
ADVANCED APR. CAL	INACTIVE			
NBS COMP RX	*			
TRK ISLAND ASSIGN	ISL1			
APPROACH LENGTH	1137 FT			
AUTO RX	ENABLE			

IXC SETUP				
CROSSING TEST MODE	OFF			
FLASH RATE	55FPM			
	IXC-1	IXC-2	IXC-3	IXC-4
VOLTAGE REGULATION	ON			
L1 VOLTAGE	* 10.0			
L2 VOLTAGE	* 10.0			
GATE 1 DELAY	3 SEC			
GATE 2 DELAY	3 SEC			

ADVANCED TRACK SETUP				
	TK1	TK2	TK3	TK4
MOTION DET TIMER	MDEN	DISABLE		
	MDTT	10 MIN		
FALSE SHUNT	FSEN	DISABLE		
	FSRX	NA		
	FST	NA		
APPROACH RELEASE	AREN	DISABLE		
	ARRX	NA		
	ART	NA		
LOS TIME		16 SEC		
IJ-LOS TIME		5 SEC		
NRML_SHHTR_VRSHRT		NRML *		

ISLAND SETUP				
	TK1	TK2	TK3	TK4
ENABLE/DISABLE	ENABLE			
FREQUENCY	4.0 KHZ			
LOSS OF SHUNT	4 SEC			
FAULT DELAY	1			

APPROACH 1 (EAST)		NO SHUNT		100% SHUNT		50% SHUNT			LIA ADDED
		RX	PHASE	RX	PHASE		RX	PHASE	± 1 to ±9
Track 1	Normal								
	Standby								
Track 2	Normal								
	Standby								
APPROACH 2 (WEST)									
Track 1	Normal								
	Standby								
Track 2	Normal								
	Standby								

INITIAL VALUES WHEN PLACED IN SERVICE

APPLICATION SOFTWARE INFORMATION	
NAME	*
REV.	1
CHECKSUM	*
CRC	*
CHASSIS ID	*
LOCATED BEHIND UCI-3	CHASSIS ID
	1 2 3 4 5 6 7 8 ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ ⓪ □ □ □ □ □ □ □ □

- ⓪ = TAB INTACT
● = TAB PUNCHED OUT

EXECUTIVE INFORMATION		
VPM-3	VERSION	PART NUMBER
CROSSING SOFTWARE	*	083024-726

NOTES:
* = FIELD ADJUSTMENT
NA = NOT APPLICABLE

CHANGE FROM TYPICAL: Y

REVISION
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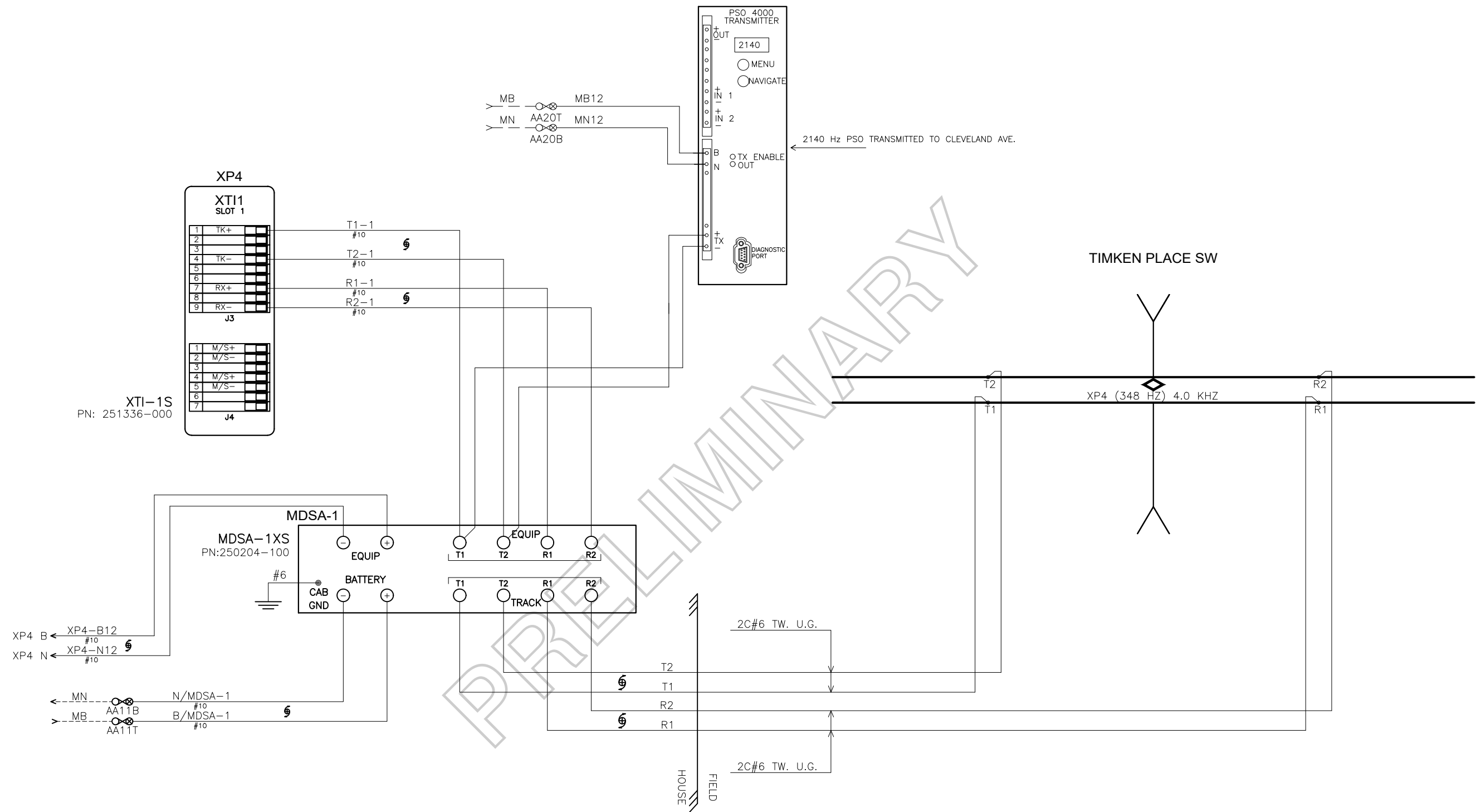


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Railway**

LOCATION			TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336		
ORIGINAL DATE	12/22/21	TITLE	XP4 SETUP SHEET		
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN21090
DRAFTSMAN	RGPT	RRMP	Q - 61.90	SCALE	N.T.S.
CHECKER	RGPT	DOT NO.	474 354D	SHEET	05 of 21



REVISION
BLOCK

CHANGE FROM TYPICAL: Y

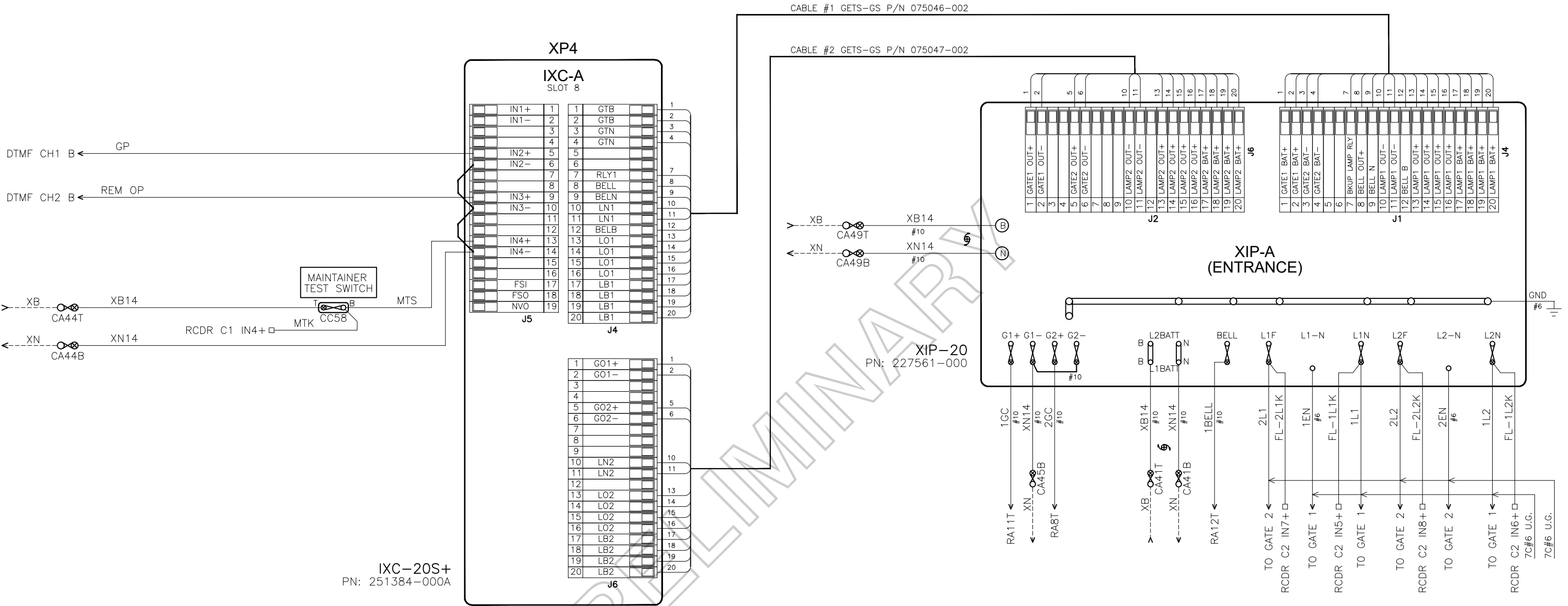


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LOCATION TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336			
ORIGINAL DATE	12/22/21	TITLE	TRACK CONNECTION CIRCUITS
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	Q - 61.90
CHECKER	RGPT	DOT NO.	474 354D
		RGPT NO.	CN21090
		SCALE	N.T.S.
		SHEET	06 of 21



NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

REVISION
BLOCK

CHANGE FROM TYPICAL: N



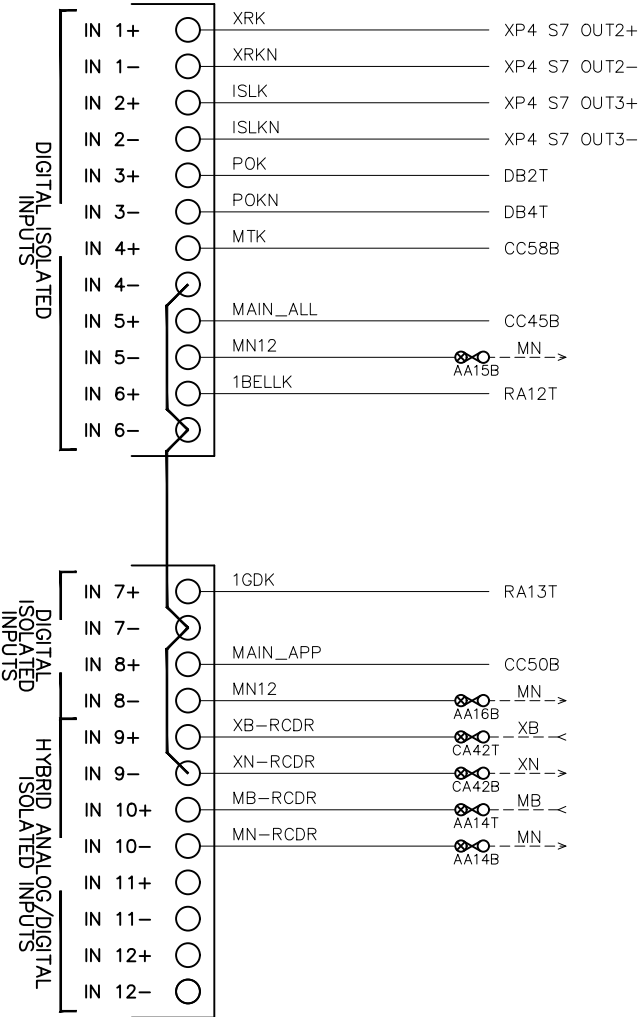
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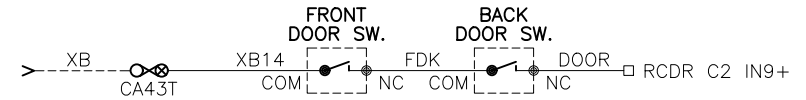
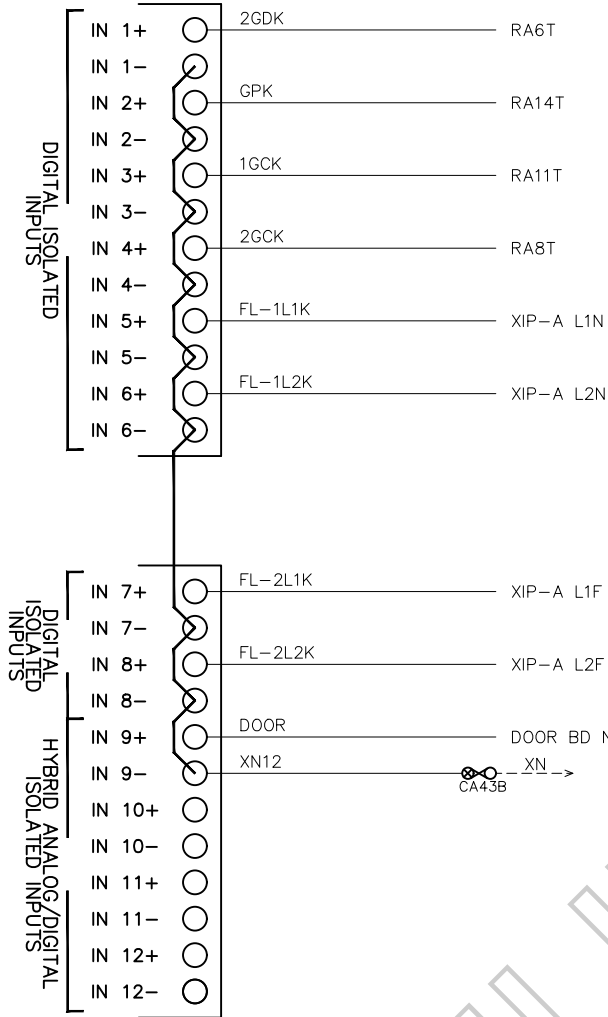
Whooling & Lake Erie
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LOCATION			TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336		
ORIGINAL DATE	12/22/21	TITLE	ENTRANCE GATE CONTROL CIRCUIT		
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN21090
DRAFTSMAN	RGPT	RRMP	Q - 61.90	SCALE	N.T.S.
CHECKER	RGPT	DOT NO.	474 354D	SHEET	07 of 21

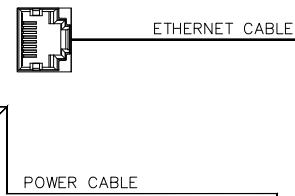
C1



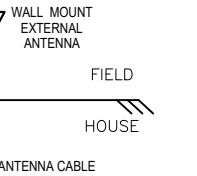
C2



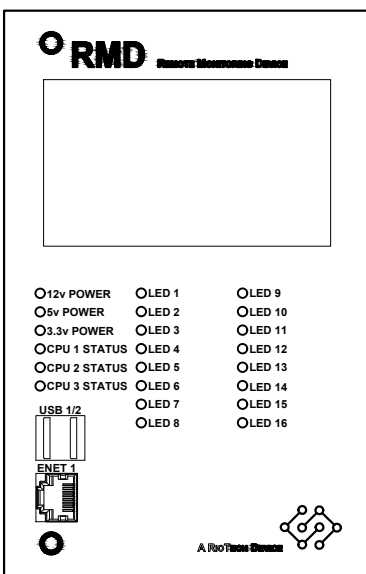
RMD ENET 2



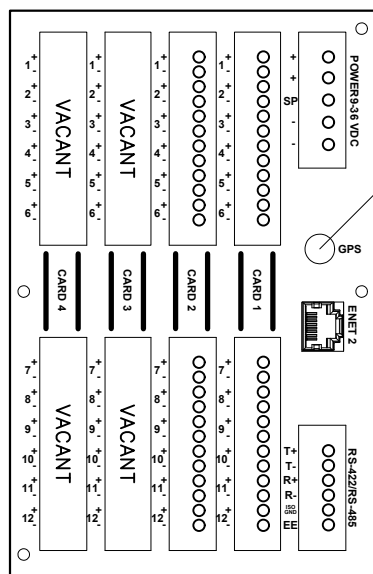
Wilson Electronics
4G Omni Plus Antenna
PN: 304422-5810



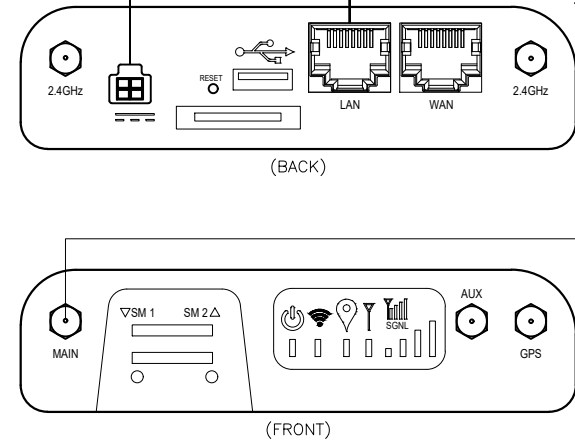
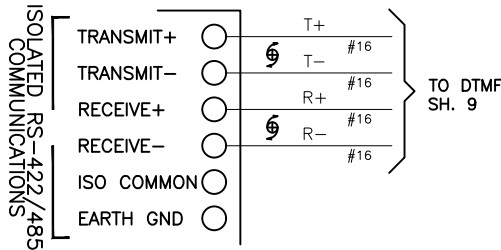
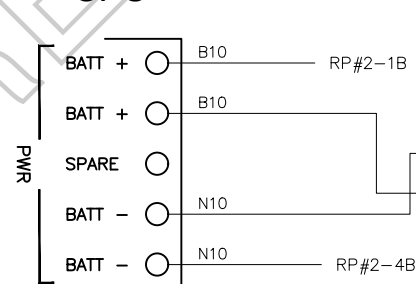
FRONT PANEL



BACK PANEL



CPU



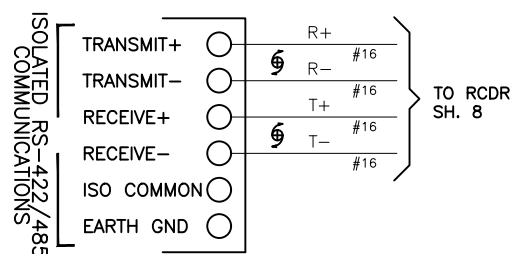
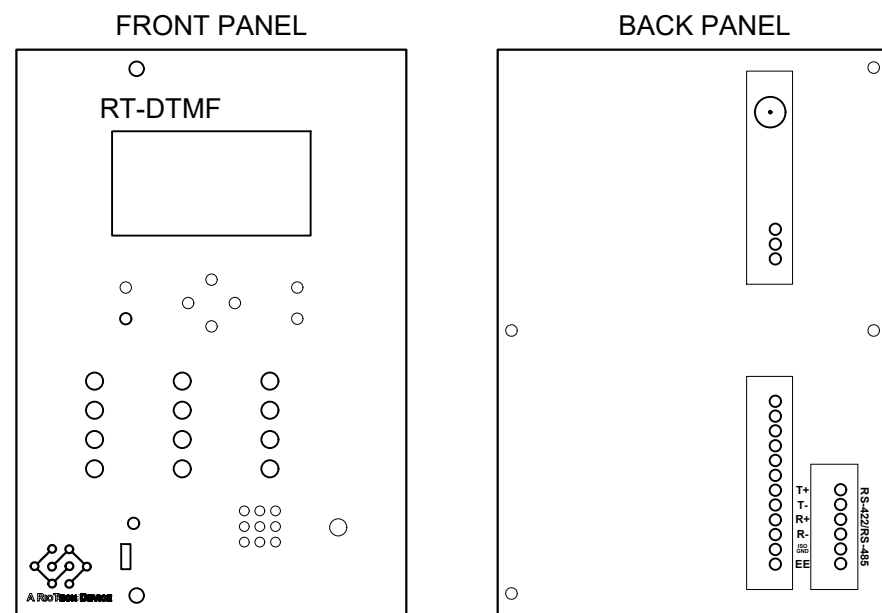
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Whooling & Lake Erie
Railway

LOCATION			
TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336			
ORIGINAL DATE	12/22/21	TITLE	RECORDER
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	Q - 61.90
CHECKER	RGPT	DOT NO.	474 354D
		RGPT NO.	CN21090
		SCALE	N.T.S.
		SHEET	08 of 21

