

# Memo

To: Docketing Division  
From: Jill Henry, Rail Specialist, Rail Division  
Cc: PUCO Legal Department  
Date: 7/20/18

Re: PUCO Case No. 18-1137-RR-FED- In the Matter of a Request for an Upgrade at the Norfolk Southern Railway Crossing, Stow Road DOT#503-541T, in Summit County, Ohio.

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On December 11, 2017, the Ohio Rail Development Commission (ORDC) authorized funding for Norfolk Southern Railway to install LED lights at Stow Road DOT#503-541T, in Summit County, Ohio. The crossing was surveyed on April 15, 2016 and found to warrant the upgrade. The electric utility provider for this crossing is First Energy Corp.- Ohio Edison.

The project will be paid for with federal funds and is actual cost. The plans and estimates for the project in the amount of \$22,311.00 have been approved. Construction may commence at once. **Staff requests a Finding & Order with completion of the project in 9 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:**

Norfolk Southern Railway Company  
Stephen Klinger  
Public Projects Engineer  
1200 Peachtree Street NE  
Atlanta, GA 30309-3597

Norfolk Southern Railway Company  
Cayela Wimberly  
Director Grade Crossing Safety  
1200 Peachtree Street NE  
Atlanta, GA 30309-3597

Eastman & Smith LTD.  
Mr. Casey Talbott  
Attorney for Norfolk Southern  
One SeaGate 24<sup>th</sup> Floor  
P.O. Box 10032  
Toledo, Ohio 43699-0032

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

City of Hudson  
Thomas Sheridan  
Assistant City Manager  
115 Executive Parkway #400  
Hudson, OH 44236

First Energy Corp. – Ohio Edison

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

**TO:** Randall Schumacher, Supervisor, Rail Division, PUCO  
**FROM:** Cathy Stout, Manager, Safety Section, ORDC  
**BY:** James Tucker, Project Manager, ORDC J. T.  
**SUBJECT:** Summit County, Stow Road, Norfolk Southern  
DOT#503541T, PID#106420  
**DATE:** April 24, 2018

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The Ohio Rail Development Commission (ORDC) established a diagnostic survey at the subject location on April 15, 2016. The Diagnostic Team recommended to upgrade to LED lights. 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 for twelve months. This construction 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.

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

April 24, 2018

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

RE: Summit County, Stow Rd, DOT #503541T  
PID#106420, NS Project 10.1099

Dear Mr. Klinger:

The plan and estimate dated April 23, 2018, for the referenced project has been reviewed and is acceptable. NS may proceed with the construction of the proposed LED light upgrade 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 from ORDC is limited to \$22,311.00. 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 James Tucker, ORDC, email [james.tucker@dot.ohio.gov](mailto:james.tucker@dot.ohio.gov) and to the Public Utilities Commission of Ohio at [jill.henry@puco.state.oh.us](mailto:jill.henry@puco.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 James Tucker at 614-398-6897 (telephone) or [james.tucker@dot.ohio.gov](mailto:james.tucker@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. 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](http://www.rail.ohio.gov)

phone: 614.644.0306

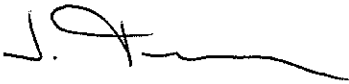
IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY



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,

A handwritten signature in black ink, appearing to read 'J. Tucker', with a long horizontal flourish extending to the right.

James Tucker  
Project Manager

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



23-Apr-18

**Detailed Estimate for Grade Crossing Warning Devices**

City/State: HUDSON, OH  
MilePost: RD-94.76  
State Proj. No.: PID 106420  
S&E Proj. No.: 10.1099  
Man Days: 18

Road: STOW ROAD  
DOT/AAR: 503541T  
County: SUMMIT  
File Number: 061-10.895



<b>***Purchases - Others***</b>		
Meals and Lodging:	\$2,462.14	
Rental of Equipment:	\$3,365.74	
(2 Trucks, 1 Backhoe w/ Trailer and 1 Pipe-Pusher for 3 Days)		
Construction Supervision Vehicle:	\$514.84	
Purchases - Other Total:		\$6,342.72
<b>***Material And Additives***</b>		
Material Cost:	\$2,280.00	
Sales and Use Tax:	\$182.00	
Material Handling Freight:	\$228.03	
Material Total:		\$2,690.03
<b>***Labor And Additives***</b>		
Labor Cost:	\$5,796.00	
(6 man crew at \$1,932.00 a day for: 3 days)		
Payroll Tax & Overheads:	\$4,941.67	
Preliminary Engineering:	\$848.01	
Construction Supervision:	\$1,693.01	
Labor Total:		\$13,278.69
	Project Cost:	\$22,311.44
	Scrap / Salvage Credit:	\$0.00
	<b>Project Total:</b>	<b>\$22,311.00</b>

Estimated on: 23-Apr-18

Estimated by: q2suj

**Estimate valid for 1 year from date of estimate**

REV	DATE	CKD BY
1	11/22/96	HEI

 = FOR MATERIAL REFERENCE SEE PLAN S-1002  
 = DENOTES TWISTED PAIR  
GROUND IN ACCORDANCE WITH CS-9001-A

NOTES

SH. NO.	CONTENTS	REVISION NO.						
		1	2	3	4	5	6	7
1	TITLE, NOTES, INDEX AND REVISIONS	✓	✓	✓	✓			
2	LOCATION PLAN	✓	✓	✓	✓			
3	POWER DISTRIBUTION	✓	✓	✓				
4	3000D2 SAFETRAN GRADE CROSSING PREDICTOR CIRCUITS	✓	✓	✓				
5	GATE CONTROL, LIGHTING CIRCUITS AND CABLE TERMINATIONS	✓	✓	✓	✓			
6	GATE MECHANISMS	✓	✓	✓	✓			
7	FRONT AND LEFT WALL LAYOUT	✓	✓					
8	RIGHT SIDE OF HOUSE, RELAY RACK & FUNCTIONS	✓	✓	✓				
9	TERMINAL BOARD ARRANGEMENT	✓	✓	✓				
10	HOUSE LAYOUT	✓						

INDEX

DESIGN: 04-01-18  
PROJECT: 10.1099  
FILE: CX0116830  
INSTALL LAMP UPGRADE TO LED'S  
AT STOW RD.  
DESIGN BY RSD/JAR RED-IN YELLOW-OUT

REVISIONS

1

11-30-98

NEW PLAN DRAWN ACCOUNT CAB SIGNAL ADDED.

WO/AFE NO: 998091 PFC NO. 3

IN SERVICE: 07-17-01

PER: J.J. BENTZ

SWS

SWS

2

12-01-00

SWS

SWS

SWS

PLAN REVISED TO INSTALL HOT BOX DETECTOR ACTIVATION.

SYSTEM FILE NO:

WO/AFE NO: 0921

IN SERVICE: 07-17-01

PER: J.J. BENTZ

SWS

SWS

3

06-03-08

WSD

WSD

PLAN REVISED TO RELOCATE SWITCH AT MILE RD-95.4

FILE NO: R-2568

IN SERVICE: 01-05-12

PER: JPH

RSD

JLM

4

04-01-18

RSD

TAH

JAR

PLAN REVISED FOR LAMP UPGRADES TO LEDS


PROJECT# 10.1099

FILE NO. CX0116830

IN SERVICE:

PER:

AAR/DOT#503541T

 NORFOLK SOUTHERN

PITTSBURGH DIVISION


CLEVELAND LINE

HUDSON, OHIO

STOW ROAD - C.R. 106

PROPERTY TITLE, NOTES, INDEX AND REVISIONS

PENNSYLVANIA R.R.

