

# Memo

To: Docketing Division  
From: Jill Henry, Rail Specialist, Rail Division  
Cc: PUCO Legal Department  
Date: 6/8/2020

Re: PUCO Case No. 20-1125-RR-FED- In the Matter of a Request for the Installation of New Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 473-124Y, at Ft Laurens Road/CR 102 in Tuscarawas County, Ohio.

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On November 15, 2019, the Ohio Rail Development Commission (ORDC) authorized funding for Wheeling & Lake Erie Railroad (WE) to upgrade to lights and gates at Ft Laurens Road/CR 102 (DOT#473-124Y) in Tuscarawas County, Ohio. The crossing was surveyed, on July 11, 2019, 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 \$200,157.93 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  
Cathy Stout  
1980 West Broad Street  
Mail Stop #3140  
Columbus, OH 43223

Tuscarawas County Engineer  
Joe Bachman  
County Engineer  
832 Front Avenue SW  
New Philadelphia, OH 44663

AEP- Ohio

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

**TO:** John Williams, Director, Transportation Department, PUCO

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

**BY:** Greg Gronbach, Project Manager, Safety Section, ORDC

**SUBJECT:** Construction Authorization for Tuscarawas County, CR102/Fort Laurens Rd, DOT# 473124Y, PID# 111143

**DATE:** May 28, 2020

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The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on July 11, 2019. The Ohio Rail Development Commission (ORDC) attended the review. The Diagnostic Team recommended the improvement of warning devices to flashing lights and roadway gates. Copies of the diagnostic review form and the plan and estimate are attached.

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 Specialist, PUCO  
ORDC Project Manager (file)



## Rail Development Commission

Mike DeWine, Governor  
Jon Husted, Lt. Governor

Mark Policinski, Chair

May 28, 2020

Tim Andrews  
Signal & Communications Supervisor  
Wheeling & Lake Erie Railway  
100 East First Street  
Brewster, Ohio 44613

RE: Construction Authorization for Tuscarawas County, CR102/Fort Laurens Rd, DOT# 473124Y, PID# 111143

Dear Mr. Andrews:

The plan dated October 25, 2019 and estimate dated March 6, 2020, 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 in accordance with the abbreviated plan.

The estimate of \$200,157.93 is acceptable and reimbursement is limited to \$200,157.93. 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](mailto:Gregory.Gronbach@dot.ohio.gov), and to the Public Utilities Commission of Ohio at [Jill.henry@puc.state.oh.us](mailto:Jill.henry@puc.state.oh.us). 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](mailto: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 Division Specialist, PUCO  
Heather Hamilton, ORDC  
ORDC (file)





# OHIO DEPARTMENT OF TRANSPORTATION

Mike DeWine, Governor Jack Marchbanks, Ph.D., Director

1980 W. Broad Street, Columbus, OH 43223  
614-466-7170  
[transportation.ohio.gov](http://transportation.ohio.gov)

**TO:** The Contracting Community  
Statewide Facilities Operations  
District Deputy Directors  
District Facilities Program Administrators

**FROM:** Kirk Slusher, Assistant Director, Field Operations *KMS*

**SUBJECT:** COVID-19/Coronavirus – Procedures Identified in the Stay at Home Order  
for Essential Facilities Infrastructure

**DATE:** April 21, 2020

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The Ohio Department of Transportation (“ODOT”) would like to provide an update on ODOT procedures and expectations related to the Stay at Home Order (“Order”) issued on March 22, 2020 by the Ohio Department of Health Director Amy Acton, MD, MPH. The Order is currently in effect and will remain in effect unless rescinded or modified. The full text of the Order can be found here: <https://coronavirus.ohio.gov/static/DirectorsOrderStayAtHome.pdf>

The Order notes several exemptions, including an exemption in Section 9 for Essential Infrastructure. The Order authorizes individuals to leave their residence to perform work to offer, provide, operate, maintain and repair Essential Infrastructure. Essential Infrastructure includes public works construction.

To help prevent the spread of COVID-19, the Order requires businesses and employers who work on such projects to take proactive measures, including:

- Complying with social distancing requirements outlined in Section 15
- Complying with the COVID-19 checklist outlined in Section 18

The implementation and adherence of these safety protocols are the responsibility of the companies, as are all other aspects of worker safety. If an employee is suspected of having, or is diagnosed with COVID-19, the company must immediately isolate the employee to a location away from other workers and report this incident to the ODOT Project Manager. Other employees who had direct contact with the individual must be quarantined from the Project per the ODH recommended protocols. The company must cooperate and respond to requests for information by ODOT regarding any occurrences.

It is understood that there may be situations that make it necessary for contractors to briefly work in close proximity to mitigate a hazard on the project. These circumstances shall not be considered normal operating procedure for the duration of the Order.

ODOT has been given direction by the Ohio Department of Health that when there are tasks that require employees to perform jobs or tasks that would put them closer than 6', they can perform those tasks with face coverings that are not medical grade PPE. All employees are to maintain social distancing at all other times, wash hands, and follow all other guidance as provided through the ODOT policies, or the Governor's Orders, as applicable.

Consistent with Section 18(g) of the Order, ODOT will allow resequencing and/or temporary suspension of work to maximize compliance with the Order upon request by the Contractor.

Requests for additional time resulting from suspension of work or claimed inefficiencies related to compliance with the Order will be addressed in accordance with the procedure outlined within the contract associated with the scope of work being performed.

# WHEELING & LAKE ERIE RAILWAY COMPANY

Tim Andrews  
Signal & Communication Supervisor

100 East First Street  
Brewster, OH 44613

Tel. 330-767-7255

tandrews@wlerwy.com

Fax: 330-767-3213

March 6, 2020

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

Re: Estimate for Railroad Crossing Warning System at Ft. Laurens Rd. DOT 473-124-Y

Dear Mr. Gronbach,

I am providing this estimate for the crossing package and installation at Ft. Laurens Rd. Award of the material package will be the result of a competitive bid; copies of the submitted quotes will be forwarded to your office when they are completed. Installation will be performed under our continuing construction agreement with CTC LLC.

Engineering Services, CTC (breakout attached)	\$194,232.24
Preliminary Installation Services, Crosier (breakout attached)	\$21,766.10
Electric Service, Emery	\$9,500.00
Electric Utility fees	\$4,500.00
WLE Direct Signal Labor	\$5,000.00
Galvanized signal foundations	\$1058.00
 TOTAL	 \$200,157.93

Please contact me if additional details are required.

Respectfully,

Tim Andrews

## Notes

1: Direct purchase from Fabricated Metals, 60' galvanized gate foundation, \$529.00 ea.








## CONSTRUCTION NOTES

- 1.) INSTALL NEW 6' X 6' BUNGALOW IN NORTHEAST 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.

FOR BIDDING

												<b>Wheeling &amp; Lake Erie Railway</b>								
												LOCATION  FORT LAURENS ROAD (CR 102) BOLIVAR, OH  40.6369700, -81.4581808								
												ORIGINAL DATE 10/25/2019		TITLE CONSTRUCTION		NOTES				
												DESIGNER CTC		SUB BREWSTER		CTC NO. CN19202				
												DRAFTSMAN CTC		RRMP B - 145.90		SCALE N.T.S.				
CHECKER CTC		DOT NO. 473 124Y		SHEET 01A OF 20																
REVISION BLOCK																				





CROSSING SIGNAL ALIGNMENT

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

ALIGNMENT

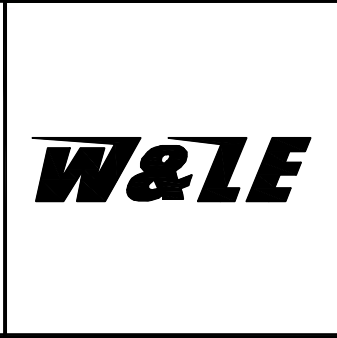
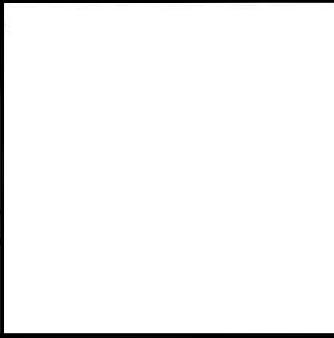
FRONT LIGHTS  
ADJUST LIGHT UNIT VERTICALLY TO ALIGN AXIS OF BEAM 5FT. 6IN. ABOVE PAVEMENT AT SELECTED ALIGNMENT DISTANCE. BOTH LAMPS SHOULD BE ALIGNED TO SAME POINT.

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.

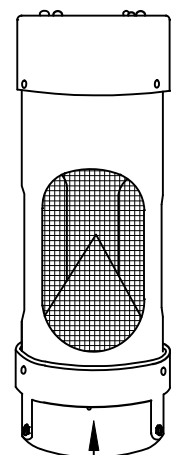
ADJUST LIGHT UNIT HORIZONTALLY TO ALIGN AXIS OF BEAM TO A POINT 50 FT. IN APPROACH TO THE SIGNAL ON OPPOSITE SIDE OF TRACK AND IN CENTER OF APPROACH TRAVEL WAY.

th								
REVISION								
BLOCK								



Whoelling & Lake Erie Railway		
LOCATION		
FORT LAURENS ROAD (CR 102) BOLIVAR, OH 40.6369700, -81.4581808		
ORIGINAL DATE	10/25/2019	TITLE
DESIGNER	CTC	CROSSING SIGNAL ALIGNMENT
DRAFTSMAN	CTC	SUB
CHECKER	CTC	BREWSTER
		CTC NO.
		CN19202
		SCALE
		N.T.S.
		SHEET
		02 of 20

1.) CROSSING IS LOCATED: LATITUDE 41.2488693  
LONGITUDE -82.7362450



THIS SIDE FACING-  
ROADWAY


GATE #2

ALUMINUM SECTION

END CAP

LAMP ASSEMBLY


The diagram shows a cross-section of a gate assembly. On the left, a vertical line represents the gate edge. To its right is a horizontal section labeled 'ALUMINUM SECTION'. Further right is a 'LAMP ASSEMBLY' which includes a 'LAMP HOUSING' and a 'LAMP GLASS'. A 'LAMP WIRE' is shown entering the assembly from the right. A 'GATE WIRE' is shown entering from the left, passing through the aluminum section and the lamp housing. An 'END CAP' is shown at the junction of the gate wire and the lamp housing. A dimension line indicates the distance from the gate edge to the end cap.



