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**Public Utilities
Commission of Ohio**

Memo

RECEIVED-DOCKETING DIV.

2015 JUN 24 PM 12:16

PUCO



To: Docketing Division
From: George Martin, Grade Crossing Planner, Rail Division
Re: In the matter of the authorization of Norfolk Southern Railway to install an active grade crossing warning device in Lorain County
Date: June 24, 2015

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

Lorain County, City of Avon Lake, Miller Rd, DOT# 472270B, approved cost \$272,886.00.

The crossing was surveyed on October 23, 2014 due to its hazard ranking, and was found to warrant the upgrade.

The project will be paid for with federal funds, and is actual cost. As the plan and estimate in the above referenced amount has already been approved, staff requests a Finding & Order with completion 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. 15- 1192 -RR-FED In the matter of the authorization of Norfolk Southern Railway to install an active grade crossing warning device in Lorain County

C: Legal Department

Please serve the following parties of record

Ms Cathy Stout

Ohio Rail Development Commission

1980 West Broad St, Mailstop #3140

Columbus, Oh 43223

Mr Stephen Klinger

Norfolk Southern Railway

1200 Peachtree St, Box 123

Atlanta, Ga 30309

Mr D Casey Talbot

Eastman & Smith Ltd

One Seagate, 24th Floor

PO Box 10032

Toledo, Oh 43699-0032

Mr Joseph Reitz, CPESC

Engineering Manager

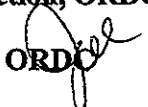
City Hall

150 Avon Belden Rd

Avon Lake, Oh 44012

Cleveland Electric Illuminating Company

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

TO: George Martin, Rail Division, PUCO
FROM: Cathy Stout, Manager, Safety Section, ORDC
BY: Joe Reinhardt, Project Manager, ORDC 
SUBJECT: Lorain County, Miller Road, DOT 472270B
Norfolk Southern, PID 99316
DATE: June 17, 2015

The Public Utilities Commission of Ohio (PUCO) established a diagnostic survey at the subject location on Miller 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)

Martin, George

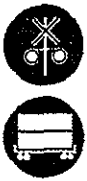
From: Reinhardt, Joseph <Joe.Reinhardt@dot.ohio.gov>
Sent: Monday, June 22, 2015 8:52 AM
To: stephen.klinger@nscorp.com
Cc: katherine.barry@nscorp.com; Martin, George
Subject: Revised Estimate, DOT 472270B, 10.2141, PID 99316 WYE TRACK

Steve:

Your new estimate dated June 17, 2015, for the amount of \$272,886.00 for the Lorain County, Miller Road warning project is approved.

Please follow the instructions from ORDC construction authorization letter
Dated June 17, 2015.

Thanks, Joe Reinhardt
ORDC, Project Manager



OHIO RAIL DEVELOPMENT COMMISSION

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

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

June 17, 2015

Mr. Stephen Klinger
Public Projects Engineer
1200 Peach Street NE, Box 123
Atlanta, Ga. 30309

RE: Lorain County, Miller Road, DOT 472270B
PID# 99316, NS Project 10.2141

Dear Mr. Klinger:

The plan and estimate dated May 19, 2015, 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 \$256,127.00. 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, email joe.reinhardt@dot.state.oh.us and to the Public Utilities Commission of Ohio at 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 (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. NS will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.



www.rail.ohio.gov


phone: 614.644.0306

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6. 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.
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,


Joseph Reinhardt
Project Manager

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



Diagnostic Review Team Survey

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

Date: 10/23/2014

Location Data

Street or Road Name: Miller Road			
Route/Road Number (i.e. Twp., Co., SR or US)		US DOT No.: 472270B	
County: LOR	Township:	City: (In or Near)	City of Avon Lake
Railroad Name: Norfolk Southern	Railroad Division: Pittsburgh	Branch/Line Name:	Bellevue Dist.
Nearest RR Timetable Station: Avon Lake		RR Milepost: 204.42	

On-Site Review Team

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

1. Joe Reinhardt, ORDC 614-644-0291
2. George Martin, PUCO 614-752-9107
3. Joe Reitz, Avon Lake 440-930-4101
4. EVERETT CHISM, NS 419-483-1101
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	2
'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	2
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	2
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	
Is crossing flagged by train crew?	<input type="checkbox"/> Yes	<input 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	1 (3/24/14)	
Hazard Ranking	709	Date Run: 9/5/2014
Railroad Data		
Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	1	2
< 1 per day		
Day thru trains		
Night thru trains		
Daytime switching movements	1	2
Nighttime switching movements		
Total number of tracks	1	
Number of main tracks	0	
Number of other tracks		
Maximum train speed	10	
Typical train speed	10	
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:		City of Avon Lake
Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic	6206 (2014)	
Highway paved	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Roadway Surface:	<input checked="" type="checkbox"/> Blacktop <input type="checkbox"/> Gravel <input type="checkbox"/> Concrete <input type="checkbox"/> Other _____	
Roadway width:	20 ft.	
Number of highway lanes	2	
Urban or Rural	Rural	
Vehicle Speed:	35 MPH	
School Bus Operation:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes _____ Amount	
Hazardous Materials Trucks:	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes _____ Amount	
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) _____	