APPROVED:  PE CAD

CHIEF ENGINEER - C&S

ISSUE DATE: NOVEMBER 30, 1998

2412-0948

SWS

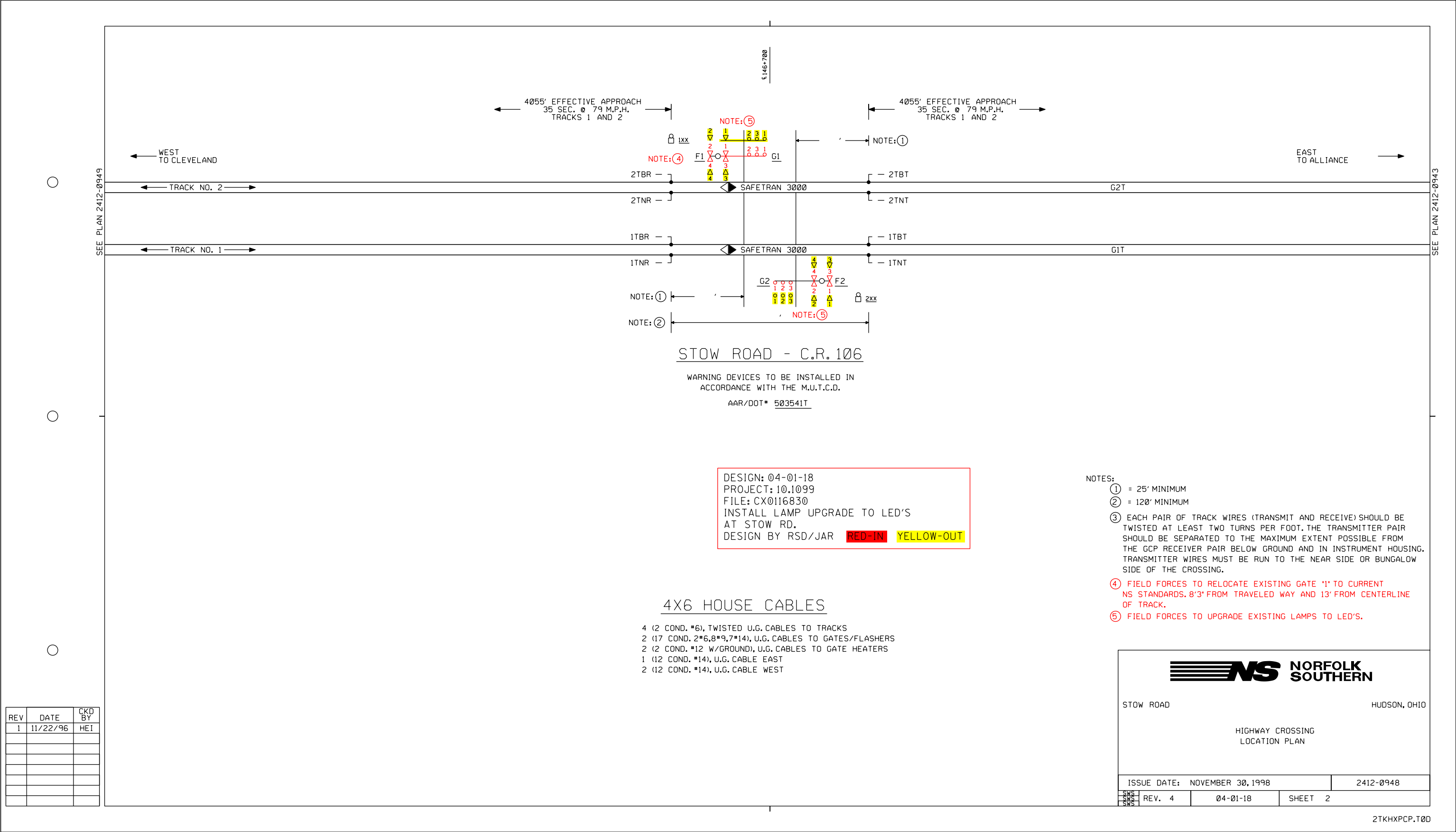
SWS

SWS

REV. 4

04-01-18

SHEET 1 OF 10



STOW ROAD - C.R. 106

WARNING DEVICES TO BE INSTALLED IN  
ACCORDANCE WITH THE M.U.T.C.D.

AAR/DOT# 503541T


DESIGN: 04-01-18  
PROJECT: 10.1099  
FILE: CX0116830  
INSTALL LAMP UPGRADE TO LED'S  
AT STOW RD.  
DESIGN BY RSD/JAR **RED-IN** **YELLOW-OUT**

4X6 HOUSE CABLES

- 4 (2 COND. #6), TWISTED U.G. CABLES TO TRACKS
- 2 (17 COND. 2\*6,8\*9,7\*14), U.G. CABLES TO GATES/FLASHERS
- 2 (2 COND. #12 W/GROUND), U.G. CABLES TO GATE HEATERS
- 1 (12 COND. #14), U.G. CABLE EAST
- 2 (12 COND. #14), U.G. CABLE WEST

- NOTES:
- ① = 25' MINIMUM
  - ② = 120' MINIMUM
  - ③ EACH PAIR OF TRACK WIRES (TRANSMIT AND RECEIVE) SHOULD BE TWISTED AT LEAST TWO TURNS PER FOOT. THE TRANSMITTER PAIR SHOULD BE SEPARATED TO THE MAXIMUM EXTENT POSSIBLE FROM THE GCP RECEIVER PAIR BELOW GROUND AND IN INSTRUMENT HOUSING. TRANSMITTER WIRES MUST BE RUN TO THE NEAR SIDE OR BUNGALOW SIDE OF THE CROSSING.
  - ④ FIELD FORCES TO RELOCATE EXISTING GATE \*1\* TO CURRENT NS STANDARDS. 8'3" FROM TRAVELED WAY AND 13' FROM CENTERLINE OF TRACK.
  - ⑤ FIELD FORCES TO UPGRADE EXISTING LAMPS TO LED'S.

