

NO
FILE

15

**Public Utilities
Commission of Ohio**

Memo

RECEIVED - DOCKETING DIV
2014 JAN -2 PM 1:47
PUCO

To: Docketing Division
From: George Martin, Grade Crossing Planner, Rail Division
Re: In the matter of the authorization of CSX Transportation to install an active grade crossing warning device in Henry County
Date: January 2, 2014

The Ohio Rail Development Commission (ORDC) has authorized funding for CSX Transportation (CSX) to install **mast-mounted flashing lights and roadway gates at the following location:**

Henry County, Bartlow Township, near Deshler, TR E, DOT# 155761C

The crossing was surveyed on May 14, 2013, as the result of a fatal accident. The diagnostic team recommended the upgrade.

The project will be paid for with federal funds, and is actual cost. As the plan and estimate for the project has been submitted and approved, staff requests an Entry with completion due 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. 14- 0006 -RR-FED In the matter of the authorization of CSX Transportation to install an active grade crossing warning device in Henry County

C: Legal Department

Please serve the following parties of record.

Ms Cathy Stout

Ohio Rail Development Commission

1980 W Broad St, Mailstop # 3140

Columbus, Oh 43223

Ms Amanda DeCesare

CSX Transportation

1717 Dixie Hwy, Ste 400

Ft Wright, Ky 41011

Bartlow Township Trustees

PO Box 41

Deshler, Oh 43516

Hancock Wood Electric Cooperative

1399 Business Park Drive, South

PO Box 190

North Baltimore, Oh 45872-0190

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

TO: Randall Schumacher, Supervisor, Rail Division, PUCO
FROM: Cathy Stout, Manager, Safety Section, ORDC
BY: Don Damron, Project Manager, ORDC
SUBJECT: Henry County, TR E
DOT# 155761C
PID# 96101
DATE: December 26, 2013

The Public Utilities Commission of Ohio (PUCO) established a Diagnostic Review Team Survey at the subject highway/railroad crossing location on 5/14/2013. The Ohio Rail Development Commission (ORDC) attended the Diagnostic Survey. The Diagnostic Review Team recommended the improvement of warning devices to flashing lights and roadway gates. Copies of the Diagnostic Review Team Survey form and the railroad plan and estimate are attached.

The PE has already been provided by the railroad. ORDC approves the site plans and estimates as provided with gate setbacks as requested by ODOT. Please issue a construction-only order for the project outlined above. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

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

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

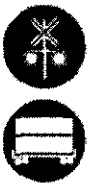
Thank you for your assistance with these matters.

Attachments:

Diagnostic Review
Plan & Estimate

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

BARTLOW mP



OHIO RAIL DEVELOPMENT COMMISSION

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

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

December 26, 2013

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

RE: Grade Crossing Warning Device Improvement – Construction Authorization
Henry County, TR E
DOT# 155761C
PID# 96101
CSX ACCT. CODE: OH0955

Dear Ms. DeCesare:

The plan and estimate dated 11/18/2013, for the referenced project has been reviewed and is acceptable. ODOT engineering approval is based on gate mechanism setbacks at 10'-3" from edge of roadway. CSX Transportation 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 \$370,886.00. 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 CSX Transportation accepting the following instructions:

1. CSX's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Don Damron, ORDC, Mail Stop #3140, 1980 West Broad Street, 2nd Floor, Columbus Ohio 43223, or email don.damron@dot.state.oh.us, or Fax 614-728-4520, (phone: 614-466-2509; cell phone: 614-917-8466), and to the Public Utilities Commission of Ohio at George.martin@puc.state.oh.us (phone 614-752-9107). The CSX project foreman will also notify the same of any stops and re-starts of the work activity and of the date work was completed for the project.
2. CSX will arrange for utilities to be located at the project site by the Ohio Utilities Protection Service (OUPS) prior to any construction activities at the site. Utilities that are not participating members of the service must be contacted directly by CSX.



