

**Public Utilities  
Commission of Ohio**

RECEIVED-DOCKETING DIV

2012 MAY 30 AM 9:28

PUCO

# Memo

**To:** Docketing Division *ltd*  
**From:** George Martin, Grade Crossing Planner, Rail Division  
**Re:** In the matter of the authorization of CSX Transportation and Norfolk Southern Railway to install active grade crossing warning devices in Logan and Crawford Counties  
**Date:** May 30, 2012

The Ohio Rail Development Commission (ORDC) has authorized funding for CSX Transportation (CSX), and Norfolk Southern Railway (NS) to install new mast mounted flashing lights and roadway gates at the following locations:

CSX Logan County, Pleasant Township, TR 33, 538715L

Logan County, Bokes Creek Township, TR 115, 518369U

NS Crawford County, Chatfield Township, TR 26/Orr Rd, 481582H

The CSX grade crossings were surveyed on November 9, 2011 and were found to warrant the upgrades. The NS grade crossing was surveyed on January 26, 2012, and was found to warrant the upgrade.

These projects will be paid for with federal funds, and are actual cost. As the plans and estimates have already been submitted and approved, staff requests an Entry with completion of the projects in nine months. Construction may commence at once. Staff requests that the following language be incorporated in the Entry:

**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.**

A suggested case coding and heading would be:

PUCO Case No. 12- *1692* -RR-FED In the matter of the authorization of CSX Transportation and Norfolk Southern Railway to install an active grade crossing warning device in Logan and Crawford Counties

C: Legal Department

Please serve the following parties of record

Ms Susan Kirkland

Ohio Rail Development Commission

1980 West Broad St, 2<sup>nd</sup> Floor

Columbus, Oh 43223

Ms Cayela Wimberly

Norfolk Southern Railway

1200 Peachtree St, Box 123

Atlanta, Ga 30309

Ms. Amanda DeCesare

CSX Transportation

1717 Dixie Hwy, Ste 400

Ft Wright, Ky 41011

Chatfield Township Trustees

3433 New Washington Rd

Bloomville, Oh 44818

Bokes Creek Township Trustees

7357 CR 50

Ridgeway, Oh 43345

Pleasant Township Trustees

9861 SR 47

W DeGraff, Oh 43318

North Central Electric Coop

350 Stump Pike Rd

PO Box 475

Attica, Oh 44807

Logan County Electric Coop

1587 CR 32N

Bellefontaine, Oh 43311

*George Martin, PUCO*

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

**TO:** Leah Thomas-Dalton, Rail Division Chief, PUCO  
**FROM:** Susan Kirkland, Manager, Safety Section, ORDC  
**BY:** Tim Perkins, Project Manager *Tim Perkins*  
**SUBJECT:** Logan County, TR 115, DOT No. 518 369 U, PID No. 92772, OP: OH0877 *CSX*  
**DATE:** May 24, 2012

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The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on November 9, 2011. 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 approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above. This construction authorization is made with the stipulation and understanding that any field work needs prior approval before the work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

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

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

Thank you for your assistance with these matters.

Attachment: Diagnostic Review  
Plan & Estimate

c: George Martin, PUCO ✓  
ORDC Project Manager (file)



Candle 2 bus at

Ohio Rail Development Commission  
1980 W. Broad Street, 2nd Floor  
Columbus, OH 43223

## Diagnostic Review Team Survey

Date: 11-9-11

## Location Data

Street or Road Name:

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

TR 115

AAR-DOT No.:

518369U

County:

LOG

Township:

Bokes Creek Twp

City:

(In or Near)

Ridgeway

Railroad  
Name:

CSX

Railroad  
Division:

Great Lakes

Branch/Line  
Name:

Incl / Mt Victory St

Nearest RR

Timetable Station:

Ridgeway

RR Milepost:

61 126.66

## On-Site Review Team

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

1. James Rice - Bokes Creek Township - 937.355.6275

2. Darrell Ramsey - Bokes Creek Township - 937.363.3471

Darrell Ramsey

3. Joe Ramsey - Bokes Creek Township - 937.363.3544 - 937.441.3406 (c)

4. Scott Coleman - Logan County Engineer - 937.592.2791 - colemans@co.logan.oh.us

5. Todd Dardus - ORDC - 614-374-9298

6. George Martin Fuls 614-752-9107

7. Karen Murphy CSXT 904-359-1650

8.

9.

## Existing Traffic Control Devices

Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2 - 1 leaning
'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
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Number of Tracks Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Inventory Tags	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Cantilever Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number:
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Other	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

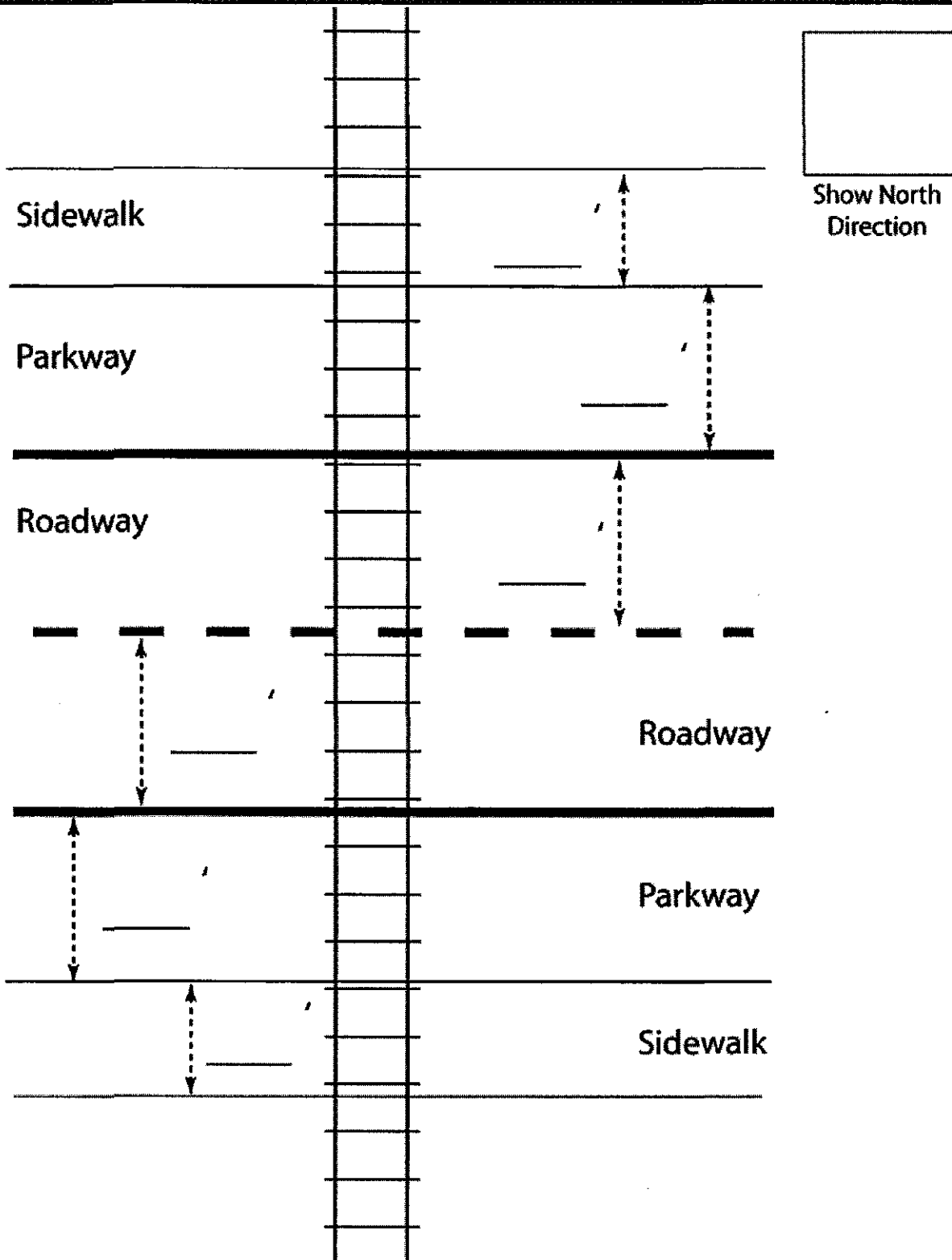
Quadrant _____ Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None	Quadrant _____ Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None
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Pedestrians: ☒ No ☐ Yes  
 Is sidewalk present? ☒ No ☐ Yes  
 Is there a nearby intersection that could cause queuing over the crossing? ☒ No ☐ Yes  
 If yes, Distance \_\_\_\_\_  
 Is this intersection signalized? ☒ No ☐ Yes  
 Are the signals currently interconnected with the existing crossing warning devices? ☐ No ☐ Yes  
 Is there a 'Do not Stop on Track' sign? ☒ No ☐ Yes  
 Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? ☒ No ☐ Yes  
 If yes, Improvement type \_\_\_\_\_ Lead Agency \_\_\_\_\_ Timeline/completion \_\_\_\_\_  
 Is it the consensus of the Diagnostic Review Team that this is a potential closure project? ☒ No ☐ Yes  
 Explain reasons: \_\_\_\_\_

Type of Development	
<input checked="" type="checkbox"/> Open Space <input type="checkbox"/> Institutional <input type="checkbox"/> Industrial <input type="checkbox"/> Commercial <input type="checkbox"/> Residential	Location of nearby schools:  <div style="text-align: center; font-size: 1.2em;">3 mls Ridgeway</div>

Utility Information
<p>Is commercial power available? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes</p> <p>Utility Provider (Company Name) <u>Logan Co Op</u> Phone Number _____</p> <p>Nearest Available Power Source <u>1000 ft plus</u></p> <p>What other utilities are present? <u>ATT underground</u>          (add locations to sketch)</p> <p>Is(are) there potential utility conflict(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown</p> <p>Comments:</p> <p style="font-family: cursive;">will need a least 6 power poles set to get electric to crossing from the North. There is power from the south about 400' to houses, underground</p> <p style="font-family: cursive;">* Invite Power Co to Design Meeting</p>

# Field Dimensions



Crossing Angle ☐ 0-29° ☐ 30-59° ☐ 60-90° Measured in \_\_\_\_\_ Quadrant?

Measurements by: \_\_\_\_\_

TABLE 1

## Clearing Sight Distances

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

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

## Notes:

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

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

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

Table 2

## Stopping Sight Distances

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

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

## Notes:

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

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

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





Amanda J. DeCesare  
Project Manager - Public Projects  
1717 Dixie Highway, Suite 400  
Fort Wright, KY 41011  
Tel. 859-344-8442  
Amanda\_DeCesare@csx.com

TP  
Logged  
5/11/12  
SA  
gave to  
T.Z.