REVISION
BLOCK

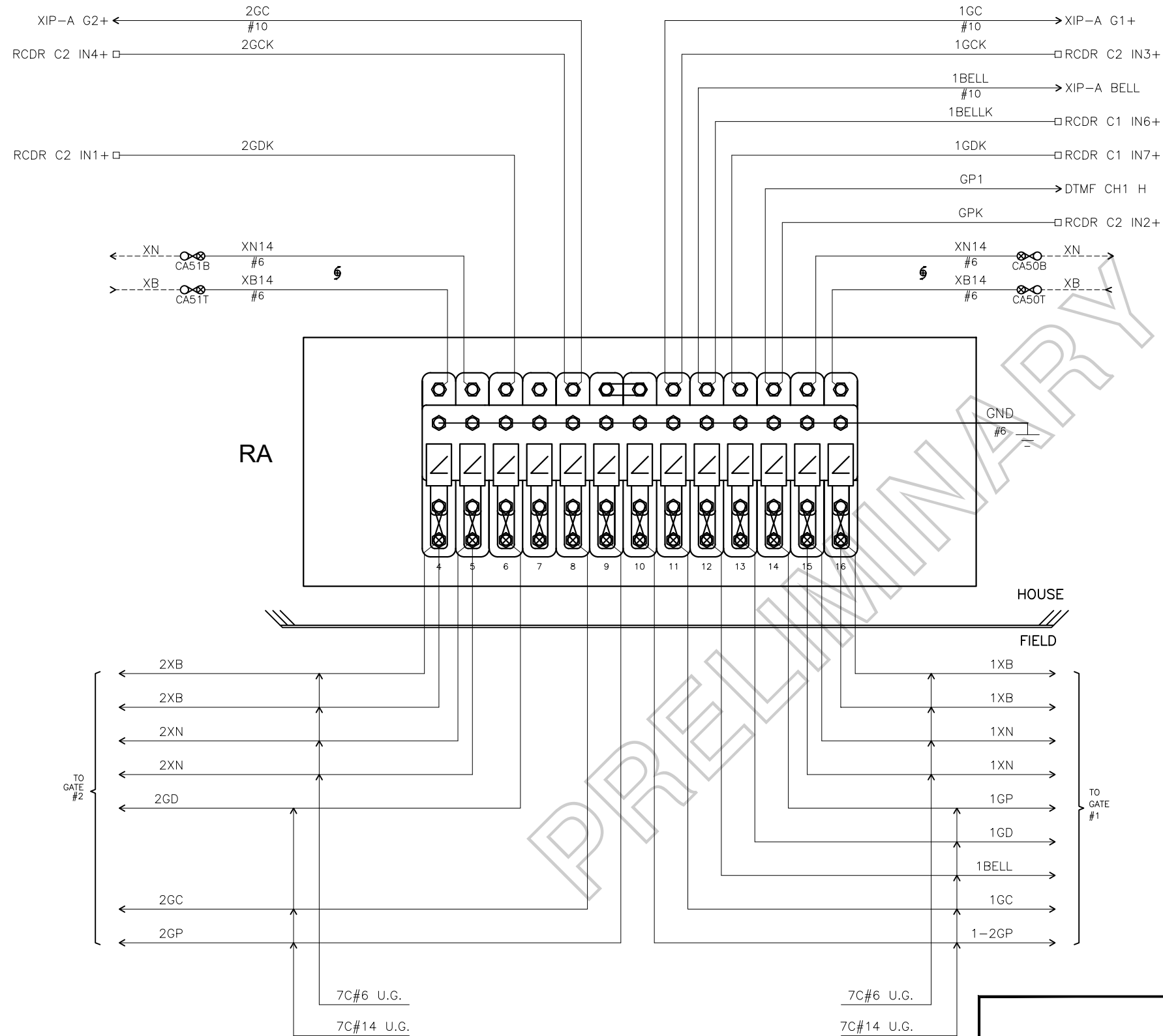


DTMF CONTROLS				
	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4
ACTIVATION CODE	5781#	578#		
DEACTIVATION CODE	5781*	578*		
DTMF RECEIVE DEBOUNCE TIME	25 MS			
RECIEVE TIMEOUT	5000 MS			

CHANNEL SETTINGS				
	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4
CHANNEL TIMEOUT	2 min	2 min		
CHANNEL INVERT	NO	NO	NO	NO

PLAYBACK SETTINGS				
	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4
ACTIVATION RESPONSE	CHANNEL 1 ACTIVE	CHANNEL 2 ACTIVE	CHANNEL 3 ACTIVE	CHANNEL 4 ACTIVE
DEACTIVATION RESPONSE	CHANNEL 1 INACTIVE	CHANNEL 2 INACTIVE	CHANNEL 3 INACTIVE	CHANNEL 4 INACTIVE
TIMEOUT RESPONSE	CHANNEL 1 TIMEOUT	CHANNEL 2 TIMEOUT	CHANNEL 3 TIMEOUT	CHANNEL 4 TIMEOUT
AUDIO RESPONSE TIME	500 MS			
FORCE AUDIO RESPONSE TIME	1000 MS			

RADIO SETTINGS	
FREQUENCY	161.250 MHz
TX POWER	6
SQUELCH ON	-74.3
SQUELCH OFF	-74.3
AAR CHANNEL	76



NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

CHANGE FROM TYPICAL: N

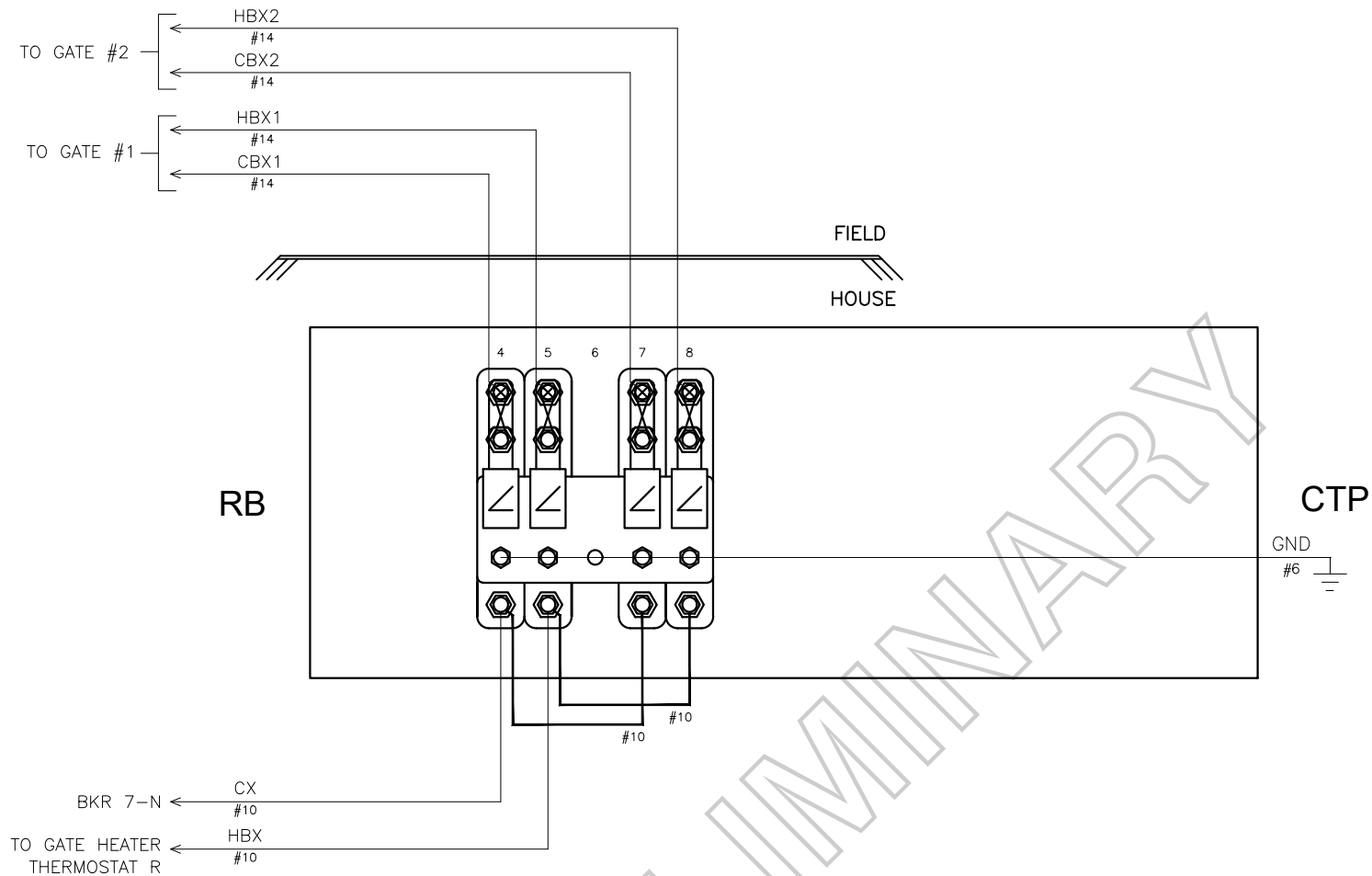
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WWW.RIOTECHNOLOGY.COM

Whooling & Lake Erie
Railway

LOCATION TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336			
ORIGINAL DATE	12/22/21	TITLE	ARRESTOR PANEL
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	Q - 61.90
CHECKER	RGPT	DOT NO.	474 354D
		RGPT NO.	CN21090
		SCALE	N.T.S.
		SHEET	10 of 21



LEGEND:

 = INSULATED NUT

NOTES: ALL WIRING THIS SHEET #16 AWG
UNLESS NOTED OTHERWISE.

CHANGE FROM TYPICAL: N

REVISION
BLOCK



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Whooling & Lake Erie
Railway

LOCATION			TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336		
ORIGINAL DATE	12/22/21	TITLE	CABLE TERMINATION PANEL		
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN21090
DRAFTSMAN	RGPT	RRMP	Q - 61.90	SCALE	N.T.S.
CHECKER	RGPT	DOT NO.	474 354D	SHEET	11 of 21

CONTACT	CLOSED	FUNCTION	TENSION
1B	75-90 DEG.	POWER DOWN	18-28 OZ.
1F	0-70 DEG.	SNUB DOWN	18-28 OZ.
2	0-86 DEG.	POWER UP	18-28 OZ.
3	0-10 DEG.	GATE DOWN	16-24 OZ.
4	82-90 DEG.	GATE CLEAR	16-24 OZ.
5	10-90 DEG.	BELL	16-24 OZ.
6	SPARE	SPARE	16-24 OZ.
7	0-2 DEG.	SNUB	16-24 OZ.