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

3. CSX 's project foremen will notify Don Damron at 614-917-8466 (cell) or don.damron@dot.state.oh.us (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.
4. CSX will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.
5. CSX will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.

Thank you for your assistance with these matters.

Sincerely,



Donald J. Damron
Project Manager

C: Randall Schumacher, Supervisor, Rail Division, PUCO
George Martin, Grade Crossing Planner, PUCO
ORDC (file)



Diagnostic Review Team Survey

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

Date: 5/14/13

Location Data

Street or Road Name: TR E			
Route/Road Number (i.e. Twp., Co., SR or US)		US DOT No.: 155761C	
County: HEN	Township: Bartlow	City: (In or Near) Deshler	
Railroad Name: CSX Transportation	Railroad Division: Louisville	Branch/Line Name:	
Nearest RR Timetable Station: Deshler		RR Milepost: 166.31	

On-Site Review Team

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

1. Amanda DeCesare - CSX - 859-426-6924
2. GEORGE MARTIN PUCW 614-752-9107
3. [Signature] Justice
4. William Jackson Trustee 419-278-8208
5. DENNIS FANNING TRUSTEE 419-278-1532
6. DON DAMRON ORDC 614 466 2509
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	
'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	
Number of Tracks Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Inventory Tags	<input type="checkbox"/> Yes	<input type="checkbox"/> No	?
Interconnected Highway Traffic Signal	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Mast-Mounted Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Cantilever Flashing Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Side Lights	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Automatic Gates	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number: Length:
Bells	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Number:
Sidewalk Gate Arms	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'No Turn' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Illumination	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Safety Data (Obtain crash reports, if possible, prior to review)		
	Initial Information (from database)	Revised
Number & dates of crashes in previous 5 years	1 (2/17/13)	
Hazard Ranking	279	Date Run: 4/26/13 6-5-13: 158
Railroad Data		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	4	10 REVISED
< 1 per day		
Day thru trains	1	5
Night thru trains	3	5
Daytime switching movements	0	0
Nighttime switching movements	0	0
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks	0	
Maximum train speed	50	
Typical train speed		45-50
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 50MPH = 1200'		
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 type="checkbox"/> No		
Can one or more tracks be eliminated through the crossing? <input type="checkbox"/> Yes <input 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: Bartlow Township		
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	159 (2008)	
Highway paved	X Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: Blacktop <input checked="" type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____		
Roadway width: 15 ft.		
Number of highway lanes	2	
Urban or Rural	Rural	
Vehicle Speed: MPH 55		
School Bus Operation: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes 10 Amount / DAY		
Hazardous Materials Trucks: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes _____ Amount		CHEMICAL PLANT IN CURTAR
Shoulders: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is the shoulder surfaced? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is there existing guardrail along roadway in crossing vicinity? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		
Is stopping site distance adequate? (See Table 2) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If no, deficient approach(es) _____

PATRICK
HENRY LOCAL SCHOOL
WEST OF CROSSING
5-7 MI FROM CORNER 2

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: <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 type="checkbox"/> No <input type="checkbox"/> Yes Are the signals currently interconnected with the existing crossing warning devices? <input type="checkbox"/> No <input type="checkbox"/> Yes Is there a 'Do not Stop on Track' sign? <input 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 type="checkbox"/> No <input type="checkbox"/> Yes If yes, Improvement type <u>POSSIBLE WIDENING BY 4 FEET TO 20' POSSIBLE</u> Lead Agency <u>TWP</u> Timeline/completion <u>5 YEARS</u>	
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: <u>BUS ROUTE CHANGE REQ IS TOO DIFFICULT.</u>	
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>PATRICK HEARY LOCAL SCHOOL WEST OF CROSSING (APPROX 5-7 MILES)</u>)
Utility Information	
Is commercial power available? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Utility Provider (Company Name) <u>HANCOCK WOOD RURAL ELECTRIC</u> Phone Number _____ Nearest Available Power Source <u>POWER AT CROSSING</u>	
What other utilities are present? (add locations to sketch) <input type="checkbox"/> Gas <input type="checkbox"/> Cable <input type="checkbox"/> Telephone <input type="checkbox"/> Fiber Optic Cable <input type="checkbox"/> Petroleum <input type="checkbox"/> Water <input type="checkbox"/> Sanitary Sewer <input type="checkbox"/> Other _____	
Is(are) there potential utility conflict(s) <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Unknown	
Comments:	