May 11, 2012

Mr. Tim Perkins  
Grade Crossing Specialist  
Ohio Rail Development Commission  
1980 W. Broad Street, 2nd Floor  
Columbus, OH 43223

Subject: Ridgeway, Logan County, OH - Installation of lights and gates. - TR 115; DOT 518369U;  
Milepost QI-126.66; PID 92772; OP # OH0877

Dear Mr. Perkins:

Attached for your review and approval is a force account estimate in the amount of \$211,692.00 for the subject at-grade crossing project. A hardcopy of the estimate and circuit plans will be sent to you at the above address. We await receipt of the ORDC's further advice and /or approval of the project cost and authority to proceed with the ordering of materials and construction.

If I can be of further assistance, please feel free to call.

Sincerely,

Amanda J. DeCesare  
Project Manager, CSXT Public Projects

Cc: Leah Dalton  
Jill Henry  
Susan Kirkland  
Susan Arduini  
George Martin

CSX TRANSPORTATION, INC.  
FORCE ACCOUNT ESTIMATE

Page 1

ACCT. CODE : 709 - OH0877

ESTIMATE SUBJECT TO REVISION AFTER: 11/5/2012 DOT NO.: 518369U  
CITY: Ridgeway COUNTY: Logan STATE: OH  
DESCRIPTION: TR - 115 - Install flashing light signals and gates.  
DIVISION: Great Lakes SUB-DIV: Mt. Victory MILE POST: QI - 126.66  
AGENCY PROJECT NUMBER: PID 92772

**PRELIMINARY ENGINEERING:**

200 Additive	31.34%	\$	-
230 Expenses		\$	-
212 Contracted & Administrative Engineering Services		\$	2,500
Subtotal		\$	2,500

**CONSTRUCTION ENGINEERING/INSPECTION:**

200 Additive	31.34%	\$	-
230 Expenses		\$	-
212 Contracted & Administrative Engineering Services		\$	2,500
Subtotal		\$	2,500

**FLAGGING SERVICE: (Contract Labor)**

070 Labor (Conductor-Flagman)		\$	-
050 Labor (Foreman/Inspector)		\$	-
070 Additive	73.76% (Transportation Department)	\$	-
050 Additive	97.95% (Engineering Department)	\$	-
230 Per Diem	(Engineering Department)	\$	-
230 Expenses		\$	-
Subtotal		\$	-

**SIGNAL & COMMUNICATIONS WORK:** (Details Attached) \$ 202,453

**TRACK WORK:** (Details Attached) \$ -

**ACCOUNTING & BILLING:**

040 Labor		\$	2,600
040 Additive	63.03%	\$	1,639
Subtotal		\$	4,239

**PROJECT SUBTOTAL**

900 CONTINGENCIES:		\$	211,692
		\$	-

GRAND TOTAL \*\*\*\*\* \$ 211,692

**DIVISION OF COST:**

Agency	100.00%	\$	211,692
Railroad		\$	-
TOTAL	*****	\$	211,692

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

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

Office of Assistant Chief Engineer Public Projects--Jacksonville, Florida

Estimated prepared by:	BSE	Approved by:	AJD	CSXT Public Project Group
DATE:	5/9/2012	DATE:	5/9/2012	

Form Revised 05-05-2010-LLS

Project Summary Sheet

Estimate No. 120101  
**CSX Transportation**  
TR 115 - Install FLS&G.  
Ridgeway, OH

DOT: 518369U

OP: OH0877

CSX Project: OH2012029

**Summary**

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Material .....	\$ 77,097
Sales Tax .....	\$ 0
Labor:	
Construction Labor (96 man-days).....	\$ 28,665
Shop Labor (6 man-days).....	\$ 1,260
Subsistence (96 man-days).....	\$ 12,480
Railroad Engineering, Preliminary .....	\$ 4,543
Railroad Engineering, Construction .....	\$ 4,300
Additives to Construction Labor .....	\$ 26,633
Additives to Shop Labor .....	\$ 1,117
Additives to Track Labor .....	\$ 0
Additives to Engineering .....	\$ 2,771
Equipment Expenses (19 work days).....	\$ 12,350
Waste Management (19 work days).....	\$ 228
Contract Engineering .....	\$ 20,010
Freight .....	\$ 4,500
Poleline Removal .....	\$ 0
AC Power Service .....	\$ 2,500
Salvage .....	\$ -1
VAC-TRUCK .....	\$ 4,000
<hr/>	
TOTAL ESTIMATE COST .....	\$ 202,452

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Date: 05/03/2012  
Estimated By: John Morrison

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

**Shop Material List for CSX Project: OH2012029 (Effective: 05/03/2012)**  
**TR-115 - Design to install FLS&G. Use a PMD-3R**  
**Ridgeway, OH - QI 126.66**

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-0003386	1	6781.00	1	6781.00	HOUSE 6X6L ALUM INCLUDES 5 SHELF, FARADAY CLOSET, 240V
020-0017120	1	11.52	6	69.12	BLOCK TERMINAL 12 POST SINGLE STRIP AAR 14.1.6 WITH 1 AAR
020-0017125	1	3.54	6	21.24	BLOCK TERMINAL 2 POST AAR 14.1.8 WITH 1 AAR 14.1.11
020-0017211	1	627.20	1	627.20	TRANSFORMER LIGHT 750VA 010520-50X MODEL SLT-50
020-0017385	1	56.16	1	56.16	CABLE RJ45 TO RJ4 15' GETS P/N 075061-015
020-0021965	1	8.96	1	8.96	EXTRACTOR DWG 59688-4 TERMINAL GRS CAT P3-308 REF
020-0022651	1	55.89	5	279.45	PLUGBOARD KIT TYPE B1 OR ST1 RELAY ASSEMBLY WITH 12 EACH
020-0022701	1	68.00	27	1836.00	ARRESTER HYBRID LOW VOLTAGE 0-30V DC OR 0-24V AC RATED AT
020-0025595	1	20.72	1	20.72	WRENCH DWG 55393-3 GR1 "E" TERMINAL POST NUT GRS CAT
020-0053360	1	406.56	3	1219.68	CHARGER BATTERY ELC 12/20 D 20 AMP 10-19.9 VDC ROTARY SW
020-0053510	1	233.11	1	233.11	KIT 240V AC EMERGENCY GENERATOR CABLE AND
020-0055608	1	21.22	1	21.22	RELAY POTTER BRUMFIELD KRP11AG12 OR STRUTHERS-DUNN
020-0056515	1	3.07	1	3.07	SOCKET RELAY 8 PIN OCTAL FOR NON VITAL RELAY CSX SS705 REF
020-0064060	1	16.12	1	16.12	PLATE RELAY MOUNTING FOR 2 EACH TYPE KHAU OR OCTAL RELAY
020-0660077	1	597.41	1	597.41	ARRESTER GE 9L10KAC213 FOR 240 VOLT SINGLE PHASE 3 WIRE
020-0750090	1	0.08	3	0.24	NUT INSULATED USE ON AAR BINDING POST TERMINAL FOR
020-0770060	1	13.44	12	161.28	ARRESTER US&S N451552-0201 TRACK SERIES RED LABEL USGA
020-0770105	1	22.40	4	89.60	ARRESTER HARMON 202217-000 AGE-1 TRACK AIR GAP EQUALIZER
020-1940055	1	14.22	1	14.22	CONTAINER TUBE HOLDER CIRCUIT PRINT PLAN 24" SCHD 20 4" PVC
020-2501400	1	1043.84	1	1043.84	CONTROLLER DTMF RADIO KEY DOWN MODE 6 SET TIMER TO 60
020-2532515	1	32.48	2	64.96	MODULE RESISTOR ISLAND OUTPUT RESISTIVE LOAD ASSEMBLY 560
020-2552400	1	7357.56	2	14715.12	DETECTOR HARMON 250826-200 PMD-3R SYSTEM W/8KHZ RSI
020-3430110	1	321.84	1	321.84	RELAY SAFETRAN 400004 500 OHMS CONTACTS 4FB-2F-1B CSX
020-3430115	1	421.20	1	421.20	RELAY SAFETRAN 400005 500 OHMS CONTACTS 4FB HEAVY DUTY
020-3430135	1	513.30	1	513.30	RELAY SAFETRAN 400213 460 OHMS CONTACTS 2FB CSX

**Shop Material List for CSX Project: OH2012029 (Effective: 05/03/2012)**  
**TR-115 - Design to install FLS&G. Use a PMD-3R**  
**Ridgeway, OH - QI 126.66**

<u>Catalog Num</u>	<u>Cond</u>	<u>Unit Price</u>	<u>Qty</u>	<u>Cost</u>	<u>Description</u>
020-3430170	1	413.95	1	413.95	RELAY SAFETRAN 400800-CSX 100/100 OHMS CONTACTS 6FB
020-3430185	1	431.55	1	431.55	RELAY SAFETRAN 400700-X 60 OHMS CONTACTS 4FB CSX
020-4200100	1	6.04	2	12.08	CONNECTOR BUS 1" CENTERS 1/2" X 36" 18 GAGE PUNCHED 1/4" X
020-4200340	1	1.65	12	19.80	LINK TEST ASSEMBLY 1" CENTERS YELLOW INSULATOR ON OFFSET
020-4200350	1	2.04	9	18.36	LINK TEST ASSEMBLY 2-3/8" CENTERS YELLOW INSULATOR ON
020-4201045	1	0.15	300	45.00	NUT HEX CLAMP (FLAT NUT) AAR 14.1.11-7 14-24 NS-2 THD FLAT
020-8000067	1	14.61	2	29.22	LOCK AMERICAN H10SIGRA CSX SIGNAL PADLOCK WITH BLACK
020-8100031	1	24.38	1	24.38	CABLE EVENT RECORDER HARMON HAWK NETWORK CABLE USED WITH
020-8100044	1	3906.57	1	3906.57	RECORDER EVENT HAWK INCLUDES ETHERNET MODEM AND CURRENT
022-8005160	1	563.90	1	563.90	KIT CDMA AND VHF RADIO MATERIAL FOR USE WITH CSX
<b>Total Cost: \$</b>				<b>34,600.87</b>	

**Field Material List for CSX Project: OH2012029 (Effective: 05/03/2012)**  
**TR-115 - Design to install FLS&G. Use a PMD-3R**  
**Ridgeway, OH - QI 126.66**