LEGEND:

 = INSULATED NUT

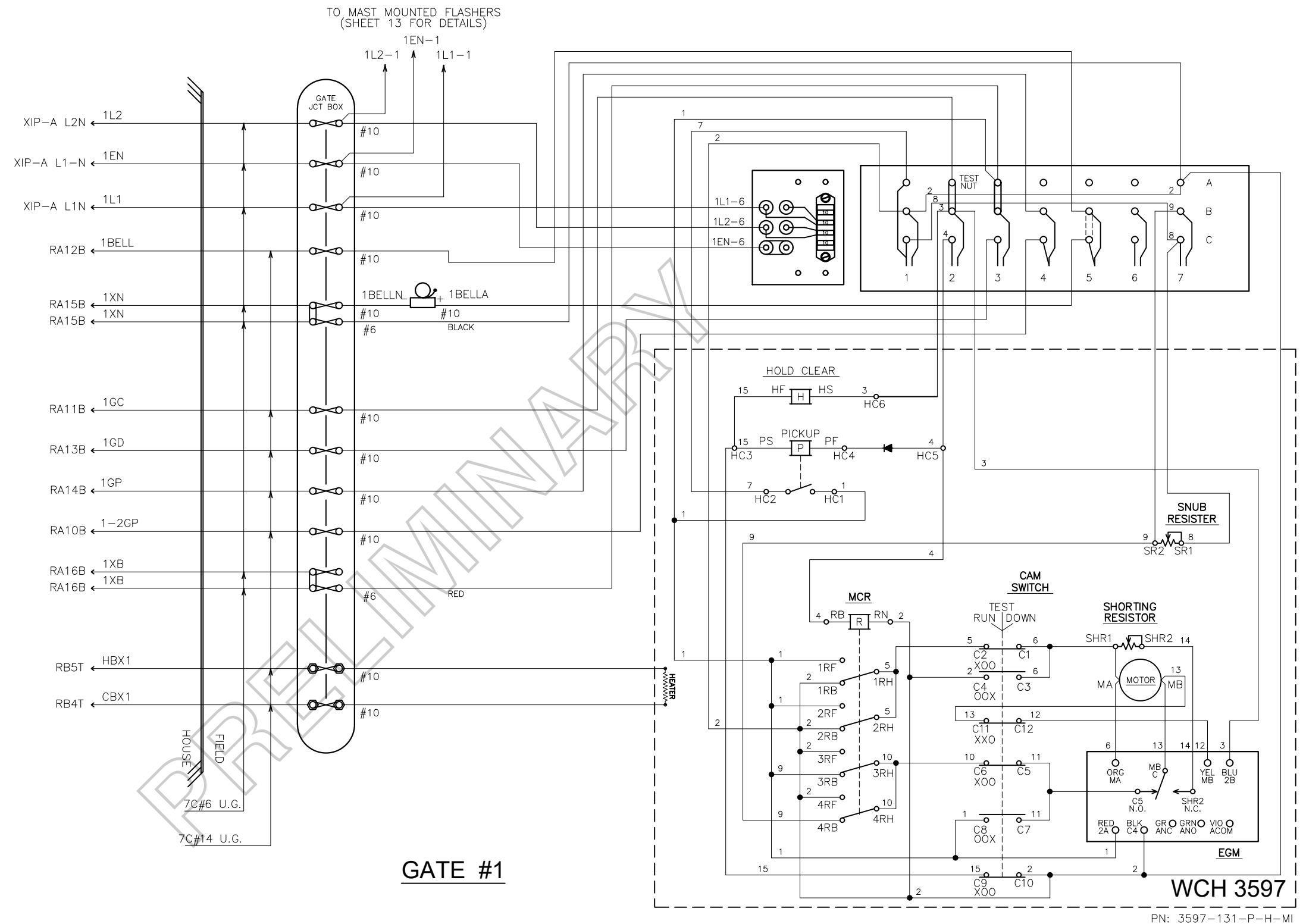
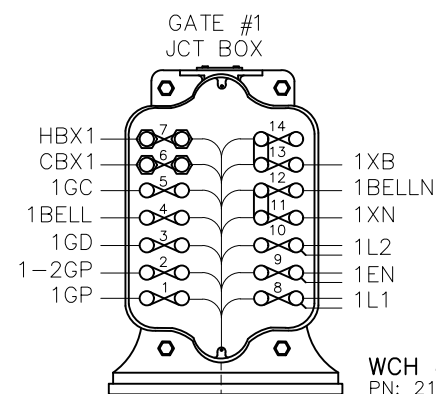
NOTES:

* BELL TO BE ELECTRONIC.

 = INTERNAL GATE WIRES THAT SHARE ELECTRICAL CONNECTIONS WITH OTHER WIRES THAT ARE ASSIGNED THE SAME NUMBER.

REFER TO SHEET 13 FOR GATE
ARM LIGHT WIRING

ADD BOLD STRAPS AND JUMPERS
AS SHOWN.



PN: 3597-131-P-H-MI

REVISION
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CHANGE FROM TYPICAL: N



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Wheeling & Lake Erie Railway

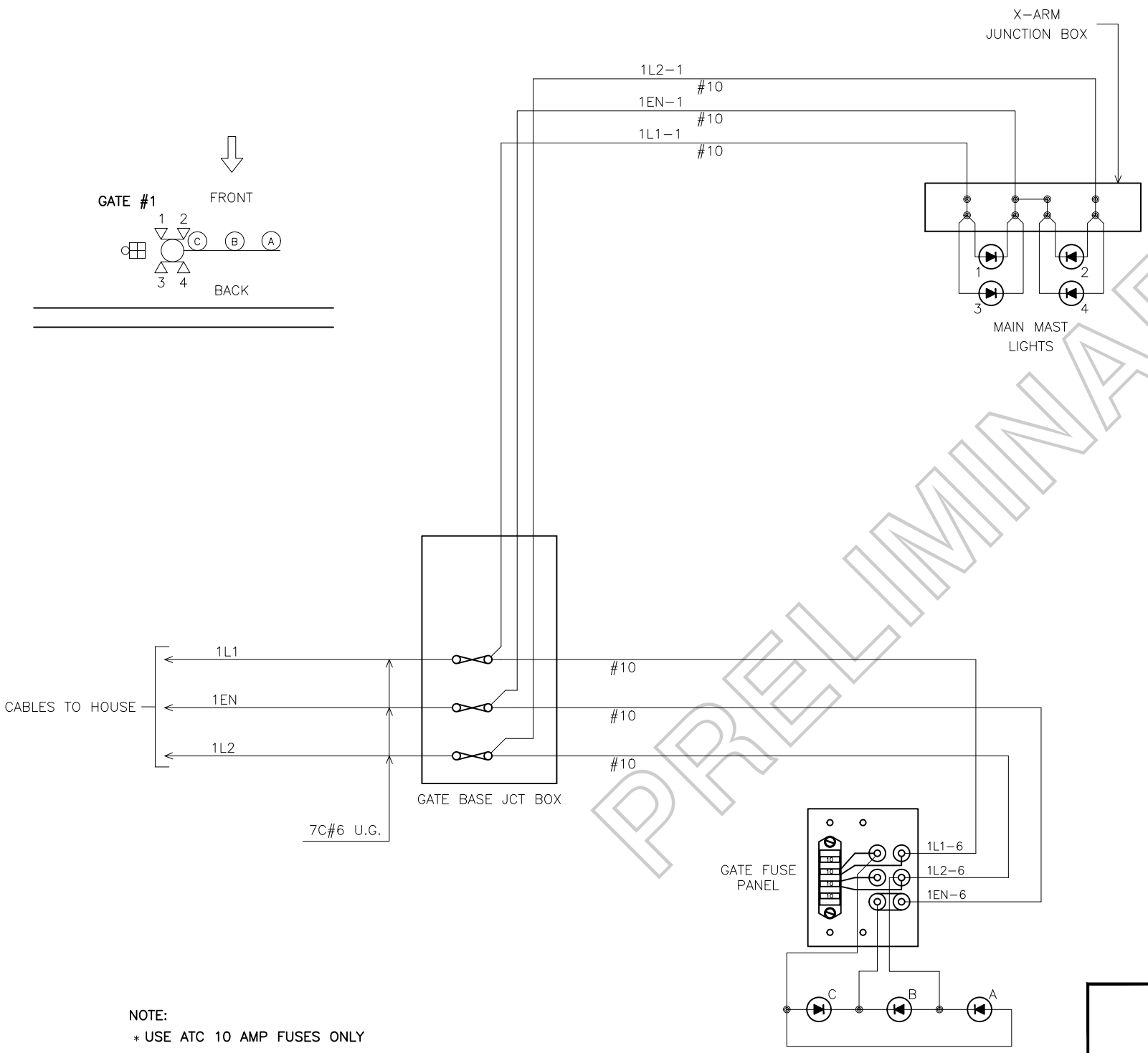
LOCATION

TIMKEN PLACE SW
CANTON, OH

40.7758466,-81.3921336

ORIGINAL DATE	12/22/21	TITLE	
DESIGNER	RGPT	GATE #1 MECHANISM (NEAR SIDE)	
DRAFTSMAN	RGPT	SUB CLEVELAND	RGPT NO. CN21090
CHECKER	RGPT	RRMP Q - 61.90	SCALE N.T.S.
		DOT NO. 474 354D	SHEET 12 OF 21

GATE #1



NOTE:
* USE ATC 10 AMP FUSES ONLY
◀ IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

