

Memo

To: Docketing Division
From: Jill Henry, Rail Specialist, Rail Division
Cc: PUCO Legal Department
Date: 12/28/16

Re: PUCO Case No. 16-2437-RR-FED- In the Matter of a Request for the Installation of Active Warning Devices at the IORY Railroad Crossing, DOT# 151-350H, Camargo Road in Hamilton County, Ohio.

On August 22, 2016, the Ohio Rail Development Commission (ORDC) authorized funding for Indiana & Ohio Railway (IORY) to install lights and gates at the Camargo Road, DOT#151-350H, grade crossing in Hamilton County, Ohio. The crossing was surveyed on April 25, 2016 and was found to warrant the upgrade. The electric utility provider for this crossing is Duke Energy-Cincinnati Gas & Electric.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$200,000 (subject to revision after bid tabulation) have been approved. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in nine months.** Staff requests that the following language be incorporated in the Finding & Order:

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

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

Please serve the following parties of record:

Indiana & Ohio Railway
John Hilborn
Vice-President Engineering, Ohio Valley Region
4349 Easton Way, Suite 110
Columbus, Ohio 43219

Ohio Rail Development Commission
Cathy Stout
1980 West Broad Street
Mail Stop #3140
Columbus, Ohio 43223

City of Madeira
Thomas Moeller
City Manager
7141 Miami Avenue
Madeira, Ohio 45243

Duke Energy- Cincinnati Gas & Electric

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

TO: Randall Schumacher, Supervisor, Rail Division, PUCO
FROM: Cathy Stout, Manager, Safety Section, ORDC
BY: Greg Gronbach, Project Manager, Safety Section, ORDC
SUBJECT: Hamilton County, Camargo Rd, IORY DOT # 151350H, PID 103323
DATE: December 12, 2016

The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on April 25, 2016. 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 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.

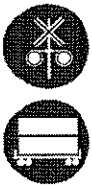
It is expected that all work necessary for FHWA acceptance of the warning devices will be completed by the in-service due date and that the railroad will be responsible for this work. This work includes, but is not limited to:

- 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: Jill Henry, PUCO
Susan Arduni, ORDC
ORDC Project Manager (file)



OHIO RAIL DEVELOPMENT COMMISSION

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

John R. Kasich, Governor • Mark Policinski, ORDC Chairman

December 12, 2016

John Hilborn, PE
Vice President-Engineering, Ohio Valley Region Railroads
Indiana & Ohio Railroad (IORY)
4349 Easton Way, Suite 110
Columbus, OH 43219

RE: Railroad PE Authorization
Hamilton County, Camargo Rd, IORY DOT # 151350H, PID 103323

Dear Mr. Hilborn:

The plan and estimate dated November 18, 2016, for the referenced project has been reviewed and is acceptable. Indiana & Ohio Railroad (IORY) may proceed with the construction of the proposed grade crossing warning system in accordance with the abbreviated plan. Construction may include but is not limited to circuitry design, installation of service poles, procurement of materials and signal construction. Please note ODOT Railroad Audit Circular No.4 Subcontracted Costs for Railroads and accordingly provide ORDC with any relevant bid documents and bid tabs pertaining to this project. 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 \$200,000.00 and will be adjusted based on bid tabulations if applicable. 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 Indiana & Ohio Railroad (IORY) accepting the following instructions:

1. Indiana & Ohio Railroad (IORY)'s project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Greg Gronbach, ORDC, email Greg.Gronbach@dot.ohio.gov, and to the Public Utilities Commission of Ohio at Jill.Henry@puc.state.oh.us. Indiana & Ohio Railroad (IORY)'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. Indiana & Ohio Railroad (IORY) 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 Indiana & Ohio Railroad (IORY).