Potential Red Flags / Project Challenges

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

NA

Crossing Consolidation or Closure:

No

Real Estate or ROW:

TWP. ROAD ROW - UNKNOWN
RR - UNKNOWN ROW

Culverts / Drainage / Ballast Conditions:

No

Roadway and/or Sidewalks:

SOME PEDESTRIAN RUNNERS.

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

FOUNDATION FOR BUNGALOW (NEW)
NEW BUNGALOW: NO PREFERENCE

TRACK SIGNAL MAY
BE IN THE WAY OF
NEW LTG. IN SW QUAD.

Environmental:

Other:

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	1 BELL
<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:

RECOMMEND NEW LXB INSTALLATION.

TRACK SIGNAL MAY BE IN THE WAY OF NEW GATE MECHANISM.
IN SW QUAD.

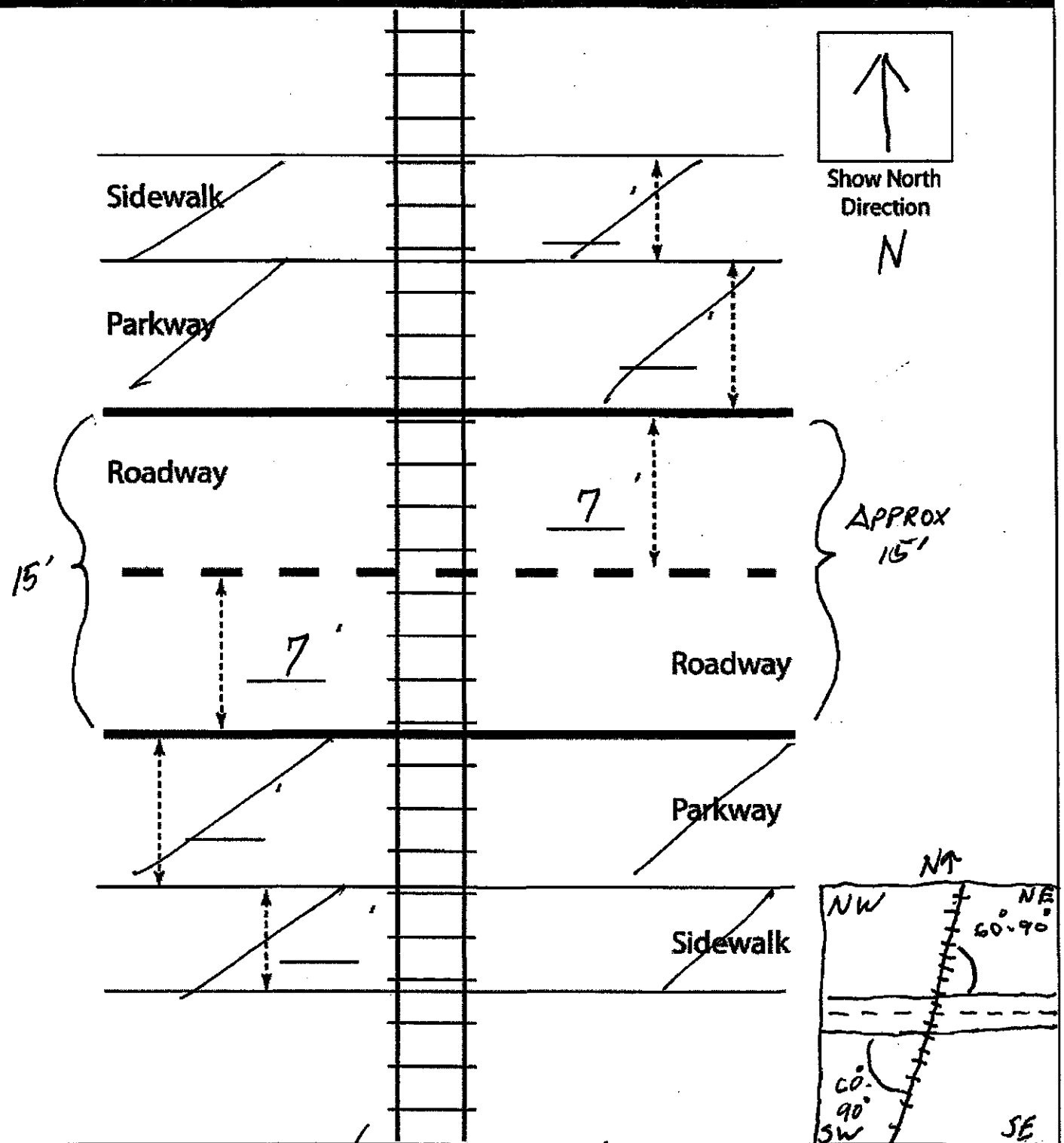
<input type="checkbox"/> Install/upgrade traffic signal preemption	
<input type="checkbox"/> No improvements needed	
<input type="checkbox"/> Other (define)	