REV	DATE	CKD BY
1	11/22/96	HE1

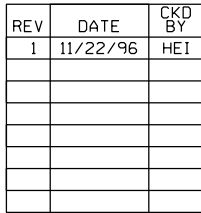


STOW ROAD

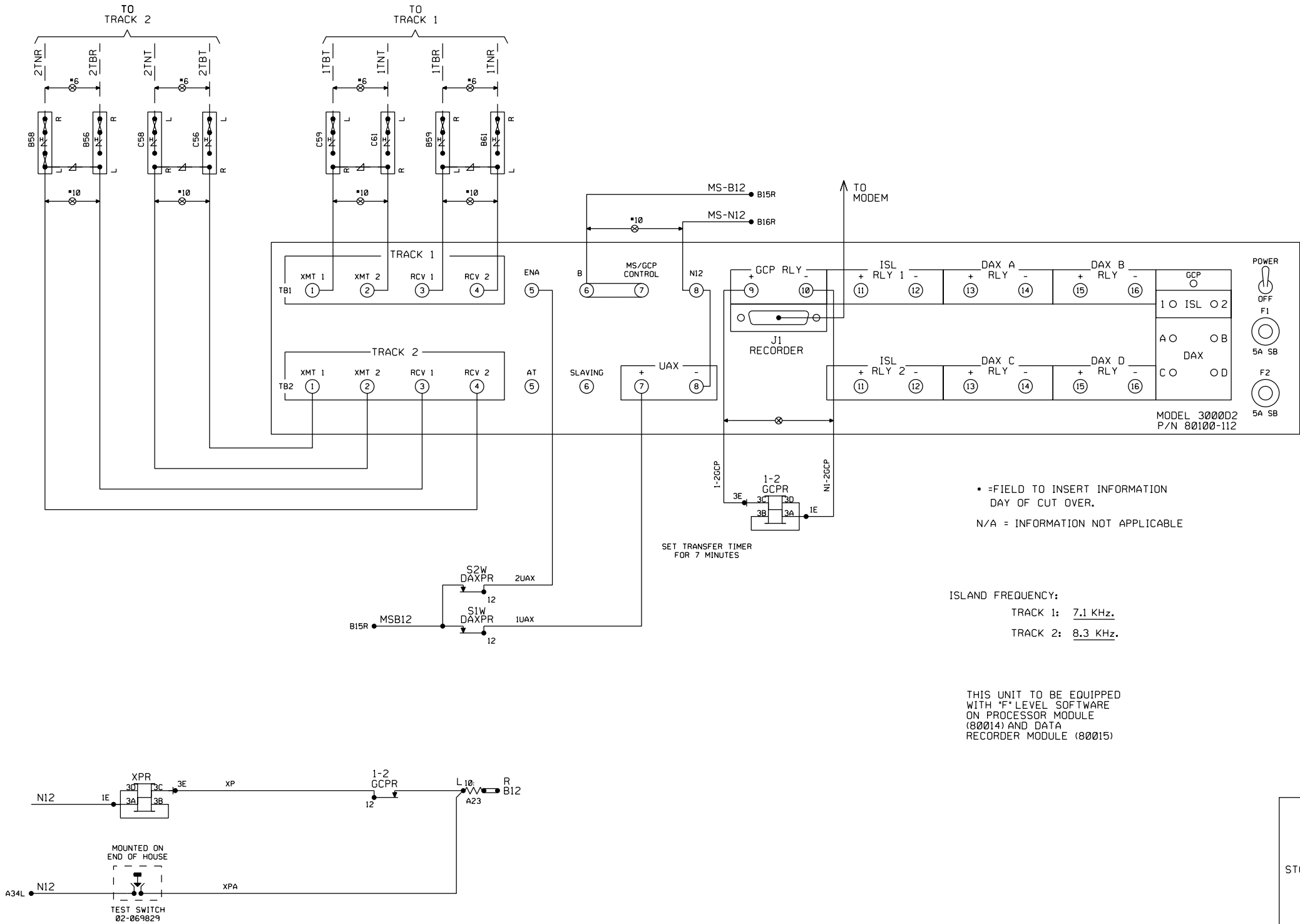
HUDSON, OHIO

HIGHWAY CROSSING  
LOCATION PLAN

ISSUE DATE: NOVEMBER 30, 1998		2412-0948	
REV. 4	04-01-18	SHEET 2	



REV	DATE	CKD BY
1	11/22/96	HE1



SYSTEM PROGRAMMING PARAMETERS		
PROMPT		RESPONSE
NUMBER OF TRACKS		2 TRACK
FREQUENCY (MS/GCP)		211 HZ
UNI/BIDIRECTIONAL	T1	BIDIRECTIONAL
UNI/BIDIRECTIONAL	T2	BIDIRECTIONAL
XMIT LEVEL	T1	MAX
XMIT LEVEL	T2	MAX
PREDICTOR/MOTION SENSOR	T1	PREDICTOR
PREDICTOR/MOTION SENSOR	T2	PREDICTOR
WARNING TIME SELECTED	T1	35 SEC.
WARNING TIME SELECTED	T2	35 SEC.
APPROACH DIST. SELECTED	T1	4034 FT.
APPROACH DIST. SELECTED	T2	4034 FT.
APPROACH DIST. COMPUTED	T1	• FT.
APPROACH DIST. COMPUTED	T2	• FT.
UAX PICKUP DELAY(0=OFF)	25-SEC.	
ENA/UAX2 PICKUP DELAY(0=ENA)	25-SEC.	
NUMBER OF DAX'S		0
ISLAND DISTANCE	T1	140 FT.
ISLAND DISTANCE	T2	140 FT.
DAX A TRACK ASSIGNMENT		N/A
DAX A DISTANCE (0=PREEMPT)		N/A FT.
DAX A WARNING TIME		N/A SEC.
DAX B TRACK ASSIGNMENT		N/A
DAX B DISTANCE (0=PREEMPT)		N/A FT.
DAX B WARNING TIME		N/A SEC.
DAX C TRACK ASSIGNMENT		N/A
DAX C DISTANCE (0=PREEMPT)		N/A FT.
DAX C WARNING TIME		N/A SEC.
DAX D TRACK ASSIGNMENT		N/A
DAX D DISTANCE (0=PREEMPT)		N/A FT.
DAX D WARNING TIME		N/A SEC.
SLAVING MASTER/SLAVE		MASTER
PASSWORD ENABLED		DISABLED
RECORDER INSTALLED		INSTALLED
RS-232-C BAUD RATE		
RS-232-C DATA BITS		
RS-232-C STOP BITS		
RS-232-C PARITY		
DATE(E.G.,MON 16 NOV 1987)		•
TIME(E.G., 11:25:43 AM)		•
DAYLIGHT SAVINGS		ON/OFF
EXPANDED PROGRAMMING HISTORY		
SWITCH TO MS	T1	0-EZ
SWITCH TO MS	T2	0-EZ
TRANSFER DELAY MS TO GCP	T1	0-SEC.
TRANSFER DELAY MS TO GCP	T2	0-SEC.
PRIME PREDICTION OFFSET	T1	0-FT.
PRIME PREDICTION OFFSET	T2	0-FT.
PICKUP DELAY PRIME		15-SEC.
PICKUP DELAY DAX A		15-SEC.
PICKUP DELAY DAX B		15-SEC.
PICKUP DELAY DAX C		15-SEC.
PICKUP DELAY DAX D		15-SEC.
COMPENSATION VALUE	T1	SET BY SYSTEM
COMPENSATION VALUE	T2	SET BY SYSTEM
NUMBER OF TRACK WIRES	T1	4 WIRES
NUMBER OF TRACK WIRES	T2	4 WIRES