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY

3. Indiana & Ohio Railroad (IORY)'s project foremen will notify Greg Gronbach at 614-395-1824 (telephone) or Greg.Gronbach@dot.ohio.gov (email) of any changes in the scope of work, cost overruns, material changes, etc. which are not included in the approved plan and estimate and secure approval of same before the work is performed.
4. Open cut of roadways is *not permitted* except in unusual circumstances and must be coordinated with the local highway authority and preapproved by ORDC.
5. Indiana & Ohio Railroad (IORY) will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.
6. Indiana & Ohio Railroad (IORY) will furnish two (2) copies of the final all-inclusive bill to ORDC stating the exact dates of starting and completing work, the initial and final dates of construction and location where the accounts may be audited.
7. This installation will include any ancillary work to make the warning devices function as designed and meet MUTCD.

Thank you for your assistance with these matters.

Sincerely,


Greg Gronbach
Project Manager

C: Randall Schumacher, Rail Division Supervisor, PUCO
Jill Henry, Rail Specialist, PUCO
Susan Arduini, ORDC
ORDC (file)



Force Account Estimate - Camargo Road (PID 103323)

INDIANA & OHIO RAILWAY COMPANY (IORY)

Madeira, OH (Hamilton County)

DOT#: 151350H
Railroad # 16IORY22R
RR MP: 16.89

SUMMARY

CROSSING WARNING SYSTEM	\$ 190,600.00
(Includes all labor, materials, shop wiring, and installation)	
CROSSING SURFACE/RESURFACE	\$ -
(Includes all labor, materials, shop wiring, and installation)	
TRACK GRADE AND REHABILITATION	\$ -
(Includes all labor, materials, and installation)	
RAILROAD ENGINEERING	\$ -
(Includes RAILROAD Labor for Reviewing Engineering Authorizations, Field Inspections and Administrative Labor)	
PRELIMINARY ENGINEERING	\$ 8,000.00
(Includes CONTRACT Labor for all Engineering, Agency Coordination, and Project Management)	
CONSTRUCTION ENGINEERING	\$ 16,000.00
(Includes CONTRACT Labor for all Engineering, Agency Coordination, and Project Management)	
CONSTRUCTION ENGINEERING INSPECTION	\$ 5,500.00
(Estimated Construction Engineering Inspection cost)	
UTILITY CROSSING	\$ -
(0 new utility crossings @ \$4000 per crossing, includes application, engineering review, and right of entry)	
FLAGGING SERVICES	\$ 5,000.00
(Estimated Flagging Services cost based on 5 days @ \$1000 per day)	
AC POWER SERVICE	\$ 4,000.00
(Includes all Coordination and Power Service Charges not included in other costs)	
OTHER (Description Required)	\$ -
TOTAL ESTIMATE COST	\$ 229,100.00 (USD)

Estimate Prepared By: J. Bolzenius, PE
Date: 11/18/2016

NOTE:

