

Memo

To: Docketing Division
From: Jill Henry, Chief, Rail Division
Cc: PUCO Legal Department
Date: 3/16/2022

Re: PUCO Case No. 22-230-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices and a Crossing Surface at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 474-476H, at SR 171 in Carroll County, Ohio.

On May 7, 2021, the Ohio Rail Development Commission (ORDC) authorized funding for Wheeling & Lake Erie Railroad (WE) to upgrade to lights and gates and a new crossing surface installation at SR 171 (DOT#474-476H) in Carroll County, Ohio. The crossing was surveyed, on December 8, 2020, 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 railroad funds and is actual cost. The lights and gates are funded at 100% federal funding and the surface is funded by a 50/50 split with the railroad. The plans and estimates for the project in the amount of \$305,974.87 have been approved. ORDC is committed to fund \$251,479.41 and the railroad will pay \$54,495.46. 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

Ohio Department of Transportation
Scott Warner
District Railroad Coordinator, Program Manager
2201 Reiser Ave.
New Philadelphia, OH 44663

AEP-Ohio

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

TO: John Williams, Transportation Director, PUCO
FROM: Allen Bell, Manager, Safety Section, ORDC
BY: Greg Gronbach, Project Manager, Safety Section, ORDC
SUBJECT: Carroll Co, State Route 171-9.52, DOT# 474476H, PID# 114424 (signals) & 115114 (surface)

DATE: January 19, 2022

The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on 12/08/2020 (Virtual Diagnostic – Covid 19 Restrictions). The Public Utilities Commission of Ohio (PUCO) attended the review. The Diagnostic Team recommended the improvement of warning devices to flashing lights and roadway gates, with a new roadway surface. Copies of the diagnostic review form and the plan and estimate are attached.

PE has already been provided by the railroad. ORDC accepts the site plans and estimates as provided. Please issue a construction-only order for the project outlined above. ORDC recommends a nine (9) month construction timeline. 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.


Greg Gronbach
Project Manager

Attachment: Diagnostic Review
Letter Agreement
PE Authorization
Plan, Estimate & Material List
Construction Authorization

c: Jill Henry, Rail Division Chief, PUCO

ORDC Project Manager (file)



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

January 19, 2022

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

RE: Construction Authorization for Carroll Co, State Route 171-9.52, DOT# 474476H, PID# 114424 (signals) & 115114 (surface)

Dear Mr. Andrews:

The plan dated 02/21/202, signal estimate dated 05/13/2021 and surface estimate dated 11/24/2021, 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.** Wheeling & Lake Erie Railway may proceed with the construction of the proposed grade crossing warning system and roadway surface (50/50 share) in accordance with the abbreviated plan.

The signal estimate of \$196,983.95 and surface estimate of \$54,495.46 (50/50 share) is acceptable and reimbursement is limited to \$251,479.41. 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 Wheeling & Lake Erie Railway accepting the following instructions:

1. Wheeling & Lake Erie Railway's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Greg Gronbach, ORDC, email Gregory.Gronbach@dot.ohio.gov, and to the Public Utilities Commission of Ohio at Jill.henry@puco.ohio.gov. Wheeling & Lake Erie Railway'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. Wheeling & Lake Erie Railway 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 Wheeling & Lake Erie Railway.



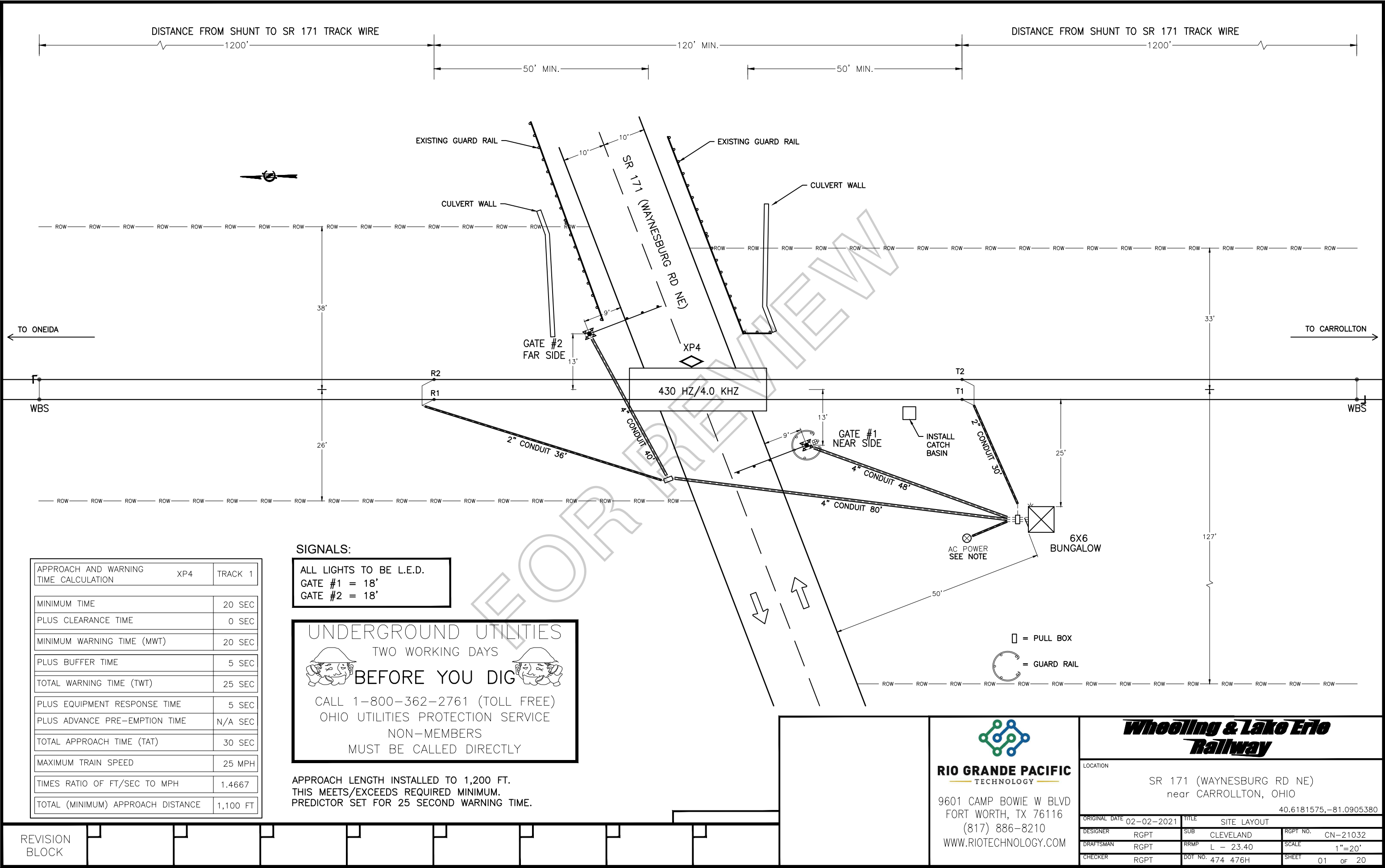
3. Wheeling & Lake Erie Railway's project foremen will notify Greg Gronbach at 614-745-6760 (telephone) or Gregory.Gronbach@dot.ohio.gov (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same 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. Wheeling & Lake Erie Railway will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.
6. Wheeling & Lake Erie Railway 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,


Greg Gronbach
Project Manager

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



APPROACH AND WARNING TIME CALCULATION	XP4	TRACK 1
MINIMUM TIME	20 SEC	
PLUS CLEARANCE TIME	0 SEC	
MINIMUM WARNING TIME (MWT)	20 SEC	
PLUS BUFFER TIME	5 SEC	
TOTAL WARNING TIME (TWT)	25 SEC	
PLUS EQUIPMENT RESPONSE TIME	5 SEC	
PLUS ADVANCE PRE-EMPTION TIME	N/A SEC	
TOTAL APPROACH TIME (TAT)	30 SEC	
MAXIMUM TRAIN SPEED	25 MPH	
TIMES RATIO OF FT/SEC TO MPH	1.4667	
TOTAL (MINIMUM) APPROACH DISTANCE	1,100 FT	

SIGNALS:
ALL LIGHTS TO BE L.E.D.
GATE #1 = 18'
GATE #2 = 18'

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

APPROACH LENGTH INSTALLED TO 1,200 FT.
THIS MEETS/EXCEEDS REQUIRED MINIMUM.
PREDICTOR SET FOR 25 SECOND WARNING TIME.

REVISION
BLOCK



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9601 CAMP BOWIE W BLVD
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(817) 886-8210
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Whooling & Lake Erie
Railway

LOCATION
SR 171 (WAYNESBURG RD NE)
near CARROLLTON, OHIO
40.6181575,-81.0905380

ORIGINAL DATE	02-02-2021	TITLE	SITE LAYOUT
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	L - 23.40
CHECKER	RGPT	DOT NO.	474 476H
		RGPT NO.	CN-21032
		SCALE	1"=20'
		SHEET	01 of 20

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.
- 5.) BUNGALOW WILL SIT 50' FROM EDGE OF ROAD AND 25' FROM NEAR RAIL DUE TO WATER ISSUES. IT WILL ALSO BE SET 1-2' ABOVE TOP OF RAIL.
- 6.) BOX CULVERT WILL NEED TO BE SET IN SW QUADRANT OVER EXISTING CULVERT.
- 7.) DITCHES WILL NEED TO BE CLEARED TO HELP PREVENT WATER IN BUNGALOW QUAD AND ALLOW FOR BETTER DRAINAGE FOR CIRCUITS.
- 8.) NEED TO INSTALL GUARDRAIL AROUND GATE #1
- 9.) 32' CROSSING PANELS TO BE INSTALLED BY OTHERS.

FOR REVIEW

										 RIO GRANDE PACIFIC TECHNOLOGY 9601 CAMP BOWIE W BLVD FORT WORTH, TX 76116 (817) 886-8210 WWW.RIO TECHNOLOGY.COM	Wheeling & Lake Erie Railway					
											LOCATION SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380					
											ORIGINAL DATE	02-02-2021	TITLE	CONSTRUCTION NOTES		
											DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN-21032
											DRAFTSMAN	RGPT	RRMP	L - 23.40	SCALE	N.T.S.
											CHECKER	RGPT	DOT NO.	474 476H	SHEET	01A of 20

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CROSSING SIGNAL ALIGNMENT

LEGEND

Ⓐ	GATE #1 FRONT MAST LIGHTS
Ⓑ	GATE #2 FRONT MAST LIGHTS
Ⓒ	GATE #2 BACK MAST LIGHTS
Ⓓ	GATE #1 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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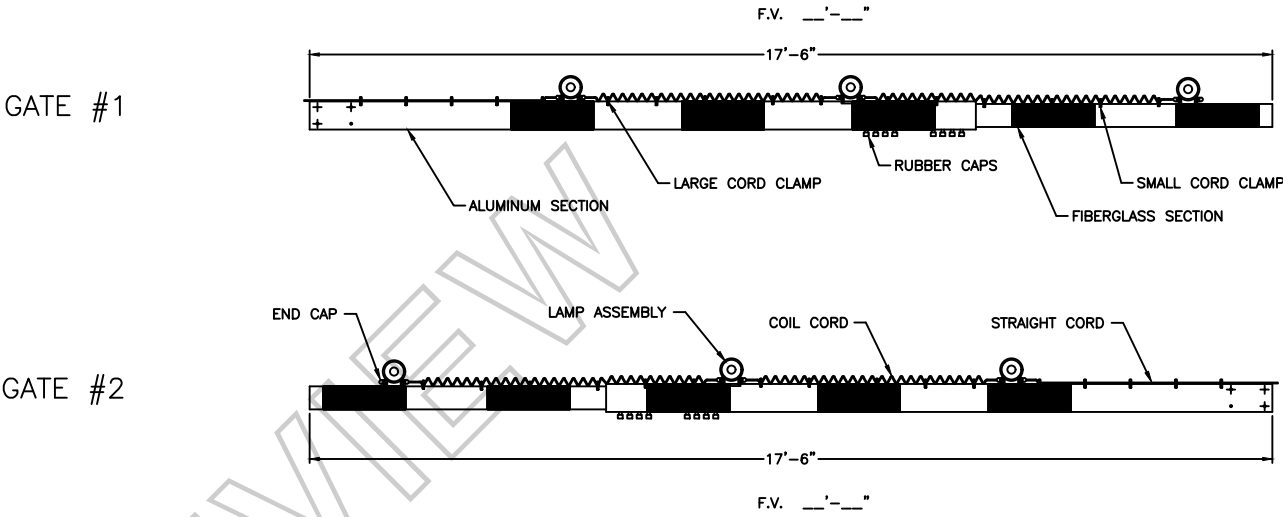
Wheeling & Lake Erie
Railway

LOCATION		
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380		
ORIGINAL DATE	02-02-2021	TITLE
CROSSING SIGNAL ALIGNMENT		
DESIGNER	RGPT	SUB
CLEVELAND		RGPT NO.
CN-21032		
DRAFTSMAN	RGPT	RRMP
L - 23.40		SCALE
N.T.S.		
CHECKER	RGPT	DOT NO.
474 476H		SHEET
02 of 20		

