PC

(22)

FILE



**Public Utilities Commission of Ohio**

# Memo

**To:** Docketing Division

**From:** George Martin, Grade Crossing Planner, Rail Division

**Re:** In the matter of the authorization of the Wheeling & Lake Erie Railway to install active grade crossing warning devices in Wayne and Lorain Counties

**Date:** March 1, 2016

The Ohio Rail Development Commission (ORDC) has authorized funding for the Wheeling & lake Erie Railway (WE) to install mast-mounted flashing lights and roadway gates as follows:

Wayne County, Sugar Creek Township, Moser Rd/TR 433, DOT# 473165D, approved cost $249,410.24.

Lorain County, near Brighton, Gore-Orphanage Rd/CR 34, DOT# 473601P, approved cost $ 273,993.24.

The crossings were surveyed on October 14, 2015, due to their hazard ranking and were found to warrant the upgrades.

The projects will be paid for with federal funds, and are actual cost. As the plans and estimates in the above referenced amounts have 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. 16- 506 -RR-FED In the matter of the authorization of the Wheeling & Lake Erie Railway to install active grade crossing warning devices in Wayne and Lorain Counties

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 Tim Andrews

Wheeling & Lkake Erie Railway

100 East First St

Brewster, Oh 44613

Sugar Creek Township Trustees

Box 224

Dalton, Oh 44618

Lorain County Engineer

Ken Carney P.E., P.S.

247 Hadaway St.

Elyria, OH 44035

Ohio Edison

Lorain-Medina Rural Electric Cooperative

22898 West Road

P.O. Box 158

Wellington, OH 44090

**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:** Wayne County, Moser Road, DOT 473165D
W&LE, PID 101927

**DATE:** February 29, 2016

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

**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, Gore-Orphange Road, DOT 473601P
W&LE, PID 101926

**DATE:** February 29, 2016

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

# OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223
John R. Kasich, Governor • Mark Policinski, ORDC Chairman


February 29, 2016

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 East First Street
Brewster, Ohio 44613

RE: Wayne County, Moser Road
DOT 473165D, PID# 101927

Dear Mr. Andrews:

The plan and estimate dated February 24, 2016, for the referenced project has been reviewed and is acceptable. WLE 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 $249,410.24. 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 WLE accepting the following instructions:

1. WLE's project foreman will furnish written notification five (5) working days prior to the date work will start at the project site to Joseph Reinhardt, ORDC, email joe.reinhardt@dot.state.oh.us and to the Public Utilities Commission of Ohio at George.martin@puc.state.oh.us. WLE'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. WLE 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 WLE.

3. WLE's project foremen will notify Joe Reinhardt at 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. WLE will furnish two (2) copies of each partial bill to ORDC. Please find the enclosed ODOT Purchase Order to reference when billing.

6. WLE 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)

# OHIO RAIL DEVELOPMENT COMMISSION

Mail Stop #3140, 1980 West Broad Street, Columbus OH 43223
John R. Kasich, Governor • Mark Policinski, ORDC Chairman


February 29, 2016

Mr. Tim Andrews
Wheeling & Lake Erie Railway
100 East First Street
Brewster, Ohio 44613

RE: Lorain County, Gore-Orphange Road
DOT 473601P, PID# 101926

Dear Mr. Andrews:

The plan and estimate dated February 24, 2016, for the referenced project has been reviewed and is acceptable. WLE 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 $273,993.24. 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.

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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)

OHIO RAIL DEVELOPMENT COMMISSION

Ohio Rail Development Commission
Mail Stop 3140, 1980 W. Broad Street,
Columbus, OH 43223

# Diagnostic Review Team Survey

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

**Date:** 10-14-15

## Location Data

| | | | | | |
|---|---|---|---|---|---|
| Street or Road Name: | Moser Rd | | | | |
| Route/Road Number (i.e. Twp., Co., SR or US) | TR 433 | | | US DOT No.: | 473165D |
| County: WAY | Township: Sugar Creek Twp | City: (In or Near) | Near Dalton | | |
| Railroad Name: Wheeling & Lake Erie RR | Railroad Division: | | | Branch/Line Name: | Main |
| Nearest RR Timetable Station: Orrville | | | | RR Milepost: | 128.5 |

## On-Site Review Team

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

1. Joe Reinhardt ORDC 614-644-0291
2. Tim Andrus WLE 330-417-5541
3. Melvin R. Wyss Twp.
4. GEORGE MARTIN PUCO 614-752-9107
5.
6.
7.
8.
9.