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

D. A. P. Smith Guy Martin
Amanda DeCaire Ronald J. Cameron

TRAIN COUNT WAS REVISED UPWARD.

Field Dimensions

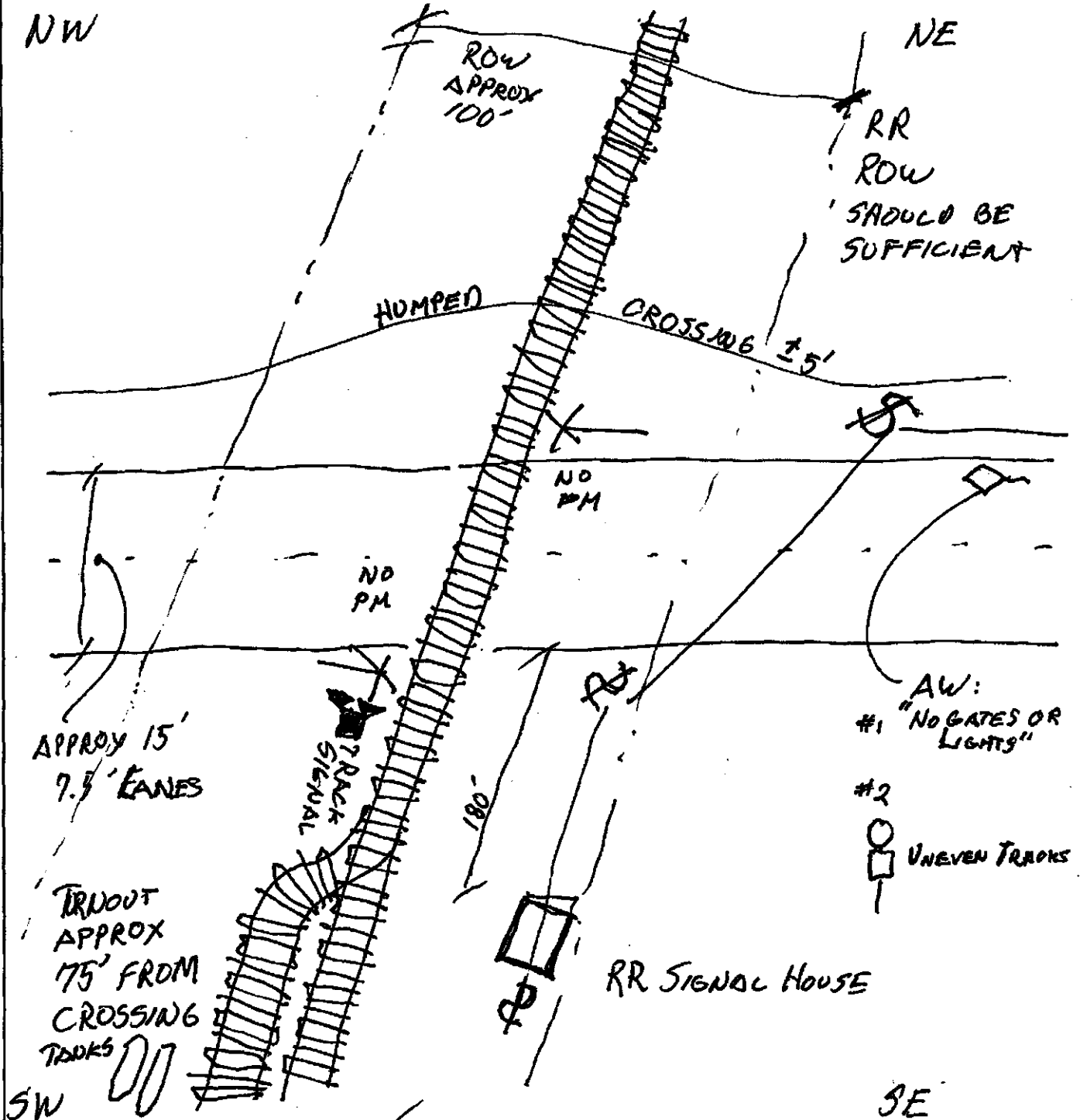


Crossing Angle ☐ 0-29° ☐ 30-59° ☒ 60-90° Measured in NE/SW Quadrant?

Measurements by: DEO

Field Sketch

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



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

Sketch by: DPA

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.

CSX TRANSPORTATION, INC.
FORCE ACCOUNT ESTIMATE

Page 1

ACCT. CODE : 709 - OH0955

ESTIMATE SUBJECT TO REVISION AFTER:	5/17/2014	DOT NO.: 155761C
CITY: Deshler	COUNTY: Henry	STATE: OH
DESCRIPTION: TR E - Install FLS&G with a bell. Relocation of the S1 signal required due to it being located too close to the crossing.		
DIVISION: Louisville	SUB-DIV: Toledo	MILE POST: BE - 166.31
AGENCY PROJECT NUMBER: PID 96101		

PRELIMINARY ENGINEERING:

200 Labor (Non Contract)	\$	-
200 Additive	\$	-
230 Expenses	\$	-