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-0010449	1	31.57	4	126.28	BOX, 9 INCH DIA. "FLOWER POT" ENCLOSURE WITH HD
020-0013687	1	17.76	4	71.04	SPLICE TRACK WIRE TO BONDSTRAND (FLOWER POT KIT)
020-0013908	1	6.90	400	2760.00	CABLE UG COMPOSITE 19 CONDUCTOR INCLUDES 13
020-0017605	1	0.33	200	66.00	WIRE CASE 10 AWG FLEX CSX SPEC SS796 OKONITE P/N
020-0025145	1	320.49	8	2563.92	SHUNT ENCLOSURE INTERRAIL P/N IRS-SE8A WAYSIDE MOUNT
020-0052475	1	11.20	4	44.80	ARM EXTENSION 10-1/2" ALUM WITH 3/8" DIAMETER MOUNTING
020-0053066	1	4.10	16	65.60	BOND WEB OF RAIL TRACK CONNECTOR 3/16" DIA X 1" TAB
020-0053220	1	2.53	150	379.50	CABLE POWER UG 3 COND NO 6 AWG - SHOW LENGTH ON EACH
020-0054075	1	1006.88	2	2013.76	GATE SAVER COMPLETE WITH SHEAR PIN AND RETURN SPRING
020-0055421	1	18.61	6	111.66	BRACKET SIGN 4" OR 5" MAST W/1/2" U-BOLT FOR ALL SIGNS
020-0056131	1	26.71	2	53.42	SIGN MULTIPLE TRACK "2 TRACKS" NO HARDWARE CSX DWG
020-0056421	1	18.61	4	74.44	BRACKET SIGN 4" OR 5" MAST FOR ALL SIGNS REQUIRING 5/8"
020-0056678	1	6124.91	2	12249.82	SIGNAL 0221-L GCWD GATE ASSY DWG SS222 INCLS ADJ 19 TO 28
020-0057275	1	1.17	400	468.00	WIRE UG TRACK TWISTED PAIR NO. 6 AWG SOLID CONDUCTOR
020-1040322	1	162.40	29	4709.60	BATTERY SAFT SPL165, 165 AH POCKET PLATE NICKEL CADMIUM
020-1040540	1	31.36	4	125.44	TRAY BATTERY FIBER CO 82687-1-P 12" WIDTH 24" LONG
020-1040550	1	45.92	1	45.92	TRAY BATTERY FIBER CO 82687-3-P 12" WIDTH 38"
020-1150750	1	0.86	200	172.00	BOND STRAND 3/16" DIA 7 STRANDS OF 19 STR EACH 6 WITH
020-1360014	1	1017.60	1	1017.60	PACKAGE FOREMANS CARE FOR ALUMINUM TYPICAL BOM FOR USE
020-1360016	1	21.18	1	21.18	PACKAGE SAFETY FOR BURCO CONTAINERS COMPLETE WITH ONE
020-1360104	1	1379.66	1	1379.66	LAYOUT METER SERVICE WITH 30' POLE CSX DWG SS351 SH 2 ITEMS
020-2500591	1	399.37	2	798.74	SHUNT SAFETRAN 62775-1543 MULTI-FREQUENCY NARROW BAND
020-2530285	1	306.34	4	1225.36	FILTER EPC 800-08055-108 TF-151
020-2530288	1	306.34	4	1225.36	FILTER EPC 800-080055-109 TF-211
020-2531270	1	282.55	4	1130.20	SHUNT HARMON 250250-151 NBS-1-10 151HZ 10 FT LEADS

**Field Material List for CSX Project: OH2012029 (Effective: 05/03/2012)**  
**TR-115 - Design to install FLS&G. Use a PMD-3R**  
**Ridgeway, OH - QI 126.66**

Catalog Num	Cond	Unit Price	Qty	Cost Description
020-3263656	1	1.77	8	14.16 SLEEVE BONDSTRAND 3/16" TO 3/16" 100 PER BOX, NICOPRESS
020-3901895	1	92.68	2	185.36 TIP FLEX HWY CROSSING GATE 24 IN LONG ENGINEERING GRADE RED
020-3920200	1	181.17	1	181.17 BELL GCWD ELECTRONIC 4" OR 5" MAST 8 TO 13 VOLTS DC GSI PN
020-3930010	1	3.70	2	7.40 KIT GATE ARM WARNING STICKER KIT INCLUDES 1-EA 5"X3"
020-4200340	1	1.65	31	51.15 LINK TEST ASSEMBLY 1" CENTERS YELLOW INSULATOR ON OFFSET
020-4200900	1	0.28	6	1.68 CONNECTOR SHEATHING AMP 329860 FOR NO. 14 WIRE
020-7300030	1	189.28	1	189.28 BRACKET BELL FITS SAFETRAN JUNCTION BOX MOUNT, 5" BENT
020-9999991	1	100.00	1	100.00 BLOCKING AND BRACING FOR PROJECTS BURCO DIST
250-0001827	1	13.76	1	13.76 BREAKER CIRCUIT SQ D QO235
250-1680406	1	0.44	160	70.40 CONDUIT LIQUID TIGHT 3/4" FLEXIBLE GREY PVC CARLON P/N
250-1680408	1	1.00	160	160.00 CONDUIT LIQUID TIGHT 3/4" NON-METALLIC ORANGE PVC
360-0006100	1	35.07	1	35.07 STOOL STEP WOOD 14"X 20" SIGNAL MAINTAINERS CSXT
360-0800145	1	4.93	1	4.93 BROOM WAREHOUSE CORN HVY DUTY 1-1/8" DIA HANDLE
<b>Total Cost: \$</b>				<b>33,913.66</b>

**Consumables List for CSX Project: OH2012029 (Effective: 05/03/2012)**  
**TR-115 - Design to install FLS&G. Use a PMD-3R**  
**Ridgeway, OH - QI 126.66**

Catalog Num	Cond	Unit Price	Qty	Cost Description
N/A		50.00	60	3000.00 FILL MATERIAL, 1 CUBIC YARD
N/A		500.00	1	500.00 RAVEN AIR-LINK
N/A		800.00	1	800.00 WALKWAY ROCK, 10 CUBIC YARDS
020-0017605	1	0.29	350	101.50 WIRE CASE 10 AWG FLEX CSX SPEC SS796 OKONITE P/N
020-0017607	1	0.68	500	340.00 WIRE CASE TW PR NO 10 AWG FLEX CSX SPEC SS796 TWIST 2
020-0017625	1	0.42	150	63.00 WIRE CASE TWISTED PAIR AWG #14 FLEX TWIST 2 TURNS PER FT
020-0017630	1	0.13	200	26.00 WIRE CASE NO 16 AWG FLEX CSX SPEC SS796 FURN 1000 FT SPOOL
020-0017635	1	0.80	130	104.00 WIRE (DO NOT ORDER, USE 020.0017636.1) SIGNAL DEL 018
020-0028610	1	0.22	100	22.00 TERMINAL RING PANDUIT PN12-14HDR-D YELLOW NYLON HVY
020-1360540	1	71.65	1	71.65 BREAKER MAIN/GENERATOR BACKFEED RETAINING GENERATOR
020-1710045	1	2.25	250	562.50 CONDUIT SDR 13.5 4" ORANGE POLYETHYLENE TRENCHLESS
020-2060072	1	750.00	2	1500.00 FOUNDATION HELICAL SCREW-IN ASSEMBLY 7' X 10", USED FOR
020-2060074	1	525.00	2	1050.00 EXTENSION 10" X 3' USE WITH XING GATE AND SIGNAL MAST
020-3261970	1	9.41	2	18.82 DECAL (DO NOT ORDER, CALL SIGNAL SHOP) ASSY 2" BLACK
020-4200880	1	0.53	2	1.06 CONNECTOR TERMINAL 2-3/8" CENTERS AAR 14.1.15-4 NICKEL
020-4200892	1	0.44	27	11.88 CONNECTOR TERMINAL 1" CENTERS AAR 14.1.15-3 NICKEL PLATED
020-4251190	1	0.13	120	15.60 TERMINAL RING PANDUIT PV10-14RD YELLOW VINYL SIZE
020-4251290	1	0.49	30	14.70 TERMINAL RING PANDUIT PV6-14R-T BLUE VINYL SIZE 6
020-4251295	1	0.49	6	2.94 TERMINAL RING PANDUIT PV6-38R-T BLUE VINYL SIZE 6
020-9999992	1	50.00	1	50.00 HOUSE SIGNAL HANDLING CHARGE BURCO DISTRIBUTION
022-5290559	1	325.00	1	325.00 CONVERTER WILMORE INPUT 10V DC TO 16V DC OUTPUT 13.6V DC
450-0019212	1	0.02	100	2.00 SCREW 10 X 1" SHT METAL PAN HD TYPE A COARSE THREAD
<b>Total Cost: \$</b>				<b>8,582.65</b>



R.R. WEST TO CP 138

3388 FT.  
3388 FT.

61 FT.  
61 FT.

H.S. 6687+46

61 FT.  
61 FT.

3388 FT.  
3388 FT.

**UNDERGROUND UTILITIES**  
TWO WORKING DAYS  
BEFORE YOU DIG  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE  
NON-MEMBERS  
MUST BE CALLED DIRECTLY

HAND DIGGING WILL BE REQUIRED  
IN NW QUAD DUE TO CLOSE PROXIMITY  
OF U.G. COMM. CABLE FOR GATE

U.G. FIBER OPTICS (AT&T)

U.G. FIBER OPTICS (AT&T)

NEW  
6" x 6"  
HOUSE  
AND METER

TR-115  
DOT# 5183690  
M.P. 01-126-66

SE

NE

NW

N  
E  
W  
S

APPROACH LENGTHS TABLE				WESTWARD		EASTWARD	
LOC. AFO, TYPE C, MOTION, CMT, OR OTHER	STANDARD MINIMUM WARNING TIME IN SECONDS	ROADWAY GATE TIME IN SECONDS	CLEARANCE TIME IN SECONDS	ML 1 HOT	ML 2 HOT	ML 1 HOT	ML 2 HOT
DOT TRAFFIC LIGHT SIMULTANEOUS PREEMPT TIME IN SECONDS*	32 SEC.	32 SEC.	32 SEC.	25	25	25	25
DESIGNED WARNING TIME FOR TRAINS AT TIME TABLE SPEED	32 SEC.	32 SEC.	32 SEC.	5	5	5	5
DESIGNED DETECTION TIME FOR TRAINS AT TIME TABLE SPEED	32 SEC.	32 SEC.	32 SEC.	2	2	2	2
TIME TABLE MAXIMUM TRAIN SPEED IN MILES PER HOUR	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
BUFFER SPEED IN MILES PER HOUR	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
TOTAL WARNING SYSTEM DESIGN SPEED IN MILES PER HOUR	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
APPROACH DISTANCE TO ISLAND EDGE IN FEET	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
HALF WIDTH OF ISLAND IN FEET	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
APPROXIMATE MILE POSTS FOR APPROACH CIRCUIT	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
* AUTHORIZING AGENCY, NONE	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
* DATE OF REQUIREMENT, NONE	36 SEC.	36 SEC.	36 SEC.	0	0	0	0
* AMOUNT OF TIME (SEC.), NONE	36 SEC.	36 SEC.	36 SEC.	0	0	0	0