## Existing Traffic Control Devices

| Type of Warning Devices | Installed? | | Quantity/Comments |
|---|---|---|---|
| Advance Warning Signs (condition?) | ☒ Yes | ☐ No | |
| 'Stop' Signs | ☐ Yes | ☒ No | |
| 'Stop Ahead' Signs | ☐ Yes | ☐ No | |
| Pavement Markings (condition?) | ☐ Yes | ☒ No | |
| Crossbucks | ☒ Yes | ☐ No | w/ 1/162P |
| Number of Tracks Signs | ☐ Yes | ☒ No | |
| Inventory Tags | ☐ Yes | ☒ No | |
| Interconnected Highway Traffic Signal | ☐ Yes | ☒ No | |
| Mast-Mounted Flashing Lights | ☐ Yes | ☒ No | |
| Cantilever Flashing Lights | ☐ Yes | ☒ No | Number: Length: |
| Side Lights | ☐ Yes | ☒ No | |
| Automatic Gates | ☐ Yes | ☒ No | Number: Length: |
| Bells | ☐ Yes | ☒ No | Number: |
| Sidewalk Gate Arms | ☐ Yes | ☒ No | |
| 'No Turn' Signs | ☐ Yes | ☒ No | |
| Illumination | ☐ Yes | ☒ No | |
| Is crossing flagged by train crew? | ☐ Yes | ☒ No | |
| Other | ☐ Yes | ☒ 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 (4/3/2015) | |
| Hazard Ranking | 158 Date Run: 8/18/15 | |

## Railroad Data

| Railroad Characteristics | Initial Information (from database) | Revised |
|---|---|---|
| Total trains per day | 12 | |
| < 1 per day | | |
| Day thru trains | 6 | |
| Night thru trains | 6 | |
| Daytime switching movements | | |
| Nighttime switching movements | | |
| Total number of tracks | 1 | |
| Number of main tracks | 1 | |
| Number of other tracks | | |
| Maximum train speed | 50 | 40 |
| Typical train speed | 50 | 40 |
| Amtrak | | |

If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) ☐ 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: Sugar Creek Twp.

| Roadway Characteristics | Initial Information (from database) | Revised |
|---|---|---|
| Average daily traffic | 151 (2013) | > 250 (Grain Season) |
| Highway paved | ☒ Yes ☐ No | ☐ Yes ☐ No |
| Roadway Surface: ☒ Blacktop ☐ Gravel ☐ Concrete ☐ Other _____ | | |
| Roadway width: 22 ft. | | |
| Number of highway lanes | 2 | |
| Urban or Rural | Rural | |
| Vehicle Speed: 55 MPH | | |

School Bus Operation: ☐ No ☒ Yes 6 Amount

Hazardous Materials Trucks: ☐ No ☒ Yes .05 Amount

Shoulders: ☐ No ☒ Yes

Is the shoulder surfaced? ☒ No ☐ Yes

Is there existing guardrail along roadway in crossing vicinity? ☒ No ☐ Yes

Is stopping site distance adequate? (See Table 2) ☒ Yes ☐ No If no, deficient approach(es) _____

| Quadrant _____ Curb and Gutter: | Quadrant _____ Curb and Gutter: |
|---|---|
| ☐ Functional (Curb height = 4" or more) | ☐ Functional (Curb height = 4" or more) |
| ☐ Non-functional (Curb height = Less than 4") | ☐ Non-functional (Curb height = Less than 4") |
| ☒ None | ☒ 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: Used often for feed factory & School buses

## Type of Development

| | | |
|---|---|---|
| ☒ Open Space | ☐ Institutional | Location of nearby schools: |
| ☐ Industrial | ☐ Commercial | |
| ☐ Residential | | |

## Utility Information

Is commercial power available? ☒ No ☐ Yes

Utility Provider (Company Name) Ohio Edison Phone Number _____

Nearest Available Power Source _____

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

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

No Closure possible, large feed factory & Buses.