Quadrant <u>NW</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>SE</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 checked="" 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) _____ Phone Number _____	
Nearest Available Power Source _____	
What other utilities are present? (add locations to sketch) <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Cable <input type="checkbox"/> Telephone <input type="checkbox"/> Fiber Optic Cable <input type="checkbox"/> Petroleum <input checked="" 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):

Crossing Consolidation or Closure:

Real Estate or ROW:

Culverts / Drainage / Ballast Conditions:

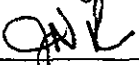



Roadway and/or Sidewalks:

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

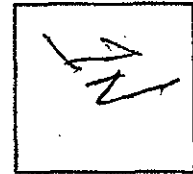
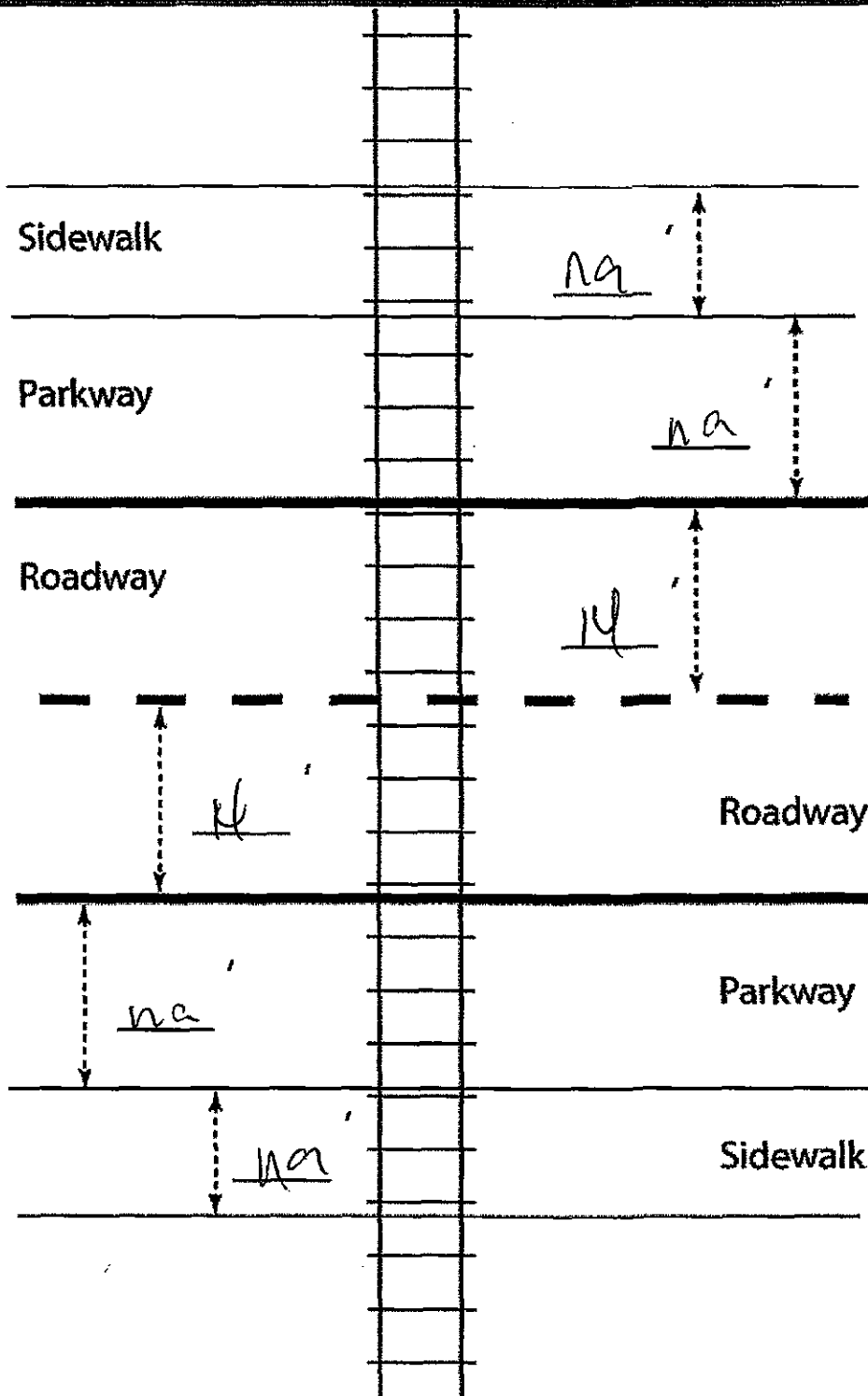
Environmental:

Other:

N/A
10-23/14
JWZ

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	TWO - SE & NW
<input type="checkbox"/> AFLS / Gates / Cants	
<input 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:	
<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



Show North Direction

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

Measurements by: JPL

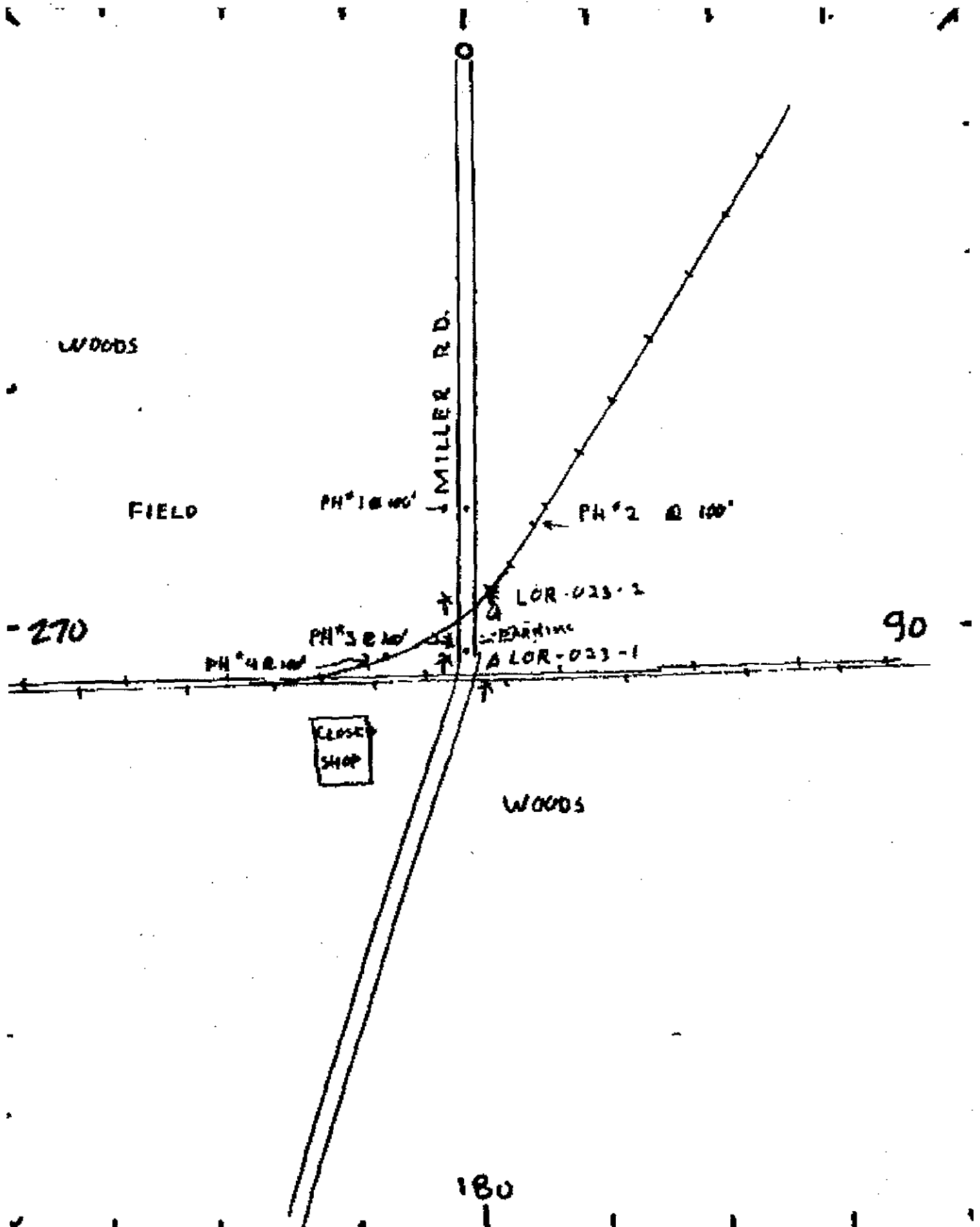


TABLE 1

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.

JAK
10-23-14