PRODUCED BY <b>xorail</b> 5811 GATE AVENUE BUILDING 180 SUITE 400 JACKSONVILLE, IL 32256	LEGEND CSX R.O.W. --- R/R POLELINE --- GAS --- FIBER OPTIC ---	GUARD RAIL --- O.H. POWER --- FENCE --- WATER --- SEWER ---	METER SERVICE POLE --- FIRE PLUG --- SEWER CAP --- GAS VENT ---	GPS COORDINATES 40°30'29" N 83°35'57" W ELEV. 1072'	REVISION DATES 04-09-2012 DATE DRAWN 03-22-2012 DRAWN BY: RPS CHECKED BY: XRL XRL # 0351230233	STREET NAME: TR-115 CITY & STATE: RIDGEWAY, OH DOT: 5183690 PROJECT #: OH2012029 OP #: 010817	M.P. 01-126-66 PROPOSED CROSSING LAYOUT SCALE = 20:1

APPROVED AS TO  
SIGNAL CROSSING  
Thomas R. 5/16/12

*George Martin, PUCO*



# OHIO RAIL DEVELOPMENT COMMISSION

1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JAMES G. BRADLEY, ORDC CHAIRMAN

May 24, 2012

Amanda DeCesare  
CSX Transportation  
Public Projects Manager  
1717 Dixie Highway, Suite 400  
Ft. Wright, KY 41011

RE: Logan County, T.R. 115, DOT No. 518 369 U,  
PID No. 92772, OP: OH0877

Dear Ms. DeCesare:

The CSX Transportation (CSX) plan and estimate dated May 3, 2012, in the amount of \$211,692.00 for the referenced project has been reviewed and is acceptable. CSX may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan. This authorization is made with the stipulation and understanding that the approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Reimbursement of eligible actual cost is limited to \$211,692.00. Additional costs must be approved in writing by the ORDC prior to being incurred. Emergency verbal authorizations by ORDC may be permitted and will be confirmed by ORDC in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon CSX accepting the following instructions:

1. CSX will furnish prior written notification of their scheduled date to start construction to George Martin, PUCO, Railroad Division.
2. CSX's project foreman will furnish FAX or written notification five (5) working days prior to the date work will start at the project site to Tim Perkins, Ohio Rail Development Commission (ORDC), 1980 West Broad Street, Columbus, Ohio 43223, email [Tim.Perkins@dot.state.oh.us](mailto:Tim.Perkins@dot.state.oh.us) or FAX (614) 728-4520, (telephone number 614-644-0284), and to the Public Utilities Commission of Ohio at 180 East Broad Street, Columbus, Ohio 43215, email [George.martin@puc.state.oh.us](mailto:George.martin@puc.state.oh.us), (telephone number 614-752-9107). CSX'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.
3. CSX will arrange for utilities to be located at the project site by the Ohio Utilities Protection Service (OUPS) prior to any construction activities at the site. Utilities that are not participating members of the service must be contacted directly by CSX.

4. CSX's project foremen will notify Tim Perkins 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.
5. CSX will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed Encumbrance Estimate to reference when billing.
6. CSX will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.
7. If desired, CSX may locate the warning devices 8'3" from traveled way.

Thank you for your assistance with these matters.

Sincerely,



Tim Perkins  
Project Manager

C: Leah Thomas-Dalton, Rail Division Chief, PUCO  
George Martin, PUCO, Grade Crossing Planner ✓  
ORDC (file)

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

**TO:** Leah Thomas-Dalton, Rail Division Chief, PUCO  
**FROM:** Susan Kirkland, Manager, Safety Section, ORDC  
**BY:** Tim Perkins, Project Manager *Jim Perkins*  
**SUBJECT:** Logan County, TR 33, DOT No. 538 715 L, PID No. 92770, OP: OH0874 CSX  
**DATE:** May 24, 2012

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The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on November 9, 2011. 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 approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above. This construction authorization is made with the stipulation and understanding that any field work needs prior approval before the work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

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

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

Thank you for your assistance with these matters.

Attachment: Diagnostic Review  
Plan & Estimate



# OHIO RAIL DEVELOPMENT COMMISSION

1980 WEST BROAD STREET • COLUMBUS, OH 43223

JOHN R. KASICH, GOVERNOR • JAMES G. BRADLEY, ORDC CHAIRMAN

May 24, 2012

Amanda DeCesare  
CSX Transportation  
Public Projects Manager  
1717 Dixie Highway, Suite 400  
Ft. Wright, KY 41011

RE: Logan County, T.R. 33, DOT No. 538 715 L,  
PID No. 92770, OP: OH0874

Dear Ms. DeCesare:

The CSX Transportation (CSX) plan and estimate dated April 24, 2012, in the amount of \$250,973.00 for the referenced project has been reviewed and is acceptable. CSX may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan. This authorization is made with the stipulation and understanding that the approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Reimbursement of eligible actual cost is limited to \$250,973.00. Additional costs must be approved in writing by the ORDC prior to being incurred. Emergency verbal authorizations by ORDC may be permitted and will be confirmed by ORDC in writing within ten (10) business days of the verbal approval.

This authorization is contingent upon CSX accepting the following instructions:

1. CSX will furnish prior written notification of their scheduled date to start construction to George Martin, PUCO, Railroad Division.
2. CSX's project foreman will furnish FAX or written notification five (5) working days prior to the date work will start at the project site to Tim Perkins, Ohio Rail Development Commission (ORDC), 1980 West Broad Street, Columbus, Ohio 43223, email [Tim.Perkins@dot.state.oh.us](mailto:Tim.Perkins@dot.state.oh.us) or FAX (614) 728-4520, (telephone number 614-644-0284), and to the Public Utilities Commission of Ohio at 180 East Broad Street, Columbus, Ohio 43215, email [George.martin@puc.state.oh.us](mailto:George.martin@puc.state.oh.us), (telephone number 614-752-9107). CSX'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.
3. CSX will arrange for utilities to be located at the project site by the Ohio Utilities Protection Service (OUPS) prior to any construction activities at the site. Utilities that are not participating members of the service must be contacted directly by CSX.

4. CSX's project foremen will notify Tim Perkins 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.
5. CSX will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed Encumbrance Estimate to reference when billing.
6. CSX will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.
7. No roadway widening planned, both foundations should be located 8'3" from the edge of roadway with the tip of gate 10' from the center line of track to avoid overhead utilities. The northwest warning device will not need a platform as designed.

Thank you for your assistance with these matters.

Sincerely,



Tim Perkins  
Project Manager

C: Leah Thomas-Dalton, Rail Division Chief, PUCO  
George Martin, PUCO, Grade Crossing Planner  
ORDC (file)



Amanda J. DeCesare  
Project Manager - Public Projects  
1717 Dixie Highway, Suite 400  
Fort Wright, KY 41011  
Tel. 859-344-8442  
Amanda\_DeCesare@csx.com

TP  
Logged  
5/11/12  
gave to  
T.Z.

May 11, 2012

Mr. Tim Perkins  
Grade Crossing Specialist  
Ohio Rail Development Commission  
1980 W. Broad Street, 2nd Floor  
Columbus, OH 43223

Subject: DeGraff. Logan County, OH - Installation of lights and gates. - TR 33; DOT 538715L;  
Milepost QI-146.76; PID 92770; OP # OH0874

Dear Mr. Perkins:

Attached for your review and approval is a force account estimate in the amount of \$250,973.00 for the subject at-grade crossing project. A hardcopy of the estimate and circuit plans will be sent to you at the above address. We await receipt of the ORDC's further advice and /or approval of the project cost and authority to proceed with the ordering of materials and construction.

If I can be of further assistance, please feel free to call.

Sincerely,

Amanda J. DeCesare  
Project Manager, CSXT Public Projects

Cc: Leah Dalton  
Jill Henry  
Susan Kirkland  
Susan Arduini  
George Martin

APPROVED 4# 10  
SICAC LITTON  
Thomas R. Zinn  
5/16/12



**CSX TRANSPORTATION, INC.  
FORCE ACCOUNT ESTIMATE**

Page 1

ACCT. CODE : 709 - OH0874

ESTIMATE SUBJECT TO REVISION AFTER: 10/31/2012	DOT NO.: 538715L
CITY: DeGraff	COUNTY: Logan
STATE: OH	
DESCRIPTION: TR-33 - Installation of FLS&G.	
DIVISION: Great Lakes	SUB-DIV: Indianapolis Line
MILE POST: QI - 146.76	
AGENCY PROJECT NUMBER: PID 92770	

**PRELIMINARY ENGINEERING:**

200 Additive	31.34%		\$	-
230 Expenses			\$	-
212 Contracted & Administrative Engineering Services			\$	2,500
<b>Subtotal</b>			<b>\$</b>	<b>2,500</b>

**CONSTRUCTION ENGINEERING/INSPECTION:**

200 Additive	31.34%		\$	-
230 Expenses			\$	-
212 Contracted & Administrative Engineering Services			\$	2,500
<b>Subtotal</b>			<b>\$</b>	<b>2,500</b>

**FLAGGING SERVICE: (Contract Labor)**

070 Labor (Conductor-Flagman)			\$	-
050 Labor (Foreman/Inspector)			\$	-
070 Additive	73.76%	(Transportation Department)	\$	-
050 Additive	97.95%	(Engineering Department)	\$	-
230 Per Diem		(Engineering Department)	\$	-
230 Expenses			\$	-
<b>Subtotal</b>			<b>\$</b>	<b>-</b>

**SIGNAL & COMMUNICATIONS WORK:** (Details Attached) \$ 240,919

**TRACK WORK:** (Details Attached) \$ -

**ACCOUNTING & BILLING:**

040 Labor			\$	3,100
040 Additive	63.03%		\$	1,954
<b>Subtotal</b>			<b>\$</b>	<b>5,054</b>

**PROJECT SUBTOTAL** \$ 250,973

900 **CONTINGENCIES:** \$ -

**GRAND TOTAL \*\*\*\*\*** **\$ 250,973**

**DIVISION OF COST:**

Agency	100.00%		\$	250,973
Railroad			\$	-
<b>TOTAL *****</b>			<b>\$</b>	<b>250,973</b>