CHANGE FROM TYPICAL: Y

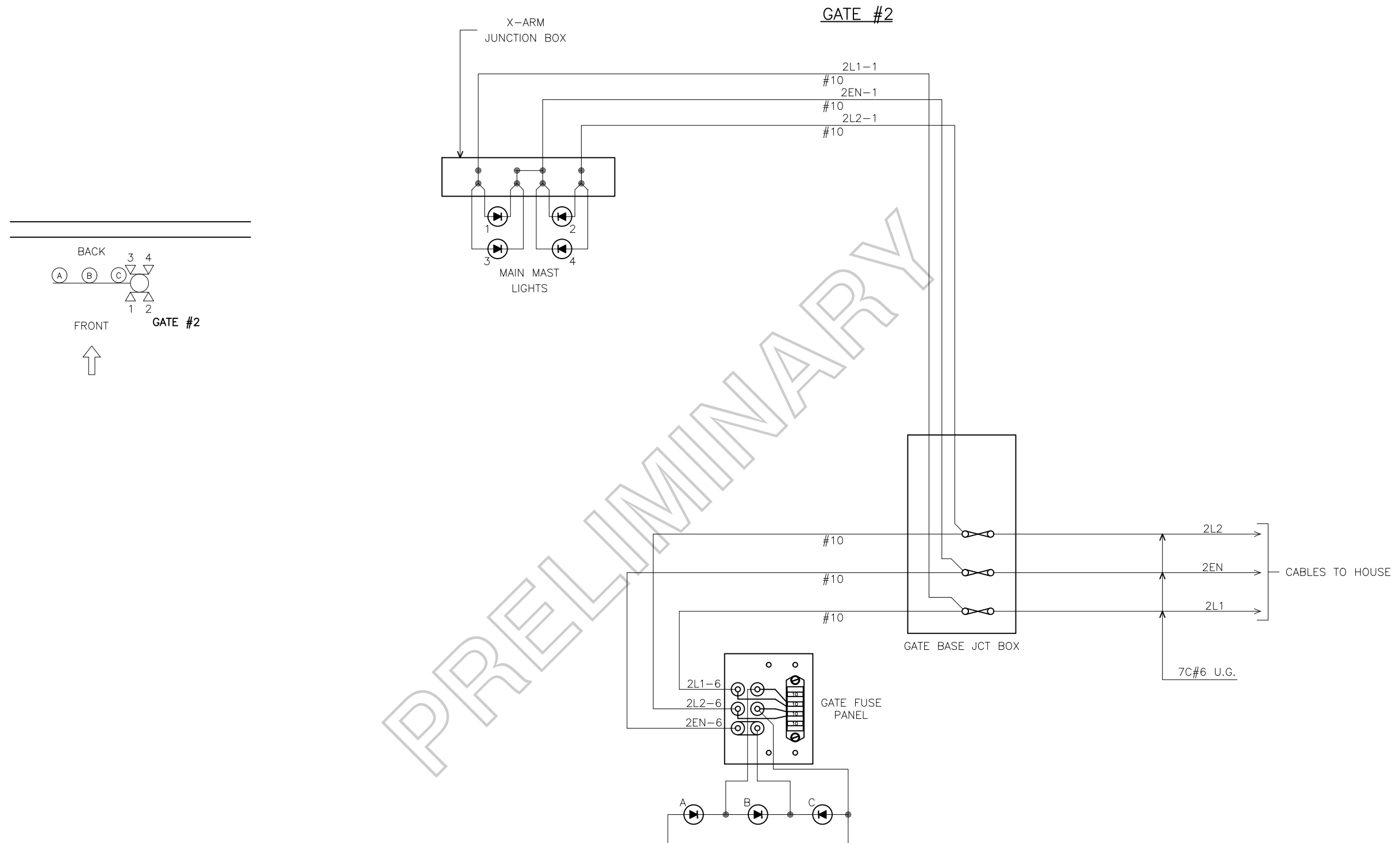
REVISION
BLOCK

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Whooling & Lake Erie
Railway

LOCATION TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336			
ORIGINAL DATE	12/22/21	TITLE	GATE #1 LIGHTS (NEAR SIDE)
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	Q - 61.90
CHECKER	RGPT	DOT NO.	474 354D
		RGPT NO.	CN21090
		SCALE	N.T.S.
		SHEET	13 of 21



NOTE:
* USE ATC 10 AMP FUSES ONLY

IS LED SYMBOL ONLY. INSTALL ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

REVISION
BLOCK

CHANGE FROM TYPICAL: Y

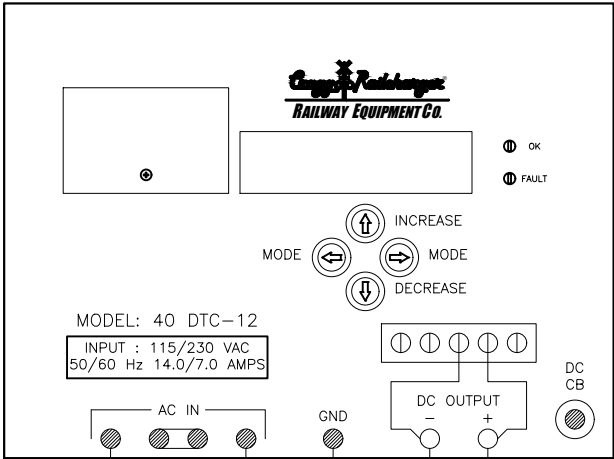
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Whooling & Lake Erie
Railway

LOCATION TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336		
ORIGINAL DATE 12/22/21	TITLE GATE #2 LIGHTS (FAR SIDE)	
DESIGNER RGPT	SUB CLEVELAND	RGPT NO. CN21090
DRAFTSMAN RGPT	RRMP Q - 61.90	SCALE N.T.S.
CHECKER RGPT	DOT NO. 474 354D	SHEET 15 of 21

MB-CHARGER
(SIDE "A" WALL)



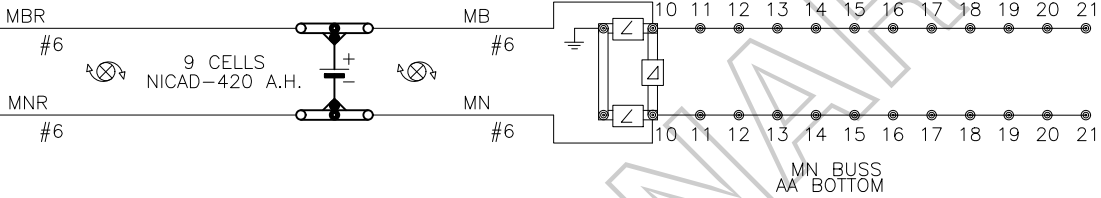
BASIC SETUP			
NO.	ABBREVIATION	DEFAULT SETTING	DESIRED SETTING
1	PASSWORD	5	5
2	USER LEVEL	BASIC	BASIC
3	BATTERY TYPE	LEAD ACID OR NI-CAD	NI-CAD
4	NUMBER OF CELLS	-	9
5	VOLTS PER CELL	-	1.42

BATTERY BUSS DETAILS

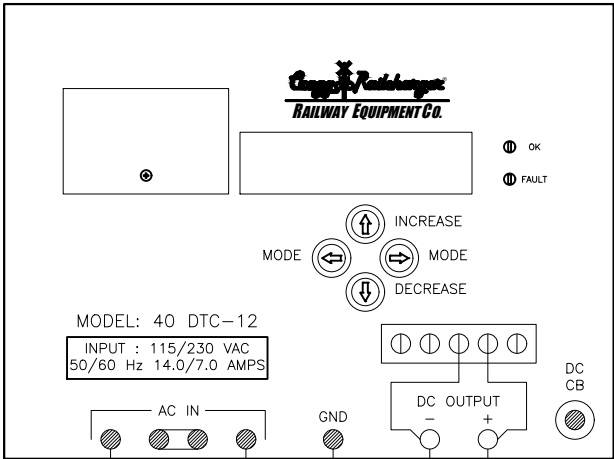
SPARE	21	SPARE
PSO4000 B	20	PSO4000 N
CC50T	19	XP4 S7 IN2-
CC45T	18	XP4 S7 IN1-
DB1T	17	DB3T
SPARE	16	RCDR C1 IN8-
SPARE	15	RCDR C1 IN5-
RCDR C1 IN10+	14	RCDR C1 IN10-
RCDR CPU BATT+	13	RCDR CPU BATT-
DTMF BATT+	12	DTMF BATT-
MDSA-1 B+	11	MDSA-1 B-
MB BATT+	10	MN BATT-

MB BUSS (TOP) AA MN BUSS (BOTTOM)

MB-BATTERY



XB-CHARGER
(SIDE "C" WALL)



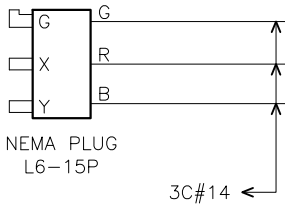
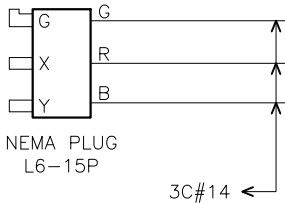
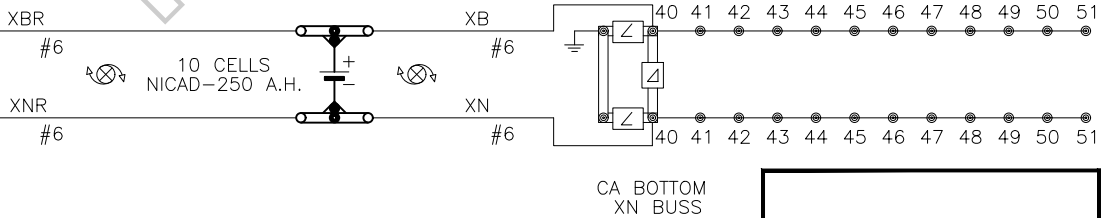
BASIC SETUP			
NO.	ABBREVIATION	DEFAULT SETTING	DESIRED SETTING
1	PASSWORD	5	5
2	USER LEVEL	BASIC	BASIC
3	BATTERY TYPE	LEAD ACID OR NI-CAD	NI-CAD
4	NUMBER OF CELLS	-	10
5	VOLTS PER CELL	-	1.42

BATTERY BUSS DETAILS

RA4T	51	RA5T
RA16T	50	RA15T
XIP-A B	49	XIP-A N
SPARE	48	SPARE
SPARE	47	SPARE
SPARE	46	SPARE
DTMF CH2 H	45	XIP-A G1-
CC58T	44	XP4 S8 IN4-
FD COM	43	RCDR C2 IN9-
RCDR C1 IN9+	42	RCDR C1 IN9-
XIP-A L1B-B	41	XIP-A L1B-N
XB BATT+	40	XN BATT-

XB BUSS (TOP) CA XN BUSS (BOTTOM)