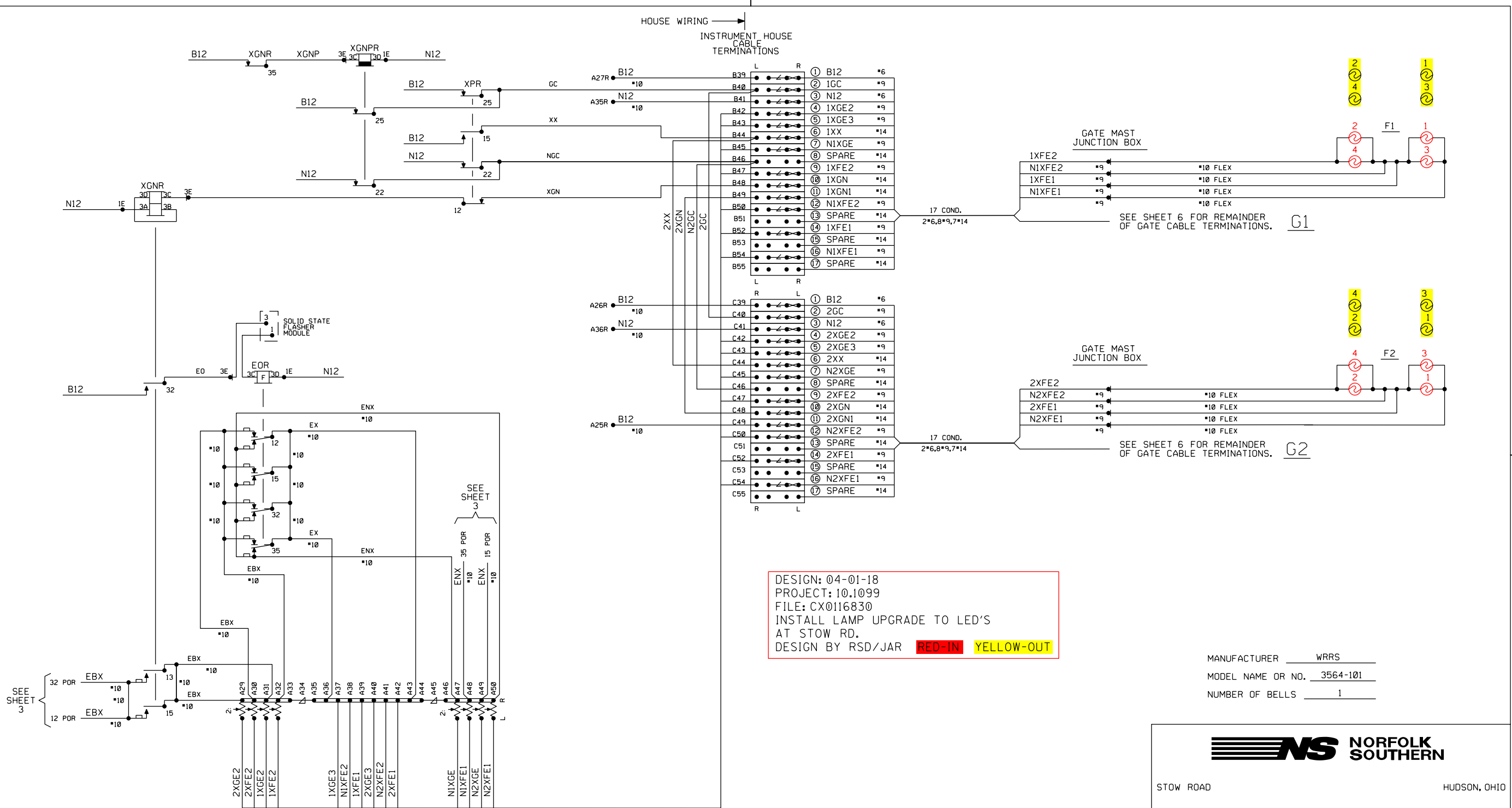



STOW ROAD HUDSON, OHIO

HIGHWAY CROSSING  
DUAL BIDIRECTIONAL GCP  
MODEL 3000D2 02-806766

ISSUE DATE: NOVEMBER 30, 1998	2412-0948
REV. 3	01-05-12 SHEET 4

REV	DATE	CKD BY
1	11/22/96	HE1



**NORFOLK SOUTHERN**

STOW ROADHUDSON, OHIO

HIGHWAY CROSSING  
GATE CONTROL, LIGHTING CIRCUITS  
AND CABLE TERMINATIONS

ISSUE DATE: NOVEMBER 30, 1998		2412-0948
SMS REV. 4	04-01-18	SHEET 5




REV	DATE	CKD BY

C&S CAD

DESIGN: 04-01-18  
PROJECT: 10.1099  
FILE: CX0116830  
INSTALL LAMP UPGRADE TO LED'S  
AT STOW RD.  
DESIGN BY RSD/JAR RED-IN YELLOW-OUT

SAFETRAN MODEL "S40" GATE		
CONTACT SPACE	CONTACT CLOSED AT	FUNCTION OF CONTACT
(6) L-M	45° - 90°	POWER DOWN CONTROL
(7) J-K	0° - 89°	POWER UP CONTROL
(8) R-S	83° - 90°	FLASHING LGT. CONTROL
(9) H-I	5° - 90°	BELL CONTROL
(10) T-U	0° - 5°	HORIZONTAL SNUB