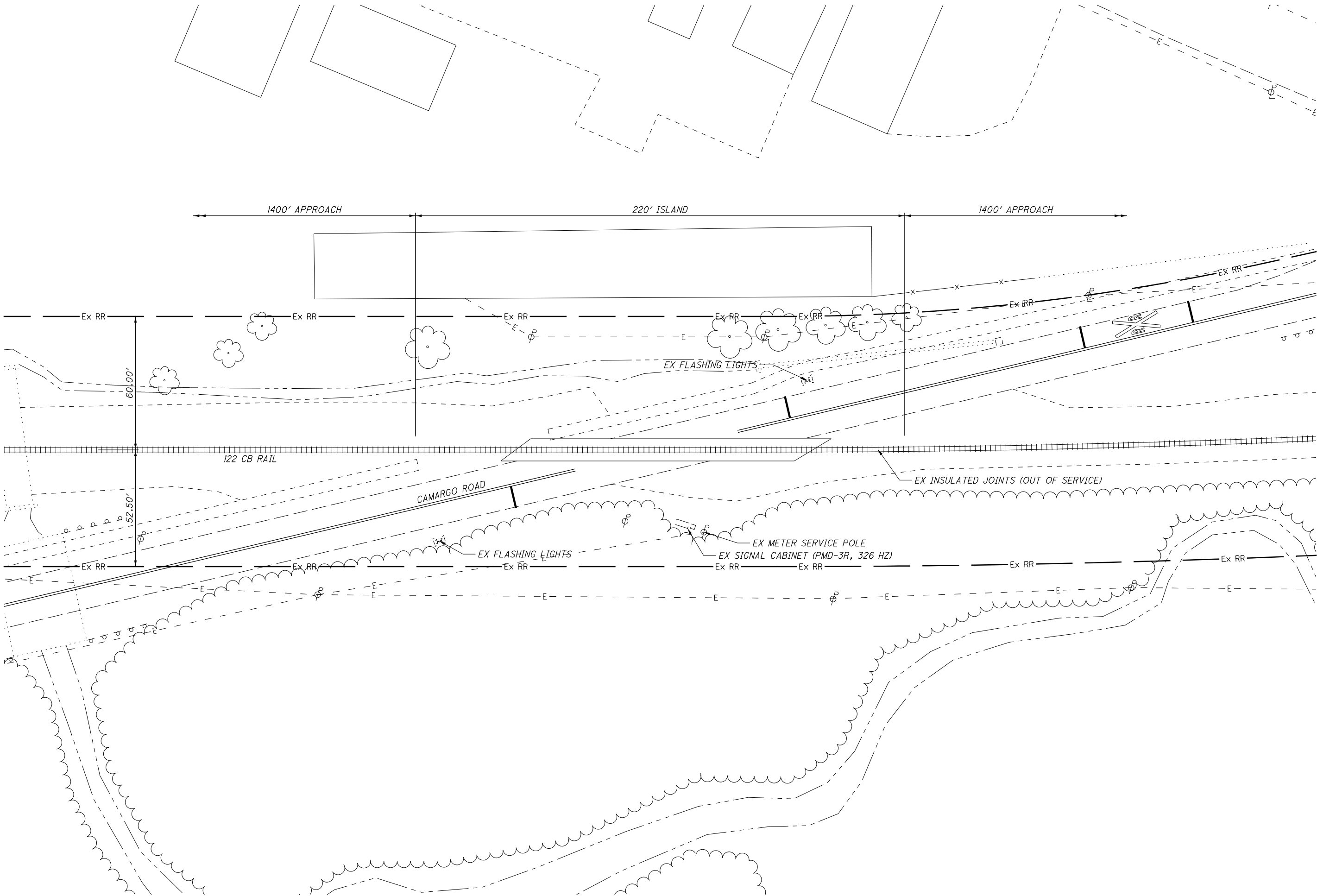
This Estimate has been prepared based on site conditions, anticipated work duration periods, material prices, labor rates, manpower, resource availability, and other factors known as of the date prepared. The actual cost for Railroad work may differ based upon the agency's requirements, their contractors work procedures, and/or other conditions that become apparent once construction commences or during the progress of the work. If any extended time elapses from the date of this Estimate, the Railroad will reserve the right to update the estimate to current price values, and require agency's approval before any work by Railroad will commence.


Preliminary Crossing Warning System Estimate

Crossing Name: Camargo Rd
Railroad: IORY
Town, State (County): Madeira, OH (Hamilton)
Railroad #: 16IORY22R
FRA#: 151350H
Patrick Engineering #: 21677.812