XB-BATTERY



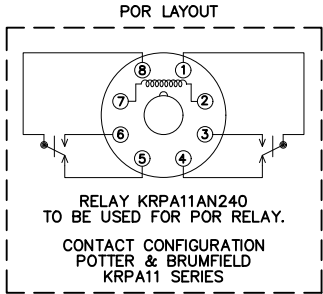
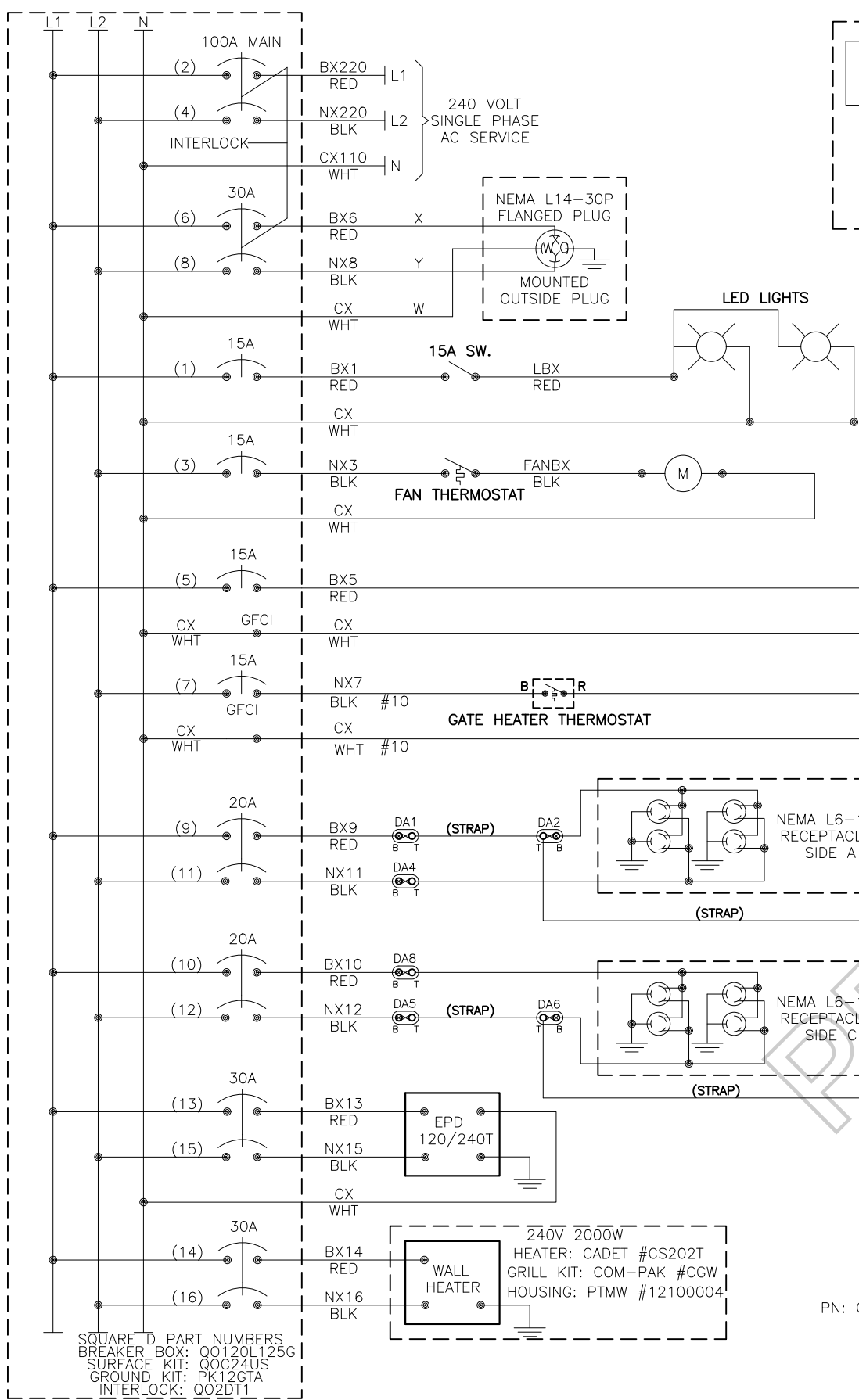
REVISION
BLOCK

CHANGE FROM TYPICAL: Y

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Whooling & Lake Erie
Railway

LOCATION TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336			
ORIGINAL DATE	12/22/21	TITLE	BATTERY CHARGERS
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	Q - 61.90
CHECKER	RGPT	DOT NO.	474 354D
		RGPT NO.	CN21090
		SCALE	1"=2'
		SHEET	16 of 21



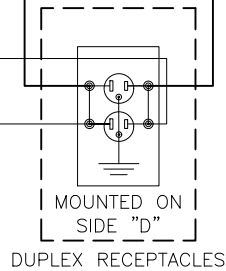
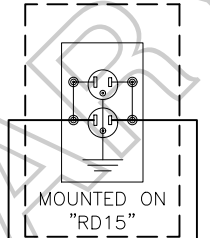
NOTE:

- WHEN AC IS ON LED IS ON
- WHEN AC IS OFF LED FLASHES UNTIL BATTERY IS DISCHARGED.
- WHEN AC IS OFF AND BATTERY IS DISCHARGED LED IS OFF.

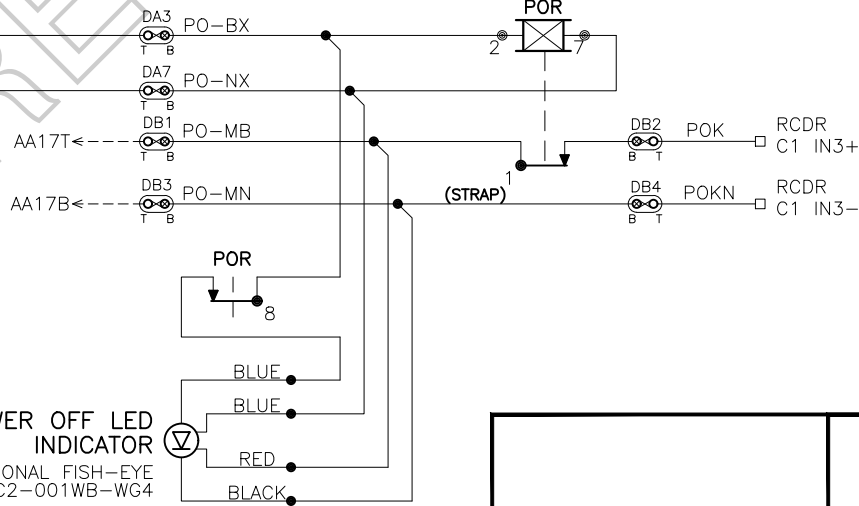
NOTES:

- 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.
- 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 USE ON ALL CIRCUITS SERVING CONVENIENCE OUTLETS AND ANY EQUIPMENT OUTSIDE THE BUNGALOW. RECEPTACLE MOUNTED GFCI MAY BE USE INSTEAD OF BREAKER TYPE.
- ALL GROUND WIRES RUN TO BREAKER BOX GROUND BUS