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

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

Office of Assistant Chief Engineer Public Projects--Jacksonville, Florida

Estimated prepared by:	BSE	Approved by: AJD
DATE: 5/4/2012	REVISED:	DATE: 5/9/2012

Form Revised 05-05-2010-LLS

Project Summary Sheet

Estimate No. 120059  
**CSX Transportation**  
TR-33 - Install FLS&G.  
DeGraff, OH

DOT: 538715L

OP: OH0874

CSX Project: OH2012026

**Summary**

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Material .....	\$ 80,852
Sales Tax .....	\$ 0
Labor:	
Construction Labor (131 man-days).....	\$ 39,408
Shop Labor (6 man-days).....	\$ 1,260
Subsistence (131 man-days).....	\$ 17,030
Railroad Engineering, Preliminary .....	\$ 4,828
Railroad Engineering, Construction .....	\$ 5,911
Additives to Construction Labor .....	\$ 36,614
Additives to Shop Labor .....	\$ 1,117
Additives to Track Labor .....	\$ 0
Additives to Engineering .....	\$ 3,366
Equipment Expenses (27 work days).....	\$ 17,550
Waste Management (27 work days).....	\$ 324
Contract Engineering .....	\$ 21,360
Freight .....	\$ 4,800
Poleline Removal .....	\$ 0
AC Power Service .....	\$ 2,500
Salvage .....	\$ -1
VAC-TRUCK .....	\$ 4,000
<hr/>	
TOTAL ESTIMATE COST .....	\$ 240,920

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Date: 04/24/2012

Estimated By: John Morrison

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

**Shop Material List for CSX Project: OH2012026 (Effective: 04/24/2012)**  
**Install FLS&G w/GCP-3000D2**  
**Degraff, OH - QI 146.76**

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-0003386	1	6781.00	1	6781.00	HOUSE 6X6L ALUM INCLUDES 5 SHELFs, FARADAY CLOSET, 240V
020-0017120	1	11.52	6	69.12	BLOCK TERMINAL 12 POST SINGLE STRIP AAR 14.1.6 WITH 1 AAR
020-0017125	1	3.54	6	21.24	BLOCK TERMINAL 2 POST AAR 14.1.8 WITH 1 AAR 14.1.11
020-0017211	1	627.20	1	627.20	TRANSFORMER LIGHT 750VA 010520-50X MODEL SLT-50
020-0017385	1	59.27	1	59.27	CABLE RJ45 TO RJ45 15' GETS P/N 075061-015
020-0021965	1	8.96	1	8.96	EXTRACTOR DWG 59688-4 TERMINAL GRS CAT P3-308 REF
020-0022651	1	55.89	7	391.23	PLUGBOARD KIT TYPE B1 OR ST1 RELAY ASSEMBLY WITH 12 EACH
020-0022701	1	68.00	33	2244.00	ARRESTER LPC 15012-1 0-30V DC OR 0-24V AC RATED AT 15 AMP
020-0025595	1	20.72	1	20.72	WRENCH DWG 55393-3 GR1 "E" TERMINAL POST NUT GRS CAT
020-0053360	1	406.56	3	1219.68	CHARGER BATTERY ELC 12/20 S 20 AMP 10-19.9 VDC ROTARY SW
020-0053510	1	233.11	1	233.11	KIT 240V AC EMERGENCY GENERATOR CABLE AND
020-0055608	1	17.88	1	17.88	RELAY POTTER BRUMFIELD KRP11AG12 OR STRUTHERS-DUNN
020-0056515	1	3.07	1	3.07	SOCKET RELAY 8 PIN OCTAL FOR NON VITAL RELAY CSX SS705 REF
020-0064060	1	16.12	1	16.12	PLATE RELAY MOUNTING FOR 2 EACH TYPE KHAU OR OCTAL RELAY
020-0660077	1	597.41	1	597.41	ARRESTER GE 9L10KAC213 FOR 240 VOLT SINGLE PHASE 3 WIRE
020-0750090	1	0.09	3	0.27	NUT INSULATED USE ON AAR BINDING POST TERMINAL FOR
020-0770060	1	13.44	12	161.28	ARRESTER US&S N451552-0201 TRACK SERIES RED LABEL USGA
020-0770105	1	22.40	4	89.60	ARRESTER HARMON 202217-000 AGE-1 TRACK AIR GAP EQUALIZER
020-1940055	1	14.22	1	14.22	CONTAINER CIRCUIT PRINT 24" SCHEDULE 20 4" PVC PIPE WITH
020-2501400	1	1043.84	1	1043.84	CONTROLLER DTMF RADIO KEY DOWN MODE 6 SET TIMER TO 60
020-2550075	1	12002.90	1	12002.90	PREDICTOR SAFETRAN GCP-3000D2 REDUNDANT TWO TRK SYS W/CASE
020-3430110	1	321.84	3	965.52	RELAY SAFETRAN 400004 500 OHMS CONTACTS 4FB-2F-1B CSX
020-3430115	1	421.20	1	421.20	RELAY SAFETRAN 400005 500 OHMS CONTACTS 4FB HEAVY DUTY
020-3430135	1	513.30	1	513.30	RELAY SAFETRAN 400213 460 OHMS CONTACTS 2FB CSX
020-3430170	1	413.95	1	413.95	RELAY SAFETRAN 400800-CSX 100/100 OHMS CONTACTS 6FB

**Shop Material List for CSX Project: OH2012026 (Effective: 04/24/2012)**  
**Install FLS&G w/GCP-3000D2**  
**Degraff, OH - QI 146.76**

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-3430185	1	431.55	1	431.55	RELAY SAFETRAN 400700-X 60 OHMS CONTACTS 4FB CSX
020-4200100	1	7.45	2	14.90	CONNECTOR BUS 1" CENTERS 1/2" X 36" 18 GAGE PUNCHED 1/4" X
020-4200340	1	1.66	12	19.92	LINK TEST ASSEMBLY 1" CENTERS COMPLETE WITH INSULATED
020-4200350	1	2.04	9	18.36	LINK TEST ASSEMBLY 2-3/8" CENTERS COMPLETE WITH
020-4201045	1	0.12	300	36.00	NUT HEX CLAMP (FLAT NUT) AAR 14.1.11-7 14-24 NS-2 THD FLAT
020-8000067	1	14.61	2	29.22	LOCK AMERICAN H10SIGRA CSX SIGNAL PADLOCK WITH BLACK
020-8100031	1	23.82	1	23.82	CABLE EVENT RECORDER HARMON HAWK NETWORK CABLE USED WITH
020-8100044	1	3906.57	1	3906.57	RECORDER EVENT HAWK INCLUDES ETHERNET MODEM AND CURRENT
022-8005160	1	563.90	1	563.90	KIT CDMA AND VHF RADIO MATERIAL FOR USE WITH CSX
<b>Total Cost: \$</b>				<b>32,980.33</b>	

**Field Material List for CSX Project: OH2012026 (Effective: 04/24/2012)**  
**Install FLS&G w/GCP-3000D2**  
**Degraff, OH - QI 146.76**

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-0010449	1	31.57	3	94.71	BOX, 9 INCH DIA. "FLOWER POT" ENCLOSURE WITH HD
020-0013687	1	17.76	3	53.28	SPLICE TRACK WIRE TO BONDSTRAND (FLOWER POT KIT)
020-0013880	1	1.95	3000	5850.00	CABLE UG 7 COND NO 14 AWG SOLID C CSX SPEC SS796 SHOW
020-0013908	1	6.98	300	2094.00	CABLE UG COMPOSITE 19 CONDUCTOR INCLUDES 13
020-0017605	1	0.30	200	60.00	WIRE CASE 10 AWG FLEX CSX SPEC SS796 OKONITE P/N
020-0022651	1	55.89	2	111.78	PLUGBOARD KIT TYPE B1 OR ST1 RELAY ASSEMBLY WITH 12 EACH
020-0022701	1	68.01	4	272.04	ARRESTER HYBRID LOW VOLTAGE 0-30V DC OR 0-24V AC RATED AT
020-0025145	1	320.49	6	1922.94	SHUNT ENCLOSURE INTERRAIL P/N IRS-SE8A WAYSIDE MOUNT
020-0028610	1	0.22	25	5.50	TERMINAL RING PANDUIT PN12-14HDR-D YELLOW NYLON HVY
020-0052475	1	11.20	4	44.80	ARM EXTENSION 10-1/2" ALUM WITH 3/8" DIAMETER MOUNTING
020-0053066	1	4.10	24	98.40	BOND WEB OF RAIL TRACK CONNECTOR 3/16" DIA X 1" TAB
020-0053220	1	2.50	150	375.00	CABLE POWER UG 3 COND NO 6 AWG, SHOW LENGTH ON EACH
020-0054075	1	1006.88	2	2013.76	GATE GARD NORMAL MOVEMENT COMPLETE WITH SHEAR PIN AND
020-0054167	1	27.53	2	55.06	KIT 72-N2CH SCOTCHCAST SPLICE FOR CABLES WITH OUTSIDE
020-0055421	1	18.61	6	111.66	BRACKET SIGN 4" OR 5" MAST W/1/2" U-BOLT FOR ALL SIGNS
020-0056181	1	33.49	2	66.98	SIGN 0254 2 TRACK MULT TRK CSX DWG SS225 ALUM
020-0056421	1	18.61	4	74.44	BRACKET SIGN 4" OR 5" MAST FOR ALL SIGNS REQUIRING 5/8"
020-0056674	1	5870.84	2	11741.68	SIGNAL 0220-L GCWD GATE ASSY DWG SS222 INCLS 18 FBRGL ARM
020-0056823	1	15.01	3	45.03	TAPE UG RED CABLE MARKER IMPRINT TO READ "CAUTION
020-0057275	1	1.32	500	660.00	WIRE UG TRACK TWISTED PAIR NO. 6 AWG SOLID CONDUCTOR
020-0750090	1	0.09	3	0.27	NUT INSULATED USE ON AAR BINDING POST TERMINAL FOR
020-1020095	1	1678.83	1	1678.83	PLATFORM HIGHWAY CROSSING ACCESS FOUNDATION COMPLETE
020-1040322	1	162.40	29	4709.60	BATTERY SAFT SPL165, 165 AH POCKET PLATE NICKEL CADMIUM
020-1040540	1	31.36	4	125.44	TRAY BATTERY FIBER CO 82687-1-P 12" WIDTH 24" LONG
020-1040550	1	45.92	1	45.92	TRAY BATTERY FIBER CO 82687-3-P 12" WIDTH 38"

**Field Material List for CSX Project: OH2012026 (Effective: 04/24/2012)**  
**Install FLS&G w/GCP-3000D2**  
**Degraff, OH - QI 146.76**