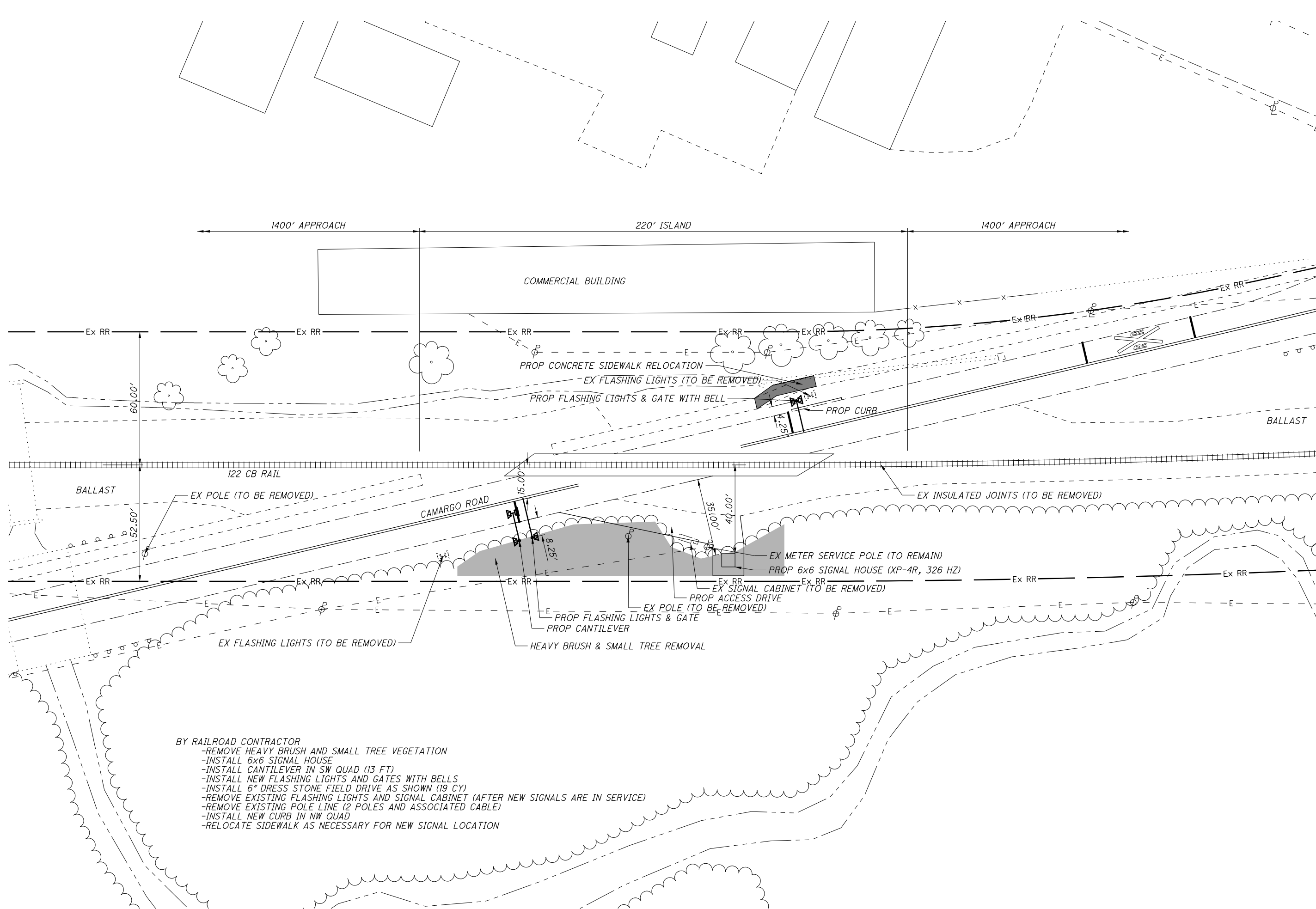
ITEM	UNIT COST	UNITS	TOTAL
6'x6' Wired House with Equipment	\$ 49,500.00	1 EA	\$ 49,500.00
Gate/Flasher Assembly	\$ 12,000.00	2 EA	\$ 24,000.00
Cantilever Assembly	\$ 30,000.00	1 EA	\$ 30,000.00
Pole Line Removal	\$ 700.00	2 EA	\$ 1,400.00
Curb and Sidewalk Installation	\$ 7,500.00	1 LS	\$ 7,500.00
Heavy Brush and Tree Removal	\$ 3,000.00	1 LS	\$ 3,000.00
SUBTOTAL			\$ 115,400.00
Field Installation Materials @ 30%			\$ 34,700.00
Freight & Handling			\$ 2,000.00
TOTAL MATERIALS			\$ 152,100.00
Foreman (1)	\$ 60.00	40 Hrs	\$ 2,400.00
Lead Signalman (2)	\$ 45.00	80 Hrs	\$ 3,600.00
Signalman (2)	\$ 35.00	80 Hrs	\$ 2,800.00
TOTAL INSTALLATION & WIRING			\$ 8,800.00
Equipment per day	\$ 800.00	5 Day	\$ 4,000.00
Pipe Push	\$ 50.00	70 LF	\$ 3,500.00
Bungalow Wiring and Test	\$ 5,800.00	3 Day	\$ 17,400.00
Remove IJ's and Install New Rail	\$ 2,400.00	2 EA	\$ 4,800.00
TOTAL EQUIPMENT			\$ 29,700.00
TOTAL CROSSING WARNING SYSTEM			\$ 190,600.00