212 Contracted & Administrative Engineering Services	\$	4,500
Subtotal	\$	4,500

CONSTRUCTION ENGINEERING/INSPECTION:

200 Labor (Non Contract)	\$	-
200 Additive	\$	-
230 Expenses	\$	-
212 Contracted & Administrative Engineering Services	\$	2,000
Subtotal	\$	2,000

FLAGGING SERVICE: (Contract Labor)

070 Labor (Conductor-Flagman)	\$	-
050 Labor (Foreman/Inspector)	\$	-
070 Additive 117.39% (Transportation Department)	\$	-
050 Additive 118.86% (Engineering Department)	\$	-
230 Per Diem (Engineering Department)	\$	-
230 Expenses	\$	-
Subtotal	\$	-

<u>SIGNAL & COMMUNICATIONS WORK:</u>	(Details Attached)	\$	359,786
---	--------------------	----	---------

<u>TRACK WORK:</u>	(Details Attached)	\$	-
---------------------------	--------------------	----	---

ACCOUNTING & BILLING:

040 Labor	\$	4,600
040 Additive	\$	-
Subtotal	\$	4,600

PROJECT SUBTOTAL

900 <u>CONTINGENCIES:</u>	\$	-
----------------------------------	----	---

GRAND TOTAL	*****	\$	370,886
--------------------	-------	----	---------

DIVISION OF COST:

Agency	100.00%	\$	370,886
Railroad		\$	-
TOTAL	*****	\$	370,886

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:
DATE: 11/18/2013

BSE
REVISED:

Approved by: AJD
DATE: 11/18/2013

CSXT Public Project Group

Project Summary Sheet

Estimate No. 123121
CSX Transportation

TR E - Upgrade to lights and gates. Section 130 funds ***** Design review assigned. This revision

Deshler, OH

DOT: 155761C

OP: OH0955

CSX Project: OH2013041

Summary

Material	\$ 112,621
Sales Tax	\$ 0
Labor:	
Construction Labor (217 man-days).....	\$ 61,731
Shop Labor (5 man-days).....	\$ 1,050
Subsistence (185 man-days).....	\$ 23,925
Railroad Engineering, Preliminary	\$ 5,740
Railroad Engineering, Construction	\$ 9,260
Additives to Construction Labor	\$ 57,354
Additives to Shop Labor	\$ 931
Additives to Track Labor	\$ 0
Additives to Engineering	\$ 4,701
Equipment Expenses (36 work days).....	\$ 23,400
Waste Management (36 work days).....	\$ 432
Contract Engineering	\$ 20,910
Freight	\$ 7,957
Poleline Removal	\$ 0
AC Power Service	\$ 0
Salvage	\$ -1
VAC-TRUCK	\$ 4,000
PROGRAM CHANGES	\$ 7,500
Contract Engineering (Design Review) Cat 2B	\$ 18,275
TOTAL ESTIMATE COST	\$ 359,785

Date: 11/07/2013
Estimated By: John Morrison

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

Consumables List for CSX Project: OH2013041 (Effective: 11/07/2013)

REMOVE SIGNAL AND INSULATED JOINTS

DESHLER, OH - BE 166.29

Catalog Num	Cond	Unit Price	Qty	Cost	Description
010-6350050	1	1245.28	2	2490.56	RAIL STOCK 136RE 39 0" UNIVERSAL ENDS TO BE DRILLED
280-8020180	1	56.86	4	227.44	WELD FIELD COMPLETE 136RE RAILTECH BOUTET P/N
Total Cost: \$				2,718	

Consumables List for CSX Project: OH2013041 (Effective: 11/07/2013)
INSTALL NEW SIGNAL AND PROGRAM CHANGE AT NE DESHLER
CONTROL POINT NE DESHLER, OH - BE 166.30

Catalog Num	Cond	Unit Price	Qty	Cost Description
013-5000515	1	1652.47	2	3304.94 JOINT INSULATED PREMIUM 132RE 40'-0" LONG WITH 23'-4" X
020-2060072	1	442.00	1	442.00 FOUNDATION HELICAL SCREW-IN ASSEMBLY 7' X 10", USED FOR
020-2060074	1	366.00	1	366.00 EXTENSION 10" X 3' USE WITH XING GATE AND SIGNAL MAST
280-8020180	1	56.86	4	227.44 WELD FIELD COMPLETE 136RE RAILTECH BOUTET P/N
Total Cost: \$				4,340.38

Shop Material List for CSX Project: OH2013041 (Effective: 11/07/2013)
INSTALL FLS&G W/HXP-3R2
DESHLER, OH - BE 166.31