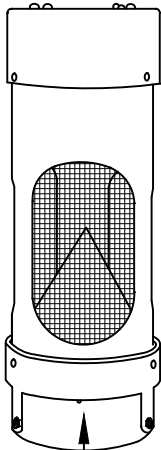
REVISION
BLOCK

SITE LAYOUT NOTES

1.) CROSSING IS LOCATED: LATITUDE 40.6181575
LONGITUDE -81.0905380



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



THIS SIDE FACING
ROADWAY

FOR REVIEW

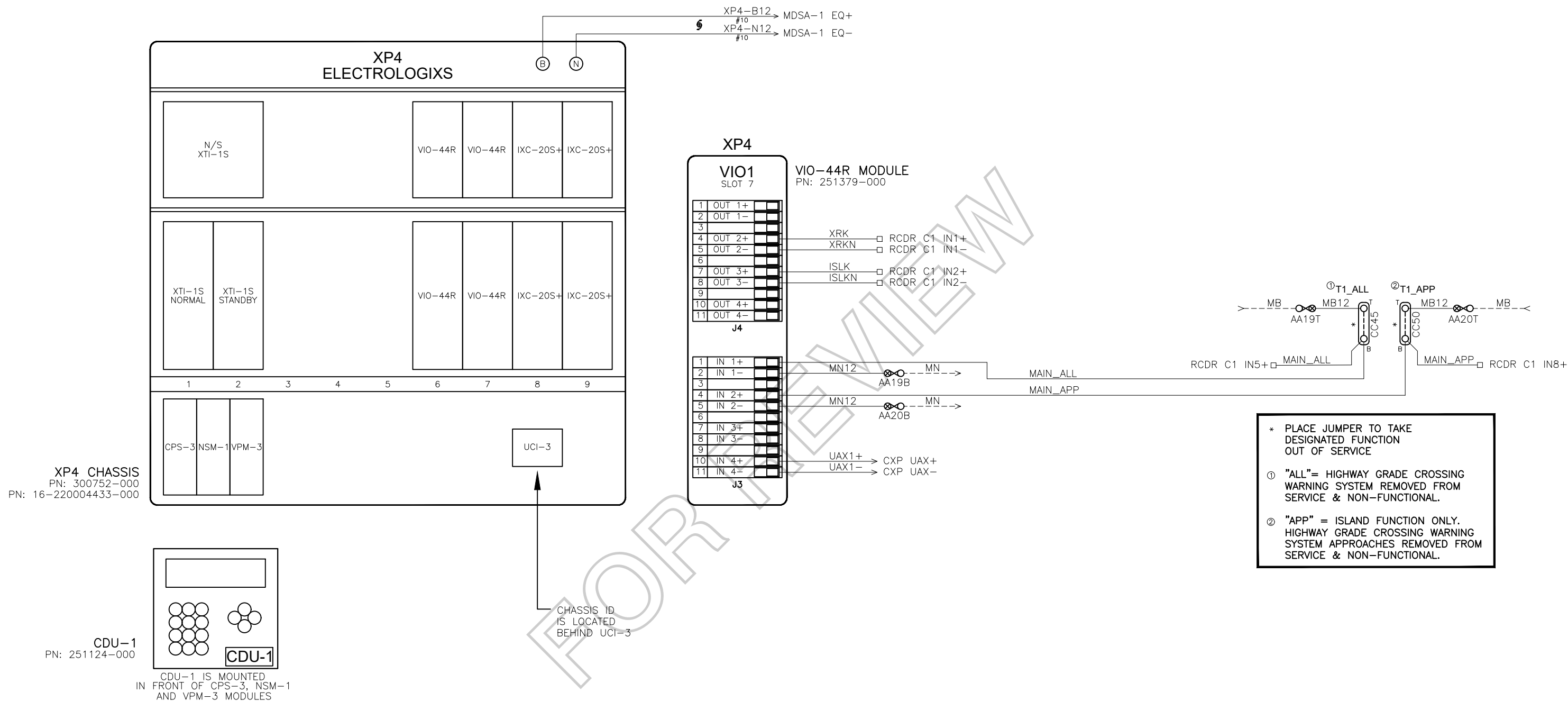
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<i>Whooling & Lake Erie Railway</i>		
LOCATION		
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380		
ORIGINAL DATE	02-02-2021	TITLE
DESIGNER	RGPT	SUB
DRAFTSMAN	RGPT	RRMP
CHECKER	RGPT	DOT NO.
		SCALE
		SHEET



NOTE: ALL WIRING THIS SHEET #16 AWG
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Whooling & Lake Erie
Railway

LOCATION SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380			
ORIGINAL DATE	02-02-2021	TITLE	XP4/VIO CIRCUITS
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	L - 23.40
CHECKER	RGPT	DOT NO.	474 476H
		RGPT NO.	CN-21032
		SCALE	N.T.S.
		SHEET	04 of 20

ADJUSTMENT NAME		MDR1				MDR2			
NAME		HIGHWAY CROSSING				HIGHWAY CROSSING			
WARNING TIME		25 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	430 HZ			
MASTER/SLAVE	MASTER			
RX ADJUST	100			
TCA	*			
DIRECTION MODE	BI			
LIA	*			
ADVANCED APR. CAL	INACTIVE			
NBS COMP RX	*			
TRK ISLAND ASSIGN	ISL1			
APPROACH LENGTH	1200 FT			
AUTO RX	ENABLE			

IXC SETUP				
CROSSING TEST MODE		OFF		
FLASH RATE		55FPM		
		IXC-1	IXC-2	IXC-3
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

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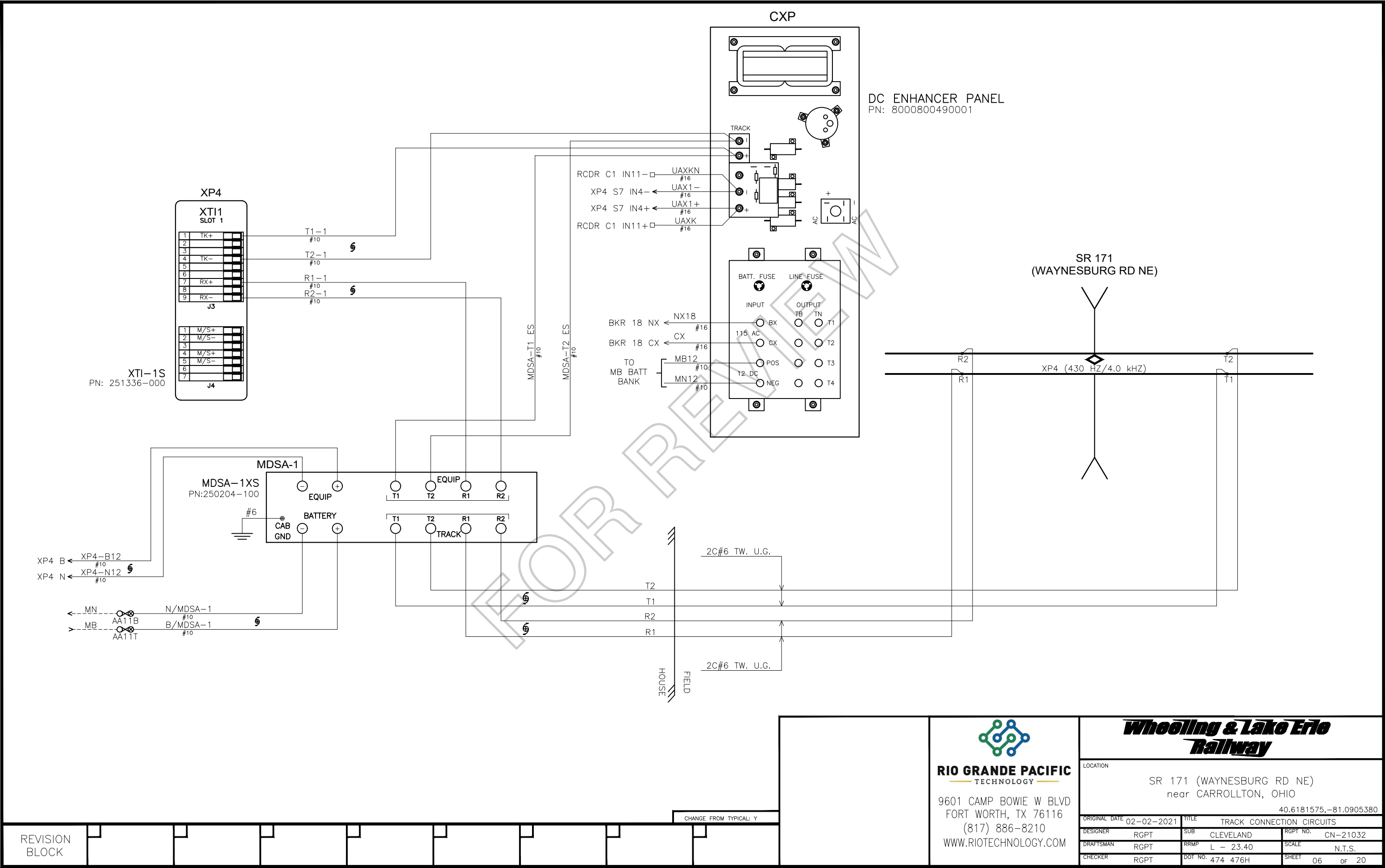


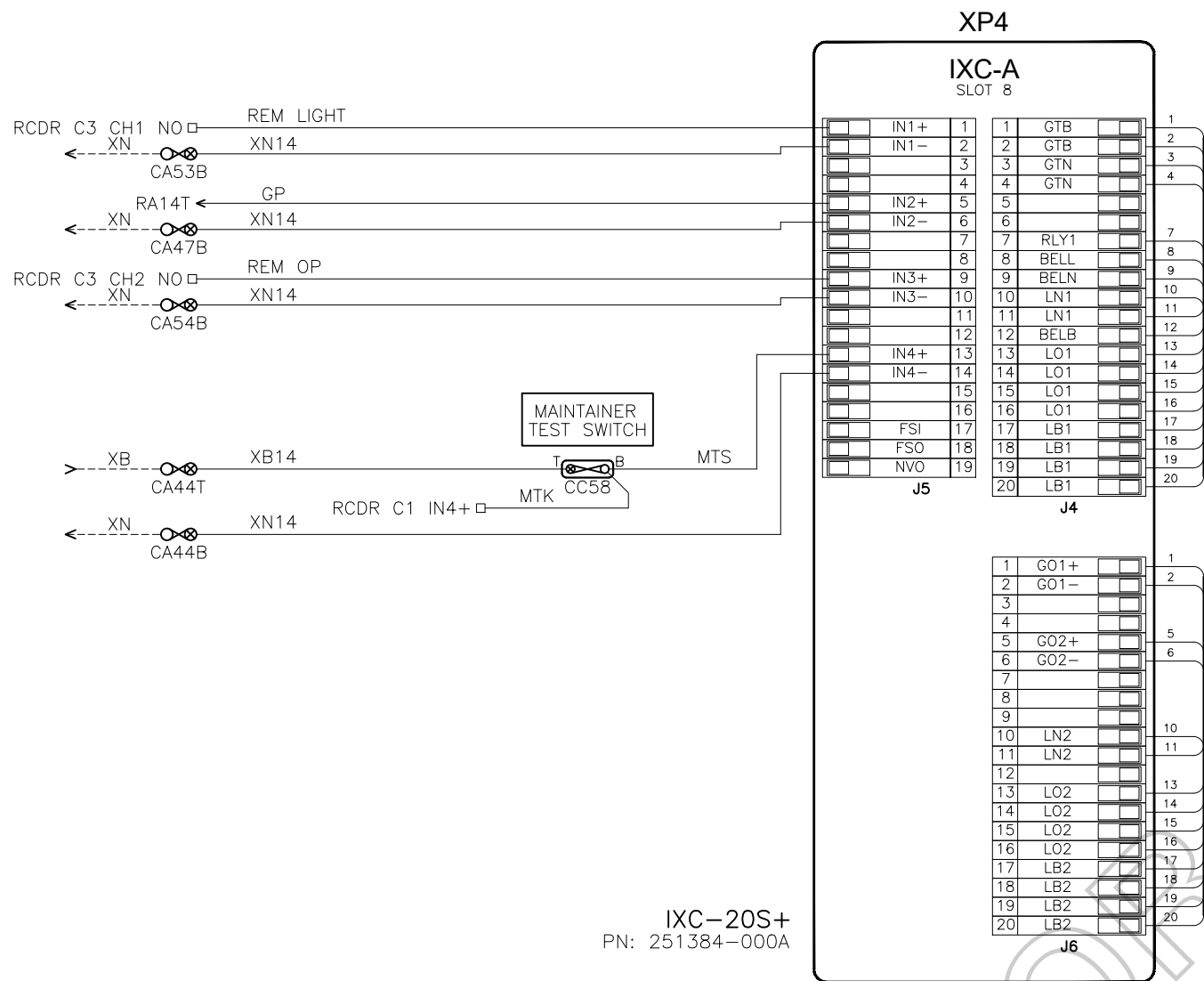
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Whooling & Lake Erie
Railway