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-1150750	1	0.86	200	172.00	BOND STRAND 3/16" DIA 7 STRANDS OF 19 STR EACH 6 WITH
020-1360014	1	845.41	1	845.41	PACKAGE FOREMANS CARE FOR ALUMINUM TYPICAL BOM FOR USE
020-1360016	1	21.18	1	21.18	PACKAGE SAFETY & SECURMENT WITH 1 EA CAUTION TAG 1 EA
020-1360104	1	1379.66	1	1379.66	LAYOUT METER SERVICE WITH 30' POLE CSX DWG SS351 SH 2 ITEMS
020-2060078	1	9.50	1	9.50	BOLT 1" - 8 X 8" INCLUDES NUT AND 3 FLAT WASHERS, USE ON
020-2500433	1	57.29	2	114.58	INDUCTOR 8V617-1000 DUMMY LOAD SAFETRAN
020-2500444	1	57.29	2	114.58	INDUCTOR 8V617-3200 DUMMY LOAD SAFETRAN
020-2500590	1	451.58	4	1806.32	SHUNT SAFETRAN P/N 6000-62775-8621 NARROW BAND
020-2500605	1	374.82	2	749.64	SHUNT SAFETRAN 62775-86 NARROW BAND 86HZ
020-2530288	1	306.34	4	1225.36	FILTER EPC 800-080055-109 TF-211
020-3263640	1	0.26	14	3.64	SLEEVE NICOPRESS 14 AWG SOLID COPPER WIRE 1-1/8" LONG STD
020-3430110	1	321.84	2	643.68	RELAY SAFETRAN 400004 500 OHMS CONTACTS 4FB-2F-1B CSX
020-3901895	1	92.68	2	185.36	TIP FLEX HWY CROSSING GATE 24 IN LONG RED & WHITE STRIPES
020-3920200	1	181.17	2	362.34	BELL GCWD ELECTRONIC 4" OR 5" MAST 8 TO 13 VOLTS DC GSI PN
020-3930010	1	3.70	2	7.40	KIT GATE ARM WARNING STICKER KIT INCLUDES 1-EA 5"X3"
020-4200340	1	1.66	41	68.06	LINK TEST ASSEMBLY 1" CENTERS COMPLETE WITH INSULATED
020-4200900	1	0.27	8	2.16	CONNECTOR SHEATHING AMP 329860 FOR NO. 14 WIRE
020-4201042	1	0.12	40	4.80	NUT HEX BINDING (RSA NUT) AAR 14.1.11-6 14-24 NS-2 THD CONE
020-4201043	1	0.11	250	27.50	NUT HEX CLAMP (FLAT NUT) AAR 14.1.11-7 14-24 NS-2 THD FLAT
020-4201044	1	0.11	200	22.00	WASHER AAR 14.1.11 ROUND COPPER NICKEL PLATED FOR AAR
020-7300030	1	189.28	2	378.56	BRACKET BELL FITS SAFETRAN JUNCTION BOX MOUNT, 5" BENT
020-9999991	1	100.00	1	100.00	BLOCKING AND BRACING FOR PROJECTS BURCO DIST
250-0001827	1	13.75	1	13.75	BREAKER CIRCUIT SQ D QO235
250-1680406	1	0.48	160	76.80	CONDUIT LIQUID TIGHT 3/4" FLEXIBLE GREY PVC CARLON P/N
250-1680408	1	1.00	160	160.00	CONDUIT LIQUID TIGHT 3/4" NON-METALLIC ORANGE PVC
360-0006100	1	35.07	1	35.07	STOOL STEP WOOD 14"X 20" SIGNAL MAINTAINERS CSXT

**Field Material List for CSX Project: OH2012026 (Effective: 04/24/2012)**  
**Install FLS&G w/GCP-3000D2**  
**Degraff, OH - QI 146.76**

Catalog Num	Cond	Unit Price	Qty	Cost Description
360-0800145	1	4.93	1	4.93 BROOM WAREHOUSE CORN HVY DUTY ID300
<b>Total Cost: \$</b>				<b>40,845.4</b>

**Consumables List for CSX Project: OH2012026 (Effective: 04/24/2012)**  
**Install FLS&G w/GCP-3000D2**  
**Degraff, OH - QI 146.76**

Catalog Num	Cond	Unit Price	Qty	Cost Description
N/A		50.00	40	2000.00 FILL MATERIAL, 1 CUBIC YARD
N/A		500.00	1	500.00 RAVEN AIR-LINK
N/A		800.00	1	800.00 WALKWAY ROCK, 10 CUBIC YARDS
020-0017605	1	0.30	350	105.00 WIRE CASE 10 AWG FLEX CSX SPEC SS796 OKONITE
020-0017607	1	0.70	500	350.00 WIRE CASE TW PR NO 10 AWG FLEX CSX SPEC SS796 TWIST 2
020-0017625	1	0.42	150	63.00 WIRE CASE TW PR NO 14 AWG FLEX CSX SPEC SS796 TWIST 2
020-0017630	1	0.13	200	26.00 WIRE CASE NO 16 AWG FLEX CSX SPEC SS796 FURN 1000 FT SPOOL
020-0017635	1	0.80	130	104.00 WIRE SIGNAL DEL 018 NO 6 COPPER STRANDED SINGLE
020-0028610	1	0.22	100	22.00 TERMINAL RING AMP 35628 YELLOW PLASTI-BOND HVY DUTY
020-1710045	1	2.25	250	562.50 CONDUIT SDR 13.5 4" POLYETHYLENE TRENCHLESS
020-2060072	1	417.01	2	834.02 FOUNDATION HELICAL SCREW-IN ASSEMBLY 7' X 10", USED FOR
020-2060074	1	571.20	2	1142.40 EXTENSION 10" X 3' USE WITH XING GATE AND SIGNAL MAST
020-3261960	1	18.82	2	37.64 DECAL (DO NOT ORDER, CALL SIGNAL SHOP) ASSY 5" BLACK
020-3261970	1	9.41	2	18.82 DECAL ASSY 2" BLACK PRESSURE SENSITIVE VINYL PRE-MASKED
020-4200880	1	0.53	2	1.06 CONNECTOR TERMINAL 2-3/8" CENTERS AAR 14.1.15-4 NICKEL
020-4200892	1	0.44	27	11.88 CONNECTOR TERMINAL 1" CENTERS AAR 14.1.15-3 NICKEL PLATED
020-4251190	1	0.13	120	15.60 TERMINAL RING AMP 35627 BLACK PLASTI-BOND WIRE SIZE 10-12
020-4251290	1	0.49	30	14.70 TERMINAL WIRE AMP 322051 BLUE WIRE SIZE NO 6 AWG 1/4" STUD
020-4251295	1	0.49	6	2.94 TERMINAL WIRE AMP 322007 BLUE WIRE SIZE NO 6 AWG 3/8" STUD
020-9999992	1	50.00	1	50.00 HOUSE, SIGNAL HANDLING CHARGE, BURCO DISTRIBUTION
022-5290559	1	325.00	1	325.00 CONVERTER WILMORE INPUT 10V DC TO 16V DC OUTPUT 13.6V DC
450-0019212	1	0.40	100	40.00 SCREW 10 X 1" SHT METAL PAN HD TYPE A COARSE THREAD
<b>Total Cost: \$</b>				<b>7,026.56</b>





## Diagnostic Review Team Survey

Date: 11-9-11

### Location Data

Street or Road Name:

Route/Road Number  
(i.e. Twp., Co., SR or US) TR 33

AAR-DOT No.: 538715L

County: LOG

Township: Pleasant Township

City:  
(In or Near) De Graff

Railroad  
Name: CSX

Railroad  
Division: Great Lakes

Branch/Line  
Name: Indianapolis

Nearest RR  
Timetable Station: De Graff

RR Milepost: 146.76

### On-Site Review Team

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

1. Victor Klinlelhofer - Pleasant Township - 937.538.0596 V.K.
2. Joan Downing - Pleasant Township - 937.585.5620 - jdowning@embarqmail.com
3. John Schindewolf - Pleasant Township - 937.585.4322
4. Steve Sanders - Pleasant Township - 937.585.5925 S, S
5. Todd Darfus - ORDC - 614-374-9298
6. Scott Coleman - LCEO - 937-592-2791
7. GEORGE MARTIN - PUCO - 614-752-9107
8. Karen Murphy - CSX - 904-559-1650
- 9.

### Existing Traffic Control Devices

Type of Warning Devices	Installed?		Quantity/Comments
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
'Stop' Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Pavement Markings (condition?)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	New Pavement
Crossbucks	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Number of Tracks Signs	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Inventory Tags	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Cantilever Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number:
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No	NA

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

Pedestrians: ☒ No ☐ Yes

Is sidewalk present? ☒ No ☐ Yes

Is there a nearby intersection that could cause queuing over the crossing? ☒ No ☐ Yes

If yes,  
Distance \_\_\_\_\_

Is this intersection signalized? ☒ No ☐ Yes

Are the signals currently interconnected with the existing crossing warning devices? ☒ No ☐ Yes

Is there a 'Do not Stop on Track' sign? ☒ No ☐ Yes

Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? ☒ No ☐ Yes

If yes,  
Improvement type \_\_\_\_\_ Lead Agency \_\_\_\_\_ Timeline/completion \_\_\_\_\_

Is it the consensus of the Diagnostic Review Team that this is a potential closure project? ☒ No ☐ Yes

Explain reasons:  
  
10 ft placement of L&B

### Type of Development

<input checked="" type="checkbox"/> Open Space <input type="checkbox"/> Industrial <input type="checkbox"/> Residential	<input type="checkbox"/> Institutional <input type="checkbox"/> Commercial	Location of nearby schools:  <u>2-3 miles</u>
---	---	---

### Utility Information

Is commercial power available? ☐ No ☒ Yes

Utility Provider (Company Name) Logan County Co-op Phone Number 937-592-4781

Nearest Available Power Source ① crossing

What other utilities are present? Century Link  
(add locations to sketch)

Is(are) there potential utility conflict(s) ☐ Yes ☐ No ☒ Unknown

Comments:

1587 CR 32N  
Bellefontaine, OH 43311

## Diagnostic Team Recommendations

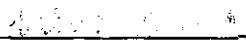
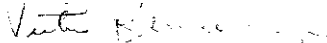
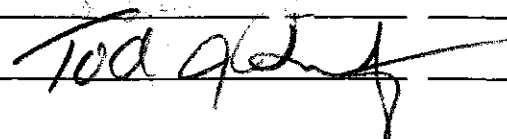
	Quadrants Needed
<input checked="" type="checkbox"/> Install/upgrade active devices	
<input checked="" type="checkbox"/> Automatic Flashing Lights (AFLS)	
<input type="checkbox"/> AFLS / Cants	
<input checked="" type="checkbox"/> AFLS / Gates	
<input type="checkbox"/> AFLS / Gates / Cants	
<input checked=""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