NORFOLK SOUTHERN

STOW ROAD

HUDSON, OHIO

HIGHWAY CROSSING - REPEATER  
WRRS MODEL 10 TYPE 3564 GATE CIRCUITS

ISSUE DATE: NOVEMBER 30, 1998

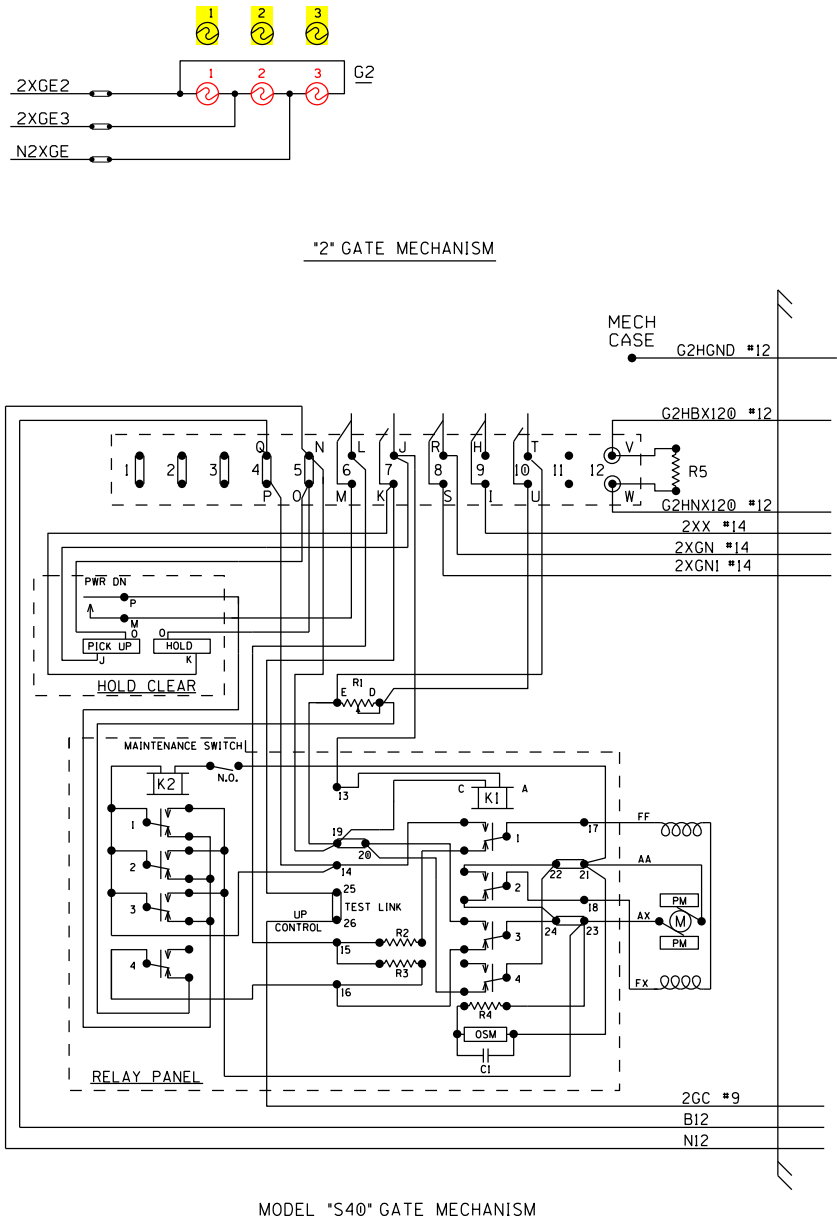
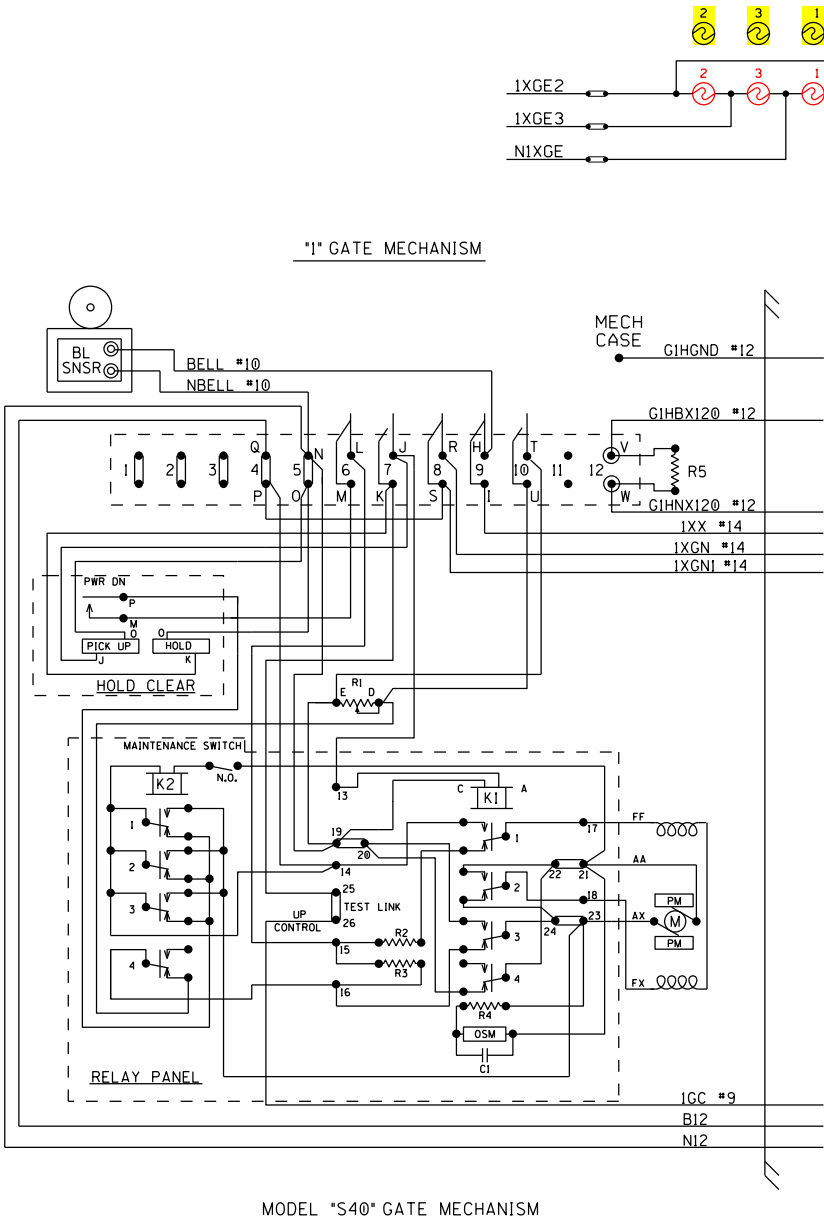
2412-0948

SMS

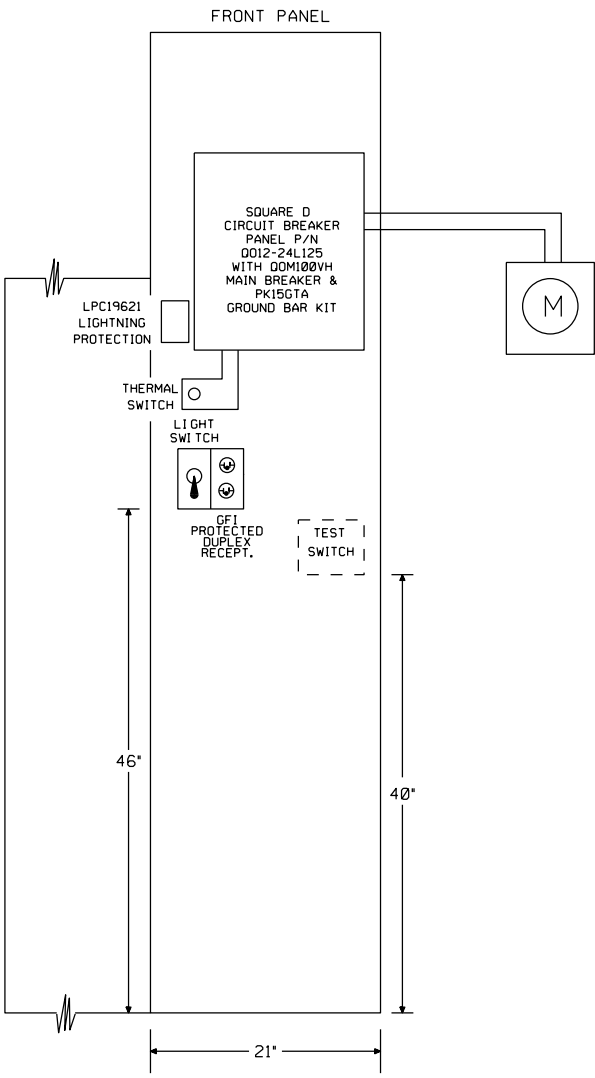
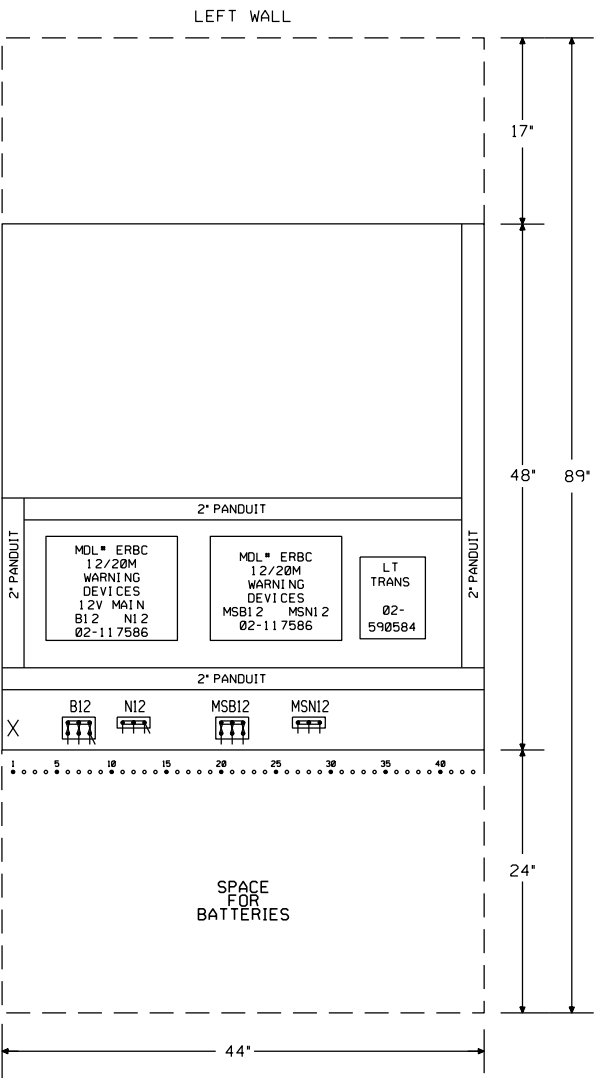
REV. 3