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:

Needing Berm Walls

JNR
10-14-15

## 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) | |

Comments:

Large Berms Walls & Power Poles Needed ≅ 900'

| | |
|---|---|
| ☐ Install/upgrade traffic signal preemption | |
| ☐ No improvements needed | |

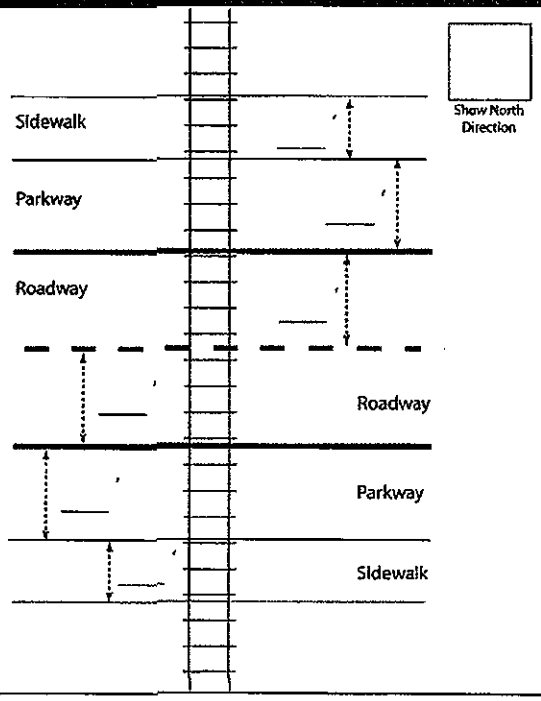
☐ Other (define)

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

JVL GM TJA

M.R.W.