THIS SIDE FACING  
ROADWAY

REVISION	BLOCK

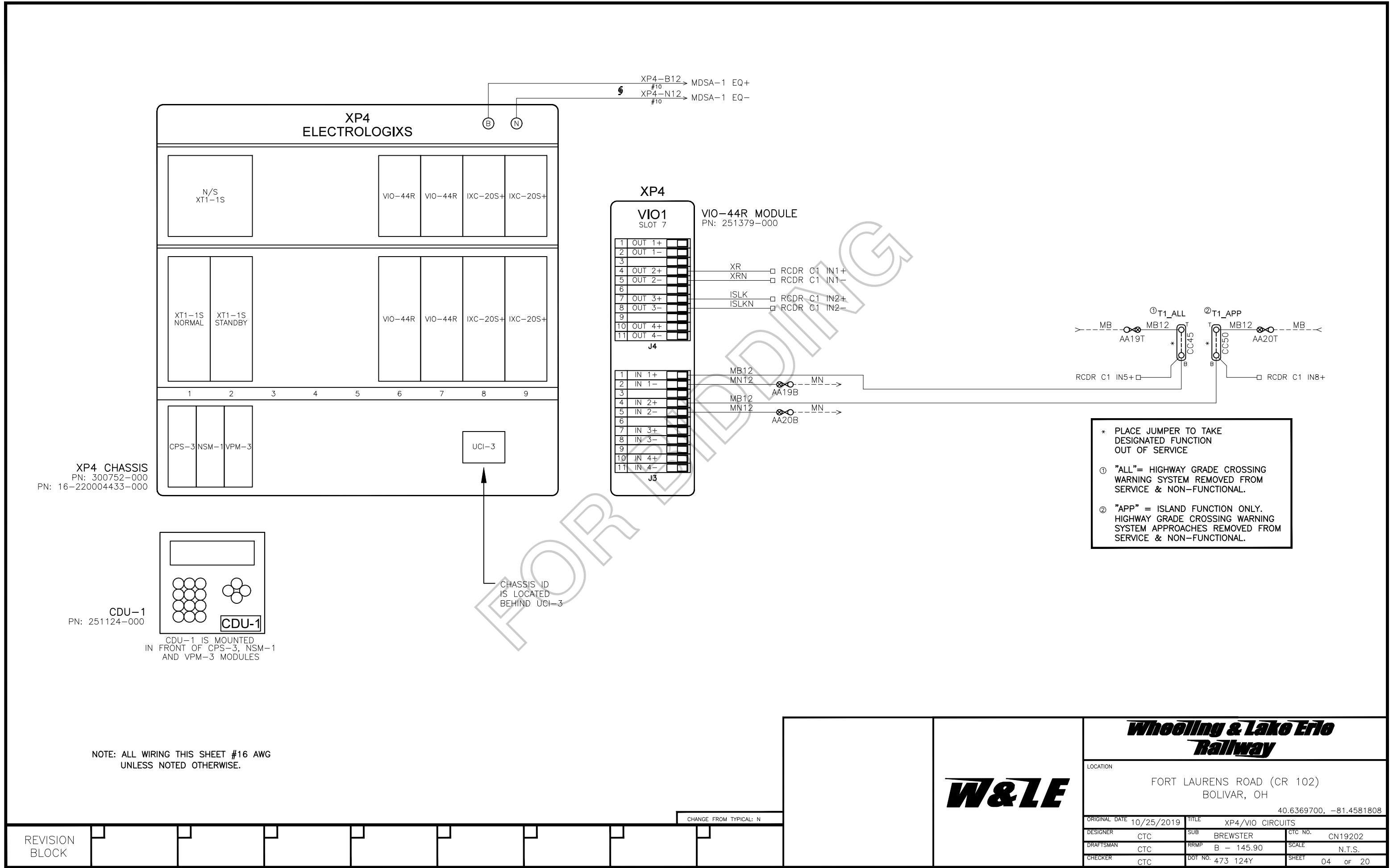
CHANGE FROM TYPICAL: N



**Whoelling & Lake Erie  
Railway**

LOCATION  
  
 FORT LAURENS ROAD (CR 102)  
 BOLIVAR, OH  
  
 40.6369700, -81.4581808

ORIGINAL DATE	10/25/2019	TITLE	SITE LAYOUT NOTES
DESIGNER	CTC	SUB	BREWSTER
DRAFTSMAN	CTC	RRMP	B - 145.90
CHECKER	CTC	DOT NO.	473 124Y
		SHEET	03 OF 20



ADJUSTMENT NAME		MDR1				MDR2			
NAME		HIGHWAY CROSSING				HIGHWAY CROSSING			
WARNING TIME		29 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	2000 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
MOTION DET TIMER	MDEN	DISABLE		
	MDTT	10 MIN		
FALSE SHUNT	FSEN	DISABLE		
	FSRX	NA		
APPROACH RELEASE	FST	NA		
	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	5.9 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
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	*	083024-716

NOTES:  
\* = FIELD ADJUSTMENT  
NA = NOT APPLICABLE

CHANGE FROM TYPICAL: Y

REVISION  
BLOCK

W&LE

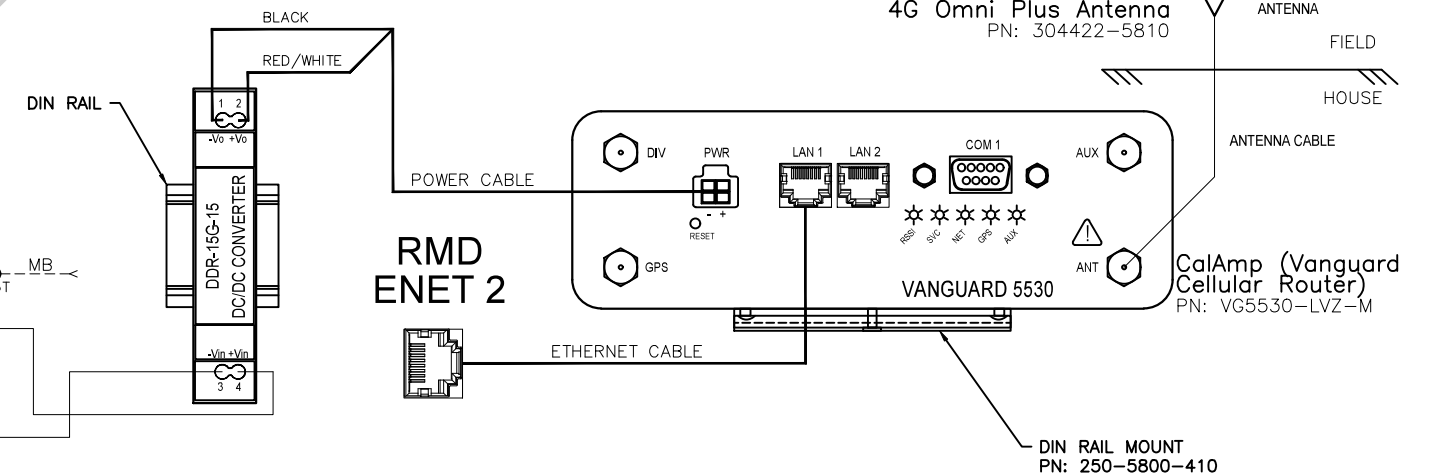
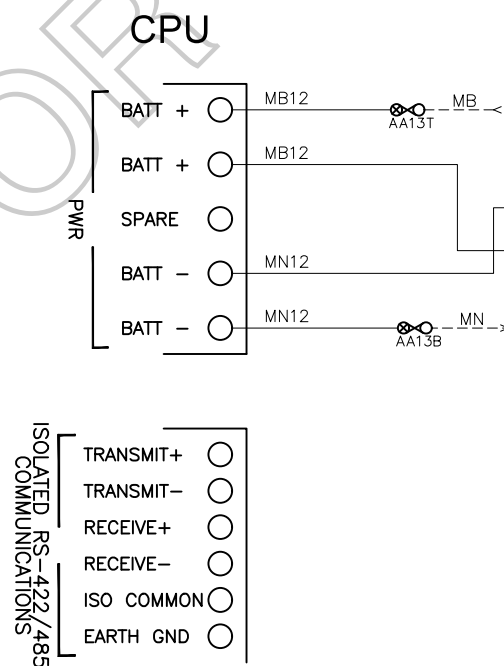
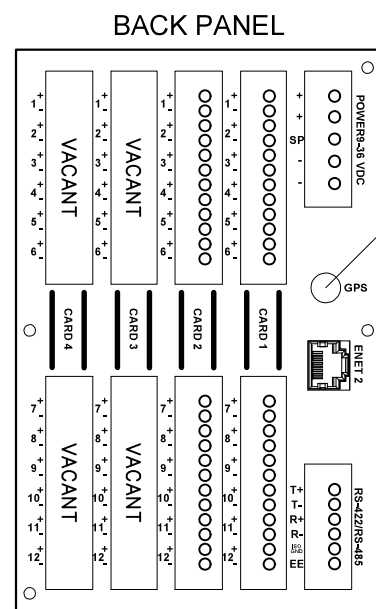
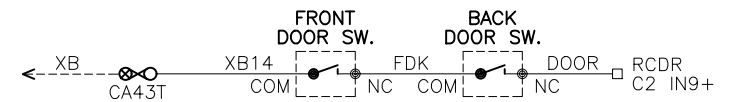
Whooling & Lake Erie  
Railway

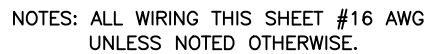
LOCATION		
FORT LAURENS ROAD (CR 102) BOLIVAR, OH		
40.6369700, -81.4581808		
ORIGINAL DATE	10/25/2019	TITLE
XP4 SETUP SHEET		
DESIGNER	CTC	SUB
BREWSTER		CTC NO.
CN19202		
DRAFTSMAN	CTC	RRMP
B - 145.90		SCALE
N.T.S.		
CHECKER	CTC	DOT NO.
473 124Y		SHEET
05		of 20







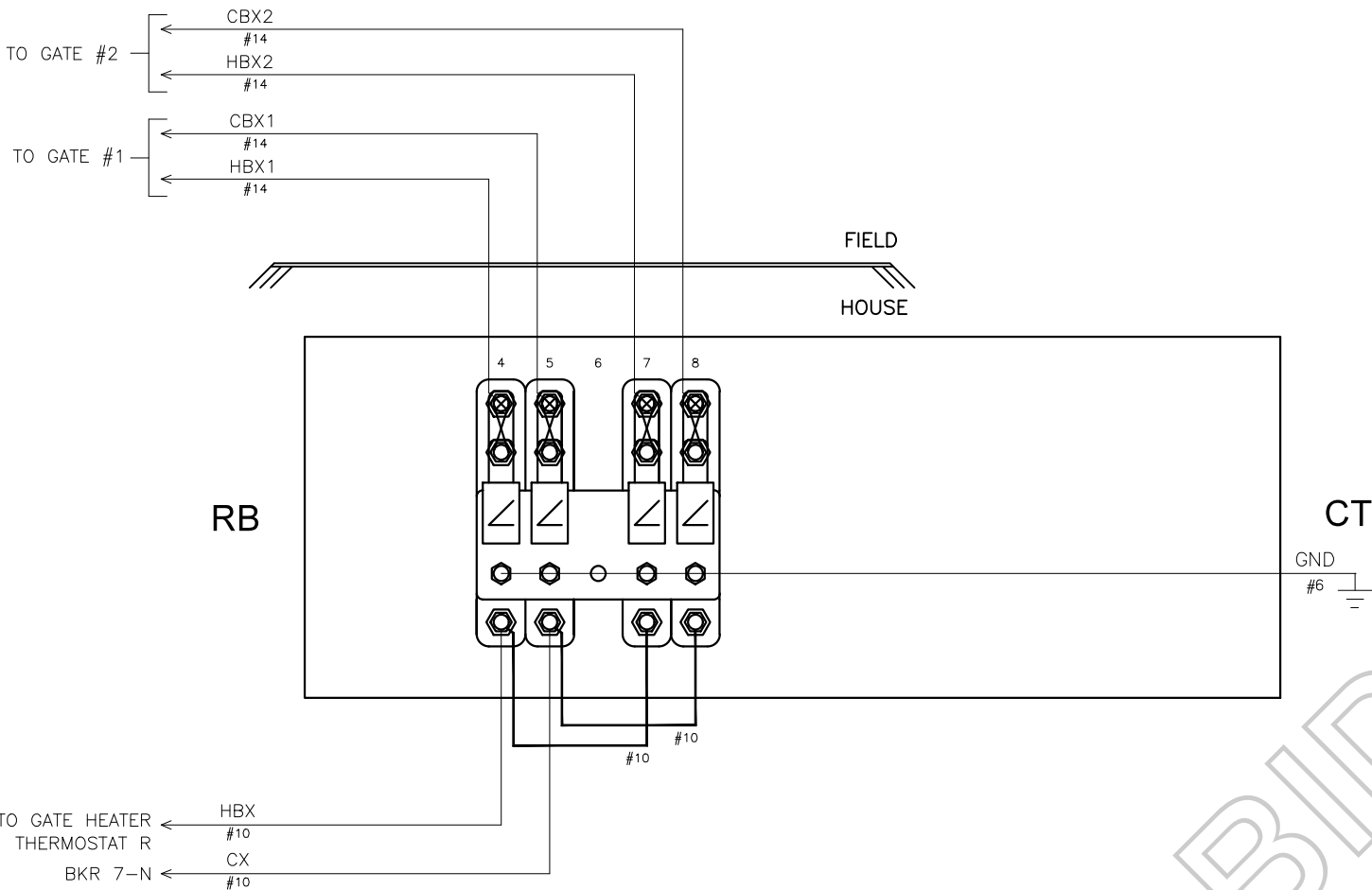




CHANGE FROM TYPICAL: N

SHEET 09 OF 20





LEGEND:

 = INSULATED NUT

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

CHANGE FROM TYPICAL: N

REVISION  
BLOCK

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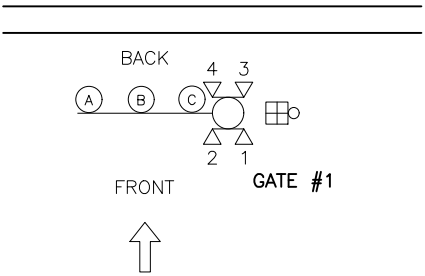
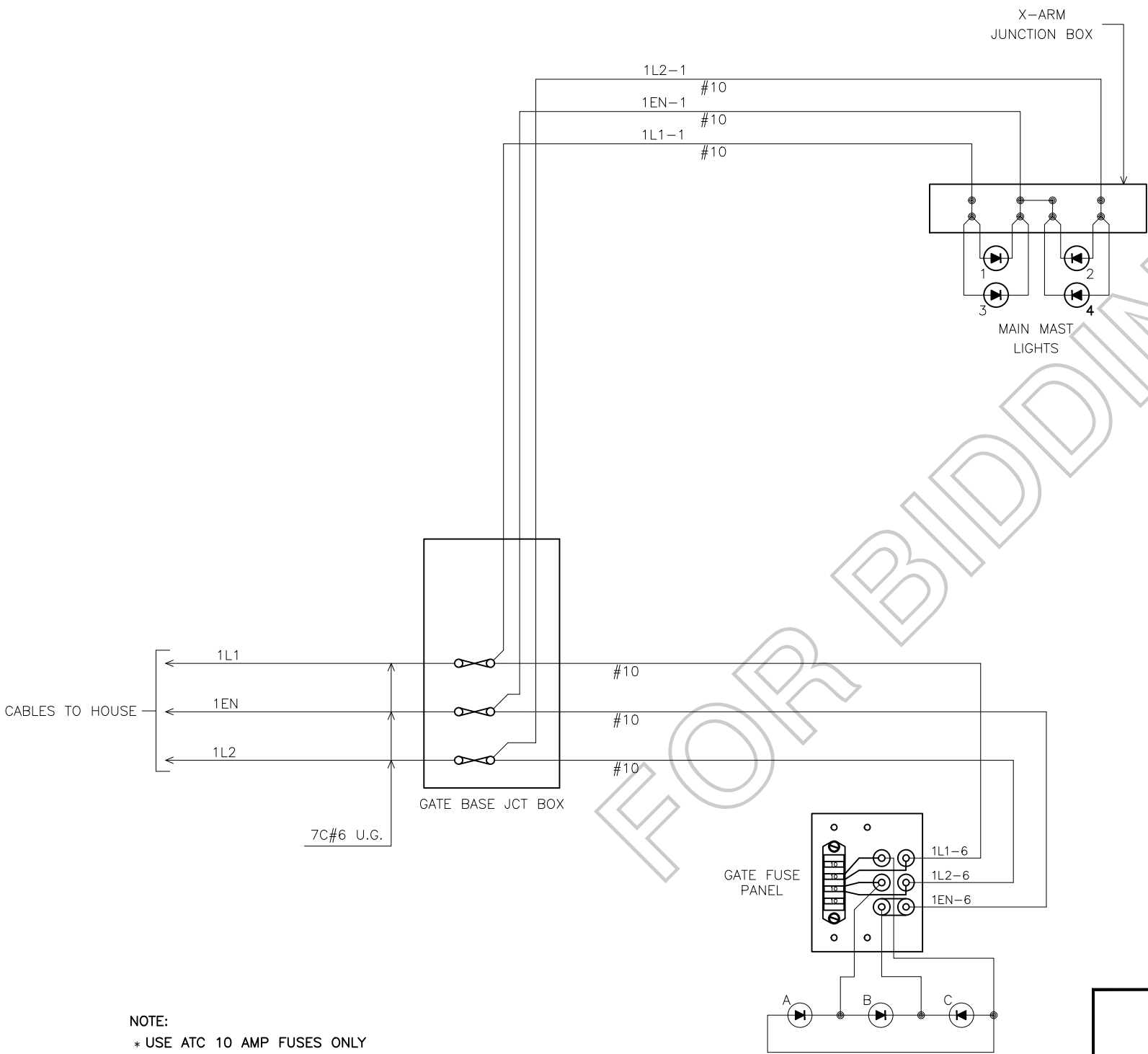
**W&LE**


**Wheeling & Lake Erie  
Railway**

LOCATION FORT LAURENS ROAD (CR 102) BOLIVAR, OH 40.6369700, -81.4581808		
ORIGINAL DATE 10/25/2019	TITLE CABLE TERMINATION PANEL	
DESIGNER CTC	SUB BREWSTER	CTC NO. CN19202
DRAFTSMAN CTC	RRMP B - 145.90	SCALE N.T.S.
CHECKER CTC	DOT NO. 473 124Y	SHEET 10 of 20



GATE #1



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

CHANGE FROM TYPICAL: Y

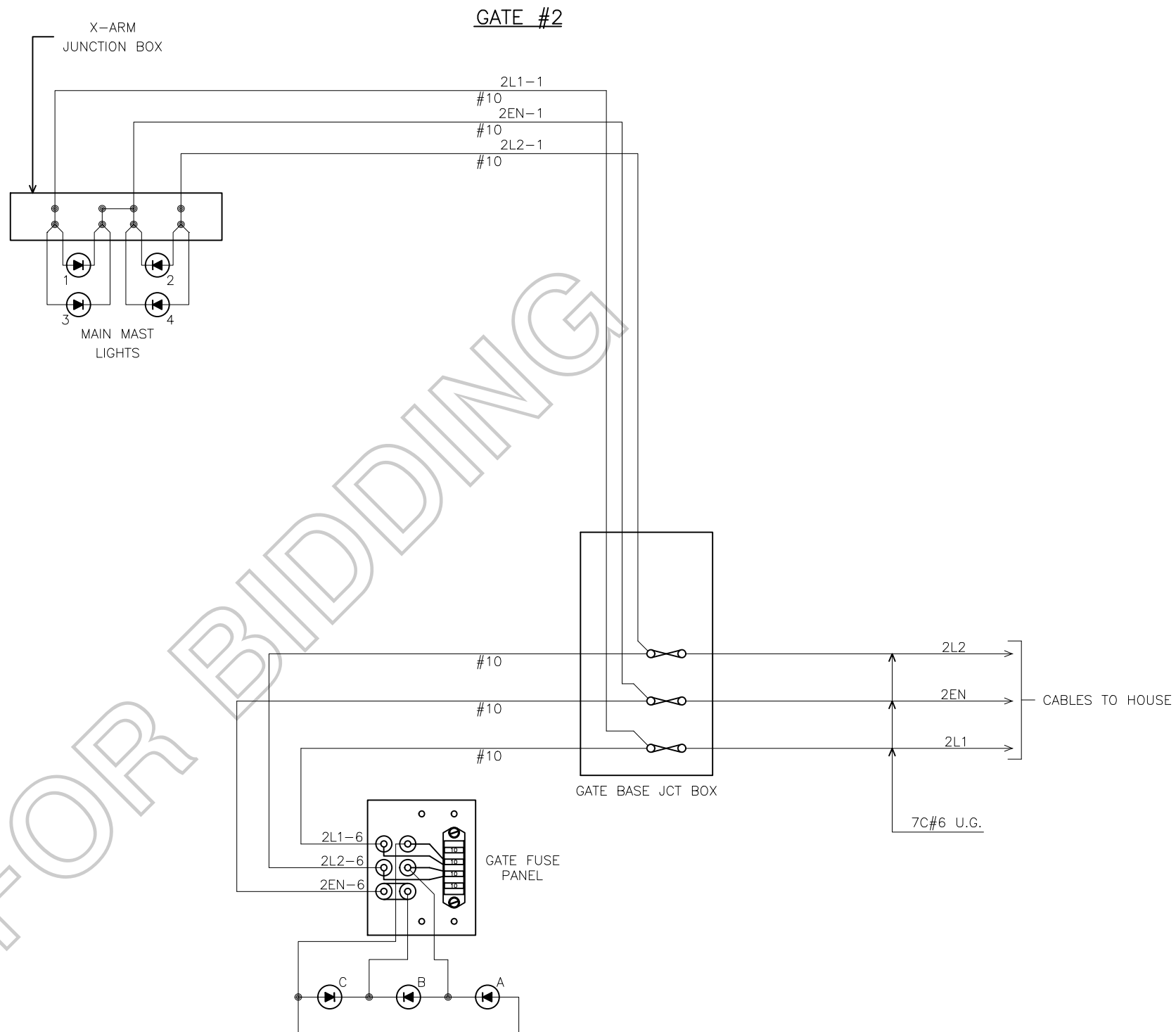
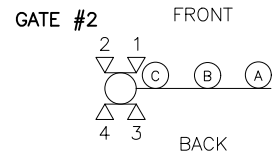
REVISION  
BLOCK

**W&LE**

**Wheeling & Lake Erie  
Railway**

LOCATION FORT LAURENS ROAD (CR 102) BOLIVAR, OH 40.6369700, -81.4581808		
ORIGINAL DATE 10/25/2019	TITLE GATE #1 LIGHTS (NEAR SIDE)	
DESIGNER CTC	SUB BREWSTER	CTC NO. CN19202
DRAFTSMAN CTC	RRMP B - 145.90	SCALE N.T.S.
CHECKER CTC	DOT NO. 473 124Y	SHEET 12 of 20





NOTE:  
\* USE ATC 10 AMP FUSES ONLY

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

REVISION  
BLOCK

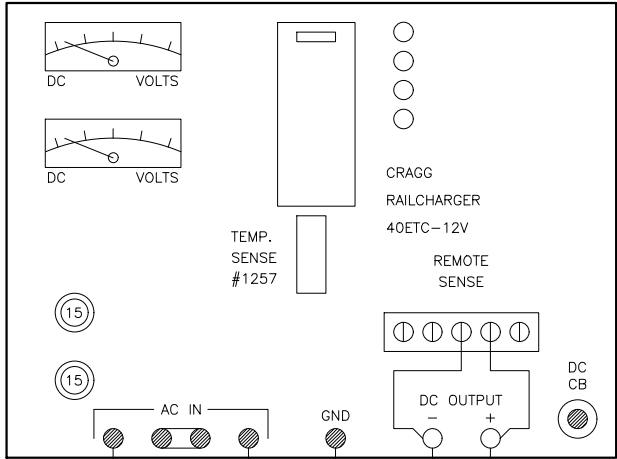
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**W&LE**

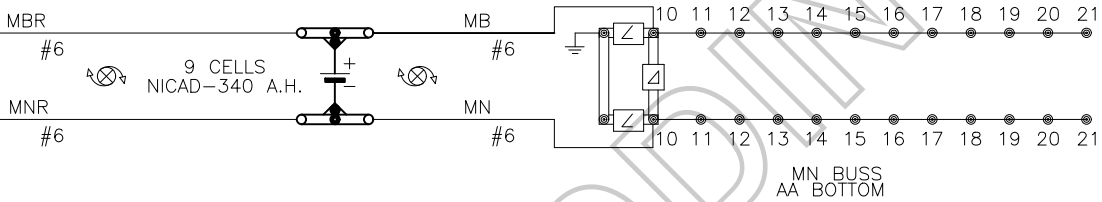
**Wheeling & Lake Erie  
Railway**

LOCATION FORT LAURENS ROAD (CR 102) BOLIVAR, OH 40.6369700, -81.4581808		
ORIGINAL DATE 10/25/2019	TITLE GATE #2 LIGHTS (FAR SIDE)	
DESIGNER CTC	SUB BREWSTER	CTC NO. CN19202
DRAFTSMAN CTC	RRMP B - 145.90	SCALE N.T.S.
CHECKER CTC	DOT NO. 473 124Y	SHEET 14 of 20

MB-CHARGER  
(SIDE "A" WALL)



MB-BATTERY

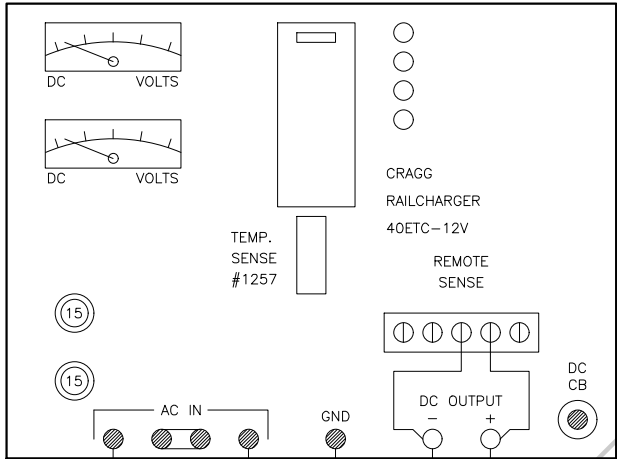


BATTERY BUSS DETAILS

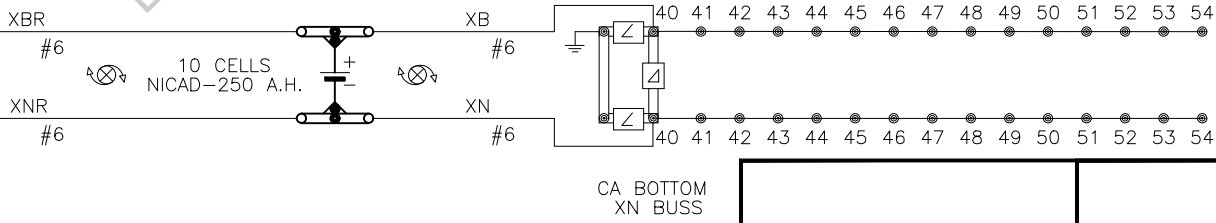
SPARE	21	SPARE
CC50T	20	XP4 S7 IN2-
CC45T	19	XP4 S7 IN1-
SPARE	18	SPARE
DB1T	17	DB3T
SPARE	16	SPARE
SPARE	15	SPARE
RCDR C1 IN10+	14	RCDR C2 IN9-
RCDR CPU BATT+	13	RCDR CPU BATT-
SPARE	12	SPARE
MDSA-1 B+	11	MDSA-1 B-
MB BATT+	10	MN BATT-