01-05-12

SHEET 6



REV	DATE	CKD BY
1	11/22/96	HEI



**NORFOLK SOUTHERN**

STOW ROADHUDSON, OHIO

HIGHWAY CROSSING  
FRONT AND LEFT WALL LAYOUT

ISSUE DATE: NOVEMBER 30, 1998		2412-0948
SMS	REV. 2	10-04-01
SMS	SHEET 7	

RELAY FUNCTIONS

POR	EOR	XPR	XGNR	XGNPR
12- EBX	12- EX	12- XGN	HDB13- EBX	22-NGC
15- ENX	15- EX	15- XX	HDB15- EBX	25-GC
22- EBX	32- EX	22- NGC	32- EO	
25- ENX	35- EX	25- GC	35- XGNP	
32- EBX		32-		
35- ENX		35-		

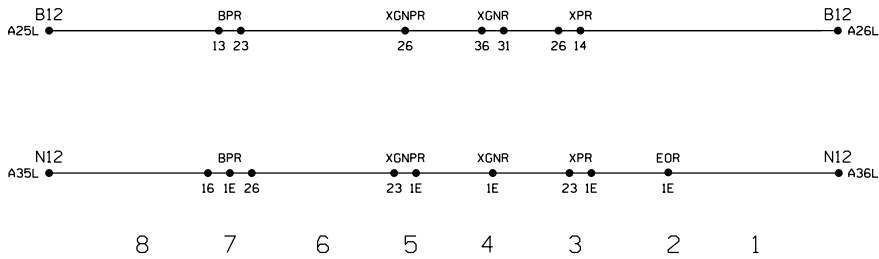
1-2 GCPR	BPR	S2W DAXPR
12- XP	12- WBPP	12- 2UAX
15-	15- NWBPP	15-
22-	22- EBPP	22-
25-	25- NEBPP	25-
32-		32-
35-		35-

S1W DAXPR
12- 1UAX
15-
22-
25-
32-
35-

\* = POR RELAY P/N A62-407 02-411542  
POR RECTIFIER P/N A53-541 02-390142 MOUNTED ON REAR OF RELAY.

RELAYS TO BE MOUNTED ON SWING-OUT RACK ON SHELF.

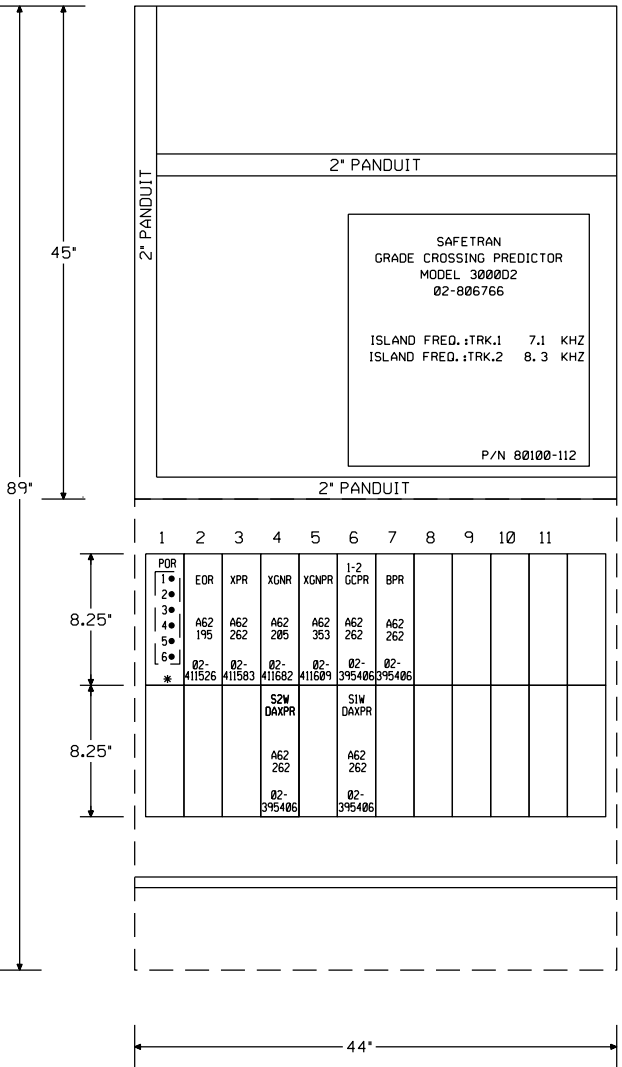
RELAY ENERGY LOOPS  
(REAR)



RELAYS

A62-407 = 02-411542 B1-PT, 6FB-HD, 100-/100:  
A62-195 = 02-411526 B1, FLASHER 4FB-HD  
A62-205 = 02-411682 B1, 2FB, 2B-HD, 210:  
A62-353 = 02-411609 B1SR (3 SEC.), 2FB, 460:  
A62-262 = 02-395406 B1N, 6FB, 500:

RIGHT WALL



REQUIRED MODULES

PART NUMBER AND MODULE NAME	UPPER BAY	LOWER BAY
80211-F (HZ) ISLAND MODULE	M1-M2	M11-M12
80012 TRANSCEIVER MODULE	M3-M4	M13-M14
80013 RELAY DRIVE MODULE	M5	M15
80214 PROCESSOR MODULE	M6	M16
80015 DATA RECORDER MODULE	M7	M17
80016-1,-2 DAX MODULE	M8	M18
80020 CONTROL MODULE INCLUDES 80017 KEYBOARD DISPLAY INTERFACE	M10	M20
80028 TRANSFER MODULE		M21