## Field Dimensions



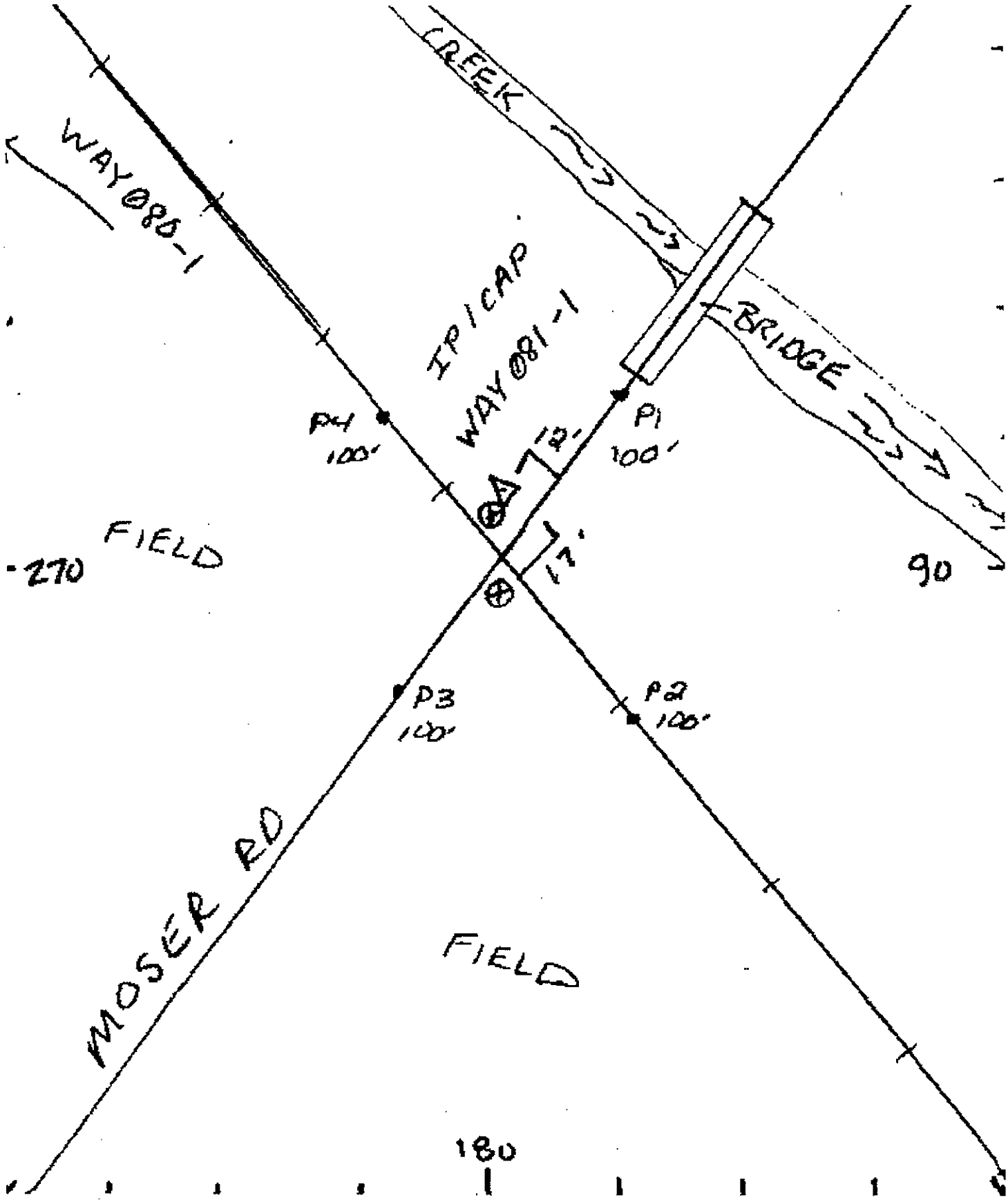

CREEK
WAY 080-1
IP/CAP
WAY 081-1
BRIDGE
P4
100'
P1
100'
12'
17'
-270
FIELD
90
P3
100'
P2
100'
MOSER RD
FIELD
180

**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.

10-14-15

OHIO RAIL DEVELOPMENT COMMISSION

Ohio Rail Development Commission
Mail Stop 3140, 1980 W. Broad Street,
Columbus, OH 43223

# Diagnostic Review Team Survey

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

**Date:** 10-14-15

## Location Data

| | | | |
|---|---|---|---|
| Street or Road Name: | Gore-Orphanage Road | | |
| Route/Road Number (i.e. Twp., Co., SR or US) | CR 34 | US DOT No.: | 473601P |
| County: LOR | Township: | City: (In or Near) | Near Brighton |
| Railroad Name: Wheeling & Lake Erie RR | Railroad Division: | Branch/Line Name: | Main |
| Nearest RR Timetable Station: Brighton | | RR Milepost: | 80.75 |

## 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. James Tucker ORDC 614-398-6897
4. William Hoffheimer Corgia County Engineer 440-329-5590
5. T- A W&LE 330-417-5541
6. 
7. 
8. 
9. 

## Existing Traffic Control Devices

| Type of Warning Devices | Installed? | Quantity/Comments |
|---|---|---|
| Advance Warning Signs (condition?) | ☒ Yes ☐ No | 2 |
| 'Stop' Signs | ☒ Yes ☐ No | 2 |
| 'Stop Ahead' Signs | ☒ Yes ☐ No | 2 |
| Pavement Markings (condition?) | ☒ Yes ☐ No | 2 |
| Crossbucks | ☒ Yes ☐ No | |
| Number of Tracks Signs | ☐ Yes ☒ No | |
| Inventory Tags | ☒ Yes ☐ No | 1 - Emergency 800# |
| Interconnected Highway Traffic Signal | ☐ Yes ☒ No | |
| Mast-Mounted Flashing Lights | ☐ Yes ☒ No | |
| Cantilever Flashing Lights | ☐ Yes ☒ No | Number: Length: |
| Side Lights | ☐ Yes ☒ No | |
| Automatic Gates | ☐ Yes ☒ No | Number: Length: |
| Bells | ☐ Yes ☒ No | Number: |
| Sidewalk Gate Arms | ☐ Yes ☒ No | |
| 'No Turn' Signs | ☐ Yes ☒ No | |
| Illumination | ☒ Yes ☐ No | 1 |
| Is crossing flagged by train crew? | ☐ Yes ☒ No | |
| Other | ☐ Yes ☒ 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 | 1000 Date Run: 8/18/15 | |