DUPLEX RECEPTACLES

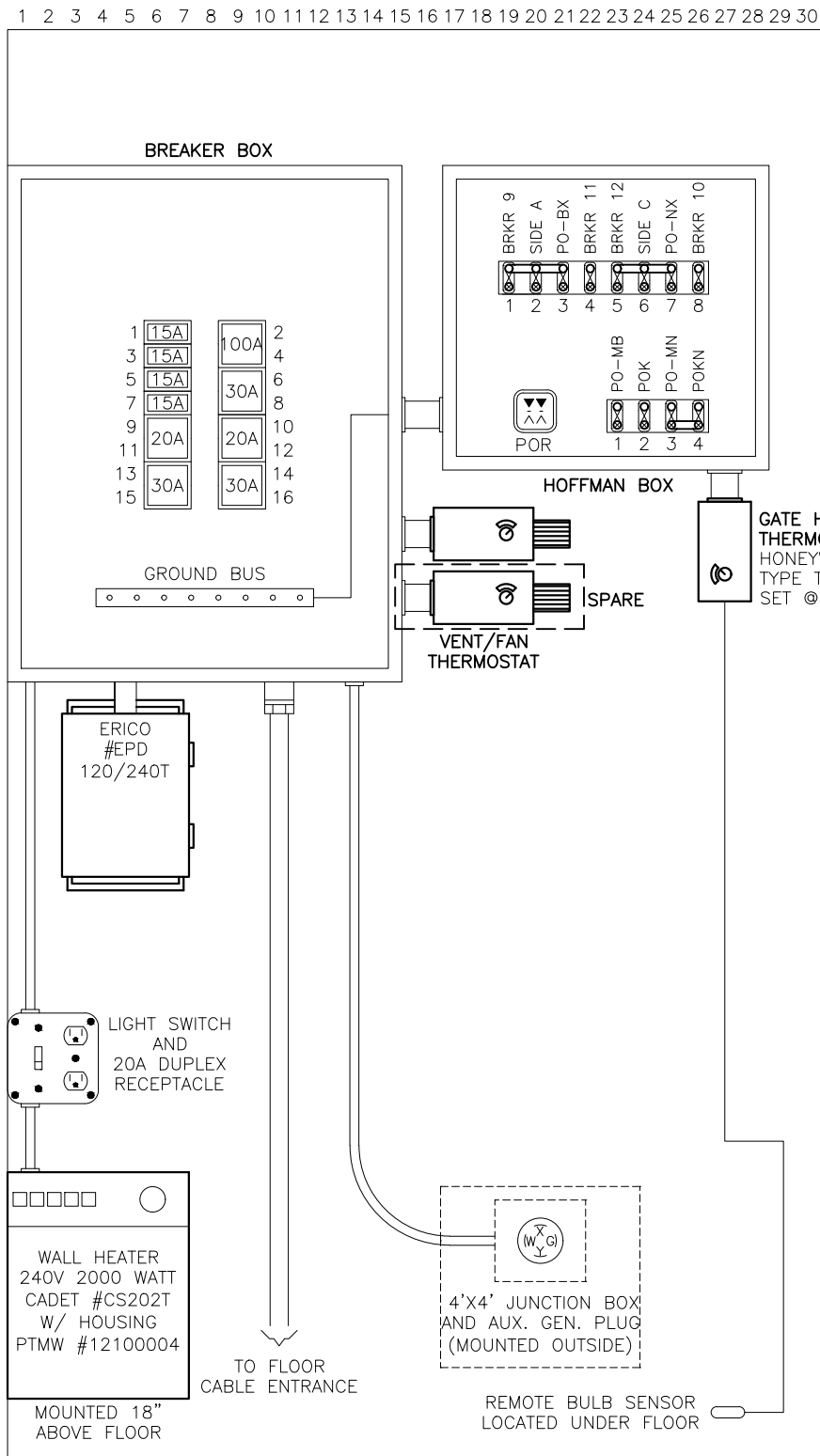


DUPLEX RECEPTACLES



POWER OFF LED INDICATOR
DIRECTIONAL FISH-EYE
PN: GEMS LC2-001WB-WG4

SIDE D



SQUARE D PART NUMBERS
BREAKER BOX: Q0120L125G
SURFACE KIT: Q0C24US
GROUND KIT: PK12GTA
INTERLOCK: Q02DT1

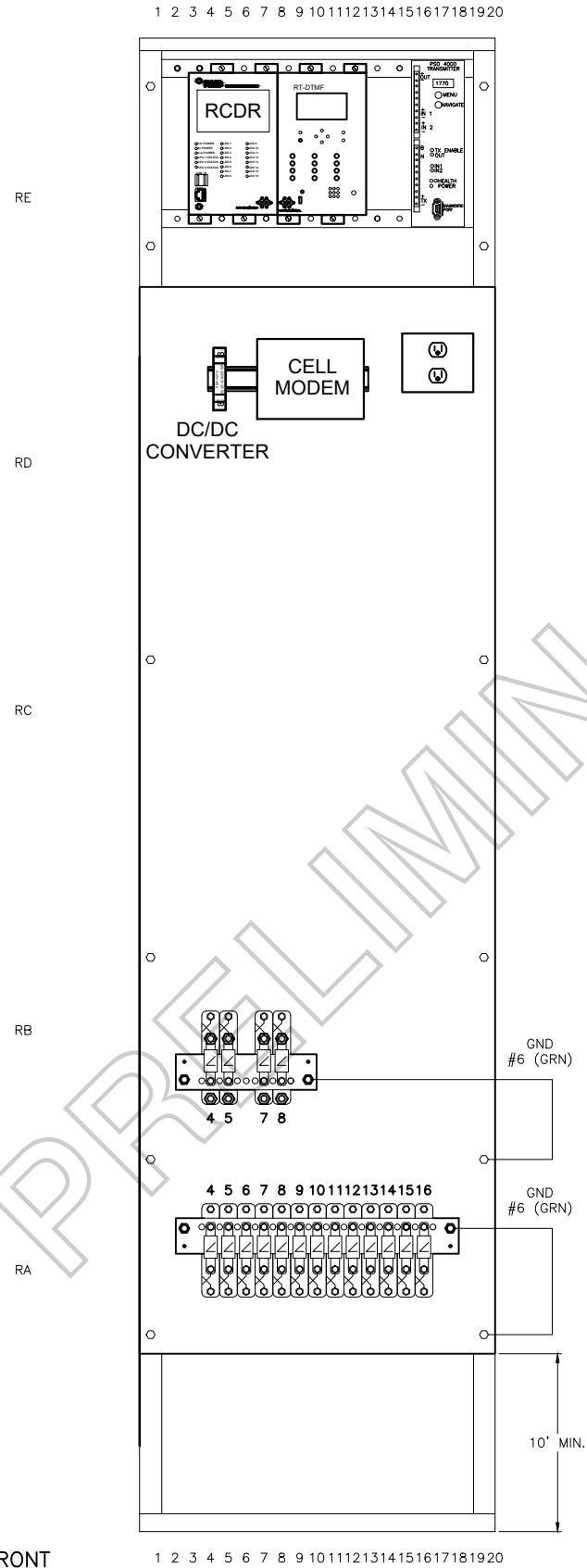
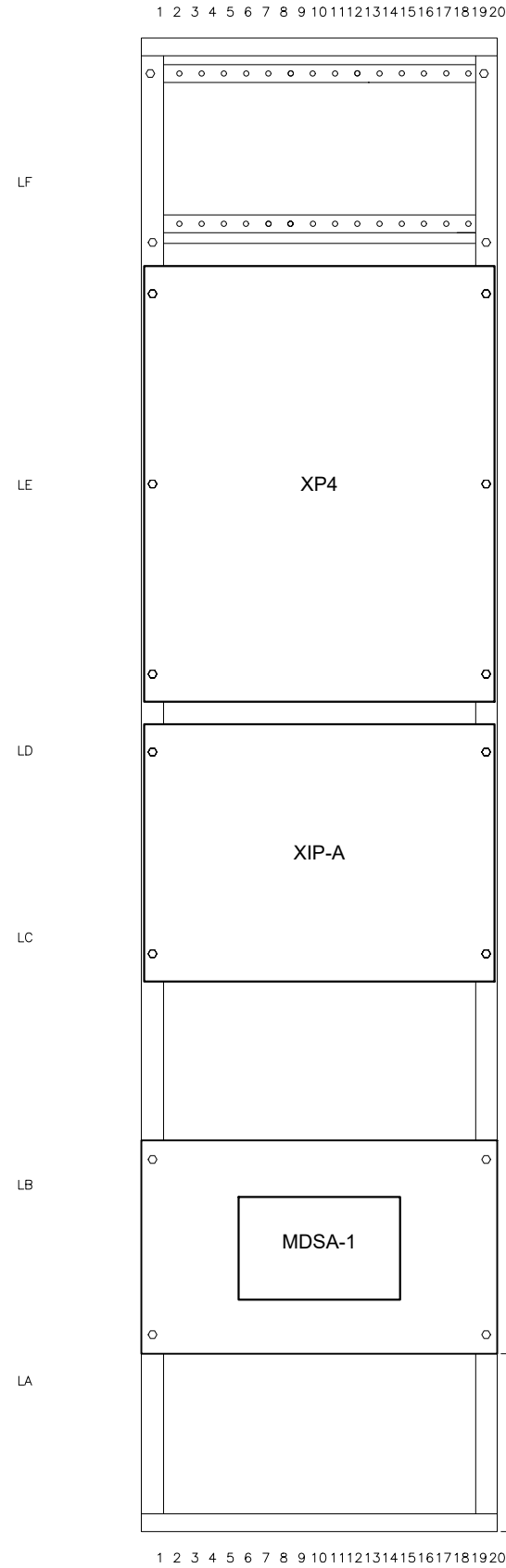
CHANGE FROM TYPICAL: N

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Whooling & Lake Erie
Railway

LOCATION			TIMKEN PLACE SW CANTON, OH		
ORIGINAL DATE			40.7758466,-81.3921336		
DESIGNER			AC POWER DISTRIBUTION		
DRAFTSMAN			RGPT		
CHECKER			CN21090		
SUB			1"=2'		
RRMP			17 of 21		
DOT NO.					
474 354D					



SIDE 'B' FRONT

REVISION
BLOCK

CHANGE FROM TYPICAL: Y


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**Wheeling & Lake Erie
Railway**

LOCATION TIMKEN PLACE SW CANTON, OH 40.7758466,-81.3921336			
ORIGINAL DATE	12/22/21	TITLE	RACK FRONT VIEW
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	Q - 61.90
CHECKER	RGPT	DOT NO.	474 354D
		RGPT NO.	CN21090
		SCALE	1"=2'
		SHEET	18 of 21

BACK OF RIGHT SIDE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

RFB

REB

RDB

RCB

RBB

RAB



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

BACK OF LEFT SIDE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

LFB

LEB

LDB

LCB

LBB

LAB

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

SIDE 'B' BACK

PRELIMINARY

CHANGE FROM TYPICAL: Y

REVISION
BLOCK

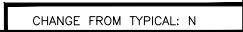


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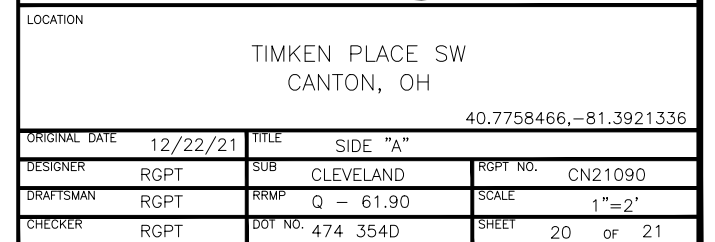
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FORT WORTH, TX 76116
(817) 886-8210
WWW.RIO TECHNOLOGY.COM

**Wheeling & Lake Erie
Railway**

LOCATION		TIMKEN PLACE SW CANTON, OH		40.7758466,-81.3921336	
ORIGINAL DATE	12/22/21	TITLE RACK BACK VIEW			
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN21090
DRAFTSMAN	RGPT	RRMP	Q - 61.90	SCALE	1"=2'
CHECKER	RGPT	DOT NO.	474 354D	SHEET	19 OF 21



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SHEET 21 OF 21



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

December 20, 2021

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 East First Street
Brewster, Ohio 44613

RE: Grade Crossing Warning Device Improvements
Stark County, Timken Place, DOT#474354D, PID 114049

Dear Mr. Andrews:

A diagnostic review was held at the above grade crossing on August 5, 2021. The crossing has been recommended to be upgraded to meet the needs of the Timken Place realignment project to be completed by the City of Canton.

Wheeling & Lake Erie Railway is authorized to proceed with the site plans and cost estimates or bid package 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. 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.

The diagnostic review form is attached. Please note any recommendations (page 7), if any, made by the team about 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 Project Manager for this project is James Tucker. James can be reached at (614) 398-6897, or james.tucker@dot.ohio.gov, if you have any questions.

Sincerely,

Project Manager

C: John Williams, Director, Transportation Department, PUCO
Jill Henry, Rail Division Chief, PUCO
Heather Hamilton, ORDC



ORDC (file)

Attachments: 3 (diagnostic review form, letter agreement, purchase order)



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

October 20, 2021

Wheeling & Lake Erie Railroad
Mr. Tim Andrews
Signals & Communications Supervisor
100 E. First Street
Brewster, Ohio 44613

Subject: Grade Crossing Warning Device Improvements
Stark County, Timken Place, DOT#474354D, PID 114049

Dear Mr. Andrews:

A diagnostic review was conducted at the subject grade crossing on August 5, 2021. As a result of the review, the existing warning devices will be relocated if necessary and upgraded to flashing lights and roadway gates.

The project shall be completed in compliance with Agreements No. 0001-A, dated September 17, 1990, entered into by the State of Ohio and Wheeling & Lake Erie Railroad (WE) and incorporated as if fully rewritten herein. The 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 (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 WE 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 projects. WE 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 WE prior to ORDC issuing a PE authorization. PE will be submitted by WE to ORDC within ninety (90) days or other time specified by ORDC in the PE authorization. Construction will not be commenced by WE prior to ORDC issuing a construction authorization. Construction will be completed by WE 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 R. Dietrich
Executive Director

Date: October 20, 2021

Wheeling & Lake Erie Railroad:

By: 

Title: S&C Supervisor

Date: 10-22-21

STA Timken Place WLE PID 114049 DOT #474354D

Timken Place (DOT #474354D), City of Canton, Stark County, Wheeling & Lake Erie
8-5-2021

Crossing at a glance:

ORDC Notes:

Please Sign In

Jim Tucker

Project Manager

ORDC

Name	Title	Organization	Signature
	614-398-6897		J. Tucker
Phone Number	Email		

Tim Andrews

WLE

Name	Title	Organization	Signature
	330-767-7255		Tim Andrews
Phone Number	Email		

Dan Moeglin

City Engineer

City of Canton

Name	Title	Organization	Signature
	390 438-6903		Dan Moeglin
Phone Number	Email		

ED MOORE

Canton City Engineer

Name	Title	Organization	Signature
			Ed Moore
Phone Number	Email		

Name	Title	Organization	Signature
Phone Number	Email		

Name	Title	Organization	Signature
Phone Number	Email		

Name	Title	Organization	Signature
Phone Number	Email		

Name	Title	Organization	Signature
Phone Number	Email		

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

Date: 8-5-2021

Location Data			
Street or Road Name:		Timken Place	
County:	Stark	Township:	US DOT No.: 474354D
City (in or near):	Canton	Railroad Name:	RR Milepost: 61.88
Safety Data (Obtain crash reports, if possible)			
	Initial Information (from database)		Revised
Number & dates of vehicle crashes in previous 5 years:	n/a		
Number & dates of pedestrian/bicycle crashes in previous 5 years:	n/a		
Hazard Ranking:	1555	Date Run:	07/06/2021