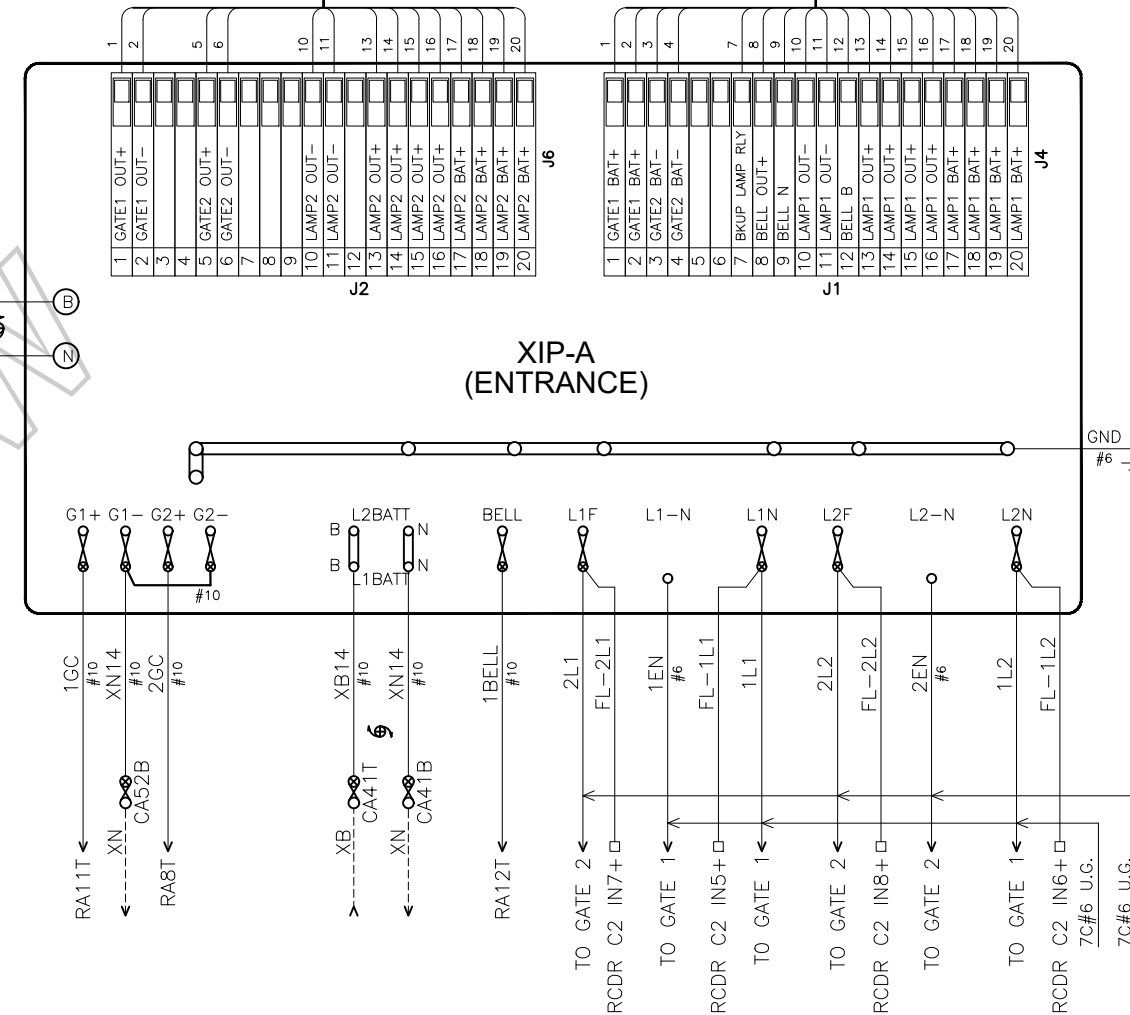
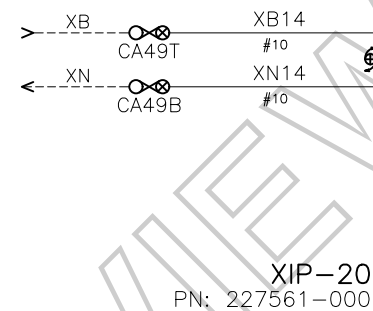
LOCATION		
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380		
ORIGINAL DATE	02-02-2021	TITLE
		XP4 SETUP SHEET
DESIGNER	RGPT	SUB
		CLEVELAND
DRAFTSMAN	RGPT	RGPT NO.
		CN-21032
CHECKER	RGPT	RRMP
		L - 23.40
		SCALE
		N.T.S.
		SHEET
		05 of 20





CABLE #1 GETS-GS P/N 075046-002

CABLE #2 GETS-GS P/N 075047-002



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

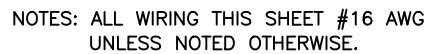
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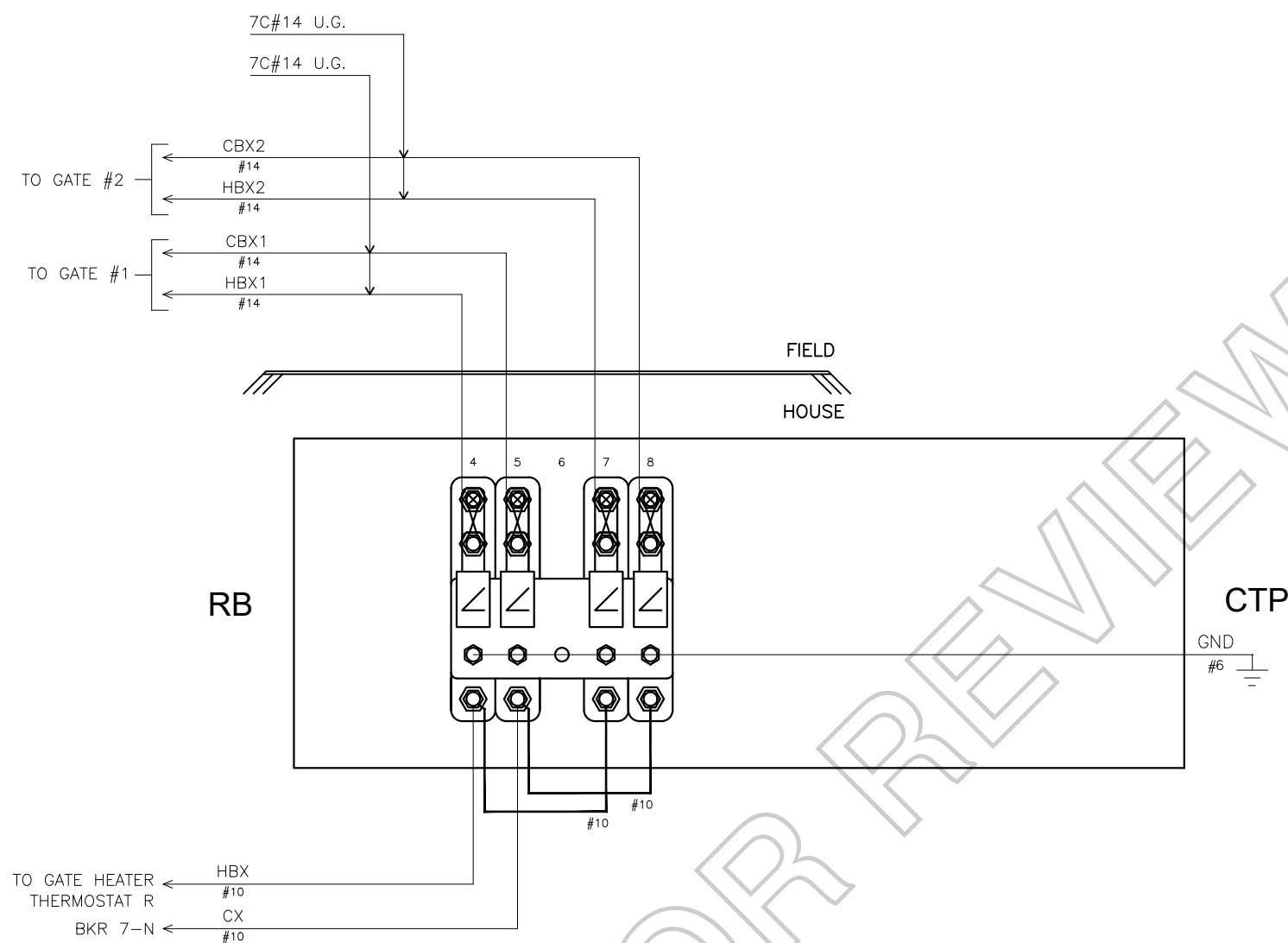
Whooling & Lake Erie
Railway

LOCATION			SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380		
ORIGINAL DATE	02-02-2021	TITLE	ENTRANCE GATE CONTROL CIRCUIT		
DESIGNER	RGPT	SUB	CLEVELAND	RGPT NO.	CN-21032
DRAFTSMAN	RGPT	RRMP	L - 23.40	SCALE	N.T.S.
CHECKER	RGPT	DOT NO.	474 476H	SHEET	07 of 20



CHANGE FROM TYPICAL: N

LOCATION			
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO			
40.6181575,-81.0905380			
ORIGINAL DATE 02-02-2021		TITLE ARRESTOR PANEL	
DESIGNER RGPT	SUB CLEVELAND	RGPT NO. CN-21032	
DRAFTSMAN RGPT	RRMP L - 23.40	SCALE N.T.S.	
CHECKER RGPT	DOT NO. 474 476H	SHEET 09 OF 20	



LEGEND:

⊗ = INSULATED NUT

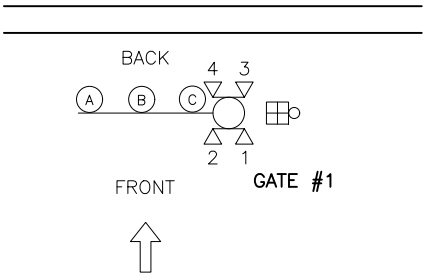
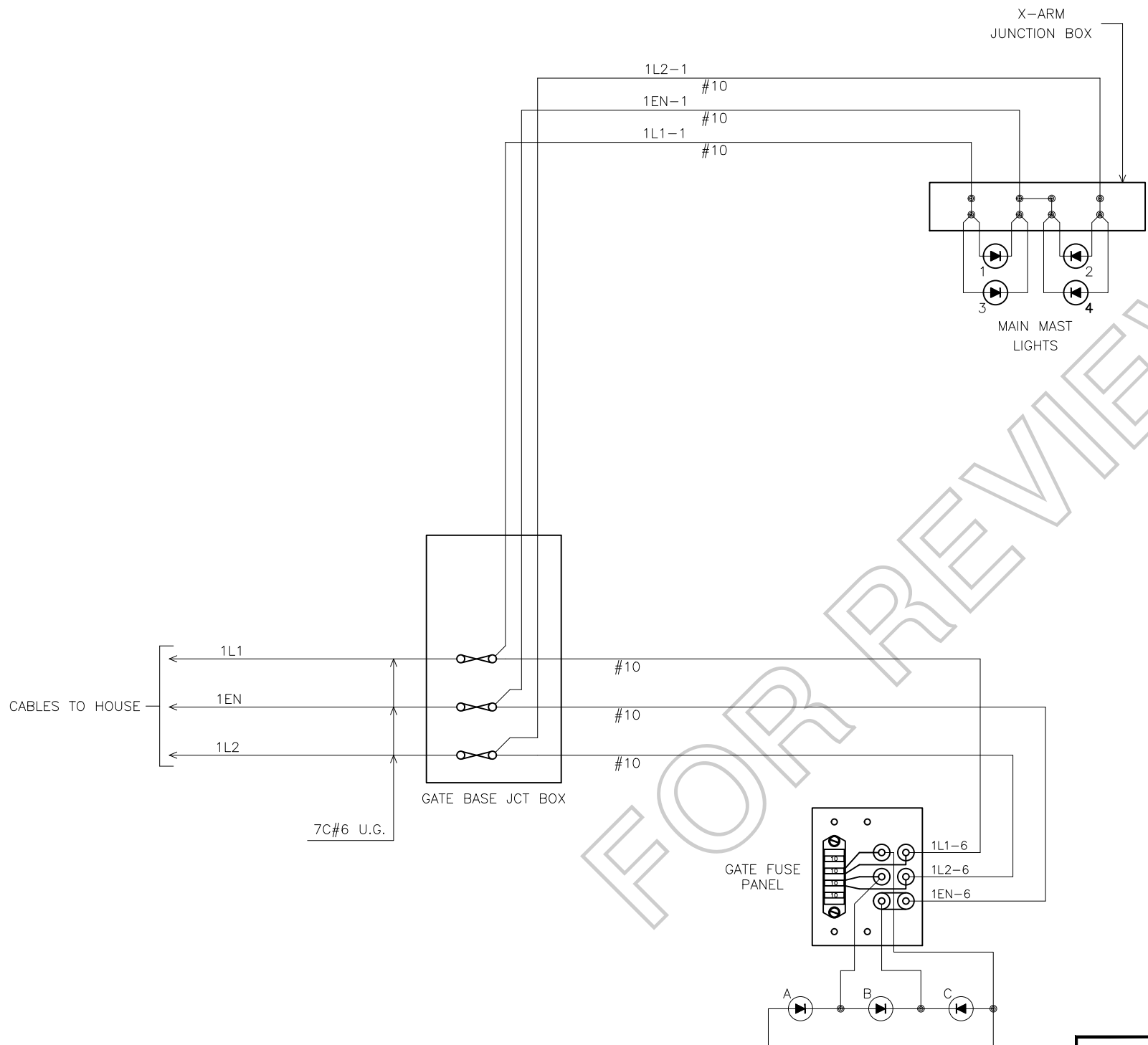
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Whooling & Lake Erie Railway			
LOCATION			
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380			
ORIGINAL DATE	02-02-2021	TITLE	CABLE TERMINAL PANEL
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	L - 23.40
CHECKER	RGPT	DOT NO.	474 476H
		RGPT NO.	CN-21032
		SCALE	N.T.S.
		SHEET	10 of 20

GATE #1



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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Whoollng & Lake Erie Railway			
LOCATION			
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380			
ORIGINAL DATE	02-02-2021	TITLE	GATE #1 LIGHTS (NEAR SIDE)
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	L - 23.40
CHECKER	RGPT	DOT NO.	474 476H
		RGPT NO.	CN-21032
		SCALE	N.T.S.
		SHEET	12 of 20

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:

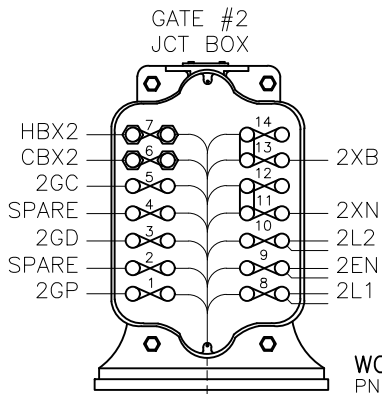
 = INSULATED NUT

NOTES:

* BELL TO BE ELECTRONIC.
 = INTERNAL GATE WIRES THAT SHARE ELECTRICAL CONNECTIONS WITH OTHER WIRES THAT ARE ASSIGNED THE SAME NUMBER.