## Railroad Data

| Railroad Characteristics | Initial Information (from database) | Revised |
|---|---|---|
| Total trains per day | 8 | |
| < 1 per day | | |
| Day thru trains | 3 | |
| Night thru trains | 3 | |
| Daytime switching movements | 1 | |
| Nighttime switching movements | 1 | |
| Total number of tracks | 1 | |
| Number of main tracks | 1 | |
| Number of other tracks | | |
| Maximum train speed | 50 | |
| Typical train speed | 50 | |
| Amtrak | | |

If non-gated crossing, is clearing sight distance adequate in all quadrants? (See Table 1) ☒ 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: Lorain County

| Roadway Characteristics | Initial Information (from database) | Revised |
|---|---|---|
| Average daily traffic | 505 (2014) | |
| Highway paved | ☒ Yes ☐ No | ☐ Yes ☐ No |

Roadway Surface: ☒ Blacktop ☐ Gravel ☐ Concrete ☐ Other _____

Roadway width: 20 ft.

| | | |
|---|---|---|
| Number of highway lanes | 2 | |
| Urban or Rural | Rural | |
| Vehicle Speed: 55 MPH | | |

School Bus Operation: ☐ No ☒ Yes 6 Amount

Hazardous Materials Trucks: ☐ No ☐ Yes .07 Amount

Shoulders: ☐ No ☒ Yes

Is the shoulder surfaced? ☒ No ☐ Yes

Is there existing guardrail along roadway in crossing vicinity? ☒ No ☐ Yes

Is stopping site distance adequate? (See Table 2) ☑ Yes ☐ No If no, deficient approach(es) _____

| Quadrant NW Curb and Gutter: | Quadrant SE Curb and Gutter: |
|---|---|
| ☐ Functional (Curb height = 4" or more) | ☐ Functional (Curb height = 4" or more) |
| ☐ Non-functional (Curb height = Less than 4") | ☐ Non-functional (Curb height = Less than 4") |
| ☒ None | ☒ 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) Rural Electric Phone Number _____

Nearest Available Power Source _____

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

Is(are) there potential utility conflict(s) ☐ Yes ☐ No ☒ 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:<br>Culvert in North Quadrant needs extended |
| Roadway and/or Sidewalks: |
| Circuitry (e.g. reaches out to other crossings, specific needs, etc.): |
| Environmental: |
| Other:<br>JWR<br>10-14-15 |

## 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) | |

Comments: Berm Wall & Culvert Extension

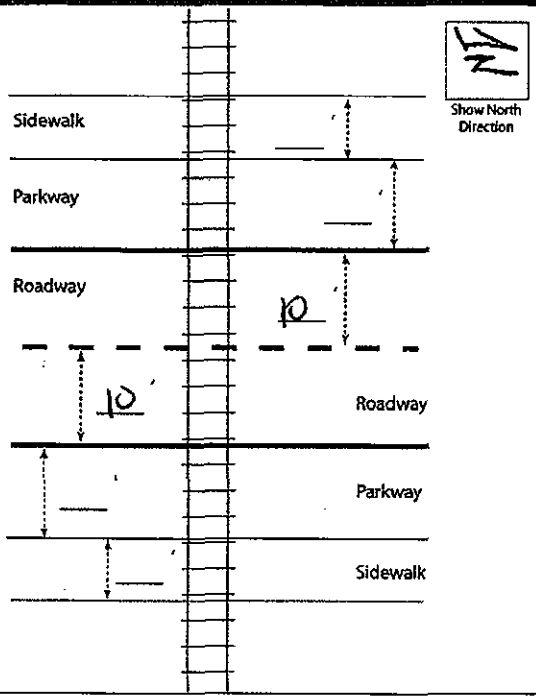
| | |
|---|---|
| ☐ Install/upgrade traffic signal preemption | |
| ☐ No improvements needed | |

☐ Other (define)