AAR TERMINALS

ISLAND MODULE	ISLAND MODULE	TRANSCEIVER MODULE	TRANSCEIVER MODULE	RELAY DRIVE MODULE	PROCESSOR MODULE	DATA RECORDER MODULE	DAX MODULE	DAX MODULE	CONTROL INTERFACE MODULE	TRANSFER MODULE
M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M21

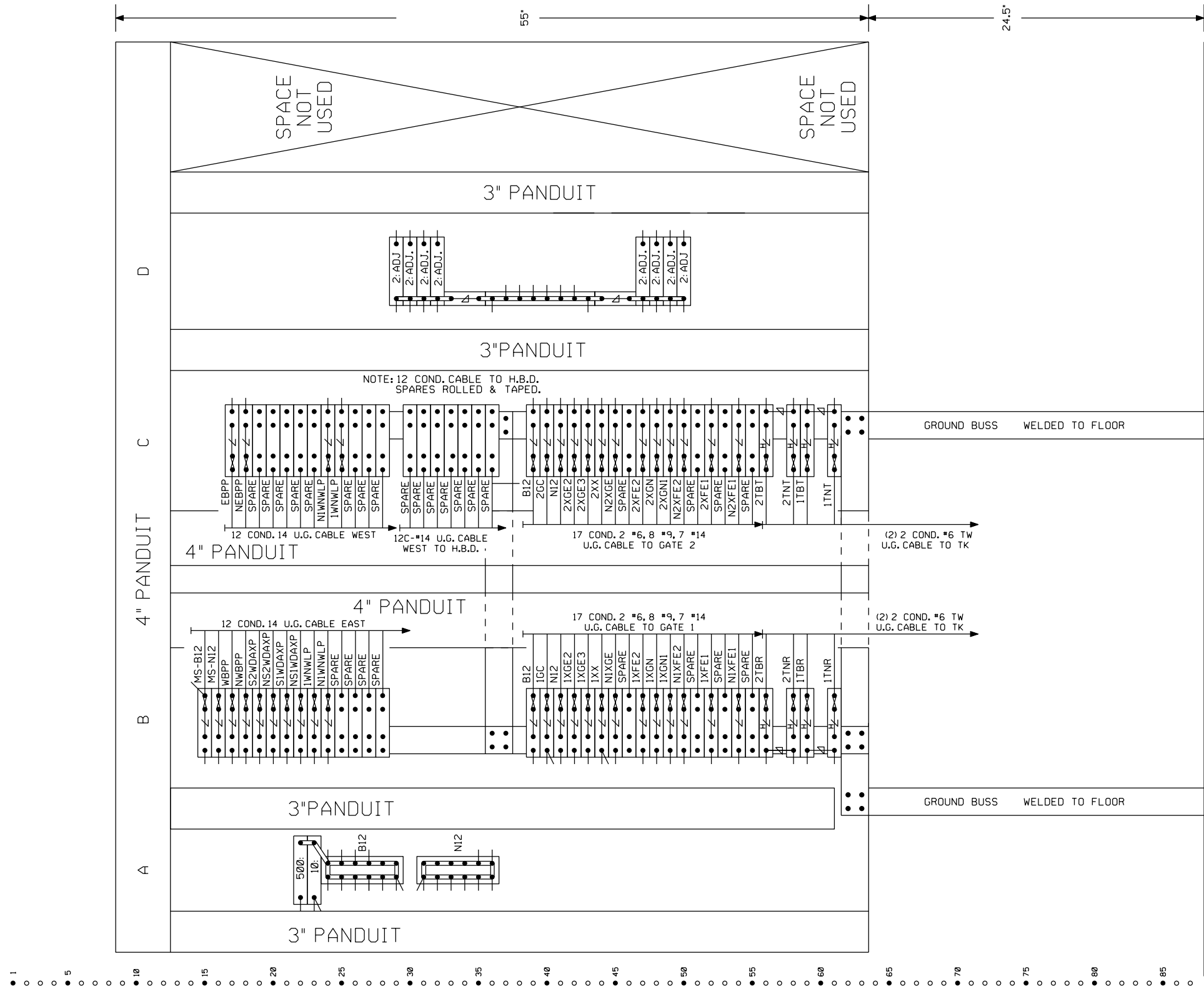
CARDFILE LAYOUT











STOW ROAD HUDSON, OHIO

HIGHWAY CROSSING  
RIGHT SIDE OF HOUSE  
RELAY RACK & FUNCTIONS

ISSUE DATE: NOVEMBER 30, 1998	2412-0948
REV. 3	SHEET 8

[illegible]

NOTES:

1: ADJ.	02-425799 - RESISTOR
2: ADJ.	02-425807 - RESISTOR
10: FIXED	02-423598 - RESISTOR
500: FIXED	02-423711 - RESISTOR
	02-036133 - 4 POST PORCELAIN BASE
	02-050753 - TERMINAL BLOCK FOR EQUALIZER
	02-048757 - TERMINAL STRIP
	02-150009 - BUSS LINK
	02-286662 - TEST LINK ASSEMBLY
	02-022316 - ARRESTOR, HEAVY DUTY
	02-025565 - ARRESTOR
	02-197950 - EQUALIZER

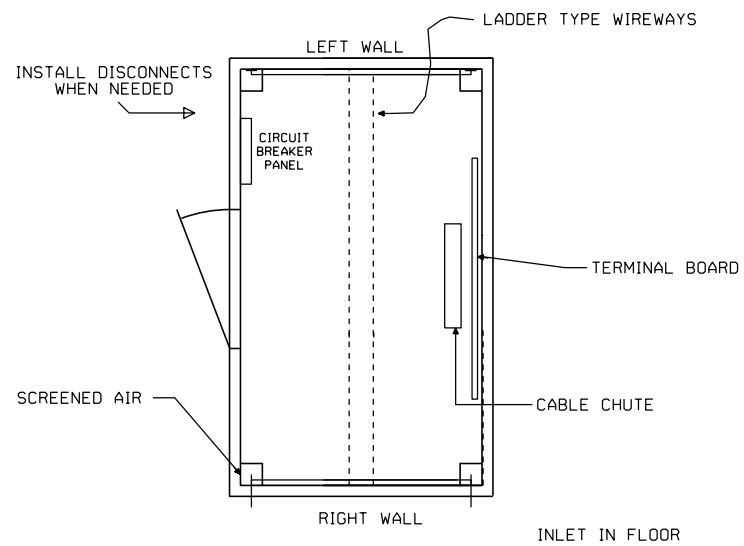
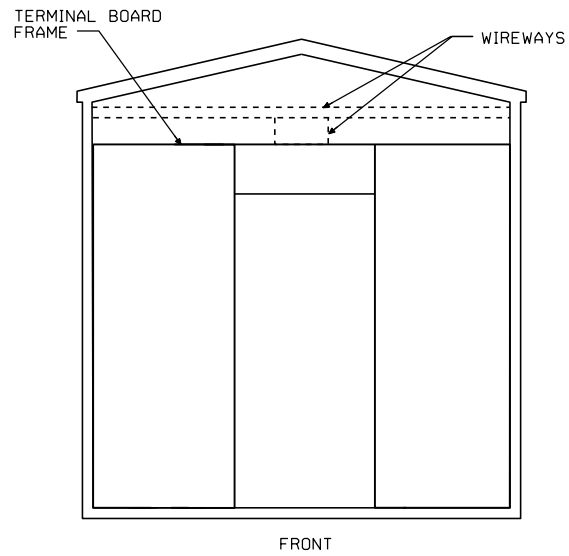
GROUND CONNECTION TO BE IN ACCORDANCE WITH STANDARD PLAN CS-9001-A