Catalog Num	Cond	Unit Price	Qty	Cost Description
N/A		0.07	2	0.14 Resistor Invensys PN Z415-0020R-0001
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
020-0018234	1	37.58	1	37.58 CABLE CONVERTER PROTOCOL/MEDIA WAYSIDE ACCESS
020-0021965	1	8.96	1	8.96 EXTRACTOR DWG 59688-4 TERMINAL GRS CAT P3-308 REF
020-0022651	1	55.89	8	447.12 PLUGBOARD KIT TYPE B1 OR ST1 RELAY ASSEMBLY WITH 12 EACH
020-0022701	1	68.00	25	1700.00 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
020-0660077	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	24	322.56 ARRESTER US&S N451552-0201 TRACK SERIES RED LABEL USGA
020-0770105	1	22.40	10	224.00 ARRESTER HARMON 202217-000 AGE-1 TRACK AIR GAP EQUALIZER
020-1000354	1	6054.50	1	6054.50 HOUSE SIGNAL 6FT X 6FT WITH PTC UPGRADE PTMW P/N 91000354
020-1940055	1	14.22	1	14.22 CONTAINER TUBE HOLDER CIRCUIT PRINT PLAN 24" SCHD 20 4" PVC
020-2180290	1	3810.58	1	3810.58 KIT, SEAR II FOR NON-REMOTE MONITORING, (80290) W/ APP SW
020-2501400	1	1043.84	1	1043.84 CONTROLLER DTMF RADIO KEY DOWN MODE 6 SET TIMER TO 60
020-2502115	1	943.82	2	1887.64 MODULE HARMON 226736-001 RSI 4KHZ RANDOM SIGNATURE ISLAND
020-2503081	1	66.24	1	66.24 MODULE SAFETRAN ECHELON TERMINATION UNIT (A80078) USE
020-2503090	1	1081.54	1	1081.54 CONVERTER PROTOCOL/MEDIA WAYSIDE ACCESS GATEWAY (WAG)
020-2552757	1	11650.50	2	23301.00 PREDICTOR HXP-3R2 W/O RSI HARMON P/N 250729-4000
020-3430110	1	321.84	2	643.68 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

Shop Material List for CSX Project: OH2013041 (Effective: 11/07/2013)
INSTALL FLS&G W/HXP-3R2
DESHLER, OH - BE 166.31

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-3430130	1	365.31	2	730.62	RELAY SAFETRAN 400023 500 OHMS CONTACTS 6FB 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
020-3430185	1	431.55	1	431.55	RELAY SAFETRAN 400700-X 60 OHMS CONTACTS 4FB CSX
020-4200340	1	1.65	24	39.60	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	0.10	300	30.00	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
022-5290559	1	364.00	1	364.00	CONVERTER WILMORE INPUT 10V DC TO 16V DC OUTPUT 13.6V DC
022-8005160	1	594.61	1	594.61	KIT CDMA AND VHF RADIO MATERIAL FOR USE WITH CSX
250-0001826	1	15.50	4	62.00	BREAKER CIRCUIT SQUARE D QO215
Total Cost: \$				47,080.76	

Field Material List for CSX Project: OH2013041 (Effective: 11/07/2013)
INSTALL FLS&G W/HXP-3R2
DESHLER, OH - BE 166.31