pw:\LSL\PW_patrick.int\RAIL\Documents\G_and_W\Ohio_Valley_Region\21677.812_Camargo_Rd\PE-Track\Camargo_XX001.dgn 11/18/2016 2:10:57 PM tsabo



 0 10 20 40 HORIZONTAL SCALE IN FEET	CALCULATED TAS		CAMARGO ROAD - MP 16.89 (151350H) EXISTING SITE LAYOUT	
	CHECKED JSB			

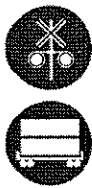
pw:\LSL\PW_patrick.int\RAIL\Documents\G_and_W\Ohio_Valley_Region\21677.812_Camargo_Rd\PE-Track\Camargo_XP001.dgn 11/18/2016 2:11:04 PM tsabo



- BY RAILROAD CONTRACTOR
- REMOVE HEAVY BRUSH AND SMALL TREE VEGETATION
 - INSTALL 6x6 SIGNAL HOUSE
 - INSTALL CANTILEVER IN SW QUAD (13 FT)
 - INSTALL NEW FLASHING LIGHTS AND GATES WITH BELLS
 - INSTALL 6" DRESS STONE FIELD DRIVE AS SHOWN (19 CY)
 - REMOVE EXISTING FLASHING LIGHTS AND SIGNAL CABINET (AFTER NEW SIGNALS ARE IN SERVICE)
 - REMOVE EXISTING POLE LINE (2 POLES AND ASSOCIATED CABLE)
 - INSTALL NEW CURB IN NW QUAD
 - RELOCATE SIDEWALK AS NECESSARY FOR NEW SIGNAL LOCATION

CALCULATED TAS	CHECKED JSB	CAMARGO ROAD - MP 16.89 (151350H) PROPOSED SITE LAYOUT	CAMARGO ROAD SIGNAL UPGRADE	<div>2 2</div>

0 20 40
HORIZONTAL
SCALE IN FEET



OHIO RAIL DEVELOPMENT COMMISSION

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

John R. Kasich, Governor • Mark Policinski, ORDC Chairman

August 22, 2016

Mr. John Hilborn
Vice President-Engineering, Ohio Valley Region Railroads
Genesee & Wyoming/IORY
4349 Easton Way, Ste. 110
Columbus, Oh 43219

RE: Hamilton County, Camargo Rd, DOT# 151350H, PID 103323

Dear Mr. Hilborn:

A diagnostic review was held at the above grade crossing on April 25, 2016. The crossing has been recommended for the installation of lights and gates.