Comments:

Bungalow in SW Quad  
Foundation to be set @ 10' from Edge of traffic

- ☐ Install/upgrade traffic signal preemption
- ☐ No improvements needed
- ☐ Other (define)

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

## Field Sketch

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

*See attached map from google earth*

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

Sketch by: \_\_\_\_\_





© 2011 Google

Google earth

Google earth

feet 100  
meters 30



## Martin, George

---

**From:** newtin@oups.org  
**Sent:** Tuesday, November 01, 2011 8:24 AM  
**To:** Martin, George  
**Subject:** OUPS EMLCFM 2011/11/01 #00085A A130500279-00A ROUT NEW LREQ

EMLCFM 00085 OUPSa 11/01/11 08:23:37 A130500279-00A ROUT NEW POLY LREQ

Ticket : A130500279 Rev: 00A Taken: 11/01/11 08:21 AM Channel:

State: OH Cnty: LOGAN Place: PLEASANT TWP  
State: OH Cnty: LOGAN Place: HARRISON TWP

Address : Street: TWP RD 33

Cross 1 : CTY RD 11

Intersection: N

Rail/Hwy: RR Milemarker(s):

Where : ENTIRE INTERSECTION OF TWP RD 33 AND THE CSX RAILROAD CROSSING - NEED  
: 50 FT EAST AND 50 FT WEST OFF OF TWP RD 33 AT RAILROAD TRACKS  
: THESE TRACKS ARE LOCATED JUST SOUTH OF CTY RD 11

WorkType: RAILROAD SIGNAL WORK

Done for:

Done by : CSX RAILROAD

Whitelined: N Blasting: N

Means of Excavation: DIRECTIONAL BORE AND BACKHOE

Work date: 11/09/11 09:00 AM Meet: N

Best Fit: 40.347567/-83.877238 40.348332/-83.865793  
: 40.338825/-83.876654 40.339589/-83.865209

Comments:

Caller : GEORGE MARTIN

Phone: 614-752-9107

Company : PUCO

Type: CONT

Co addr : 180 E BROAD ST

City : COLUMBUS

St: OH Zip: 43215

Email: GEORGE.MARTIN@PUC.STATE.OH.US

Members:

DPL =DAYTON POWER & LIGHT

LGC =LOGAN CTY ELECTRIC COOP

LOE =LOGAN CTY ENGINEERS

UTCP =CENTURYLINK (FORMERLY EMBARQ)

**Martin, George**

---

**From:** agt\_comm@irth.com  
**Sent:** Tuesday, November 01, 2011 8:25 PM  
**To:** Martin, George  
**Subject:** Locating DP&L Owned Electric Lines

=====  
**To:** PUCO **Attn:** GEORGE MARTIN  
**Voice:** 6147529107 **Fax:**  
**Re:** Locating DP&L Owned Electric Lines

Dayton Power and Light is replying to your request to have our underground electric facilities located.

=====  
**Ticket:** A130500279  
**County:** LOGAN **Place:** PLEASANT  
**Address:** TWP RD 33

**DPL:**  
Dayton Power and Light has responded to your request for locating and has determined that your digging area is not in Dayton Power and Light's service territory.

=====  
If you have any questions please call the Ohio Utilities Protection Service at 800-362-2764.  
=====

This message was generated by an automated system. Please do not reply to this email.



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

**TO:** Leah Thomas-Dalton, Rail Division Chief, PUCO  
**FROM:** Susan Kirkland, Manager, Safety Section, ORDC  
**BY:** Joe Reinhardt, Project Manager, ORDC  
**SUBJECT:** Crawford County, Orr Road, TR26  
DOT 481582H, Norfolk Southern  
**DATE:** May 30, 2012

---

The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on Orr Road. 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 approves the site plans and estimates as provided. Please issue a construction-only order for the project outlined above. This construction authorization is made with the stipulation and understanding that any field work needs prior approval before the work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

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

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

Thank you for your assistance with these matters.

Attachment: Diagnostic Review  
Plan & Estimate

c: George Martin, PUCO  
ORDC Project Manager (file)

STATE OF OHIO  
**PURCHASE ORDER**  
OHIO DEPARTMENT OF TRANSPORTATION

PAGE: 1 of 1

P.O. DATE: 2/24/2012

ODOT P.O. NUMBER: 579921

DOCUMENT TYPE: CNTE

CHANGE ORDER: RR

OAKS P.O. NUMBER:

P/D NUMBER	CONTRACT/BID/OIH		CONTROL BOARD NBR.	DOC. AMOUNT	
92935	DOTC17069-1			\$250,000.00	
PROJECT NBR.	SIB LOAN NBR.	AGREEMENT NBR.	COUNTY	ROUTE	SECTION
			CRA	ORR	ROAD

**VENDOR INFORMATION:**

**NAME:** NORFOLK SOUTHERN CORPORAT

**OAKS VENDOR NUMBER:** 0000085980

**ADDRESS:** PO BOX 116944

**ADDRESS CODE:** 001

**CITY, STATE:** ATLANTA, GA

**ZIP CODE:** 30368-6944

**DESCRIPTION:**

RR CROSSING PROTECTION

LINE NBR	FUND	FISCAL YEAR	SAC	SPRC	RCAT	ACTIVITY	ACCOUNT CODE
01	7002	2012	4FP7	0003	NOCC	0071	573067
ELIGIBILITY		FAN		STATE JOB NBR		LINE AMOUNT	
E		DOT1E120 000329		438336		\$250,000.00	

THE DIRECTOR OF BUDGET AND MANAGEMENT HEREBY CERTIFIES THAT THERE IS A BALANCE IN THE APPROPRIATION NOT ALREADY OBLIGATED TO PAY EXISTING OBLIGATIONS IN AN AMOUNT AT LEAST EQUAL TO THE PORTION OF THE CONTRACT, AGREEMENT, OBLIGATION, RESOLUTION OR ORDER TO BE PERFORMED IN THE CURRENT FISCAL YEAR.



# OHIO RAIL DEVELOPMENT COMMISSION

1980 WEST BROAD STREET • COLUMBUS, OH 43223  
JOHN R. KASICH, GOVERNOR • JAMES G. BRADLEY, ORDC CHAIRMAN

May 30, 2012

Ms. Cayela Wimberly  
Public Projects Engineer  
1200 Peach Street, Box 123  
Atlanta, Ga. 30309

RE: Crawford County, Orr Road, TR26, DOT# 481582H  
PID# 92935, NS Project 10.1363

Dear Ms. Wimberly:

The plan and estimate dated May 17, 2012, for the referenced project has been reviewed and is acceptable. NS may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan. This authorization is made with the stipulation and understanding that the approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit. Reimbursement of eligible actual cost is limited to \$201,602.00. 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.

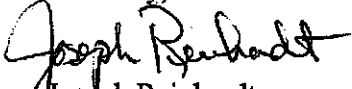
This authorization is contingent upon NS accepting the following instructions:

1. NS's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Joe Reinhardt, ORDC, [joe.reinhardt@dot.state.oh.us](mailto:joe.reinhardt@dot.state.oh.us) email and to the Public Utilities Commission of Ohio at [George.martin@puc.state.oh.us](mailto:George.martin@puc.state.oh.us). NS'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. NS 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 NS.
3. NS's project foremen will notify Joe Reinhardt at 614-580-7728 (telephone) or [joe.reinhardt@dot.state.oh.us](mailto:joe.reinhardt@dot.state.oh.us) (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.
4. NS will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed Encumbrance Estimate to reference when billing.

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

Thank you for your assistance with these matters.

Sincerely,

  
Joseph Reinhardt  
Project Manager

C: Leah Thomas-Dalton, Rail Division Chief, PUCO  
George Martin, PUCO, Grade Crossing Planner  
ORDC (file)

Attachment: 1 (encumbrance estimate)



## Diagnostic Review Team Survey

Date: 1/26/2012

Location Data			
Street or Road Name: Orr Road			
Route/Road Number (i.e. Twp., Co., SR or US) TR 26		US DOT No.: 481582H	
County: Crawford (CRA)	Township: Chatfield Twp	City: (In or Near) Chatfield	
Railroad Name: NS	Railroad Division: LAKE	Branch/Line Name: SANDUSKY	
Nearest RR Timetable Station: Chatfield		RR Milepost: 72.13	

On-Site Review Team		
(Include: Name - Organization - Phone Number - Email)		
1. Joe Reinhardt - ORDC - 614.580.7728 - joe.reinhardt@dot.state.oh.us	<i>Joe Reinhardt</i>	
2. George Martin - PUCO - 614.752.9107 - George.Martin@puc.state.oh.us	<i>George Martin</i>	
3. <i>RAND PATERSON</i> PUCO - Rail Division	<i>Rand Paterson</i>	
4. <i>TERRY LEONHART</i> Chatfield Justice	<i>Terry Leonhart</i>	
5. <i>Kenneth Kalk</i> Chatfield Justice	<i>Kenneth Kalk</i>	
6. <i>A.J. Pearce</i> Norfolk Southern	<i>A.J. Pearce</i>	
7. _____	_____	
8. _____	_____	
9. _____	_____	

Existing Traffic Control Devices		
Type of Warning Devices	Installed?	Quantity/Comments
Advance Warning Signs (condition?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	TWO - Correct
'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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Crossbucks	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	TWO w/ YIELD
Number of Tracks Signs	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Inventory Tags	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Cantilever Flashing Lights	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Number:
Sidewalk Gate Arms	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Illumination	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	ONE
Is crossing flagged by train crew?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Other	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Safety Data (Obtain crash reports, if possible, prior to review)		
	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	0	
Hazard Ranking	331	Date Run: 1/9/2012
Railroad Data		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	30	
< 1 per day		
Day thru trains	14	
Night thru trains	14	
Daytime switching movements	0	
Nighttime switching movements	2	
Total number of tracks		
Number of main tracks	1	
Number of other tracks	0	
Maximum train speed	60	
Typical train speed		
Amtrak		
If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If multiple tracks, can two trains occupy crossing at the same time? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Can one train block the motorists' view of another train at crossing? <input type="checkbox"/> Yes (Explain below) <input checked="" type="checkbox"/> No		
Can one or more tracks be eliminated through the crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Are there other track(s) crossing this same roadway within 100 ft of this crossing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, Crossing DOT #(if different) _____		
If yes, distance _____ (take measurement between track centerlines at closest point along roadway)		
Roadway Data		
Local Highway Authority:		Chatfield Twp
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	129 (2006)	
Highway paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface:	<input type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input checked="" type="checkbox"/> Other <u>Chp Seal</u>	
Roadway width:	<u>20</u> ft.	
Number of highway lanes	1	
Urban or Rural	Rural	
Vehicle Speed:	<u>55</u> MPH	
School Bus Operation:	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes _____ Amount	
Hazardous Materials Trucks:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes _____ Amount	
Shoulders:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	
Is the shoulder surfaced?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is there existing guardrail along roadway in crossing vicinity?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is stopping site distance adequate? (See Table 2)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, deficient approach(es) _____	