Existing Traffic Control Devices		
Type of Warning Devices	Installed?	Quantity/Comments
HIGHWAY		
Advance Warning Signs (condition?)	☒ Yes ☐ No	2
'Stop' Signs	☐ Yes ☒ No	
'Stop Ahead' Signs	☐ Yes ☒ No	
Pavement Markings (condition?)	☒ Yes ☐ No	
Dynamic Envelope Markings (condition?)	☐ Yes ☒ No	
Illumination	☐ Yes ☒ No	
'No Turn' Signs (highway/passive)	☐ Yes ☒ No	
Barriers/fencing (pedestrian/bicycle)	☐ Yes ☒ No	
LOOK Sign	☐ Yes ☒ No	
Do Not Stop On Track Sign	☐ Yes ☒ No	
RAILROAD		
Crossbucks	☒ Yes ☐ No	
Crossbucks – assembly with Stop	☐ Yes ☒ No	
Crossbucks – assembly with Yield	☐ Yes ☒ No	
Mast-Mounted Flashing Lights	☒ Yes ☐ No	4-Pair
Cantilever Flashing Lights	☐ Yes ☒ No	Number: Length:
Side Lights	☐ Yes ☒ No	
LED or Incandescent Lights? Size?	☒ Yes ☐ No	12" Incandescent
Automatic Gates	☒ Yes ☐ No	Number: 2 Length:
Bells	☒ Yes ☐ No	Number: 1
Sidewalk/Pedestrian Gate Arms	☐ Yes ☒ No	Number: Length:
'No Turn' Signs (railroad/active)	☐ Yes ☒ No	
Is crossing flagged by train crew?	☐ Yes ☒ No	
OTHER	☐ Yes ☐ No	

Railroad DataType of Train: ☒ Freight ☐ Intercity Passenger ☐ Transit ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	12	ok
<1 per day? Trains per week	-	
Day thru trains	6	
Night thru trains	6	
Switching	0	
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks	0	
Maximum train speed	15	25
Typical train speed	1-25	
Amtrak		

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

If yes, Crossing DOT# (if different) _____

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

If multiple tracks, can two trains occupy crossing at the same time? ☐ Yes ☒ NoCan one train block the motorists' view of another train at the crossing? ☐ Yes (explain below) ☒ NoCan one or more tracks be eliminated through the crossings? ☐ Yes ☐ No

Comments:

Circuitry: ☐ Constant Warning Time ☒ Motion Detection ☐ AFO ☐ PTC ☐ DC ☐ Other _____

Roadway Data		
Local Highway Authority: <u>Stark County</u>		
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	<u>1900 (2006)</u>	<u>closed rd.</u>
Highway Paved	☒ Yes ☐ No	☐ Yes ☐ No
Roadway Surface: ☐ Blacktop ☐ Gravel ☒ Concrete Other _____		
Roadway width (paved/travelled way): <u>30</u> ft		
Number of Highway Lanes	<u>2</u>	
Urban or Rural	<u>urban</u>	
Vehicle Speed: <u>N/A</u> MPH		
School Bus Operation: ☐ Yes ☒ No Amount _____		
Location of nearby schools: <u>none close by</u>		
Hazardous Materials Trucks: ☒ Yes ☐ No Amount (from FRA) <u>490</u> LHA verified/changed?		
Shoulders: ☐ Yes ☒ No		
Is the Shoulder Surfaced? ☐ Yes ☒ No If yes, shoulder width: _____ ft.		
Is there existing guardrail along the roadway in crossing vicinity? ☐ Yes ☒ No		
Crossing Angle ☐ 0-29° ☐ 30-59° ☒ 60-90° Measured in _____ Quadrant?		
Quadrant <u>NW</u> Curb & Gutter:	Quadrant <u>SE</u> Curb & Gutter:	
☐ Functional (Curb height = 4" or more)	☐ Functional (Curb height = 4" or more)	
☐ Non-functional (Curb height = less than 4")	☐ Non-functional (Curb height = less than 4")	
☒ None	☒ None	
Is there a nearby intersection that could cause queuing over the crossing? ☐ Yes ☒ No		
If yes, distance _____		
Is this intersection signalized? ☐ Yes ☐ No		
Are there signals currently interconnected with the existing crossing warning devices? ☐ Yes ☒ No		
Is there a 'Do Not Stop on Track' sign? ☐ Yes ☒ No		
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? ☒ Yes ☐ No		
If yes:		
Improvement type <u>Realignment</u> Lead Agency <u>City of Canton</u> Timeline/completion <u>End of 2021</u>		

Pedestrian & Bicycle Data

Regular pedestrian usage: ☐ Yes ☒ No Volumes: ☐ Occasional ☐ <20 ☐ 20-60 ☐ >60

Is sidewalk present in the approach? ☐ Yes ☒ No Quadrants:

Does crossing surface accommodate pedestrians? ☐ Yes ☒ No

Both sides of roadway? ☐ Yes ☒ No If no, which side is paved?

Pedestrian generators in close proximity (e.g. schools, sports/entertainment venues)? ☐ Yes ☒ No

Comments:

Regular bicycle usage: ☐ Yes ☒ No

☒ Roadway ☐ Dedicated Lane (on street) ☐ Dedicated Path (off street) ☐ Shared Use (pedestrian/bicycle) Path
☐ Bikes must use sidewalk

Future plans for pedestrian or bicycle routes? ☐ Yes ☒ No

Comments:

Utility Information

Is commercial power available? ☒ Yes ☐ No

Utility Provider (Company Name)

Nearest Available Power Source — @ crossing

What other utilities are present? ☒ Gas ☒ Cable ☒ Telephone ☐ Fiber Optic Cable (add locations to sketch)
☐ Petroleum ☒ Water ☒ Sanitary Sewer ☐ Other

Comments:

Surface

Surface review form completed? ☐ Yes ☒ No

Sight Preview (REFER TO TABLES)

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

Is stopping sight distance adequate? (See Table 2) ☐ Yes ☒ No If no, which quadrant? SW

When considering recommendations for bicycle treatments:

Bicycle sight distance adequate? ☒ Yes ☒ No If no, which quadrant? SW + NW 250'

When considering recommendations for pedestrian treatments:

Pedestrian sight distance adequate? ☒ Yes ☒ No If no, which quadrant? SW + NW 300'

Potential Red Flags / Project Challenges

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

N/A

Crossing Consolidation or Closure:

N/A

Real Estate or ROW:

City to Acquire more R.O.W from the Wheeling
in the NE Quad.

Culvert / Drainage / Ballast Conditions:

N/A

Roadway and/or Sidewalks:

City to realign Timkin Place

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

Start of Cleveland Ave. Preemption

Environmental:

City has Secured all environmental clearances

Utilities:

overhead and underground.

Other:

Potential Closure

Is it the consensus of the Diagnostic Review Team that this is a potential closure project? **NO**

Explain reasons: **city is going to realign this road.**

Diagnostic Team Recommendations

☐ No improvements needed

Quadrants Needed

☒ Install/upgrade active devices

☐ Automatic Flashing Lights (AFLS)

☐ AFLS / Cants

☒ AFLS / Gates

☐ AFLS / Gates / Cants

☒ Bells / number

☐ Upgrade circuitry / type

☐ Sidelights

☒ LED Upgrades

☐ Guardrail Needed

☐ Install/Replace curb

☐ Bungalow placement & offset from rail & highway

☐ Other (define)

Comments: **project is to relocate warning devices to meet the needs of the Tinkin Place realignment project**

☐ Install/upgrade traffic signal preemption

Other (define):

Diagnostic Team Recommendations (cont.)

PEDESTRIAN/BICYCLE Treatments (additional, not included above)

☐ Crossing Surface (specify)

☐ Sidewalk (specify)

☐ Detectable warning surfaces

☐ LOOK Sign (R15-8)

☐ Stop lines

☐ Illumination

☐ Dynamic envelop markings

☐ Channelization

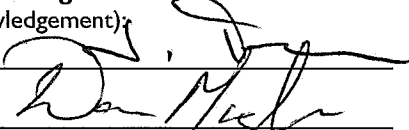
☐ Path delineation

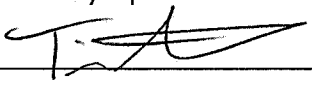
☐ Fencing/barriers

☐ Other

Comments:

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





Field Sketch (optional)

Include utilities as marked by OUPS and LHA; include ROW boundaries as indicated by railroad and LHA.

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.

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.

Bicycle & Pedestrian Clearing Sight Distances

Clearing Sight Distance from Stop Position*											
Crossing of one track								Crossing 2 Tracks		Crossing 3 Tracks	
Train Speed	Car	Single-unit Truck	Bus	WB-50 Semitruck	65-foot Double Truck	Pedestrian ¹	Bicyclist ²	Pedestrian ¹	Bicyclist ²	Pedestrian ¹	Bicyclist ²
10	105	185	200	225	240	120	100	180	120	240	140
20	205	365	400	450	485	240	200	360	240	480	270
25	255	455	500	560	605	300	250	450	290	590	340
30	310	550	600	675	725	360	290	530	350	710	410
40	410	730	795	895	965	480	390	710	470	950	540
50	515	910	995	1,120	1,205	590	490	890	580	1180	670
60	615	1,095	1,195	1,345	1,445	710	580	1060	700	1420	810
70	715	1,275	1,395	1,570	1,680	830	680	1240	810	1650	940
80	820	1,460	1,590	1,790	1,925	950	780	1420	930	1890	1080
90	920	1,640	1,790	2,015	2,165	1060	870	1590	1040	2120	1210

*A single track, 90-degree, level crossing

¹ Walking 3.5 feet per second across tracks 15 feet apart, with a 2-second reaction time to reach a decision point 10 feet before the center of the first track, and clearing 10 feet beyond the centerline of the second track.

² Bicycling 8 miles per hour across tracks 15 feet apart, from a stopped position 10 feet before the center of the first track with an acceleration of 2.5 feet per second, and clearing 10 feet beyond the centerline of the second track on a bike of 6 feet length.

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

Case No(s). 22-0242-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 474-354D, at Timken Place in Stark County, Ohio. electronically filed by Mrs. Jill A. Henry on behalf of PUCO/Rail Division