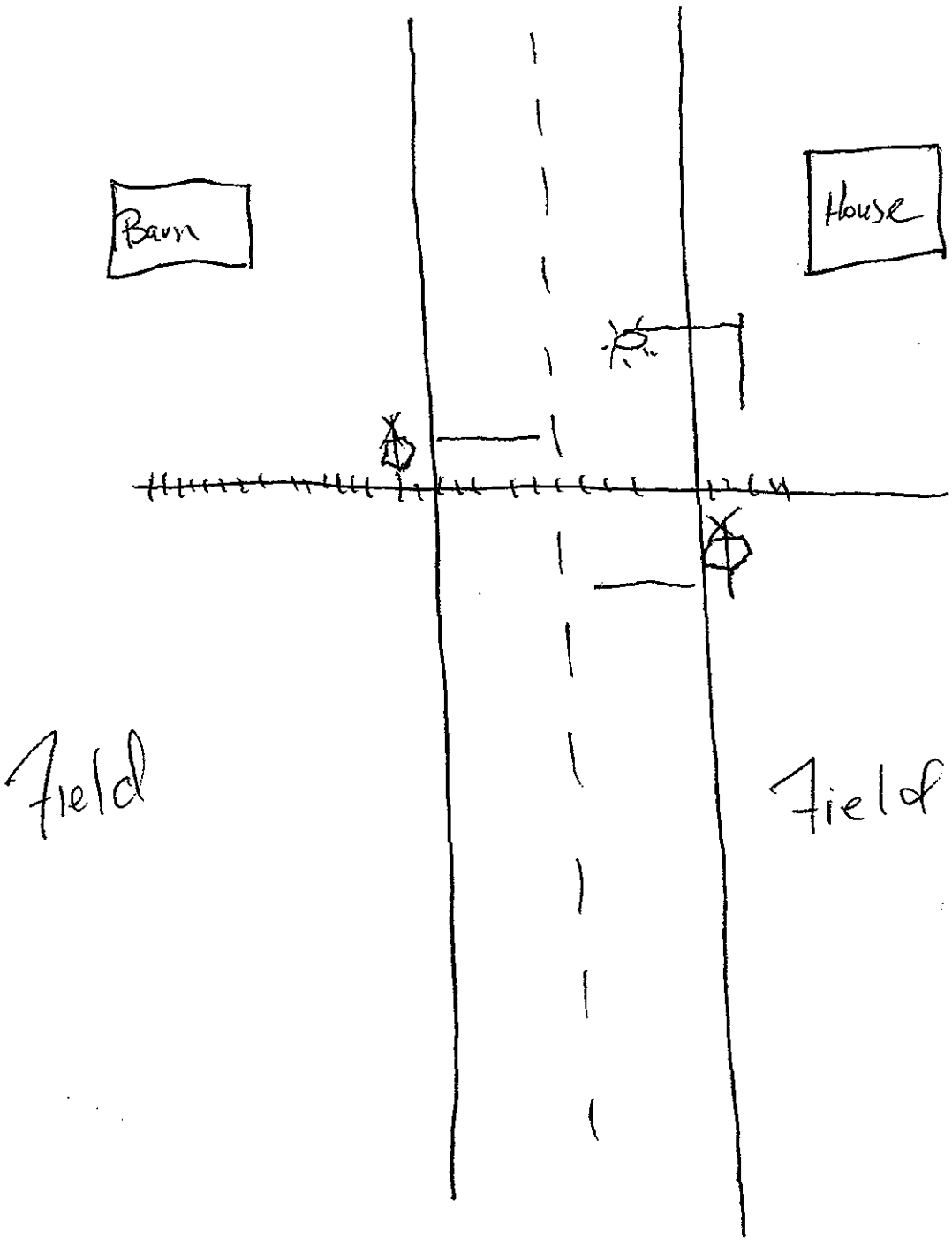
Acknowledgement of Recommendations (each entity represented at the diagnostic must have at least one signature acknowledgement):

| | | |
|---|---|---|
| [signature] | TSA | |
| [signature] | [signature] | |

## Field Dimensions



## Field Sketch




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

Sketch by: [signature]

**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.

10-14-15