MB BUSS (TOP) AA MN BUSS (BOTTOM)

XB-CHARGER  
(SIDE "C" WALL)



XB-BATTERY



BATTERY BUSS DETAILS

SPARE	54	SPARE
SPARE	53	SPARE
SPARE	52	XIP-A G1-
RA4T	51	RA5T
RA16T	50	RA15T
XIP-A B	49	XIP-A N
GDR 25	48	XP4 S8 IN1-
GPR 12	47	XP4 ST IN3-
GDR 15	46	SPARE
GPR 15	45	GPR 1E
CC58T	44	XP4 S8 IN4-
FD COM	43	RCDR C1 IN10-
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)

**Whooling & Lake Erie  
Railway**

LOCATION

FORT LAURENS ROAD (CR 102)  
BOLIVAR, OH

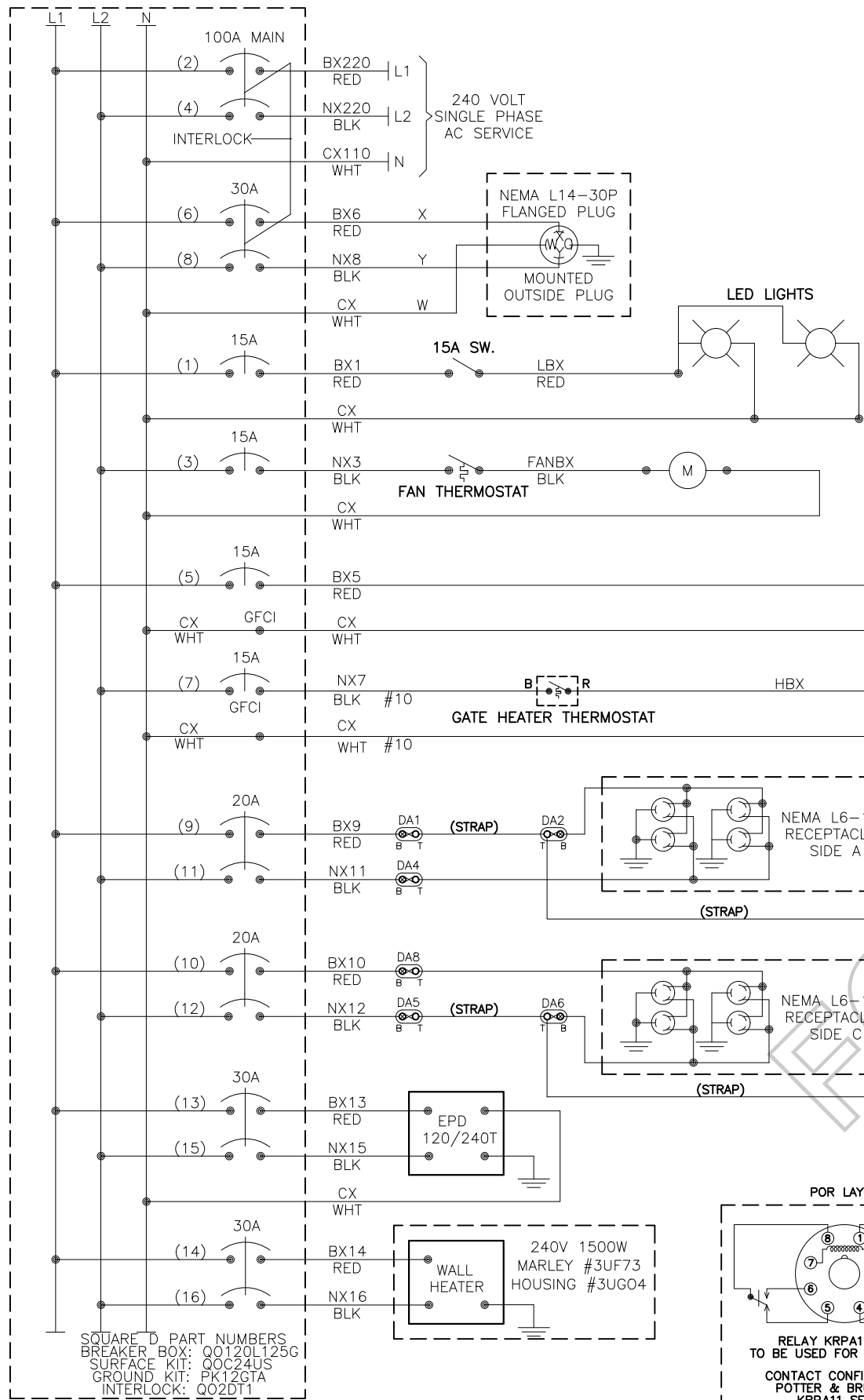
40.6369700, -81.4581808

ORIGINAL DATE	10/25/2019	TITLE	BATTERY CHARGER
DESIGNER	CTC	SUB	BREWSTER
DRAFTSMAN	CTC	RRMP	B - 145.90
CHECKER	CTC	DOT NO.	473 124Y
		SCALE	1"=2'
		SHEET	15 of 20

**W&LE**

CHANGE FROM TYPICAL: Y

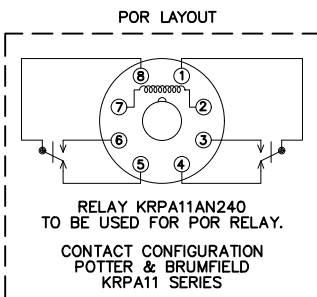
REVISION  
BLOCK



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

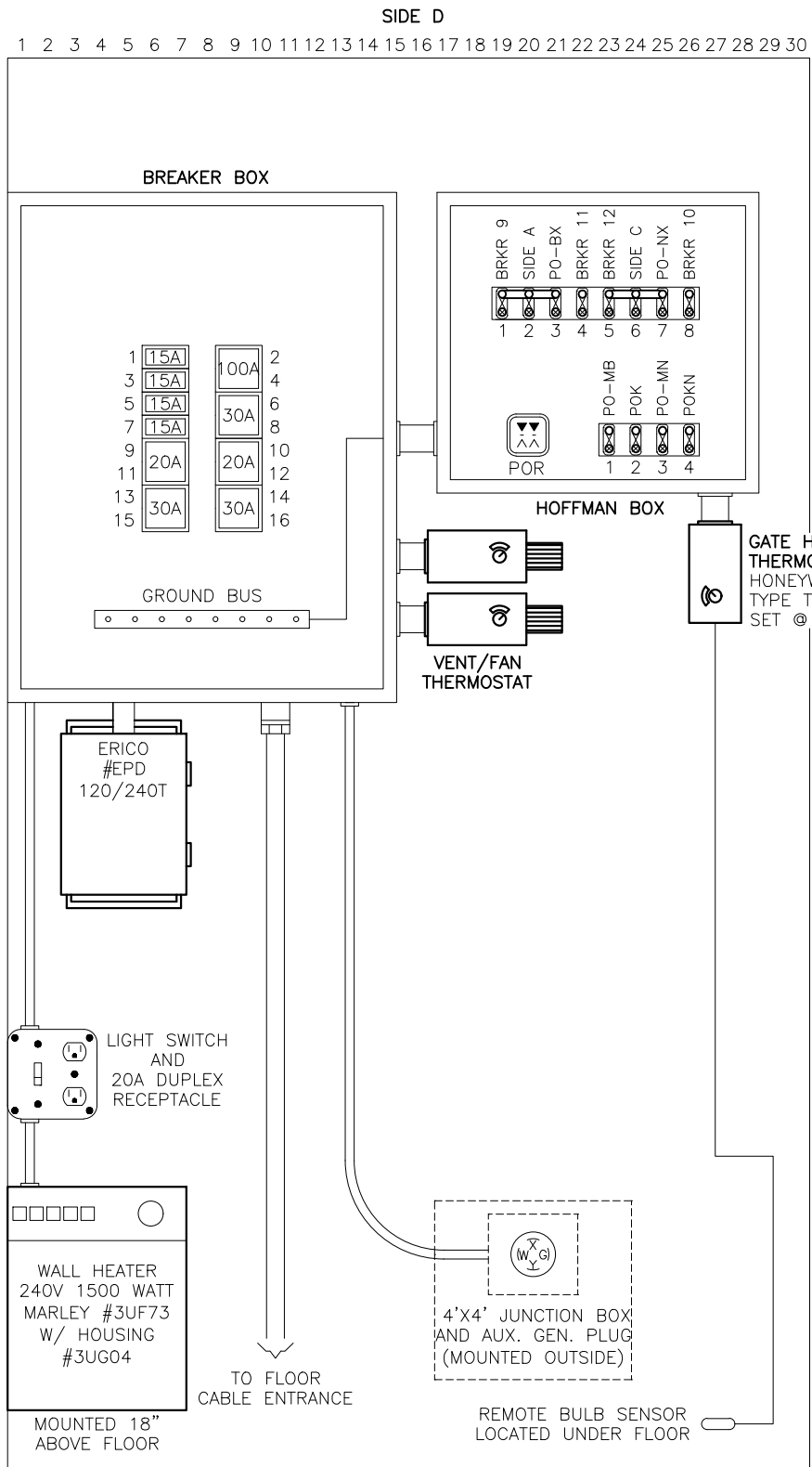
NOTES:

- 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

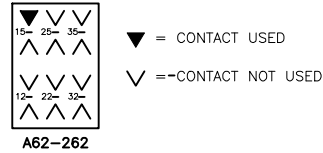
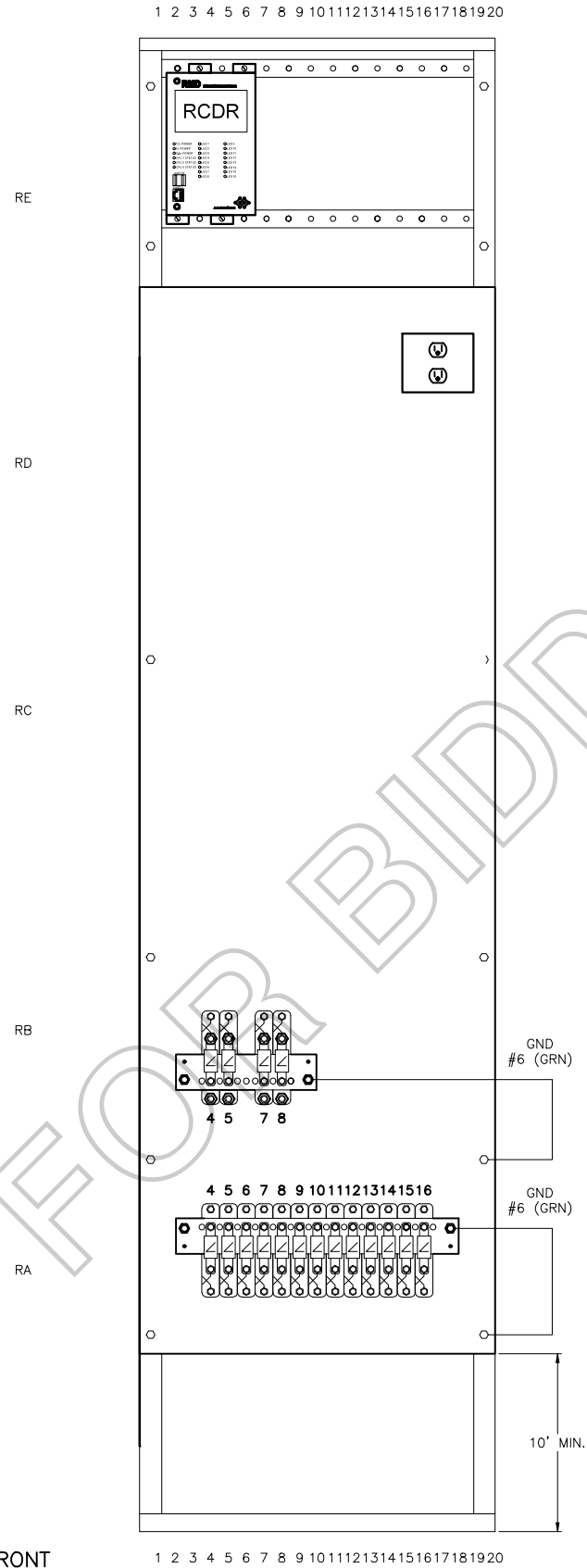
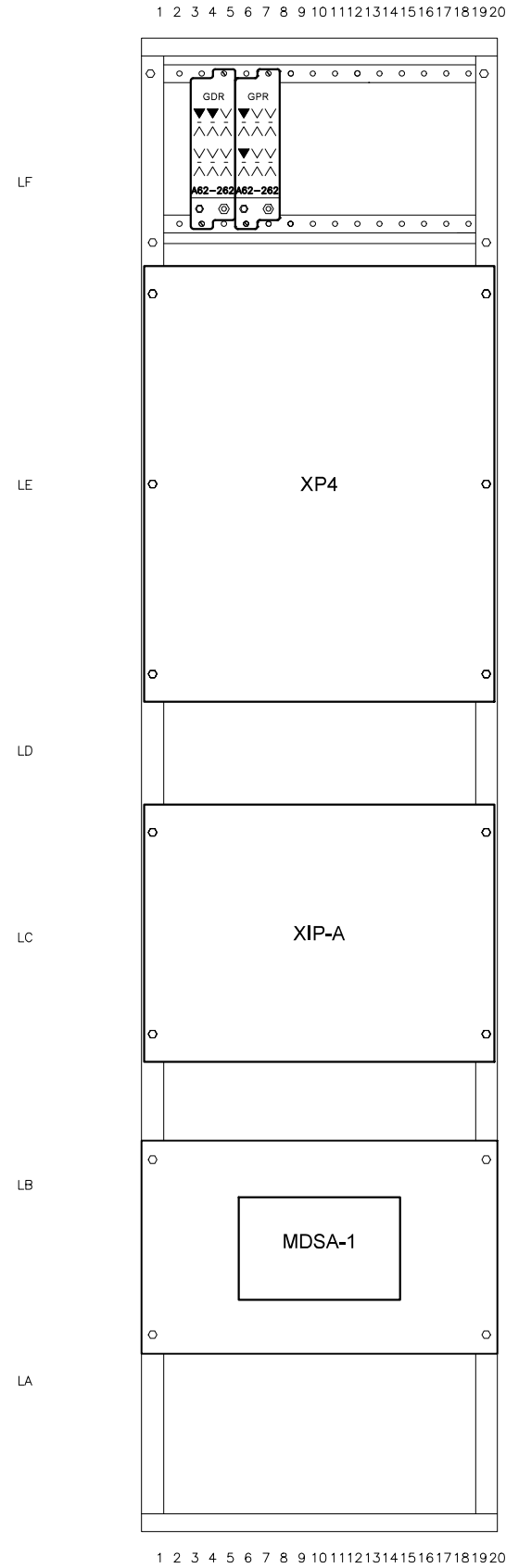


**W&LE**

**Whoelling & Lake Erie  
Railway**

LOCATION			FORT LAURENS ROAD (CR 102) BOLIVAR, OH		
ORIGINAL DATE			40.6369700, -81.4581808		
DESIGNER		CTC	SUB		AC POWER DISTRIBUTION
DRAFTSMAN		CTC	BREWSTER		CTC NO. CN19202
CHECKER		CTC	B - 145.90		SCALE 1"=2'
			DOT NO. 473 124Y		SHEET 16 of 20

REVISION  
BLOCK



RELAY CROSS REFERENCE	
GRS	SAFETRAN
A62-262	400000

SIDE 'B' FRONT

**W&LE**

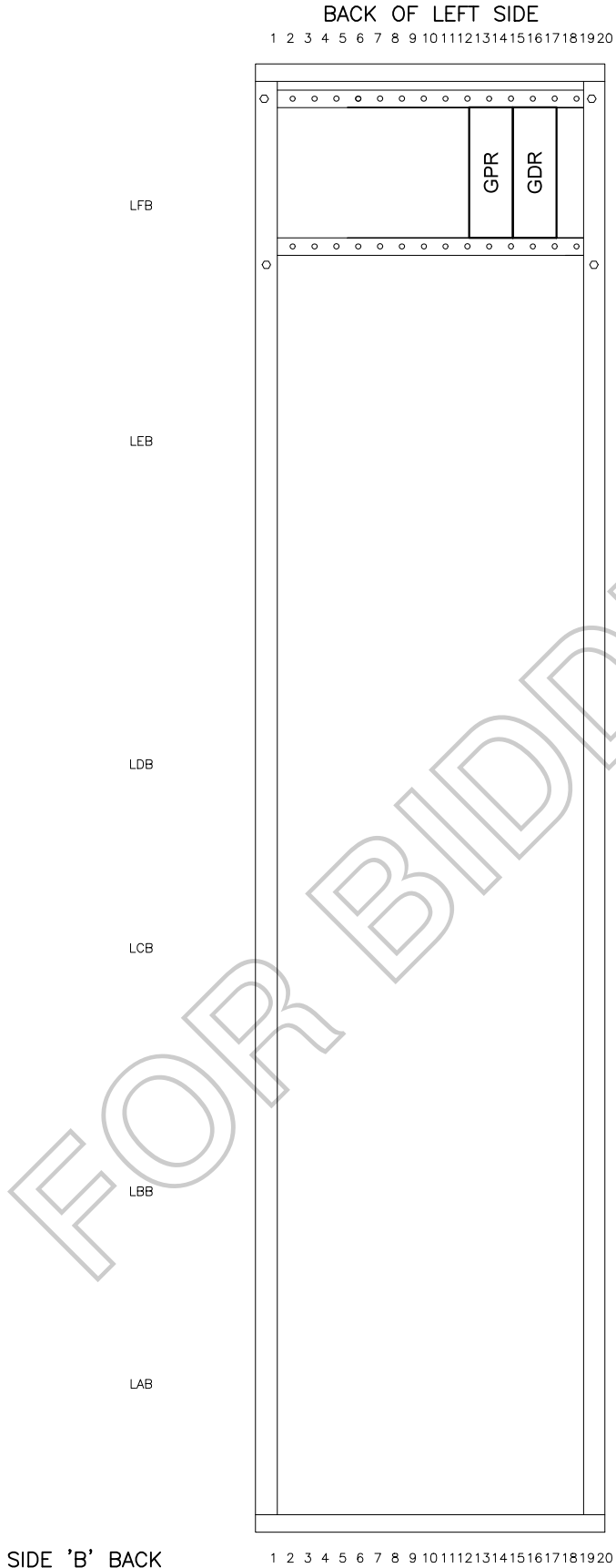
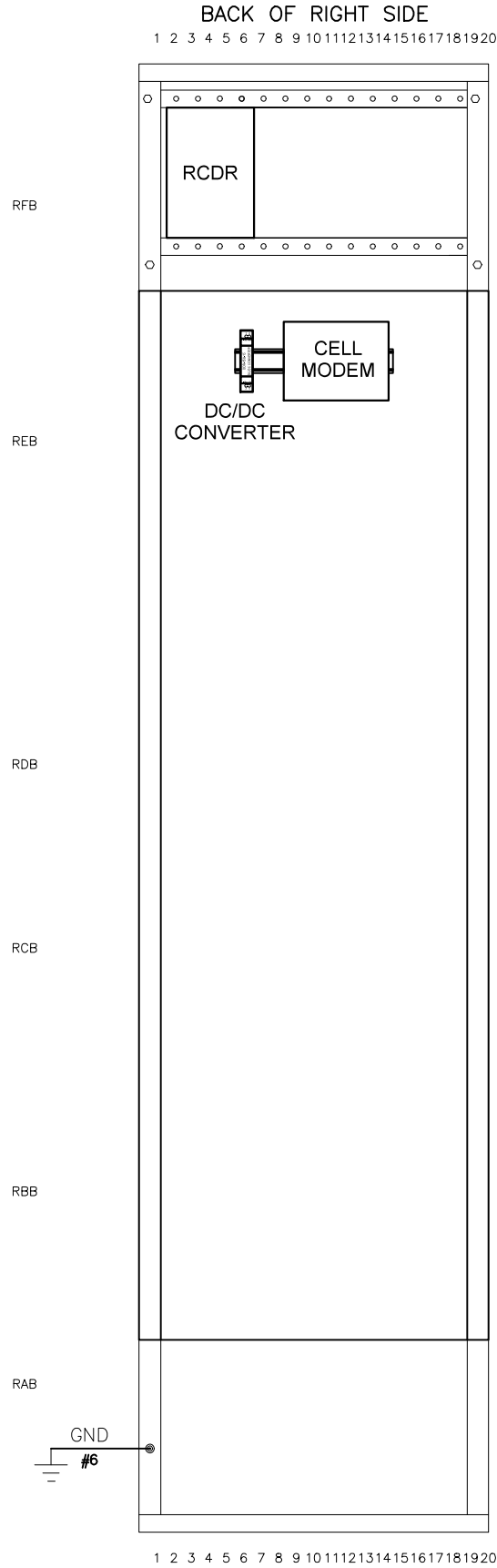
**Wheeling & Lake Erie  
Railway**

LOCATION		
FORT LAURENS ROAD (CR 102) BOLIVAR, OH		
40.6369700, -81.4581808		
ORIGINAL DATE	10/25/2019	TITLE RACK FRONT VIEW
DESIGNER	CTC	SUB BREWSTER
DRAFTSMAN	CTC	RRMP B - 145.90
CHECKER	CTC	DOT NO. 473 124Y
		CTC NO. CN19202
		SCALE 1"=2'
		SHEET 17 of 20

REVISION  
BLOCK

CHANGE FROM TYPICAL: Y





SIDE 'B' BACK

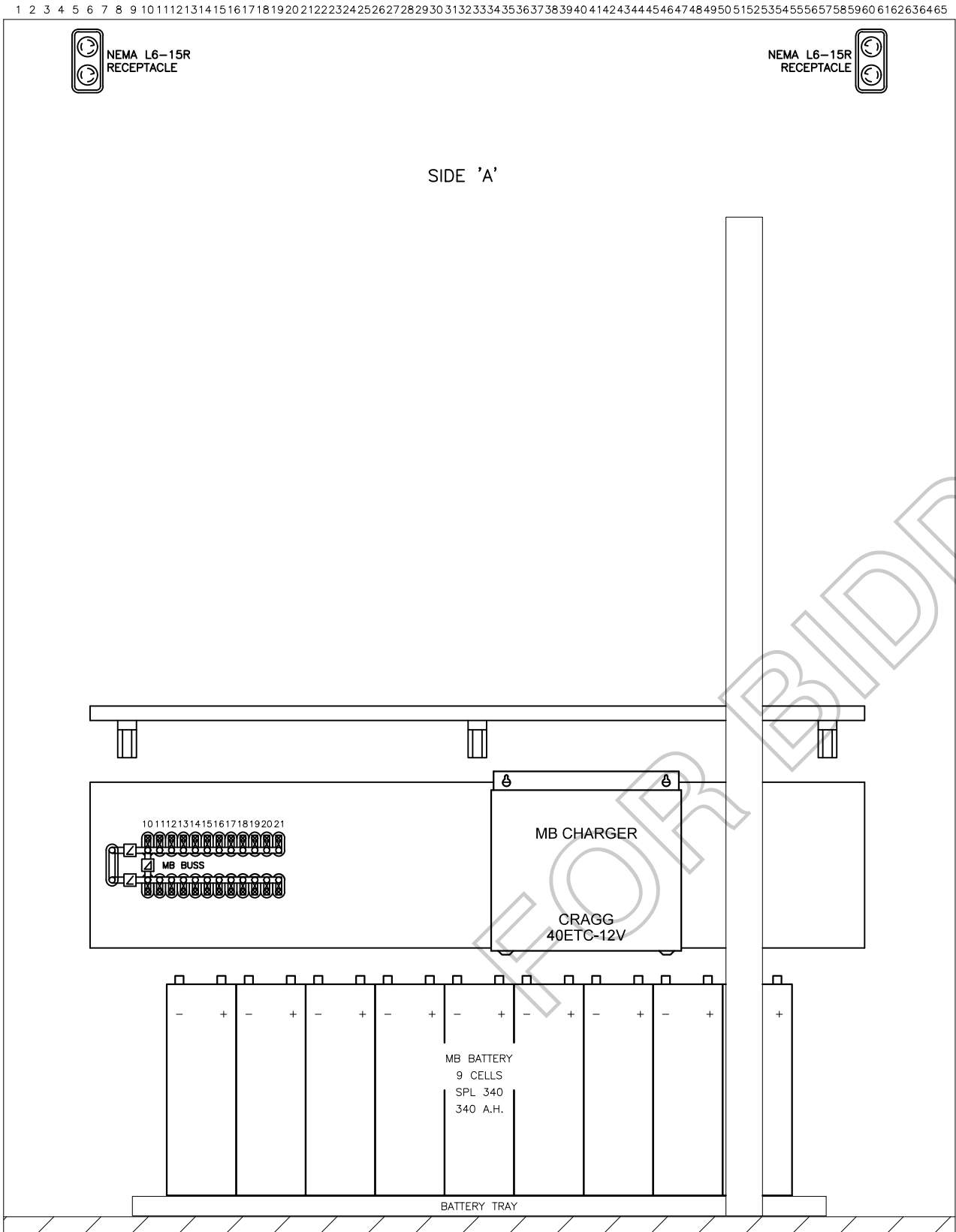
CHANGE FROM TYPICAL: Y

REVISION  
BLOCK

**W&LE**

**Wheeling & Lake Erie  
Railway**

LOCATION		
FORT LAURENS ROAD (CR 102) BOLIVAR, OH		
40.6369700, -81.4581808		
ORIGINAL DATE	10/25/2019	TITLE RACK BACK VIEW
DESIGNER	CTC	SUB BREWSTER
DRAFTSMAN	CTC	CTC NO. CN19202
CHECKER	CTC	RRMP B - 145.90
		SCALE 1"=2'
		SHEET 18 of 20