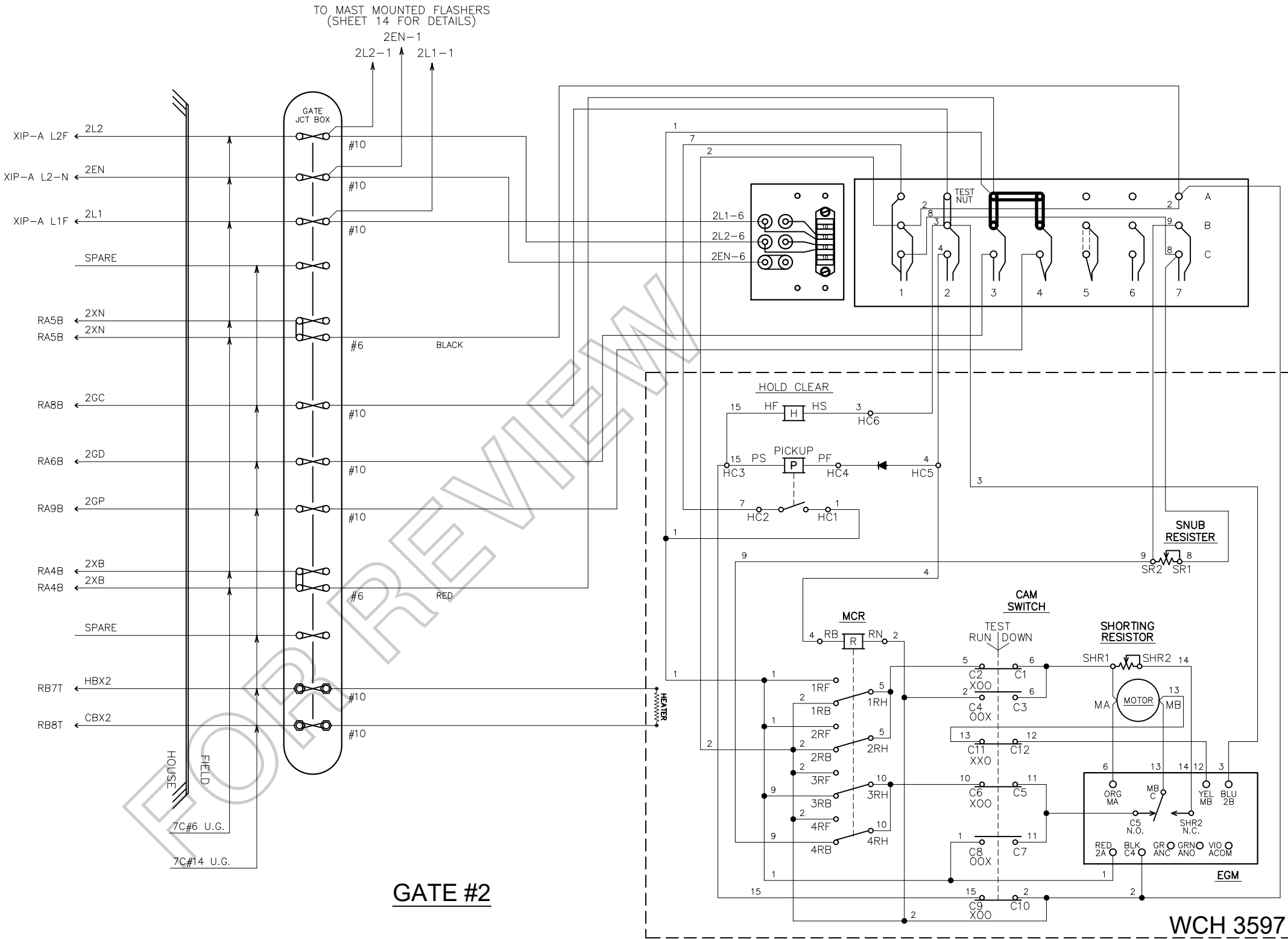
REFER TO SHEET 14 FOR GATE ARM LIGHT WIRING

ADD BOLD STRAPS AND JUMPERS AS SHOWN



WCH Junction box base
PN: 2149-A-139

-----> CABLES TO HOUSE



REVISION
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CHANGE FROM TYPICAL: Y



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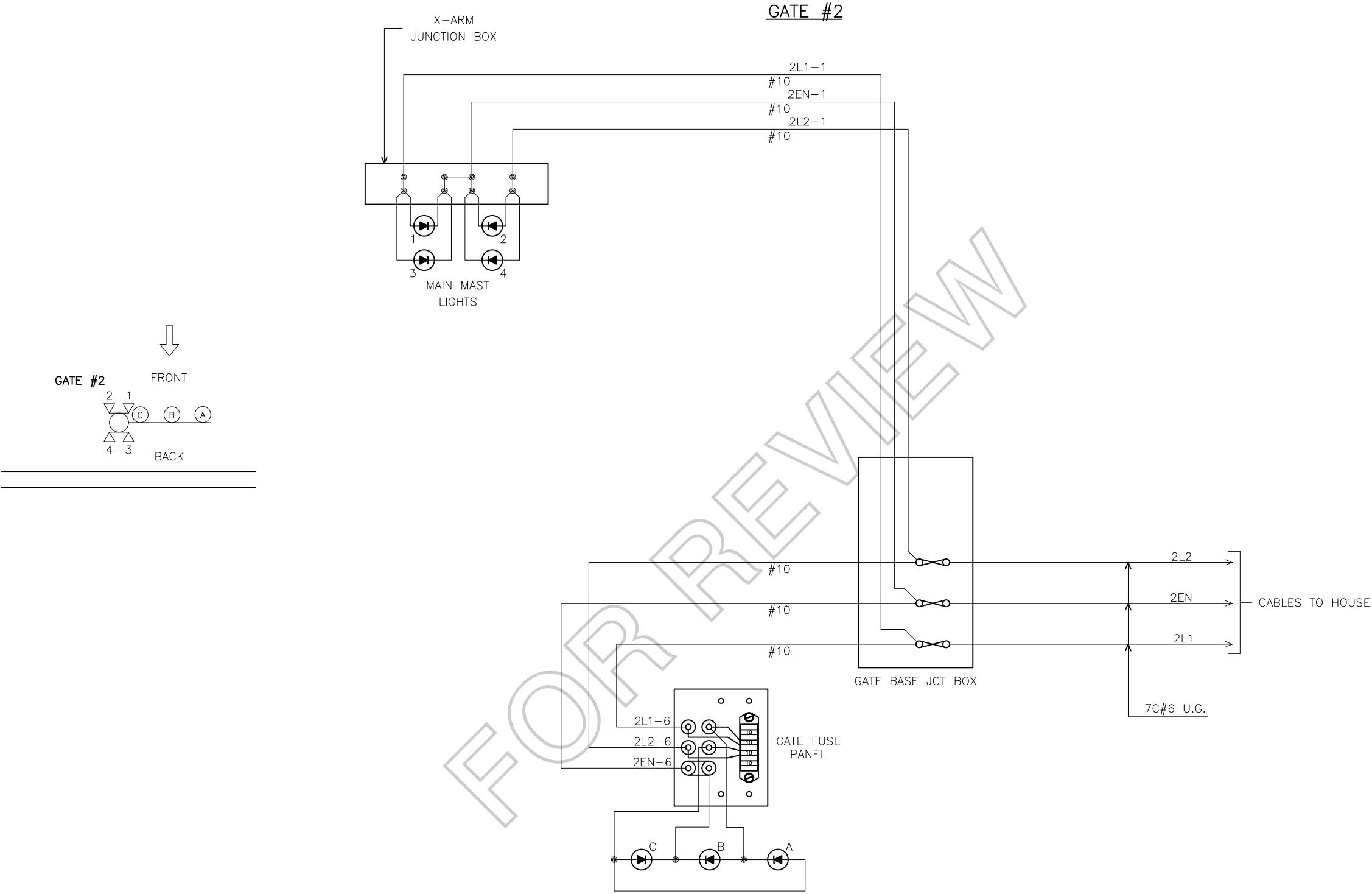
Wheeling & Lake Erie
Railway

LOCATION

SR 171 (WAYNESBURG RD NE)
near CARROLLTON, OHIO

40.6181575,-81.0905380

ORIGINAL DATE	02-02-2021	TITLE	GATE #2 MECHANISM (FAR SIDE)
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	L - 23.40
CHECKER	RGPT	DOT NO.	474 476H
		RGPT NO.	CN-21032
		SCALE	N.T.S.
		SHEET	13 of 20



NOTE:
* USE ATC 10 AMP FUSES ONLY

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

REVISION BLOCK	CHANGE FROM TYPICAL: Y							

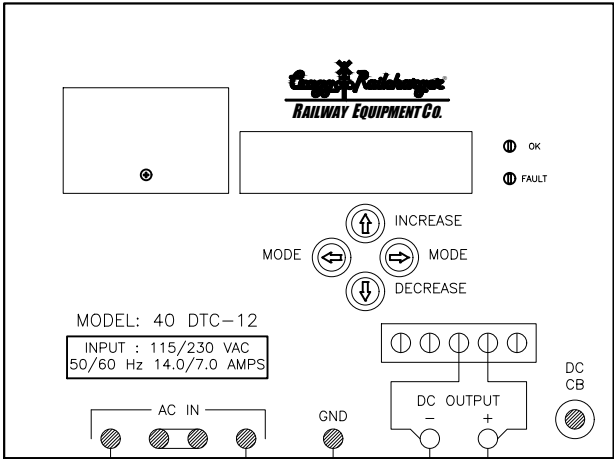


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TECHNOLOGY

9601 CAMP BOWIE W BLVD
FORT WORTH, TX 76116
(817) 886-8210
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<i>Whooling & Lake Erie</i> Railway		
LOCATION SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380		
ORIGINAL DATE 02-02-2021	TITLE GATE #2 LIGHTS (FAR SIDE)	
DESIGNER RGPT	SUB CLEVELAND	RGPT NO. CN-21032
DRAFTSMAN RGPT	RRMP L - 23.40	SCALE N.T.S.
CHECKER RGPT	DOT NO. 474 476H	SHEET 14 of 20

MB-CHARGER
(SIDE "A" WALL)

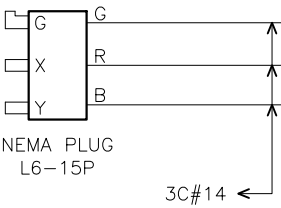


BASIC SETUP			
NO.	ABBREVIATION	DEFAULT SETTING	DESIRED SETTING
1	PASSWORD	5	5
2	USER LEVEL	BASIC	BASIC
3	BATTERY TYPE	LEAD ACID OR NI-CAD	NI-CAD
4	NUMBER OF CELLS	-	9
5	VOLTS PER CELL	-	1.42

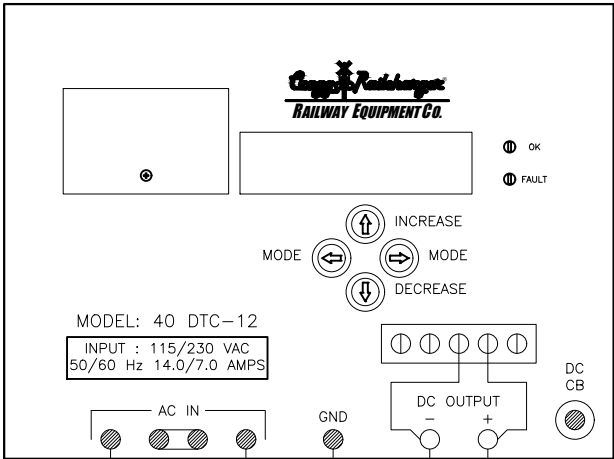
BATTERY BUSS DETAILS

SPARE	21	SPARE
CC50T	20	XP4 S7 IN2-
CC45T	19	XP4 S7 IN1-
SPARE	18	SPARE
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-
SPARE	12	SPARE
MDSA-1 B+	11	MDSA-1 B-
MB BATT+	10	MN BATT-

MB BUSS (TOP) AA MN BUSS (BOTTOM)



XB-CHARGER
(SIDE "C" WALL)

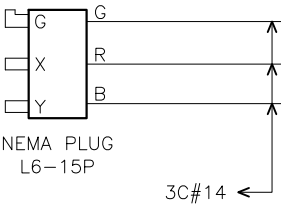


BASIC SETUP			
NO.	ABBREVIATION	DEFAULT SETTING	DESIRED SETTING
1	PASSWORD	5	5
2	USER LEVEL	BASIC	BASIC
3	BATTERY TYPE	LEAD ACID OR NI-CAD	NI-CAD
4	NUMBER OF CELLS	-	10
5	VOLTS PER CELL	-	1.42

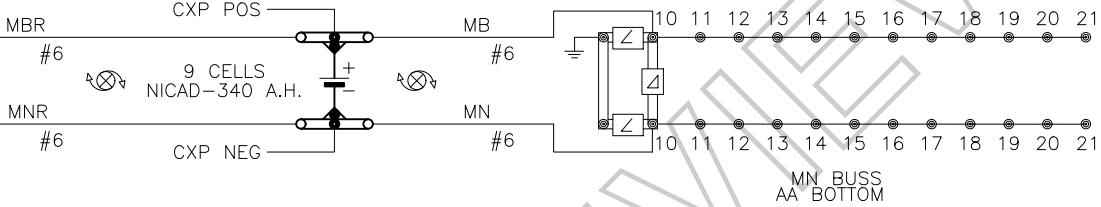
BATTERY BUSS DETAILS

RCDR C3 CH2 COM	54	XP4 S8 IN3-
RCDR C3 CH1 COM	53	XP4 S8 IN1-
SPARE	52	XIP-A G1-
RA4T	51	RA5T
RA16T	50	RA15T
XIP-A B	49	XIP-A N
SPARE	48	XP4 S8 IN1-
SPARE	47	XP4 S8 IN2-
SPARE	46	SPARE
SPARE	45	SPARE
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-