Genesee & Wyoming/IORY is authorized to proceed with the site plans and cost estimates (PE) or bid package for this project. This authorization is made with the stipulation and understanding that any field work needs prior approval before work begins. This authorization is made with the stipulation and understanding that an approved estimate may contain entries for items or activities that may be cited and found to be ineligible for federal participation during the project audit.

The diagnostic review form is attached. Please note any recommendations (page 5), if any, made by the team with regard to requirements for this location. Any minor roadway work necessary for MUTCD compliance should be incorporated into the PE and such costs will flow through the railroad reimbursement process.

The Project Manager for this project is Greg Gronbach. Greg Gronbach can be reached at (614) 395-1824, or Greg.Gronbach@dot.ohio.gov, if you have any questions.

Sincerely,

Greg Gronbach
Project Manager

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

Attachment: 1 (diagnostic review form)



www.rail.ohio.gov

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY



Diagnostic Review Team Survey

Reason for Survey:

(e.g. formula, accident, constituent, etc.)

PUCO Formula Spring Pick

Date:

4/25/2016

Location Data

Street or Road Name: Camargo Road			
Route/Road Number (i.e. Twp., Co., SR or US)		US DOT No.: 151350H	
County: HAM	Township:	City: (In or Near)	City of Madeira
Railroad Name: Indiana & Ohio Railway	Railroad Division: Louisville	Branch/Line Name:	
Nearest RR Timetable Station: Oakley		RR Milepost: 16.89	

On-Site Review Team

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

1. GREG GRONBACH ORDC 614-395-1824 GREG.GRONBACH@DOT.OHIO.GOV
2. GEORGE MARTIN PUCO 614-752-9107
3. Derek Winchester LOR 513-317-3707 Derek.Winchester@war.com
4. Tom Mireux MADARA 513-561-7228 TMIREUX@MADARACITY.COM
5. _____
6. _____
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	GOOD
'Stop' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
'Stop Ahead' Signs	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Pavement Markings (condition?)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	AVERAGE
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 checked="" 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 checked="" type="checkbox"/> Yes	<input 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	0	
Hazard Ranking	1101	Date Run: 3/30/2016

Railroad Data

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	6	
< 1 per day		
Day thru trains	4	
Night thru trains	2	
Daytime switching movements		
Nighttime switching movements		
Total number of tracks	1	
Number of main tracks	1	
Number of other tracks		
Maximum train speed	40 25	
Typical train speed	40	
Amtrak		

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

If multiple tracks, can two trains occupy crossing at the same time? ☐ Yes ☒ No

Can one train block the motorists' view of another train at crossing? ☐ Yes (Explain below) ☒ No

Can one or more tracks be eliminated through the crossing? ☐ Yes ☒ No

Are there other track(s) crossing this same roadway within 100 ft of this crossing? ☐ Yes ☒ 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:

City of Madeira

Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	7942 (2014)	
Highway paved	X Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface: <input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____		
Roadway width: <u>22</u> ft.		
Number of highway lanes	2	
Urban or Rural	Rural	
Vehicle Speed: <u>35</u> MPH		
School Bus Operation: <input type="checkbox"/> No X Yes <u>15</u> Amount		
Hazardous Materials Trucks: <input type="checkbox"/> No X Yes <u>.04</u> 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 _____ Curb and Gutter: <input type="checkbox"/> Functional (Curb height = 4" or more) <input type="checkbox"/> Non-functional (Curb height = Less than 4") <input 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 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:

Type of Development

☐ Open Space ☐ Institutional
☐ Industrial ☒ Commercial
☒ Residential

Location of nearby schools: _____

Utility Information

Is commercial power available? ☐ No ☒ Yes

Utility Provider (Company Name) DUKE

Phone Number _____

Nearest Available Power Source _____

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

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

Comments:

Power lines in SE quad.