Quadrant <u>NE</u> Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None	Quadrant <u>SW</u> Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input checked="" type="checkbox"/> None
Pedestrians: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is sidewalk present? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is there a nearby intersection that could cause queuing over the crossing? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, Distance _____ Is this intersection signalized? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Are the signals currently interconnected with the existing crossing warning devices? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Is there a 'Do not Stop on Track' sign? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Is a roadway improvement project (e.g. widening, turn lanes, nearby new or upgraded traffic signal, sidewalk) planned at or near this location in the foreseeable future? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, Improvement type _____ Lead Agency _____ Timeline/completion _____	
Is it the consensus of the Diagnostic Review Team that this is a potential closure project? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Explain reasons: _____	
Type of Development	
<input checked="" type="checkbox"/> Open Space <input type="checkbox"/> Industrial <input type="checkbox"/> Residential <input type="checkbox"/> Institutional <input type="checkbox"/> Commercial	Location of nearby schools: _____
Utility Information	
Is commercial power available? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Utility Provider (Company Name) <u>Unknown</u> Phone Number <u>800-426-3072</u> Nearest Available Power Source <u>At Crossing Site</u> What other utilities are present? _____ (add locations to sketch) _____ Is(are) there potential utility conflict(s) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown Comments: <div style="text-align: center; margin-top: 20px;"> <p>NORTH CENTRAL ELECTRIC COOP</p> <p>350 STUMP PIKE RD</p> <p>PO BOX 475</p> <p>ATICA, OH 44807</p> </div>	

## Potential Red Flags / Project Challenges

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

Crossing Consolidation or Closure:

Real Estate or ROW:

Culverts / Drainage / Ballast Conditions:

Roadway and/or Sidewalks:

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

Environmental:

Other:



## Diagnostic Team Recommendations



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



Comments:


Retaining & Curb walls Needed

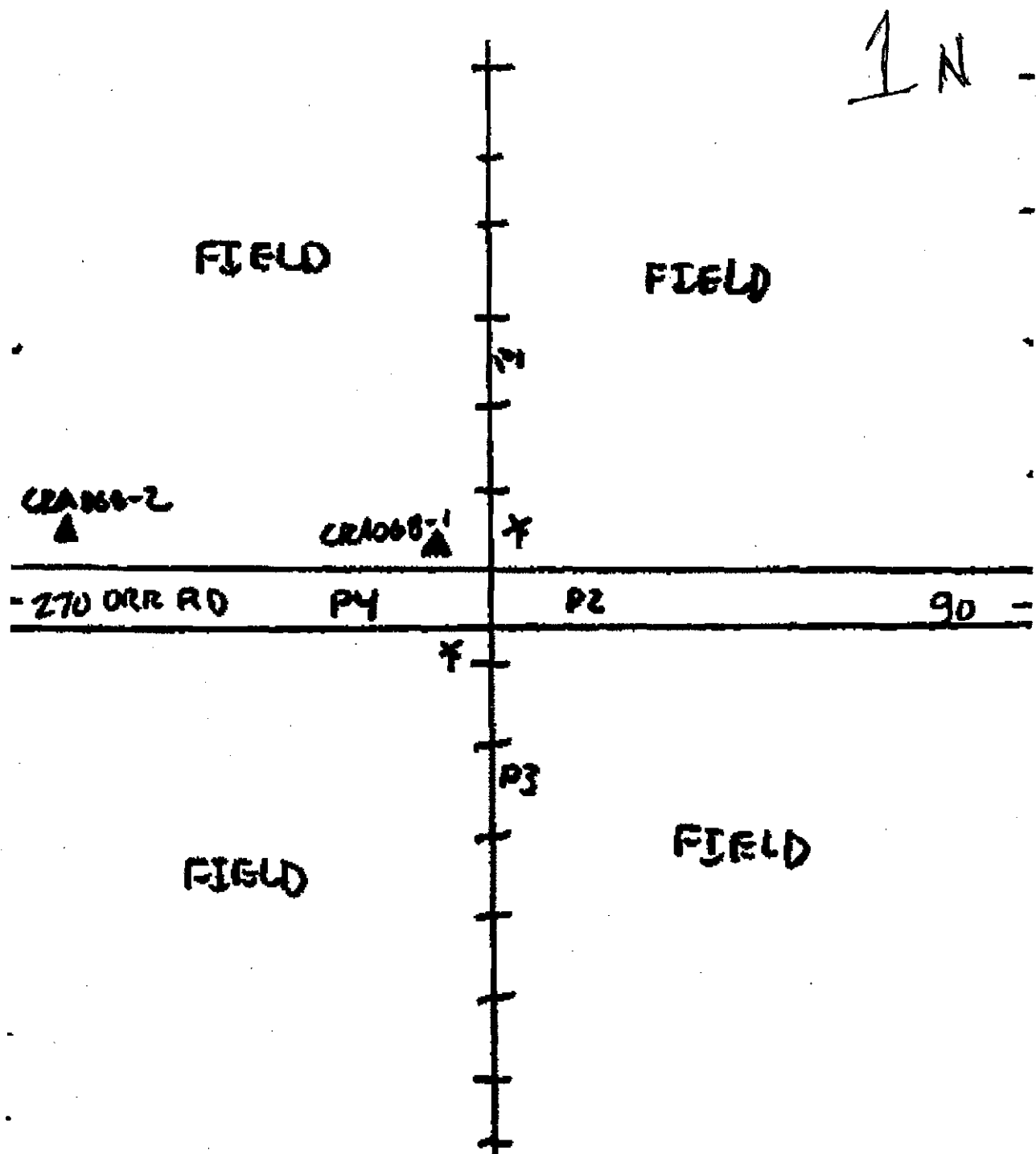
<input type="checkbox"/> Install/upgrade traffic signal preemption	
<input type="checkbox"/> No improvements needed	
<input type="checkbox"/> Other (define)	

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

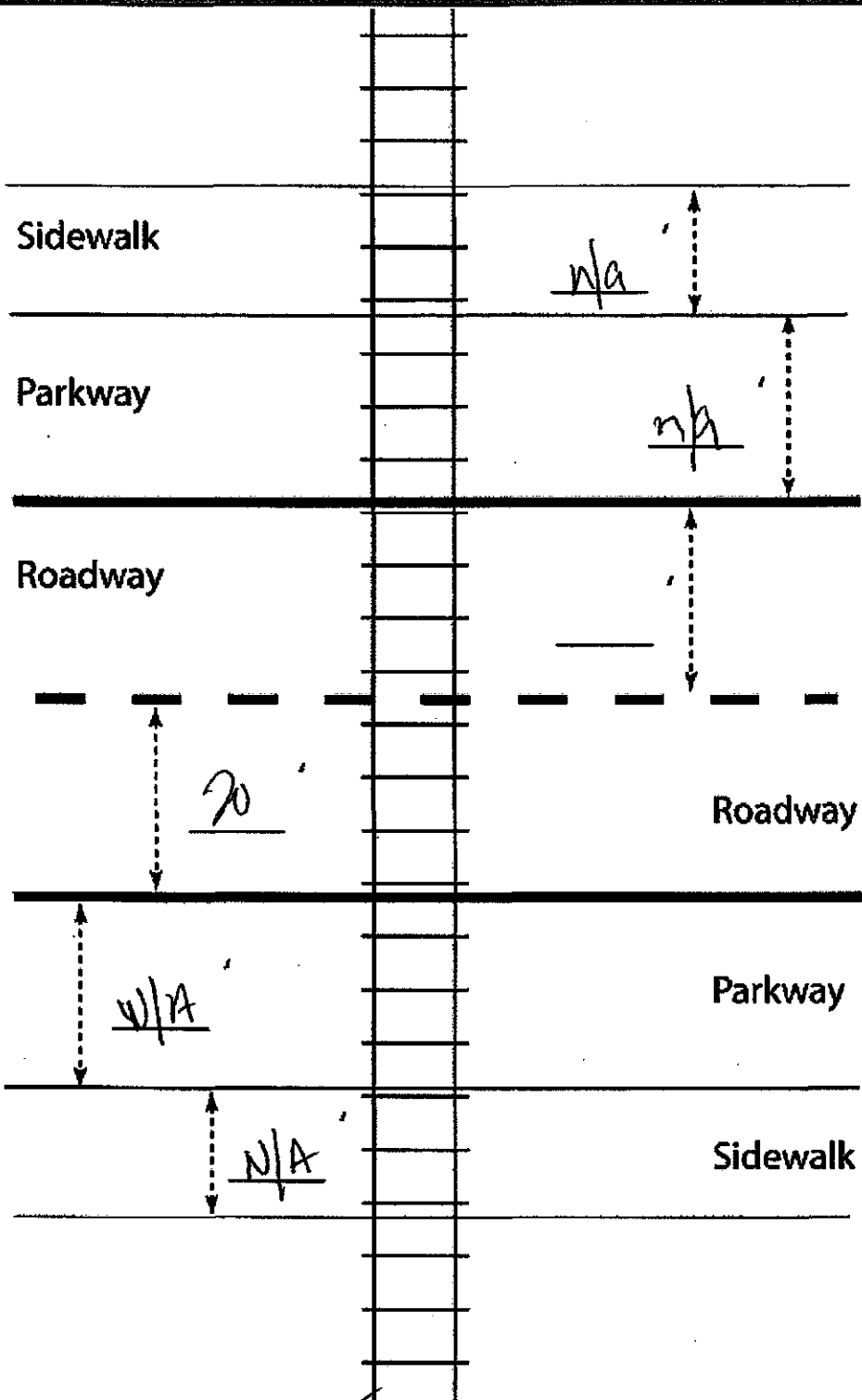




# Field Dimensions

1N

Show North Direction



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

Measurements by: *[Signature]*

**TABLE I****Clearing Sight Distances**

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

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

**Notes:**

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

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

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

**Table 2****Stopping Sight Distances**

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

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

**Notes:**

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

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

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