CHANGE FROM TYPICAL: N

REVISION  
BLOCK

**W&LE**

**Wheeling & Lake Erie  
Railway**

LOCATION		
FORT LAURENS ROAD (CR 102) BOLIVAR, OH		
40.6369700, -81.4581808		
ORIGINAL DATE	10/25/2019	TITLE
		SIDE "A"
DESIGNER	CTC	SUB
		BREWSTER
DRAFTSMAN	CTC	CTC NO.
		CN19202
CHECKER	CTC	RRMP
		B - 145.90
		SCALE
		1"=2'
		SHEET
		19 of 20

SHEET 20 OF 20

**From:** [Bob Crosier](#)  
**To:** [Tim Andrews](#)  
**Subject:** Ft Laurens Estimate  
**Date:** Monday, March 2, 2020 9:07:14 AM

---

Equip op 72 hrs @ 26.00 = 1872.00  
Skilled La 72 hrs @ 19.00 = 1368.00  
Project Manager 72 hrs @ 50.00 = 3600.00  
Admin 1 hr @ 30.00 = 30.00  
sub total \$6870.00  
G&A addition total \$10992.00

E-55 exc 60 hrs @ 42.41 = 2544.60  
E-32 exc 10 hrs @ 32.92 = 329.20  
Dump truck 20 hrs @ 42.20 = 844.00  
Directional drill 12 hrs @ 62.90 = 754.80  
Digger derrick 10 hrs @ 58.24 = 582.40  
Equip truck 72 hrs @ 22.52 = 1621.44  
Hydra tamper 10 hrs @ 18.00 = 180.00  
Tamper 10 hrs @ 4.00 = 40.00  
Traffic signs 72 hrs @ .23 = 16.56  
Traffic cones 72 hrs @ .13 = 9.36  
equipment total \$6922.36

130' - 5" pvc conduit @ 3.15 = 409.50  
2 - 5" 90 bends @ 23.50 = 47.00  
2 - 5" 45 bends @ 20.00 = 40.00  
6 - 5" coup @ 6.00 = 36.00  
90' - 4" pvc conduit @ 1.95 = 175.50  
4 - 4" sweeps @ 35.00 = 140.00  
2 - 4" 45 bends @ 13.00 = 26.00  
10 - 4" coup @ 2.25 = 22.50  
100' - 2" pvc conduit @ .80 = 80.00  
3 - 2" sweeps @ 16.00 = 48.00  
4 - 2" 45 bends @ 2.25 = 9.00  
350' pull rope @ .15 = 52.50  
2 - ground rods @ 17.50 = 35.00  
2 - 17x30x18 pull boxes @ 370.00 = 740.00  
1 - can pvc cement @ 12.00 = 12.00  
total material \$1873.00  
total labor \$10992.00  
total equip \$6922.36

sub total	\$19787.36
10% profit	\$1978.74
total estimate	\$21766.10

Thank you,  
Bob Crosier  
Crosier Industrial Construction LLC  
8938 Peck Rd  
Ravenna, Ohio 44266  
330 592 3082

# Bid Template

Name of Bidder:	CTC Inc.
Address:	9601 Camp Bowie West
Phone:	817-886-8243
Fax:	817-886-8225
Date:	Monday, December 16, 2019
Project Location(s):	Fort Laurens Rd - DOT# 473 124Y

## LABOR

	Hours	Rate	Ext.
Signal Engineer	4	\$ 52.88	\$ 211.52
Signal Designer	24	\$ 33.65	\$ 807.60
Project Engineer		\$ 45.67	\$ -
Project Administrator	-	\$ -	\$ -
Signal Circuit Checker	4	\$ 52.88	\$ 211.52
CAD Draftsman	32	\$ 33.65	\$ 1,076.80
Engineering Assistant			
Construction Manager	40	\$ 39.61	\$ 1,584.40
Project Manager	40	\$ 36.06	\$ 1,442.40
Signal Supervisor			
Signal Foreman	80	\$ 31.25	\$ 2,500.00
Assistant Foreman	80	\$ 28.50	\$ 2,280.00
Signalman	160	\$ 21.00	\$ 3,360.00
Signal Helper			
Accountant/Billing Clerk	8	\$ 26.00	\$ 208.00
Other 1	-	\$ -	\$ -
Other 2			
Other 3			
Total Labor Bid			\$ 13,682.24

## MEALS, LODGING AND TRAVEL

	Days	Rate	Amount
Meal Per Diem	32	\$ 35.00	\$ 1,120.00
Lodging Per Diem	32	\$ 75.00	\$ 2,400.00
Airfare			
	Miles	Rate	
Vehicle Mileage	-	\$ -	\$ -
Total Meals, Lodging and Travel			\$ 3,520.00

## EQUIPMENT

EQUIPMENT		Days/Hours	Rate	Amount
Pickup Truck/Foreman's Truck		8	\$ 150.00	\$ 1,200.00
Backhoe		8	\$ 200.00	\$ 1,600.00
Other 1	High Reach Forklift	16	\$ 175.00	\$ 2,800.00
Other 2	Equipment Delivery/Pickup	4	\$ 250.00	\$ 1,000.00
Other 3	Diesel Fuel Surcharge	50	\$ 5.00	\$ 250.00
Other 4	Crew Trailer	8	\$ 75.00	\$ 600.00
Other 5				
Other 6				
Other 7				
Other 8				
Other 9				
Other 10				
Total Equipment				\$ 7,450.00

**SUBCONTRACTORS**

	Name	Amount
Subcontractor 1	Travel Expenses	\$ 5,000.00
Subcontractor 2		
Subcontractor 3		
Subcontractor 4		
Subcontractor 5		
Subcontractor 6		
Subcontractor 7		
Subcontractor 8		
Total Subcontractors		\$ 5,000.00

**ADDITIVES/RATES**

	Rate	Amount
Fringe Benefit Rate to Labor	30.00%	\$ 4,104.67
General and Administrative Overhead Rate to Labor	145.00%	\$ 19,839.25
General Liability Rate to Labor	11.00%	\$ 1,505.05
Other Approved Additive Rate		
Total Additives		\$ 25,448.97
Profit/Fee Rate to Labor and Additives	10.00%	\$ 3,913.12

**TOTAL AMOUNT OF ESTIMATE****\$ 59,014.33**

Please complete all relevant fields shaded in gray.

Orange, blue and yellow cells contain formulas that cannot be edited.

Per ODOT/ORDC policy, overheads are reimbursable only when applied to direct labor dollars.

Per ODOT/ORDC policy, profit is reimbursable only when applied to direct labor and overhead.

Other cost items such as meals, subcontractors, equipment, etc., are not eligible for profit.

<b>Total Material Estimate = \$98,819.50</b>				
<b>HOUSE MATERIALS</b>				
<b>DESCRIPTION</b>	<b>QTY</b>	<b>UOM</b>	<b>UNIT PRICE</b>	<b>TOTAL PRICE</b>
Bungalow, Alum. 6 X6 w/Heater P/N 91000564 D-1, PTMW	1	EA	\$9,477.00	\$9,477.00
Wrench, AAR terminal - 11", P/N 032619-9X, Siemens	1	EA	\$44.00	\$44.00
Sensor, Intrusion Alarm Switch, P/N 9410002021, PTMW	2	EA	\$54.00	\$108.00
Decal, Danger 240V (5"X3.5"), P/N 3XDUS, Grainger	1	EA	\$3.00	\$3.00
Wire, Case, #16AWG 1000' spool, Blue, P/N 152-11-3002, Okonite	2	EA	\$198.00	\$396.00
Wire, Case, #10AWG 1000' spool, Blue, P/N 152-11-3038, Okonite	2	EA	\$407.00	\$814.00
Wire, Case, #6AWG, Green, P/N N6GNM, Reynolds	100	FT	\$0.35	\$35.00
Wire, Case, #6AWG, Black, P/N N6BM, Reynolds	100	FT	\$0.35	\$35.00
Wire, Case, #6AWG, Red, P/N N6RD, Reynolds	100	FT	\$0.35	\$35.00
Event Recorder/Remote Monitoring Device, RioTech	1	EA	\$3,875.00	\$3,875.00
Vanguard 5530 Cell Modem basic package (Verizon), P/N VG5530-LVZ-M, CalAmp	1	EA	\$850.00	\$850.00
Modem bracket, DIN Rail mount, P/N 250-5800-410, CalAmp	1	EA	\$25.00	\$25.00
Antenna, 4G Omni Plus Directional, P/N 304422-5810, Wilson Electronics	1	EA	\$100.00	\$100.00
DIN Rail, 35mm x 2', zinc-plated w/end caps	1	EA	\$5.00	\$5.00
Cable, 3' Cat6 Ethernet cable	1	EA	\$10.00	\$10.00
MDSA-1X Surge arrestor panel, P/N 250204-100, Alstom	1	EA	\$474.00	\$474.00
XP4 Chassis, Alstom - <b>AS SHOWN ON PRINTS</b>	1	EA	\$33,623.00	\$33,623.00
XIP-20 w/Lamp Resistor, P/N 227561-000, Alstom	1	EA	\$620.00	\$620.00
Cable, XIP 12 ft (cable #1) (need 1 for XP4 Assy) P/N 075046-001, Alstom	1	EA	\$107.00	\$107.00
Cable, XIP 12 ft (cable #2) (need 1 for XP4 Assy) P/N 075047-001, Alstom	1	EA	\$107.00	\$107.00
Relay, 500 Ohm, 6PT, Nuetral relay, plug-in, P/N A62-0262, Alstom	3	EA	\$1,260.00	\$3,780.00
Plugboard, Kit (1E/3E test posts) P/N 59686-019-02, Alstom	3	EA	\$125.00	\$375.00
Wrench, 3E test tool, P/N P03-0320, Alstom	1	EA	\$76.00	\$76.00
Extractor Tool, Terminal clip, P/N 032619-25, Siemens	1	EA	\$12.00	\$12.00
Relay, 8-pin KRPA style, 10A/240V, P/N 70198711, Allied	3	EA	\$19.00	\$57.00
Relay, 8-pin KRPA style, 10A/12VDC, P/N 70199265, Allied	2	EA	\$16.00	\$32.00
Socket, 8-pin KRPA style, P/N 70199343, Allied	5	EA	\$6.00	\$30.00
Spring, Hold down for KRPA style relay, P/N 70198576, Allied	5	EA	\$0.50	\$2.50
Battery Charger, ETC-12V 40AMP, P/N 520740, Railway Equipment	2	EA	\$590.00	\$1,180.00
Battery, NiCad 340 A.H., P/N SPL-340, Saft	9	EA	\$315.00	\$2,835.00
Battery, NiCad 250 A.H., P/N SPL-250, Saft	10	EA	\$225.00	\$2,250.00
Terminal, Battery, 3-PT, P/N 225481-000, J&A Industries	4	EA	\$25.00	\$100.00
Battery Tray 12'x27", P/N 027002-001, J&A	4	EA	\$48.00	\$192.00
Nema Plug, Locking, 15 Amp/240V, P/N L6-15P, Reynolds	2	EA	\$15.00	\$30.00
Power Indicator, 2 Eye/4 Wire w/wago conn, P/N LC2-001WB-WG4, Velcorp Gems	1	EA	\$150.00	\$150.00
Cable, SJ Cord 4c/14 for Bungalow, P/N BJ11404	50	EA	\$0.75	\$37.50
Tie-wrap, 11 1/2", PKG 100, Black, P/N LTS11-0, Vantex	1	EA	\$22.00	\$22.00
Tie-wrap, mounting, PKG 100, P/N TYM, Vantex	1	EA	\$28.00	\$28.00
Loom, Spiral Wrap 100', Black, P/N SW38-0, Vantex	1	EA	\$50.00	\$50.00
Panduit, Wire Duct, 2"X3"X6' Gray, P/N G2X3LG6, Graybar	6	EA	\$5.00	\$30.00
Panduit, Cover, 6' Gray, P/N C2LG6, Graybar	6	EA	\$1.50	\$9.00
Terminal, 2X6 W/ Flat nut/washer, P/N 220-0101, Rebel	5	EA	\$12.00	\$60.00
Terminal, Block, 2 3/8" center - 2 post w/hardware, P/N 220-0301, Rebel	8	EA	\$5.00	\$40.00
Terminal, 4-post, Block Kit, w/ 14-24 AAR Hardware, P/N B2700A2C1WH, Erico	17	EA	\$25.00	\$425.00
RailSurge Plane Strip Busbar (36"), P/N B2700HC36, Erico	2	EA	\$38.00	\$76.00
Connector, Buss Strap (1" - 36 holes), P/N 9A2216-36, L&W Industries	4	EA	\$18.00	\$72.00
Arrestor, DC, P/N EPD2050F, Erico	17	EA	\$48.00	\$816.00
Arrestor, AC, P/N EPD2170F, Erico	4	EA	\$48.00	\$192.00
Equalizer, Air Gap, with Cover/Hardware , P/N 4000-44700-001X, Siemens	2	EA	\$25.00	\$50.00
Binding Nut, P/N 13073-000, Rebel	200	EA	\$0.25	\$50.00
Clamp Nut, P/N 13079-000, Rebel	200	EA	\$0.15	\$30.00
Washer, P/N 013074-000, Rebel	200	EA	\$0.10	\$20.00
Insulated Nut, 1 3/16", P/N 023408-1X, Safetran	24	EA	\$4.00	\$96.00
Gold Test Nut, P/N 13296-001, Rebel	50	EA	\$0.65	\$32.50
1' Test Link, Flat, P/N 32257-002, Rebel	50	EA	\$1.75	\$87.50
Terminal Ring, 1/4", insulated, #14 - #16 (yellow w/blk stripe), Arrow Electronics	100	EA	\$0.55	\$55.00
Terminal, Ring, 1/4" non-insulated, #6, Battery Lug, P/N T6-14, Vantex	8	EA	\$0.75	\$6.00
<b>TOTAL:</b>			<b>\$64,129.00</b>	