Catalog Num	Cond	Unit Price	Qty	Cost	Description
020-0010447	1	13.02	2	26.04	BOX GROUND ROD CONNECTION ENCLOSURE COMPLETE WITH 7"
020-0013555	1	297.00	2	594.00	BOX JUNCTION 8 WAY ALUMINUM INCLUDES 2 EACH 4 POST
020-0013686	1	72.73	11	800.03	BOOTLEG KIT CSX RAIL CONN W/15 FT 3/16 IN BDSTRAND 6/64
020-0013908	1	6.90	350	2415.00	CABLE UG COMPOSITE 19 CONDUCTOR INCLUDES 13
020-0014000	1	4.73	400	1892.00	CABLE UG 10 COND NO 9 AWG SOLID C CSX SPEC SS796 SHOW
020-0015287	1	20.72	3	62.16	LOCK HEXAGON/SPANNER SCREW HEAD TYPE WITHOUT CHAIN
020-0017605	1	0.31	200	62.00	WIRE CASE 10 AWG FLEX CSX SPEC SS796 OKONITE P/N
020-0017625	1	0.45	200	90.00	WIRE CASE TWISTED PAIR AWG #14 FLEX TWIST 2 TURNS PER FT
020-0022701	1	68.01	12	816.12	ARRESTER HYBRID LOW VOLTAGE 0-30V DC OR 0-24V AC RATED AT
020-0025145	1	343.27	6	2059.62	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
020-0053220	1	2.53	400	1012.00	CABLE POWER UG 3 COND NO 6 AWG - SHOW LENGTH ON EACH
020-0053250	1	2.52	400	1008.00	CABLE UG 5 COND NO 9 AWG SOLID C CSX SPEC SS796 SHOW
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
020-0056678	1	6295.13	2	12590.26	SIGNAL 0221-L GCWD GATE ASSY DWG SS222 INCLS ADJ 19 TO 28
020-0056823	1	15.01	1	15.01	TAPE UG RED CABLE MARKER IMPRINT TO READ "CAUTION"
020-0057275	1	1.17	3000	3510.00	WIRE UG TRACK TWISTED PAIR NO. 6 AWG SOLID CONDUCTOR
020-1020095	1	1678.83	1	1678.83	PLATFORM HIGHWAY CROSSING ACCESS FOUNDATION COMPLETE
020-1021810	1	8105.00	1	8105.00	SIGNAL 131-1454 RH TOP G/Y/R MID G/Y/R BOT G/L/R CL ASSY
020-1040322	1	162.40	30	4872.00	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"
020-1304014	1	6.14	32	196.48	KIT BOND, CADWELD PLUS WEB OF RAIL BOND 3/16 DIA. 4" LARGE
020-1360014	1	1017.60	1	1017.60	PACKAGE FOREMANS CARE FOR ALUMINUM TYPICAL BOM FOR USE

Field Material List for CSX Project: OH2013041 (Effective: 11/07/2013)
INSTALL FLS&G W/HXP-3R2
DESHLER, OH - BE 166.31

Catalog Num	Cond	Unit Price	Qty	Cost Description
020-1360016	1	21.18	1	21.18 PACKAGE SAFETY FOR BURCO CONTAINERS COMPLETE WITH ONE
020-2060078	1	53.00	4	212.00 BOLT 1" - 8 X 8" INCLUDES NUT AND 3 FLAT WASHERS, USE ON
020-2530280	1	312.12	2	624.24 FILTER EPC 800-080055-107 TF-86
020-2530300	1	190.40	1	190.40 REACTOR TRACK BATTERY MODEL 5025A GETS P/N 250141-001
020-2531231	1	272.46	1	272.46 SHUNT HARMON 250250-86 NBS-1-10 86HZ 10 FT LEADS
020-2531280	1	265.93	2	531.86 SHUNT HARMON 250250-267 NBS-1-10 267HZ 10 FT LEADS
020-2541306	1	553.24	1	553.24 SHUNT HARMON 250849-001 FSS-1B FREQUENCY SELECTEDABLE
020-2541309	1	497.44	2	994.88 SHUNT HARMON 250849-002 FSS-1C/2C FREQUENCY
020-2541317	1	80.33	2	160.66 INDUCTOR 227032-002 750 DUMMY LOAD HARMON
020-2541324	1	108.64	1	108.64 INDUCTOR 227032-009 2500 DUMMY LOAD HARMON
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	60	99.00 LINK TEST ASSEMBLY 1" CENTERS YELLOW INSULATOR ON OFFSET
020-4200900	1	0.28	10	2.80 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	0.12	250	30.00 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	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
250-0001836	1	14.97	1	14.97 BREAKER CIRCUIT SQ D QO260
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
Total Cost: \$				49,724.23

Consumables List for CSX Project: OH2013041 (Effective: 11/07/2013)
INSTALL FLS&G W/HXP-3R2
DESHLER, OH - BE 166.31

Catalog Num	Cond	Unit Price	Qty	Cost Description
N/A		50.00	70	3500.00 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
450-0019212	1	0.02	100	2.00 SCREW 10 X 1" SHT METAL PAN HD TYPE A COARSE THREAD
Total Cost: \$				8,757.65