Potential Red Flags / Project Challenges

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

N/A

Crossing Consolidation or Closure:

N/A

Real Estate or ROW:

N/A

Culverts / Drainage / Ballast Conditions:

N/A

Roadway and/or Sidewalks:

SIDEWALK ON WESTSIDE OF CAMAREO RD.

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

N/A

Environmental:

N/A

Other:

Diagnostic Team Recommendations

Quadrants Needed

- ☐ Install/upgrade active devices
- ☐ Automatic Flashing Lights (AFLS)
- ☐ AFLS / Cants
- ☒ AFLS / Gates
- ☒ AFLS / Gates / Cants
- ☐ Bells / number
- ☐ Upgrade circuitry / type
- ☐ Sidelights
- ☐ Guardrail Needed
- ☐ Install/Replace curb
- ☐ Bungalow placement & offset from rail & highway
- ☐ Other (define)

SOUTHSIDE OF CROSSING (NB)

Comments: NORTHSIDE OF CROSSING @ 4'3" WITH CURB AND SIDEWALK TO BE DONE BY CITY - THRU ORDC FUNDING. G4W TO REMOVE POLES ON SOUTHSIDE OF CROSSING BOTH SIDES (E+W).

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

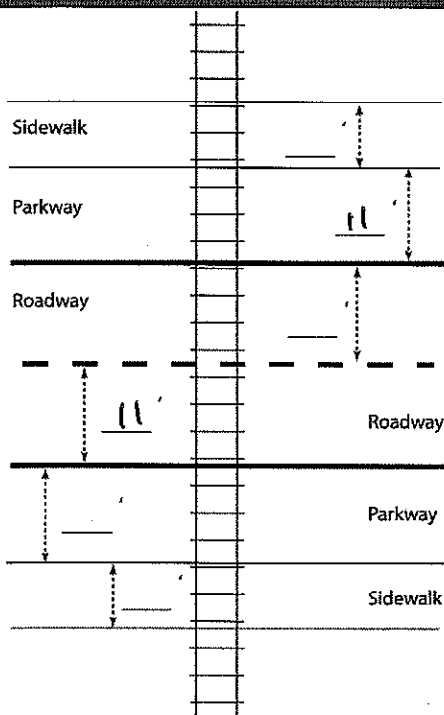
Acknowledgement of Recommendations (each entity represented at the diagnostic must have at least one signature acknowledgement):