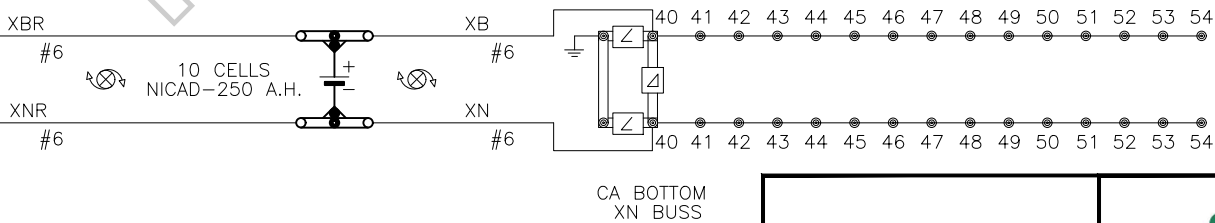
XB BUSS (TOP) CA XN BUSS (BOTTOM)



MB-BATTERY



XB-BATTERY



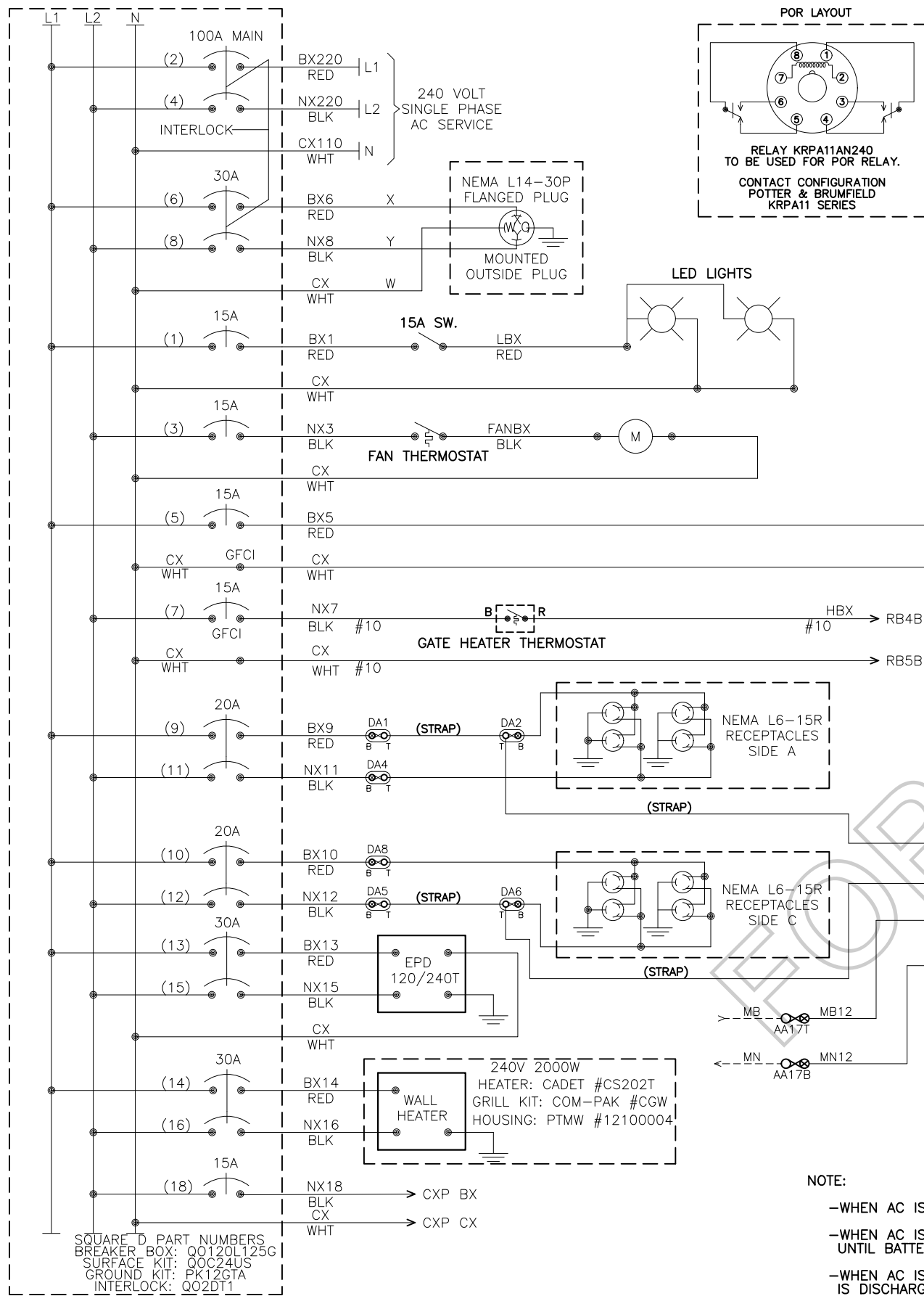
REVISION
BLOCK

CHANGE FROM TYPICAL: Y

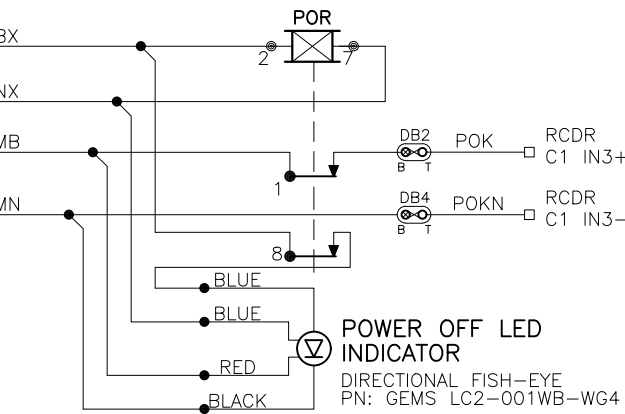
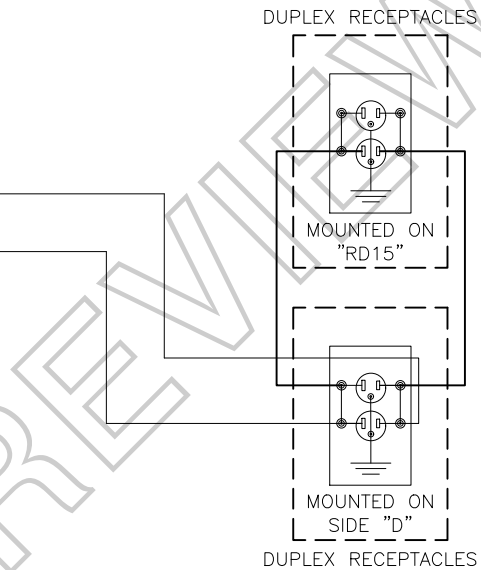
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Whooling & Lake Erie
Railway

LOCATION		
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380		
ORIGINAL DATE	02-02-2021	TITLE
DESIGNER	RGPT	SUB
DRAFTSMAN	RGPT	RRMP
CHECKER	RGPT	DOT NO.
		474 476H
		SCALE
		1"=2'
		SHEET
		15 of 20

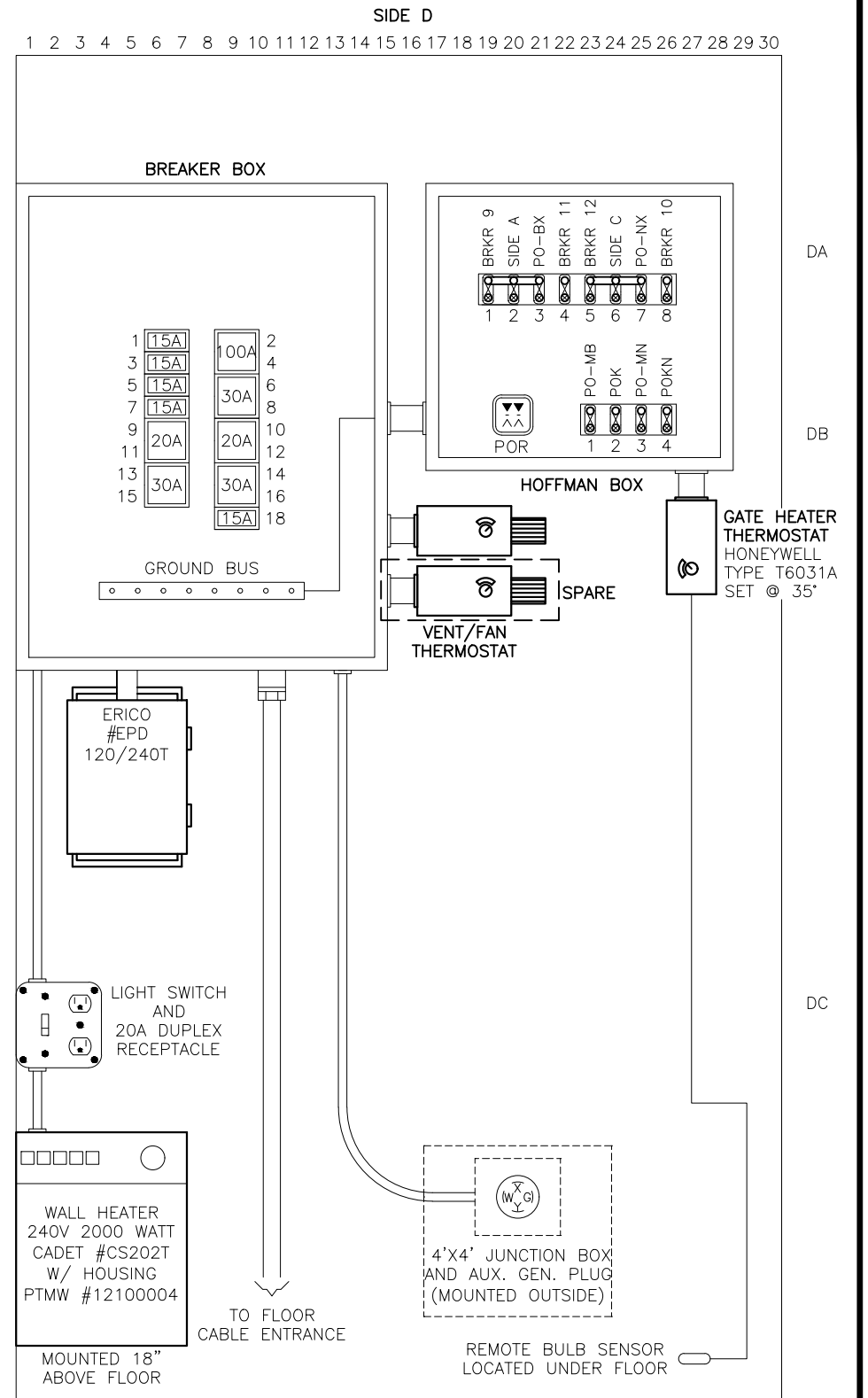


- NOTES:
- USE THE FOLLOWING COLOR CODE:
GRN - GREEN - SAFETY EQUIPMENT GROUND
WHT - WHITE - CX110 (NEUTRAL)
BLK - BLACK - NX220 (L2)
RED - RED - BX220 (L1)
EXCEPTIONS TO THE ABOVE COLOR CODE ARE THE PRE-WIRED, SEALED ARRESTOR UNITS MOUNTED ON THE BREAKER BOX WHICH HAVE TWO BLACK AND ONE WHITE WIRE EACH.
 - 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



- 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.