FIELD MATERIALS				
DESCRIPTION	QTY	UOM	UNIT PRICE	TOTAL PRICE
Cable, 7/C#6, Armored, P/N 1077-02, Alstom	500	FT	\$8.11	\$4,055.00
Cable, 7C#14, Armored, P/N 1023-02, Alstom	500	FT	\$2.99	\$1,495.00
Cable, 3C#6, Armored w/ground, P/N 012243-200, Alstom	300	FT	\$6.00	\$1,800.00
Wire, Track, 2C/#6, Twist, Solid, P/N 1094-02, Alstom	300	FT	\$2.25	\$675.00
Bootleg Kit-Complete (IE. Red Hose, Sleeves, Heat shrink, Rubber tape, electrical tape)	1	EA	\$500.00	\$500.00
Liquid Tape, 4 oz bottle, Home Depot	1	EA	\$7.50	\$7.50
Bond Wire, 7 1/2" XS Style, P/N SBS24883, Erico	100	EA	\$5.12	\$500.00
Connector, Track, Web of Rail, P/N SB20136, Erico	100	EA	\$4.63	\$512.00
Wheel, grinding, P/N SB22122, Erico	3	EA	\$36.00	\$108.00
Bondstrand, 100' Hand Coil, P/N SBS8TCINS664, Erico	1	EA	\$150.00	\$150.00
5/8" X 8' Copper Ground Rod P/N 615880, Erico	6	EA	\$11.00	\$66.00
5/8" Ground Rod Weld, P/N SBNT1161G, Erico	6	EA	\$5.50	\$33.00
Wire, Ground, #6AWG, Bare Copper, Graybar	60	FT	\$0.45	\$27.00
FSS-1B, Tunable NBS. P/N 250849-001, Alstom	2	EA	\$1,200.00	\$2,400.00
FSS-1E, Tunable NBS. P/N 250849-004, Alstom (CR-99)	1	EA	\$1,200.00	\$1,200.00
Shunt Enclosure, Orange, P/N 500-400-100-09-Orange, G&B	3	EA	\$385.00	\$1,155.00
Mast, Gate, 18'X5" w/pigtail (single-sided Jct Box), P/N 715-324-2-GS, WCH	2	EA	\$580.00	\$1,160.00
Jct box, Gate, 5" single hole w/24 terminals, P/N 2149-A-139, WCH	2	EA	\$475.00	\$950.00
Pinnacle, 5", P/N 010-9034, Rebel	1	EA	\$18.00	\$18.00
Mech, Model 3597, P/N 3597-131-P-H-MI, WCH (WLE P/N)	2	EA	\$3,800.00	\$7,600.00
Crossarm Assy, 5" Mtg., 2 Way, P/N 975-0804-5, WCH	2	EA	\$700.00	\$1,400.00
Lights, 12" LED, P/N 433121680XLTC-00, Arms	8	EA	\$75.00	\$600.00
Counterweight Pkg, 17'-32', Stud plate, L&R arms, P/N CTWT-AL-32, WCH	2	EA	\$1,450.00	\$2,900.00
Sign, Crossbuck, No brackets/hardware, P/N 070-0065, Rebel Railway	2	EA	\$85.00	\$170.00
5" Sign Kit, Brackets/extensions/Ubolts/hardware, P/N 070-5008, Rebel Railway	4	EA	\$60.00	\$240.00
Wind Bracket, 36", 5"MTG w/hardware, P/N NEG-191036, NEG	2	EA	\$75.00	\$150.00
Bell, Electronic, 5" Base, P/N EB-3-360-5, GSI	1	EA	\$195.00	\$195.00
Gate Keeper, 2-Way, w/Hardware & Buffer Spring, P/N SK-1000-SW40, GSI	2	EA	\$1,200.00	\$2,400.00
E-Z Gate LED lamp kit, P/N 9298-1120, Railway Equip	2	EA	\$175.00	\$350.00
Gate, Alum/Polyglass adjustable 19-24', P/N SG-1924-FT-HI, GSI	2	EA	\$259.00	\$518.00
Wrench, Torque (KIT), P/N 2590-K-9, WCH	1	EA	\$195.00	\$195.00
Sign, Emergency, ENS, 15"X9" Blue, Eagle Traffic	2	EA	\$45.00	\$90.00
Field cable Tag Kit.	1	EA	\$250.00	\$250.00
Tape, 3M Scotch 3/4" x 66' electrical tape - Black (3-pack), Home Depot	1	EA	\$12.00	\$12.00
Schedule 40 2" & 4" PVC Conduit Kit with Elbows (See list below)	1	LOT	\$500.00	\$500.00
PVC Solvent Cement	1	EA	\$25.00	\$25.00
Duct seal, 5lb, P/N 31-605, Graybar	3	EA	\$12.00	\$36.00
Plaster, DAP 4lb Box, Home Depot	1	EA	\$8.00	\$8.00
Lock, Barrel Style	5	EA	\$48.00	\$240.00
			<b>TOTAL:</b>	<b>\$34,690.50</b>

PVC Conduit Kit	Qty
PVC Conduit, 4"x10' Schedule 40 w/bell	6
PVC 90° Elbow, 4", 16" Radius w/bell	8
PVC Coupler, 4" Schedule 40	12
PVC Conduit, 2"x10' Schedule 40 w/bell	2
PVC 90° Elbow, 2", 24" Radius w/bell	2
PVC Coupler, 2" Schedule 40	4



## Rail Development Commission

Mike DeWine, Governor  
Jon Husted, Lt. Governor

Mark Policinski, Chair

November 15, 2019

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

RE: PE Authorization for Tuscarawas County, CR102/Fort Laurens Rd, DOT# 473124Y,  
PID# 111143

Dear Mr. Andrews:

A diagnostic review was held at the above grade crossing on July 11, 2019. The crossing has been recommended for the installation of lights and gates at the Wheeling & Lake Erie Railroad grade crossing DOT# 473124Y.

Wheeling & Lake Erie Railroad 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 8), 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. Greg 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: Randall Schumacher, Chief, Rail Division, PUCO  
Jill Henry, Rail Specialist, PUCO  
Heather Hamilton, ORDC  
ORDC (file)



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



# Public Utilities Commission

Mike DeWine, Governor  
Sam Randazzo, Chairman

## Commissioners

M. Beth Trombold  
Lawrence K. Friedeman  
Dennis P. Deters  
Daniel R. Conway

October 15, 2019

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

Re: Tuscarawas County, Ft Laurens  
Road/CR 102, DOT#473-124Y,  
hereinafter referred to as the "Project"

Dear Mr. Andrews:

The Public Utilities Commission of Ohio (PUCO) has identified and the Ohio Rail Development Commission (ORDC) surveyed, on July 11, 2019, the above mentioned grade crossing for warning device upgrades. The location has been approved for flashing lights and roadway gates.

The Project shall comply with Master Warning Devices Agreement No. 0001-A, dated September 17, 1990, and entered into by the State of Ohio and Wheeling & Lake Erie Railroad (RAILROAD). Furthermore, the RAILROAD shall comply with all applicable state and federal laws governing grade crossing safety programs.

Reimbursable costs will be limited by ORDC based upon approved estimates and bid tabulations, if applicable. These limits will be quantified by the ORDC in its construction authorization to the RAILROAD and may be amended by the ORDC based upon revised estimates and bid tabulations. Additional costs must be approved in writing by the 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.

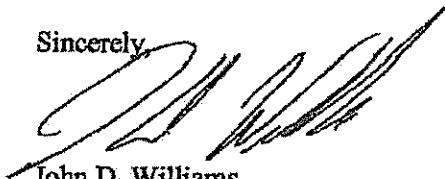
The RAILROAD shall complete plans and estimates for the Project within ninety (90) days after the RAILROAD is notified of authorization to proceed unless otherwise agreed by ORDC/PUCO and the RAILROAD.

The RAILROAD shall not commence construction prior to PUCO's Order and ORDC's construction authorization. The RAILROAD shall provide written notification of the construction start date to PUCO and ORDC no later than five (5) business days prior to such date.

Page 2 of 2  
Ft. Laurens Road/CR 102  
Tuscarawas County  
WE

Please indicate your acceptance of the terms and conditions of this Letter of Agreement by signing and returning one (1) copy to Ms. Jill Henry, Rail Specialist, Rail Division, Public Utilities Commission of Ohio, 180 E. Broad Street, Columbus, Ohio 43215-3793.

Sincerely,



John D. Williams  
Director, Transportation  
Public Utilities Commission of Ohio

Wheeling & Lake Erie Railroad

By T. A.