E4W6
Drom

G4W
Amala Gul

all

Field Dimensions



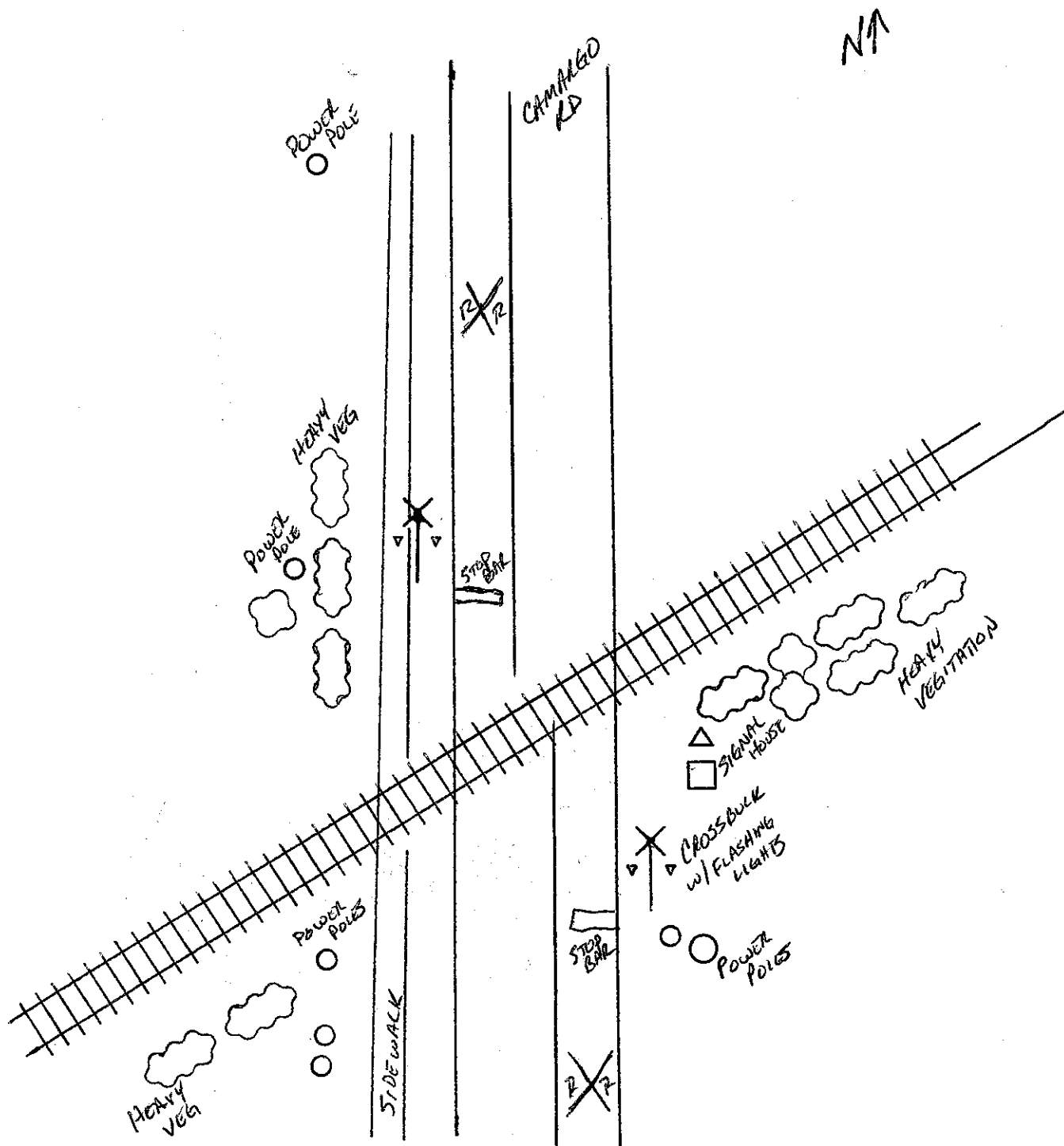
County: Nam Route: CAMAIZGO RD DOT#: 1513504

Surface type <input type="checkbox"/> Rubber seal and asphalt <input type="checkbox"/> Timber and asphalt <input type="checkbox"/> Asphalt <input type="checkbox"/> Composite <input type="checkbox"/> Concrete panel <input type="checkbox"/> Full-depth timber <input checked="" type="checkbox"/> Full-depth rubber <input type="checkbox"/> Other _____	Condition <input type="checkbox"/> Good <input checked="" type="checkbox"/> Fair <input type="checkbox"/> Poor Comments: _____ _____ _____
Is the surface good and sufficient? <u>Yes</u> / No	
Vehicle type (cars, trucks, etc.): _____	
Surface conditions: Can vehicles cross at posted speed? <u>YES</u> Local observations/driver behaviors: <u>NO SLOWING - CROSS AT SPEED</u> <u>LIMIT.</u> Relevant crash history: _____ _____ _____	
Do existing surface conditions have negative effects on the current or proposed warning devices? Explain: _____ _____ _____	
Comments: 	

Form completed by: AWG

Date: 4/21/16

Field Sketch



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

Sketch by: Gwla

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.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/28/2016 2:28:17 PM

in

Case No(s). 16-2437-RR-FED

Summary: Application In the Matter of a Request for the Installation of Active Warning Devices at the IORY Railroad Crossing, DOT#151-350H, Camargo Road in Hamilton County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division