CHANGE FROM TYPICAL: N

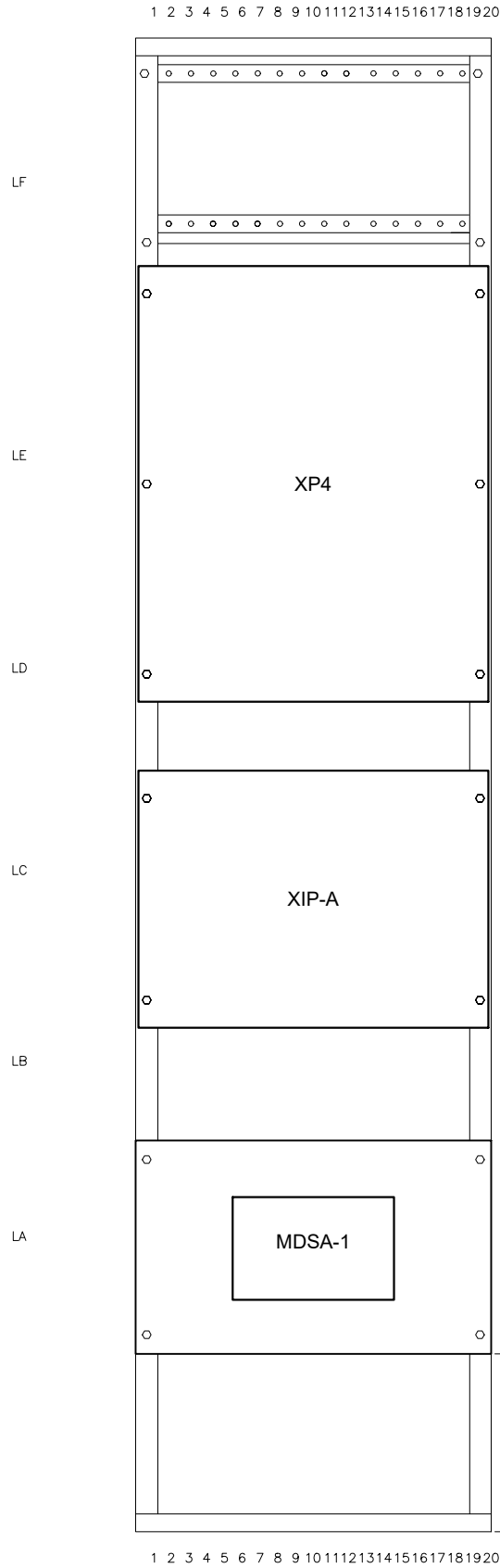


REVISION
BLOCK

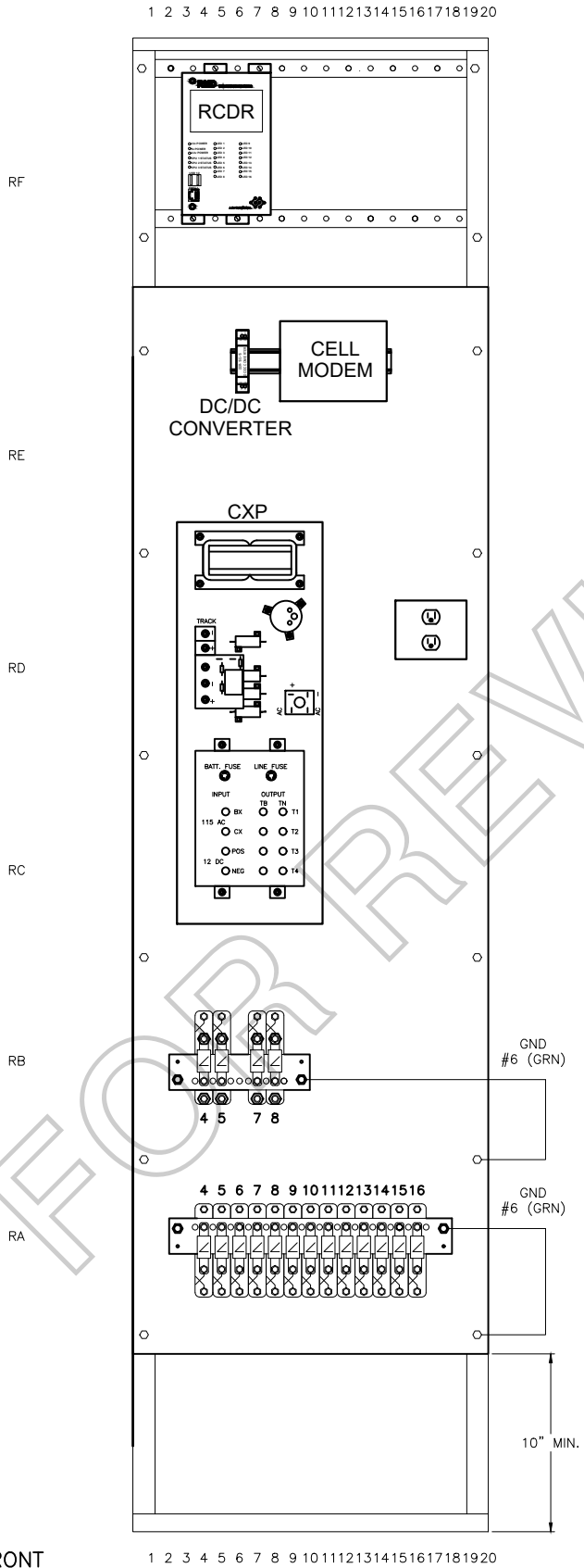
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Whooling & Lake Erie
Railway

LOCATION			SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO		
ORIGINAL DATE			40.6181575,-81.0905380		
DESIGNER			AC POWER DISTRIBUTION		
DRAFTSMAN			RGPT		
CHECKER			CN-21032		
TITLE			SCALE		
SUB			1"=2'		
DOT NO.			SHEET		
474 476H			16 of 20		



SIDE 'B' FRONT



CHANGE FROM TYPICAL: Y

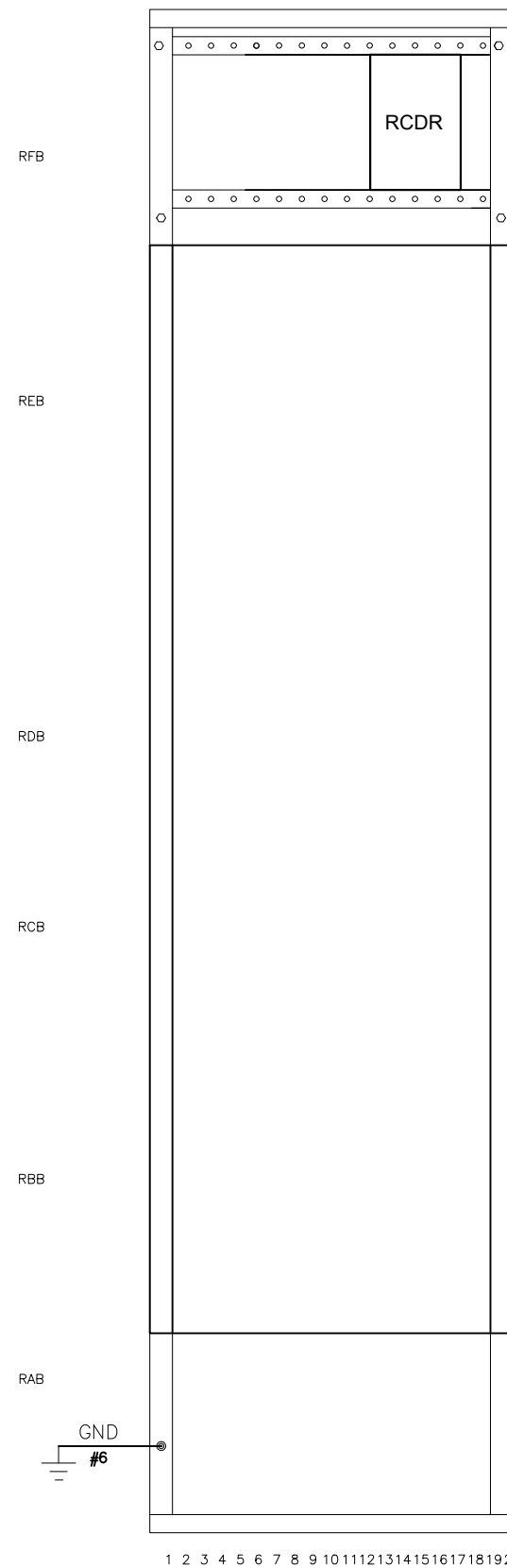
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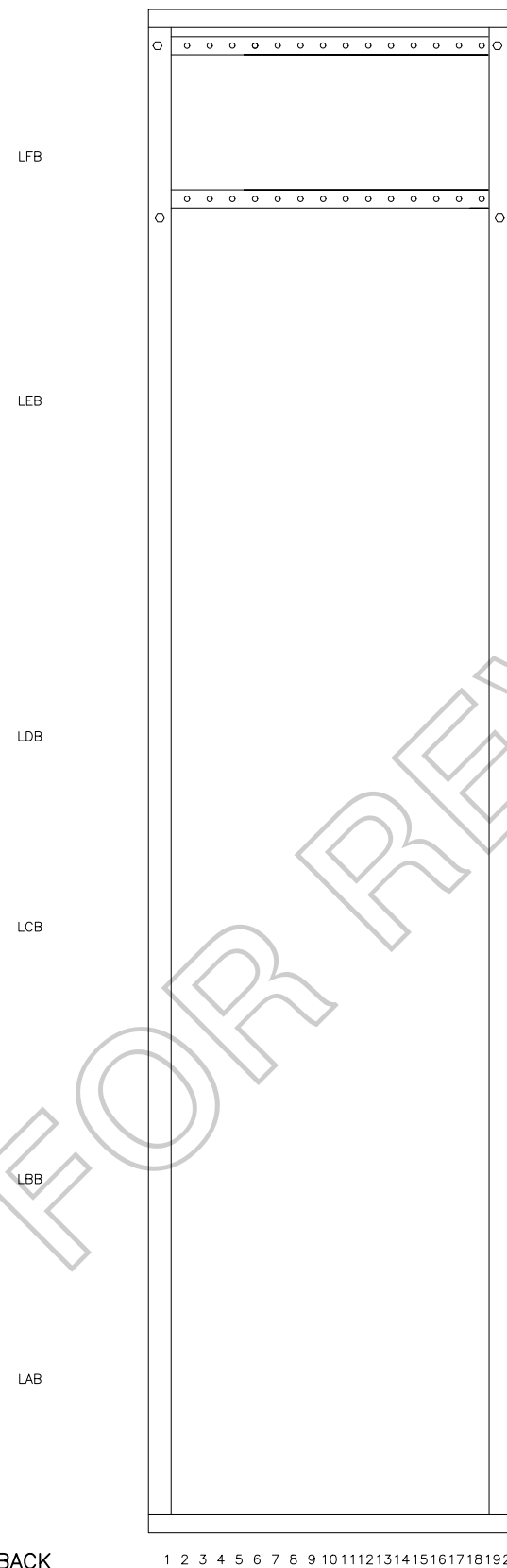
**Whoollng & Lake Erie
Railway**

LOCATION		
SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380		
ORIGINAL DATE	02-02-2021	TITLE RACK FRONT VIEW
DESIGNER	RGPT	SUB CLEVELAND
DRAFTSMAN	RGPT	RRMP L - 23.40
CHECKER	RGPT	DOT NO. 474 476H
		RGPT NO. CN-21032
		SCALE 1"=2'
		SHEET 17 of 20

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



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



SIDE 'B' BACK

CHANGE FROM TYPICAL: Y



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Wheeling & Lake Erie Railway

LOCATION

SR 171 (WAYNESBURG RD NE)
near CARROLLTON, OHIO

40.6181575,-81.0905380

ORIGINAL DATE	02-02-2021
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1	TITLE	RACK BACK VIEW
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DESIGNER	RGPT
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	RACK BACK
SUB	CLEVELAND

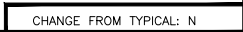
	RGPT
DRAFTSMAN	RGPT

	CLEVELAND
RRMP	L - 23.40

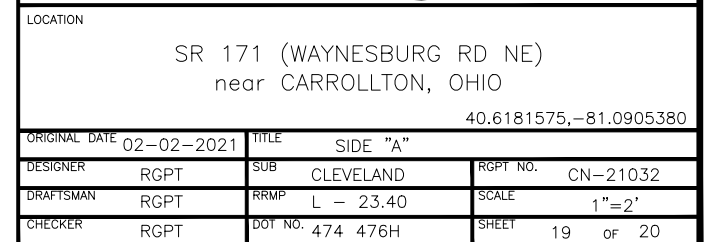
DOT NO.	474 476H	SHEET	16 OF 20
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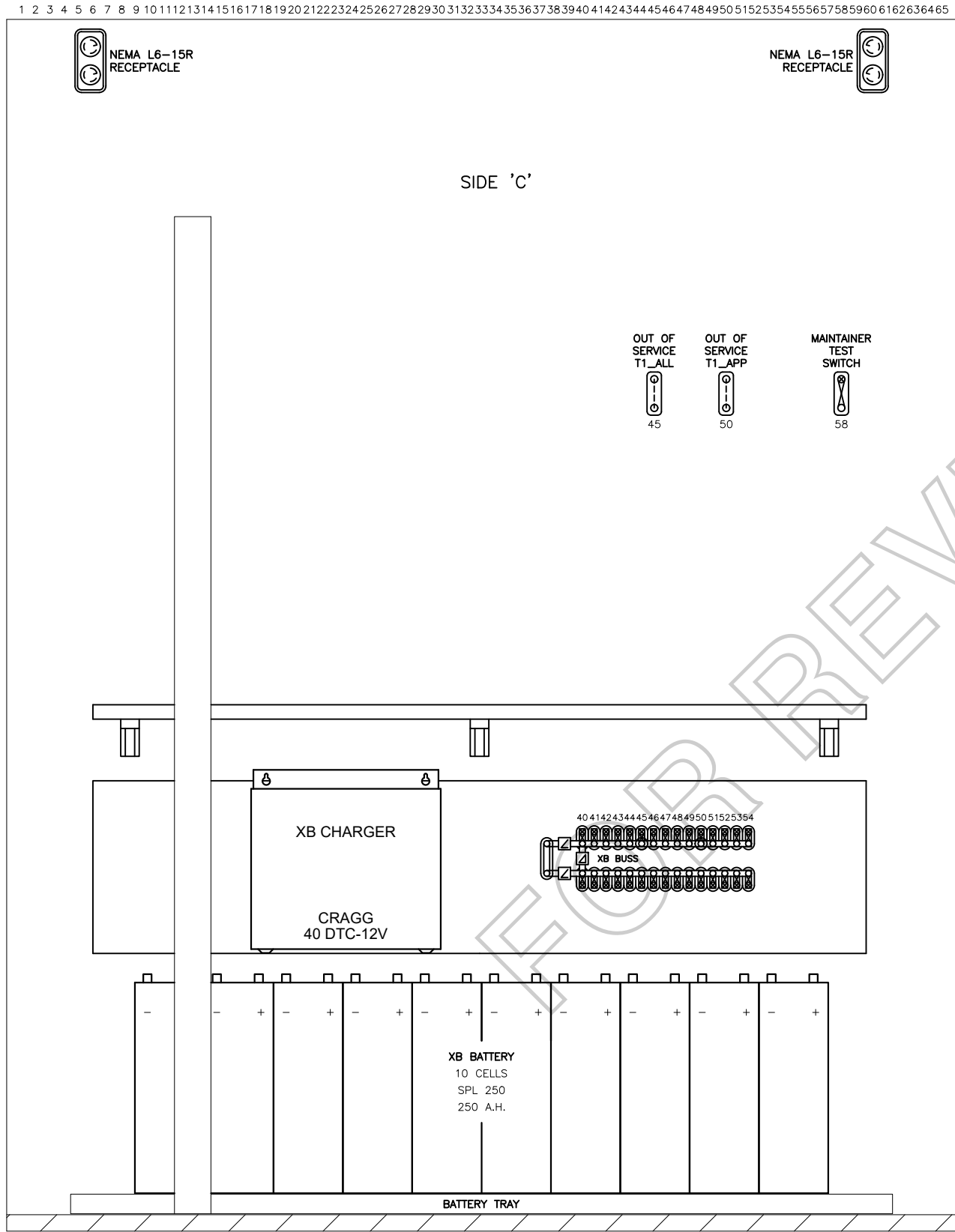
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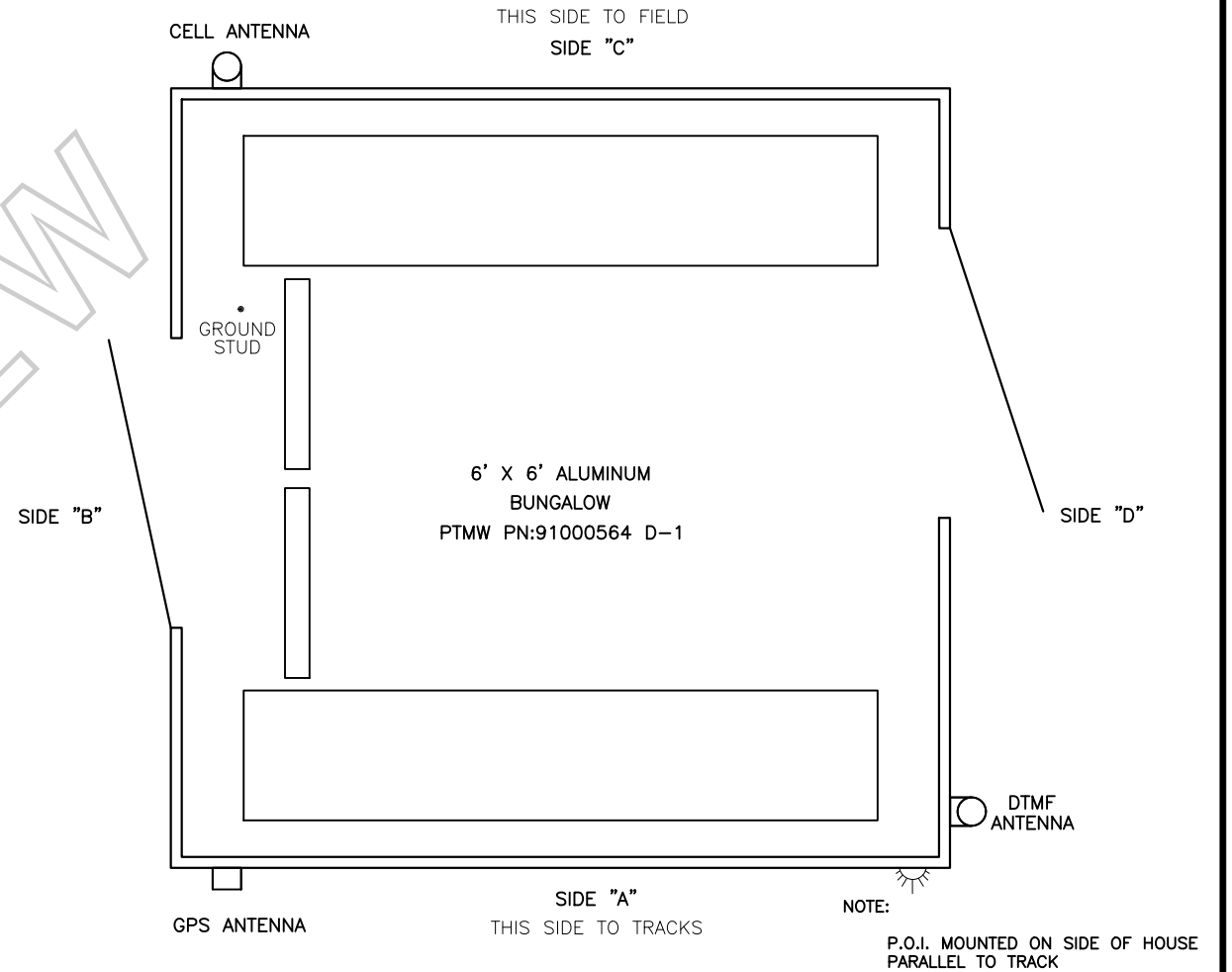
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NOTE:

ANTENNA TO BE PLACED IN AERIAL CABLE ENTRY PROVIDED.



REVISION
BLOCK

CHANGE FROM TYPICAL: N



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**Whoollng & Lake Erie
Railway**

LOCATION SR 171 (WAYNESBURG RD NE) near CARROLLTON, OHIO 40.6181575,-81.0905380			
ORIGINAL DATE	02-02-2021	TITLE	SIDE "C"
DESIGNER	RGPT	SUB	CLEVELAND
DRAFTSMAN	RGPT	RRMP	L - 23.40
CHECKER	RGPT	DOT NO.	474 476H
		RGPT NO.	CN-21032
		SCALE	1"=2'
		SHEET	20 of 20

Wheeling & Lake Erie
Carrollton, OH - SR-171 (Waynesburg Rd)
DOT# 474 476H



MP L-23.40 - Cleveland Subdivision

Riotech Project Estimate

ENGINEERING				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
DIAGNOSTIC TECHNICIAN	0	HR	\$65.67	\$0.00
CADD TECHNICIAN	56	HR	\$36.25	\$2,030.00
SIGNAL DESIGNER	16	HR	\$65.67	\$1,050.72
SIGNAL ENGINEER - CHECK	4	HR	\$65.67	\$262.68
SIGNAL ENGINEER - SEAL (IF APPLICABLE)	4	HR	\$66.53	\$266.12
LOGIC PROGRAMMER	4	HR	\$123.19	\$492.76
SUBTOTAL				\$4,102.28
G&A	165%			\$6,768.76
FIXED FEE	10%			\$1,087.10
ENGINEERING TOTAL				\$11,958.15

PROJECT MANAGEMENT				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
PROJECT MANAGER - SIGNAL	8	HR	\$43.27	\$346.16
SR. PROJECT MANAGER - SIGNAL	16	HR	\$65.67	\$1,050.72
PROJECT MANAGER - MATERIAL	0	HR	\$35.38	\$0.00
PURCHASING MANAGER	40	HR	\$30.31	\$1,212.40
ACCOUNTING	16	HR	\$40.00	\$640.00
SUBTOTAL				\$3,249.28
G&A	165%			\$5,361.31
FIXED FEE	10%			\$861.06
PROJECT MANAGEMENT TOTAL				\$9,471.65

EAF LABOR				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
EAF SUPERVISOR	40	HR	\$30.31	\$1,212.40
EAF LEAD FOREMAN	56	HR	\$21.22	\$1,188.32
LEAD WIREMAN	0	HR	\$20.75	\$0.00
WIREMAN	0	HR	\$17.00	\$0.00
TEST	8	HR	\$66.53	\$532.24
QA/QC	2	HR	\$35.38	\$70.76
SUBTOTAL				\$3,003.72
G&A	165%			\$4,956.14
FIXED FEE	10%			\$795.99
EAF LABOR TOTAL				\$8,755.84

Wheeling & Lake Erie
Carrollton, OH - SR-171 (Waynesburg Rd)
DOT# 474 476H



CONSTRUCTION LABOR				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
MANAGER OF FIELD SVCS	16	HR	\$43.27	\$692.32
CONSTRUCTION SUPERVISOR	80	HR	\$32.83	\$2,626.40
CREW FOREMAN	80	HR	\$29.94	\$2,395.20
CREWMAN 3	80	HR	\$22.04	\$1,763.20
CREWMAN 1	80	HR	\$20.00	\$1,600.00
FIELD ENGINEER (CUTOVER SUPPORT)	0	HR	\$64.06	\$0.00
SUBTOTAL				\$9,077.12
G&A	165%			\$14,977.25
FIXED FEE	10%			\$2,405.44
CONSTRUCTION LABOR TOTAL				\$26,459.80

CONSTRUCTION LABOR EXPENSES				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
DIAGNOSTIC EXPENSES	0	EA	\$175.00	\$0.00
MANAGER EXPENSES	0	EA	\$175.00	\$0.00
CREW MEALS	32	EA	\$56.00	\$1,792.00
CREW LODGING	32	EA	\$125.00	\$4,000.00
MOBILIZATION	1	EA	\$1,500.00	\$1,500.00
SUBTOTAL				\$7,292.00
FIXED FEE	0%			\$0.00
CONSTRUCTION LABOR EXPENSES TOTAL				\$7,292.00

CONSTRUCTION EQUIPMENT				
<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
TRUCK, PU, 1 TON CREW CAB	80	HR	\$21.50	\$1,720.00
TRAILER, UTILITY (12,000lb SC410)	80	HR	\$10.25	\$820.00
RENTAL EQUIPMENT (BACKHOE W/18" BKT)	1	WK	\$1,600.00	\$1,600.00
RENTAL EQUIPMENT (FORKLIFT - 8K)	2	WK	\$1,600.00	\$3,200.00
RENTAL EQUIPMENT (MINI EX W/18" BKT)	0	WK	\$1,400.00	\$0.00
RENTAL EQUIPMENT (VIBRATORY RAMMER/TAMPER)	0	WK	\$350.00	\$0.00
EQUIPMENT DELIVERY/PICKUP	4	LS	\$250.00	\$1,000.00
DIESEL FUEL SURCHARGE	20	GAL	\$5.00	\$100.00
SUBTOTAL				\$8,440.00
FIXED FEE	0%			\$0.00
CONSTRUCTION EQUIPMENT TOTAL				\$8,440.00

Wheeling & Lake Erie
Carrollton, OH - SR-171 (Waynesburg Rd)
DOT# 474 476H



MATERIAL

<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
CROSSING MATERIAL	1	LS	SEE ATTACHED DETAIL	\$109,485.11
MATERIAL INBOUND FREIGHT	1	LS	\$3,500.00	\$3,500.00
FILL DIRT	10	TN	\$25.89	\$258.90
COVER ROCK (3/4" CRUSHED - WHITE)	25	TN	\$26.50	\$662.50
CONCRETE (CANTILEVERS) - IF APPLICABLE	0	YD	\$300.00	\$0.00
PALLET CHARGE - GATES	2	EA	\$100.00	\$200.00
PVC PACKAGE (FROM PULL BOX TO HOUSE)	1	LS	\$3,500.00	\$3,500.00
SUBTOTAL				\$117,606.51
TAX (IF APPLICABLE)	-			\$0.00
FIXED FEE	0%			\$0.00
MATERIAL TOTAL				\$117,606.51

SUBCONTRACTOR

<i>Description</i>	<i>Qty</i>	<i>UOM</i>	<i>Unit Price</i>	<i>Amount</i>
CONTAINER DELIVERY	1	LS	\$4,500.00	\$4,500.00
CONTAINER PICKUP	1	LS	\$2,500.00	\$2,500.00
HORIZONTAL BORING (4" HDPE)		FT	\$45.00	\$0.00
METER POLE (PERMITS & INSTALL)		LS	\$5,000.00	\$0.00
SIDEWALK CONSTRUCTION (APPROX. 50')		LS	\$8,000.00	\$0.00
SUBTOTAL				\$7,000.00
FIXED FEE	0%			\$0.00
SUBCONTRACTOR TOTAL				\$7,000.00

TOTAL PROJECT ESTIMATE

\$196,983.95

VENDOR	DESCRIPTION	PART NUMBER	QTY	UOM
Contech	Guardrail, 2/3 circle	5213716-2/3	1	EA
Elliott Elect	5/8" X 8' Copper Ground Rod	95082476	6	EA
Erico	5/8" Ground Rod Weld	SBNT1161G	6	EA
Graybar	Wire, Ground, #6AWG, Bare Copper	BARE-CU-SD-6-SOL-315S	60	FT
Okonite	Cable, 7/C#6, Armored	206-11-6247	500	FT
Okonite	Cable, 7C#14, Armored	206-11-6887	500	FT
Okonite	Cable, 3C#6 w/Ground for A/C power	206-11-6070	150	FT
Okonite	Wire, Track, 2C/#6, Twist, Solid	150-12-3933	350	FT
Allied	Relay, 8-pin KRPA style, 10A/240VAC	70198711	1	EA
Allied	Socket, 8-pin KRPA style	70199343	1	EA
Allied	Spring, Hold down for KRPA style relay	70198576	1	EA
Alstom	Controller, ElectroLogIXS XP4	16-220004433	1	EA
Alstom	MDSA-1X Surge arrestor panel	250204-100	1	EA
Alstom	XIP Panel, 20 Amp	227561-000	1	EA
Alstom	Cable, 12 ft (cable #1) (Need 1 for XIP)	075046-002	1	EA
Alstom	Cable, 12 ft (cable #2) (Need 1 for XIP)	075047-002	1	EA
CalAmp	Cell Modem, LMU-5541	LMU-5541	1	EA
CalAmp	Din rail mount, LMU-5541 cell modem	250-5800-410	1	EA
Digikey	DC-DC Converter, din rail mount	DDR-15G-15	1	EA
Erico	Arrestor, DC	EPD2050F	17	EA
Erico	Arrestor, AC	EPD2170F	4	EA
Grainger	Decal, Danger 240V, 5"x3.5"	3XDU5	1	EA
Graybar	Panduit, Wire Duct, 2"X3"X6' Gray	95032476	6	EA
Graybar	Panduit, Cover, 6' Gray	88197241	6	EA
Graybar	Cable, SJ Cord 4c/14	BJ11404-14/4-SJOOW-300V	50	FT
J&A Industries	Terminal, Battery, 3-PT	225481-000	4	EA
J&A Industries	Battery Tray, 12"x27"	027002-001	4	EA
Okonite	Wire, Case, #16AWG 1000' spool, Blue	152-11-3002	2	EA
Okonite	Wire, Case, #10AWG 1000' spool, Blue	152-11-3038	2	EA
PTMW	Bungalow, Alum. 6 X6 w/Heater	91000564 D-1	1	EA
PTMW	Sensor, Intrusion Alarm Swich	9410002021	2	EA
Railway Equip	Battery Charger, 40DTC-12V	520940	2	EA
Rebel	Terminal, 2X6 W/ Flat nut/washer	220-0101	5	EA
Rebel	Terminal, Block, 2 3/8" center - 2 post w/hardware	220-0301	8	EA
Reynolds	Wire, Case, #6AWG, Green	N6GNM	100	FT
Reynolds	Wire, Case, #6AWG, Black	N6BM	100	FT
Reynolds	Wire, Case, #6AWG. Red	N6RD	100	FT
Reynolds	Nema Plug, Locking, (L6-15P) 15A/240V	HBL4570C	2	EA
Riotech	Recorder, RMD (includes 3' harness & wago strips)	(Populate per Plans)	1	EA
Riotech	Recorder DTMF Module	RT-2100-00	1	EA
Riotech	DIN Rail, 35mm x 2', Zinc-plated, w/end caps		1	EA
Riotech	Cable, 3' Cat6 Ethernet cable		1	EA
Saft	Battery, SPL 340 Ni-Cad	SPL+340	10	EA
Saft	Battery, SPL 420 Ni-Cad	SPL+420	9	EA
Siemens	Equalizer, Air Gap, with Cover/Hardware	4000-44700-001X	2	EA
Siemens	DC Enhancer Panel	8000800490001	1	EA
Vantex	Tie-wrap, 11 1/2" (100 pk)	LTS11-0	1	EA
Vantex	Tie-wrap, mounting (100 pk)	TYM	1	EA
Velcorp Gems	Power Indicator, Wago connector	LC2-001WB-WG4	1	EA
Wilson Elec	Antenna, 4G Omni Plus Directional Kit	304422-5810	1	EA
Alstom	Insulated Nut, 1 3/16"	013986-000	24	EA
Arrow	Terminal Ring, HD, 1/4", insulated, #10 - #12 (yellow w/blk stripe)	2-320569-6	100	EA
Graybar	Duct seal, 5lb	31-605	3	EA
Home Depot	Tape, 3M Scotch 3/4" x 66' electrical tape - Black (3-pack)		1	EA
Home Depot	Plaster, DAP 4lb Box		1	EA
Rebel	Nut, AAR Flat Nut	220-0001	200	EA