Title S&C Supervisor

Date 10-22-19

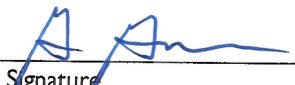
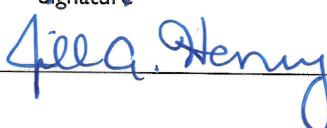
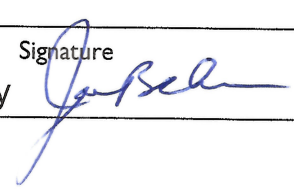
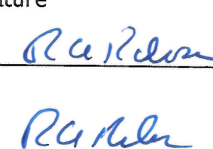
Matthew Dietrich  
Executive Director  
Ohio Rail Development Commission

Date [Signature]

**Crossing at a glance:** Rank 1649

**ORDC Notes:** Skewed Track. Constituent complaint 6/16 - No lights & gates.

**Please Sign In**

Greg Gronbach	Project Manager	ORDC
Name	Title	Organization
614-745-6760	gregory.gronbach@dot.ohio.gov	
Phone Number	Email	Signature
Jill Henry	Rail Specialist	PUCO
Name	Title	Organization
614-806-3916	jill.henry@puco.ohio.gov	
Phone Number	Email	Signature
<del>Tim Andrews</del>	<del>Signal Supervisor</del>	<del>Wheeling &amp; Lake Erie</del>
Name	Title	Organization
330-417-5541	tandrews@wlerwy.com	
Phone Number	Email	Signature
Joe Bachman	County Engineer	Tuscarawas County
Name	Title	Organization
330-204-9463	tcejoe@yahoo.com	
Phone Number	Email	Signature
RAY KOJASZ	FOREMAN	W & L E RWY
Name	Title	Organization
330-705-6028	R.KOJASZ@WLE.RWY.COM	
Phone Number	Email	Signature
Name	Title	Organization
Phone Number	Email	Signature
Name	Title	Organization
Phone Number	Email	Signature
Name	Title	Organization
Phone Number	Email	Signature



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

Date: 7/11/2019

Location Data			
Street or Road Name: CR 102 / Fort Laurens Road Northwest			
County: Tuscarawas	Township:	US DOT No.: 473124Y	
City (in or near): near Bolivar	Railroad Name: WE	RR Milepost: 145.90	
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: 1649	Date Run: 03/18/2019		

Existing Traffic Control Devices		
Type of Warning Devices	Installed?	Quantity/Comments
<b>HIGHWAY</b>		
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Good
'Stop' Signs	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
'Stop Ahead' Signs	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Pavement Markings (condition?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Good
Dynamic Envelope Markings (condition?)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Illumination	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
'No Turn' Signs (highway/passive)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Barriers/fencing (pedestrian/bicycle)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
LOOK Sign	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Do Not Stop On Track Sign	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>RAILROAD</b>		
Crossbucks	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2
Crossbucks – assembly with Stop	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Crossbucks – assembly with Yield	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	NW = 8'8" / 15' SE = 8'3" / 12'6"
Cantilever Flashing Lights	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
LED or Incandescent Lights? Size?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12'
Automatic Gates	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number: Length:
Bells	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Number: 1 NW QUAD
Sidewalk/Pedestrian Gate Arms	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number: Length:
'No Turn' Signs (railroad/active)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>OTHER</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2 BLUE GNS SIGNS

## 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	<del>4</del> 6	MOSTLY THRU / 3 RETURNS
<1 per day? Trains per week	-	
Day thru trains	<del>2</del> 3	
Night thru trains	<del>2</del> 3	
Switching	0	
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks	-	
Maximum train speed	<del>50</del> 40	
Typical train speed	<del>15-50</del> 40	
Amtrak	-	

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

If yes, Crossing DOT# (if different) N/A

If yes, distance N/A (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: Tuscarawas County		
Roadway Characteristics	Initial Information (from database)	Revised
Average Daily Traffic	2,542	
Highway Paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: <input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete Other _____		
Roadway width (paved/travelled way): <u>25</u> ft		
Number of Highway Lanes	2	
Urban or Rural	Rural - Minor Collector	
Vehicle Speed: <u>n/a</u> MPH <u>35</u>		
School Bus Operation: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Amount <u>10+</u>		
Location of nearby schools: <u>BOLIVAR ELEMENTARY 1 MI NORTH</u>		
Hazardous Materials Trucks: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Amount (from FRA) <u>7%</u> LHA verified/changed?		
Shoulders: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is the Shoulder Surfaced? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, shoulder width: _____ ft.		
Is there existing guardrail along the roadway in crossing vicinity? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Crossing Angle <input type="checkbox"/> 0-29° <input checked="" type="checkbox"/> 30-59° <input type="checkbox"/> 60-90° Measured in _____ Quadrant?		
Quadrant <u>SE</u> Curb & Gutter:	Quadrant <u>NW</u> Curb & Gutter:	
<input type="checkbox"/> Functional (Curb height = 4" or more)	<input type="checkbox"/> Functional (Curb height = 4" or more)	
<input type="checkbox"/> Non-functional (Curb height = less than 4")	<input type="checkbox"/> Non-functional (Curb height = less than 4")	
<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> None	
Is there a nearby intersection that could cause queuing over the crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, distance <u>n/a</u>		
Is this intersection signalized? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Are there signals currently interconnected with the existing crossing warning devices? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is there a 'Do Not Stop on Track' sign? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes:		
Improvement type _____ Lead Agency _____ Timeline/completion _____		

Pedestrian & Bicycle Data	
Regular pedestrian usage:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Volumes: <input type="checkbox"/> Occasional <input type="checkbox"/> <20 <input type="checkbox"/> 20-60 <input type="checkbox"/> >60
Is sidewalk present in the approach?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Quadrants:
Does crossing surface accommodate pedestrians?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Both sides of roadway?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, which side is paved?
Pedestrian generators in close proximity (e.g. schools, sports/entertainment venues)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Comments:	
Regular bicycle usage: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<input type="checkbox"/> Roadway <input type="checkbox"/> Dedicated Lane (on street) <input type="checkbox"/> Dedicated Path (off street) <input type="checkbox"/> Shared Use (pedestrian/bicycle) Path <input type="checkbox"/> Bikes must use sidewalk	
Future plans for pedestrian or bicycle routes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Comments:	

Utility Information	
Is commercial power available?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Utility Provider (Company Name)	ACP
Nearest Available Power Source	AT CROSSING
What other utilities are present?	<input type="checkbox"/> Gas <input type="checkbox"/> Cable <input type="checkbox"/> Telephone <input type="checkbox"/> Fiber Optic Cable (add locations to sketch) <input type="checkbox"/> Petroleum <input checked="" type="checkbox"/> Water <input checked="" type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Other
Comments:	

Surface	
Surface review form completed?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Sight Preview (REFER TO TABLES)	
If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Is stopping sight distance adequate? (See Table 2)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, which quadrant? _____
When considering recommendations for bicycle treatments:	
Bicycle sight distance adequate?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, which quadrant? _____
When considering recommendations for pedestrian treatments:	
Pedestrian sight distance adequate?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, which quadrant? _____

## Potential Red Flags / Project Challenges

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

NO

Crossing Consolidation or Closure:

NO - MAIN RD A LOT OF TRAFFIC.

Real Estate or ROW:

NO

Culvert / Drainage / Ballast Conditions:

NO

Roadway and/or Sidewalks:

NO

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

- CURRENTLY HAS FLASHERS ONLY.

Environmental:

NO

Utilities:

NO

Other:



## Potential Closure

Is it the consensus of the Diagnostic Review Team that this is a potential closure project?

NO

Explain reasons:

## 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

NE QUAD

☐ Other (define)

Comments:

☐ 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):

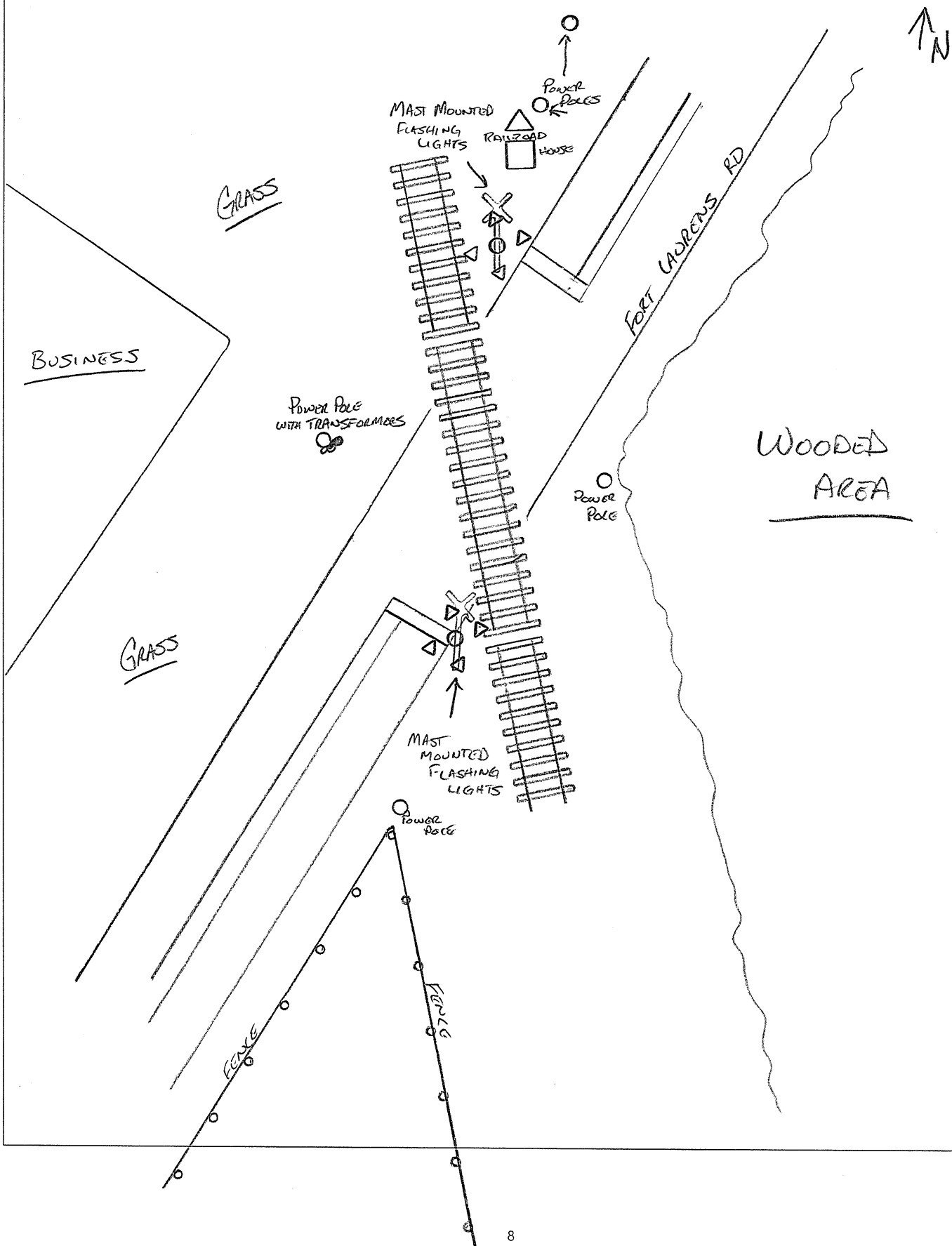
EWG

RKelen JS

John

## 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 <sup>1</sup>	Bicyclist <sup>2</sup>	Pedestrian <sup>1</sup>	Bicyclist <sup>2</sup>	Pedestrian <sup>1</sup>	Bicyclist <sup>2</sup>
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

<sup>1</sup> 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.

<sup>2</sup> 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: TUS

Route: FORT LAURENS RD - BOULVAR DOT#: 473124Y

<p>Surface type</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Rubber seal and asphalt</li><li><input type="checkbox"/> Timber and asphalt</li><li><input type="checkbox"/> Asphalt</li><li><input type="checkbox"/> Composite</li><li><input type="checkbox"/> Concrete panel</li><li><input checked="" type="checkbox"/> Full-depth timber</li><li><input type="checkbox"/> Full-depth rubber</li><li><input type="checkbox"/> Other _____</li></ul>	<p>Condition</p> <ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Good</li><li><input type="checkbox"/> Fair</li><li><input type="checkbox"/> Poor</li></ul> <p>Comments: <u>SURFACE IS NEW.</u></p> <p>_____</p> <p>_____</p>
<p>Is the surface good and sufficient? <u>Yes</u> / No</p>	
<p>Vehicle type (cars, trucks, etc.): <u>CAR, TRUCKS, SEMI-TRACTOR</u></p>	
<p>Surface conditions:</p> <p>Can vehicles cross at posted speed? <u>YES</u></p> <p>Local observations/driver behaviors: <u>DRIVERS CROSS AT POSTED SPEED LIMIT. CROSSING SURFACE IS SMOOTH.</u></p> <p>Relevant crash history: <u>NO</u></p> <p>_____</p> <p>_____</p>	
<p>Do existing surface conditions have negative effects on the current or proposed warning devices?</p> <p>Explain: <u>NO</u></p> <p>_____</p> <p>_____</p> <p>_____</p>	
<p>Comments:</p> <p>_____</p> <p>_____</p> <p>_____</p>	

Form completed by: G. GRONBACH

Date: 6/27/19



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

**Commission of Ohio Docketing Information System on**

**6/10/2020 10:24:45 AM**

**in**

**Case No(s). 20-1125-RR-FED**

Summary: Application In the Matter of a Request for the Installation of New Active Warning Devices at the Wheeling & Lake Erie Railroad Grade Crossing, DOT# 473-124Y, at Ft Laurens Road/CR 102 in Tuscarawas County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division