Rebel	Nut, AAR Crown Nut	220-0000	200	EA
Rebel	Washer, AAR Flat	220-0003	200	EA
Rebel	Gold Test Nut	220-0008	50	EA
Rebel	Strap, 1" offset test link	220-0506	50	EA
Rebel	Lock, Barrel Style	290-0000	5	EA
Siemens	Wrench, AAR terminal, 6.5"	032619-9X	1	EA
Vantex	Terminal, Ring, 1/4" non-insulated, #6, Battery Lug	T6-14	8	EA
Arms	Lights, Red 12" LED	433121680XLTC-00	8	EA
Eagle Traffic	Sign, Emergency, ENS, 15"x9" Blue		2	EA
GSI	Gate Keeper, 2-Way, w/Hardware & Buffer Spring	SK-1000-SW40	2	EA
GSI	Gate, Alum/Polyglass 19'-24', Hi Intensity tape	SG-1924-FT-HI	2	EA
GSI	Bell, Electronic, 5" Base	EB-3-360-5	1	EA
NEG	Wind Bracket, 36", 5"MTG w/hardware	NEG-191036	2	EA
Railway Equip	E-Z gate LED lamp kit	9298-1120	2	EA
Rebel	Pinnacle, 5"	010-9034	1	EA
Rebel	Sign, Crossbuck (NO brackets or hardware)	070-0065	2	EA
Rebel	5" Sign Kit (Brackets/extensions/Ubolts/hardware)	070-5008	4	EA
WCH	Mast, Gate, 18'X5" w/pigtail (single-sided Jct Box)	715-324-2-GS	2	EA
WCH	Jct box, Gate, 5" single (28 terminals & 2" flange)	2149-A-139	2	EA
WCH	Mech, Model 3597	3597-131-P-H-MI	2	EA
WCH	Crossarm Assy, 5" Mtg., 2 Way	975-0804-5	2	EA
WCH	Counterweight Pkg, 17'-32', Stud plate, L&R arms	CTWT-AL-32	2	EA
WCH	Wrench, Torque (KIT)	3590-K-9	1	EA
Alstom	Dual Wide Band Shunt (1134D-3 - 1134D-5)	SEE VENDOR GUIDE	2	EA
Erico	Connector, Headbonds	SB20136	100	EA
Erico	Wheel, grinding	SB22122	3	EA
Erico	Bond Wire, 7 1/2" XS Style, P/N SBS24883, Erico	SBS24883	100	EA
G&B	Shunt Enclosure, Orange	500-400-100-09	2	EA
Riotech	Bootleg Kit, Crossing complete, 1 Track		1	EA

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

November 24, 2021

Ohio Rail Development Commission
Mr. Gregory Gronbach
1980 West Broad Street
Columbus, OH 43223

Estimate for Railroad Crossing Surface SR 171, Waynesburg Dr.- PID# 115114

Dear Mr. Gronbach,

I am providing this estimate for the crossing surface replacement at SR 171. Surface will be completed using W&LE employees and welds will be completed by Holland. Please let me know if you have any questions.

Labor/Rock/Asphalt	\$65,000.00
Timber/Spikes/Plates/Spikes/Rail	\$29,990.92
Welding of Joints (Holland)	\$14,000.00
TOTAL:	\$108,990.92

Please contact me if additional details are required.

Respectfully,



Tim Andrews



Rail Development Commission

Mike DeWine, Governor
Jon Husted, Lt. Governor

Scott Corbitt, Chair

May 7, 2021

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

RE: PE Authorization for (Signals) Carroll Co, State Route 171-9.52, DOT# 474476H, PID# 114424

Dear Mr Andrews:

A diagnostic review (constituent) was held at the above grade crossing on December 8, 2020. The crossing has been recommended for the installation of lights/gates with a new roadway surface (surface authorizations later).

Wheeling & Lake Erie 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 Greg Gronbach. Mr. Gronbach can be reached at (614) 745-6760, or Gregory.Gronbach@dot.ohio.gov, if you have any questions.

Sincerely,


Greg Gronbach
Project Manager

C: John Williams, Director, Transportation Department, PUCO
Jill Henry, Rail Specialist, 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

March 15, 2021

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

Subject: Grade Crossing Warning Device Improvement
Carroll County, State Route 171-9.52, DOT# 474476H, PID 114424

Dear Mr. Andrews:

A diagnostic review was conducted at the subject grade crossing on December 8, 2020. As a result of the review, the devices will be upgraded to automatic 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 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 WE and may be amended by the ORDC based on revised estimates and bid tabulations.

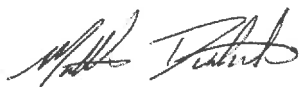
This Letter Agreement and the approved plans constitute the scope of the projects. WE shall notify ORDC in writing of any changes in the scope of work which are not in the approved plans and estimates and secure approval in writing of same before the work is performed.

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,

A handwritten signature in dark ink, appearing to read "Matthew Dietrich", written in a cursive style.

Matthew Dietrich
Executive Director

Wheeling & Lake Erie Railroad:

By: Tim Andrews

Title: SAC Supervisor

Date: 3-31-21

CAR State Route 171 WE PID 114424 DOT #474476H

State Route 171-9.52, Carroll County, Wheeling & Lake Erie (Virtual Diagnostic)**DATE 12-8-2020****Crossing at a glance:****Hazard Rank -****ORDC Notes:****Please Sign In**

JIM TUCKER

ORDC

Name

Title

Organization

Phone Number

Email

Signature

CATHY STOUT

ORDC

Name

Title

Organization

Phone Number

Email

Signature

Heather
Hamilton

ORDC

Name

Title

Organization

Phone Number

Email

Signature

TIM ANDREWS

WE

Name

Title

Organization

Phone Number

Email

Signature

Scott Warner

ODOT

Name

Title

Organization

Phone Number

Email

Signature

Jill Henry

PUCO

Name

Title

Organization

Phone Number

Email

Signature

Shawn Zurfley

PUCO

Name

Title

Organization

Phone Number

Email

Signature

Tim Brown

ORDC

Name

Title

Organization

Phone Number

Email

Signature

Ben Schillig

WE

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

Date: **12-8-2020**

Location Data		
Street or Road Name: State Route 171-9.52		
County: Carroll	Township:	US DOT No.: 474476H
City (in or near): Near Carrollton	Railroad Name: WE	RR Milepost: 23.40
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:		
Hazard Ranking: 2692	Date Run: 11/25/2020	

Existing Traffic Control Devices		
Type of Warning Devices	Installed?	Quantity/Comments
HIGHWAY		
Advance Warning Signs (condition?)	☒ Yes ☐ No	2-Good Condition
'Stop' Signs	☐ Yes ☒ No	
'Stop Ahead' Signs	☐ Yes ☒ No	
Pavement Markings (condition?)	☒ Yes ☐ No	2-Good Condition
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	2-Good Condition
Crossbucks – assembly with Stop	☐ Yes ☒ No	
Crossbucks – assembly with Yield	☒ Yes ☐ No	2-Yield Good Condition
Mast-Mounted Flashing Lights	☐ Yes ☒ No	
Cantilever Flashing Lights	☐ Yes ☒ No	Number: Length:
Side Lights	☐ Yes ☒ No	
LED or Incandescent Lights? Size?	☐ Yes ☒ No	
Automatic Gates	☐ Yes ☒ No	Number: Length:
Bells	☐ Yes ☒ No	Number:
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 Data		
Type of Train: ☒ Freight ☐ Intercity Passenger ☐ Transit ☐ Shared Use Transit ☐ Commuter ☐ Tourist/Other		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	2	
<1 per day? Trains per week	-	
Day thru trains	0	0
Night thru trains	1	2 week 1 down and 1 back
Switching	1	0
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks	-	
Maximum train speed	10	
Typical train speed	10	
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 ☒ No		
Can one train block the motorists' view of another train at the crossing? ☐ Yes (explain below) ☒ No		
Can 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:		STATE
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	2025 (2017)	1583 (2019)
Highway Paved	☒ Yes ☐ No	☐ Yes ☐ No
Roadway Surface: ☒ Blacktop ☐ Gravel ☐ Concrete Other _____		
Roadway width (paved/travelled way): 28 ft		
Number of Highway Lanes	2	
Urban or Rural	Rural-Major Collector	
Vehicle Speed: 55 MPH		
School Bus Operation: ☒ Yes ☐ No Amount 2		
Location of nearby schools: SR 9 1 mile west		
Hazardous Materials Trucks: ☒ Yes ☐ No Amount (from FRA) 8% LHA verified/changed?		
Shoulders: ☒ Yes ☐ No		
Is the Shoulder Surfaced? ☒ Yes ☐ No If yes, shoulder width: 2 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 NE Curb & Gutter:	Quadrant SW 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 _____ Lead Agency _____ Timeline/completion _____		

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)	AEP
Nearest Available Power Source	50' West of crossing on pole #1018-110
What other utilities are present?	☐ Gas ☒ Cable ☒ Telephone ☐ Fiber Optic Cable (add locations to sketch) ☐ Petroleum ☐ Water ☐ Sanitary Sewer ☐ Other
Comments: Unknown for other utilities as nothing was marked	

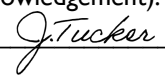
Surface	
Surface review form completed?	☒ Yes ☐ No

Sight Preview (REFER TO TABLES)	
If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1)	☒ Yes ☐ No 240'
Is stopping sight distance adequate? (See Table 2)	☒ Yes ☐ No If no, which quadrant? _____ 570'
When considering recommendations for bicycle treatments:	
Bicycle sight distance adequate?	☒ Yes ☐ No If no, which quadrant? _____ 100'
When considering recommendations for pedestrian treatments:	
Pedestrian sight distance adequate?	☒ Yes ☐ No If no, which quadrant? _____ 120'

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: Wheeling= 265' NW quad, 127' SW quad 38'NE quad and 33' SE quad
Culvert / Drainage / Ballast Conditions: CAR-171-0953 Box Culvert Eastside of crossing= possible wing wall modification
Roadway and/or Sidewalks: N/A
Circuitry (e.g. reaches out to other crossings, specific needs, etc.): N/A
Environmental: CAR-171-0953 Box Culvert Eastside of crossing
Utilities: Overhead cable/telephone in NE Quad
Other:

Potential Closure
Is it the consensus of the Diagnostic Review Team that this is a potential closure project? NO
Explain reasons: State Route

Diagnostic Team Recommendations	
☐ No improvements needed	Quadrants Needed
☒ Install/upgrade active devices	
☐ Automatic Flashing Lights (AFLS)	
☐ AFLS / Cants	
☒ AFLS / Gates	NE/SW quads
☐ AFLS / Gates / Cants	
☒ Bells / number	I
☐ Upgrade circuitry / type	
☐ Sidelights	
☐ LED Upgrades	12' LED
☐ Guardrail Needed	
☐ Install/Replace curb	
☐ Bungalow placement & offset from rail & highway	
☐ Other (define)	
Comments: Rusty Rail, Possible style C. Shunt enhancer? Possible wing wall modification in NE Quad to make room for the new foundation	
☐ 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.											

County: **Carroll**

Route: **State Route 171**

DOT#: **474476H**

Railroad: WHEELING & LAKE ERIE	LHA: ODOT
Surface type ☐ Rubber seal and asphalt ☐ Timber and asphalt ☐ Asphalt ☐ Composite ☐ Concrete panel ☐ Full-depth timber ☐ Full-depth rubber ☐ Other _____	Condition ☐ Good ☐ Fair ☐ Poor Comments: TIMBERS ARE OLD AND ASPHALT IS CRACKING
Vehicle type (cars, trucks, etc.): CARS/TRUCKS	
Surface conditions: Can vehicles cross at posted speed? YES Local observations/driver behaviors: MOST VEHICLES CROSS AT OR ABOVE POSTED SPEED Relevant crash history: UNKNOWN	
Do existing surface conditions have negative effects on the current or proposed warning devices? Explain: UNKNOWN THE SURFACE IS IN FAIR CONDITION WITH NO JOINTS WITHIN THE SURFACE ITSELF	
Comments:	

Form completed by: JAMES TUCKER

Date: 12-4-2020

**This foregoing document was electronically filed with the Public Utilities
Commission of Ohio Docketing Information System on**

3/21/2022 10:31:26 AM

in

Case No(s). 22-0230-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices and a Crossing Surface at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 474-476H, at SR 171 in Carroll County, Ohio. electronically filed by Mrs. Jill A. Henry on behalf of PUCO/Rail Division