STOW ROAD

HUDSON, OHIO


HIGHWAY CROSSING  
TERMINAL BOARD ARRANGEMENT

ISSUE DATE: NOVEMBER 30, 1998				2412-0948	
SWS SWS SWS	REV. 3	01-05-12	SHEET	9	



4 x 6 STYLE BUNGALOW

REV	DATE	CKD BY
1	11/22/96	HEI



STOW ROAD

HUDSON, OHIO

HIGHWAY CROSSING  
HOUSE LAYOUT

ISSUE DATE: NOVEMBER 30, 1998		2412-0948	
REV. 1	10-04-01	SHEET	10



# OHIO RAIL DEVELOPMENT COMMISSION

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

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

December 11, 2017

Mr. Stephen J. Klinger  
Norfolk Southern  
Administrator Grade Crossing Program  
1200 Peachtree Street  
Atlanta, Ga. 30309-3597

RE: Grade Crossing Warning Device Modification  
Summit County, Stow Rd, DOT#503541T, PID#106420

Dear Mr. Klinger:

A diagnostic review was held at the above grade crossing on April 15, 2016. The crossing has been recommended to receive a LED light upgrade and replace the Island Relay Adapter module card.

Norfolk Southern (NS) 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. Please note that the railroad must provide ORDC with a plan stamped by a professional engineer licensed in the State of Ohio prior to acceptance and close out of the project.

The diagnostic review form is attached. Please note any recommendations (page 1), 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 James Tucker. James can be reached at (614) 398-6897, or [james.tucker@dot.ohio.gov](mailto:james.tucker@dot.ohio.gov), if you have any questions.

Sincerely,

Project Manager

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

Attachment: 1 (diagnostic review form)



[www.rail.ohio.gov](http://www.rail.ohio.gov)

phone: 614.644.0306

IMPROVING RAIL TODAY FOR TOMORROW'S ECONOMY



High Hazard Crossing With Active Warning Devices			
Street Name: Stow Road		County: SUM	
LHA: City of Hudson		USDOT#: 503541T	
Nearest City: City of Hudson		Hazard Rank: 4	
Roadway Information			
ADT: 11450 (2010)		Posted Speed Limit: None Listed.	
Railroad: Norfolk Southern		Number of Tracks: 2	
Train Count: 45		Speed Over Crossing: 60	
Storage Distance (Ft.): 1300		Train Detection Type: CWT	
Accidents			
Accident Factors		2 of Accidents in Last 5 Years:	
		1 of Fatalities in Last 5 Years:	
Accident Date	4/21/2013	2/23/2010	
Position of Accident	Moving over Crossing	Stopped on Crossing	
Circumstance	Rail equip. struck by highway user	Rail equip. struck by highway user	
Visibility/Time of Day	Dawn	Dusk	
Weather Conditions	Clear	Clear	
Crossing Interconnect.	No	No	
Crossing Illuminated	No	No	
Drove Around Train	No	No	
Highway User Action	Drove around the gate	Stopped on Crossing	
Alcohol/Drug Related?			
Driver Speeding?			
Other Notes: 4/21/2013: Motorist drove around gate and was struck by a train. 2/23/2010: Driver did not come to a stop until vehicle was on the crossing.			
Recommendations: City: "Do not stop on tracks" signs (both sides) on N. approach			
Investigate line delineators			
Consult internally to address salting			
RR = # of tracks sign (S. approach)			
OROC: (with RR) LEDs			

Further consultation w/ pre-emption/loop detector



## Existing Traffic Control Devices

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

## Railroad Data

Railroad Characteristics	Initial Information (from database)	Revised
Total trains per day	45	70
< 1 per day		
Day thru trains	20	35
Night thru trains	20	30
Daytime switching movements	5	05
Nighttime switching movements	0	
Total number of tracks	2	
Number of main tracks	2	
Number of other tracks		
Maximum train speed	60	79
Typical train speed		
Amtrak		yes

If multiple tracks, can two trains occupy crossing at the same time? ☒ Yes ☐ NoCan one train block the motorists' view of another train at crossing? ☒ Yes (Explain below) ☐ NoCan one or more tracks be eliminated through the crossing? ☐ Yes ☒ NoAre 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)

County: SUM

Route: Stow Road

DOT#: 503541T

Date: 4/15/2016

**Roadway Data**

Local Highway Authority: City of Hudson

Roadway Characteristics	Initial Information (from database)	Revised
Average daily traffic 11450 (2010)		15000
Highway paved	Yes X No	Yes No
Roadway Surface: <u>Blacktop</u> Gravel Concrete Other _____		
Roadway width: _____ ft.		
Number of highway lanes	2	
Urban or Rural	Urban	
Vehicle Speed: _____ MPH <u>35</u>	Not Listed.	
School Bus Operation: No Yes X Amount <u>4</u> <i>will get info from school dist.</i>		
Hazardous Materials Trucks: No Yes X Amount <u>.04</u> <i>A signed Truck Route</i>		
Shoulders: No <u>Yes</u>		
Is the shoulder surfaced? No <u>Yes</u>		
Is there existing guardrail along roadway in crossing vicinity? No <u>Yes</u>		
Is stopping site distance adequate? (See Table 2) <u>Yes</u> No If no, deficient approach(es) _____		
Quadrant _____ Curb and Gutter: Functional (Curb height = 4" or more) Non-functional (Curb height = Less than 4") <u>None</u>	Quadrant _____ Curb and Gutter: Functional (Curb height = 4" or more) Non-functional (Curb height = Less than 4") <u>None</u>	
Pedestrians: No <u>Yes</u> <i>Bike Path</i>		
Is sidewalk present? <u>No</u> Yes		
Is there a nearby intersection that could cause queuing over the crossing? No <u>Yes</u>		
If yes, Street Name <u>RAVENNA ST.</u> Distance _____		
Is this intersection signalized? No <u>Yes</u>		
Are the signals currently interconnected with the existing crossing warning devices? <u>No</u> Yes		
Is there a 'Do not Stop on Track' sign? No <u>Yes</u> <i>2 N.B. only</i>		
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? <u>No</u> 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: <u>No</u> Yes		
Explain reasons:		
Type of Development		
Open Space Institutional Industrial Commercial <u>Residential</u>	Location of nearby schools: <i>2 miles Seton Catholic</i>	

County: SUM

Route: Stow Road

DOT#: 503541T

Date: 4/15/2016

**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.): *Type of detection present*

Environmental:

Other:

SOM

Stow Rd

DOT # 503541T

4-15-16

## Field Sketch

⊗ = Power

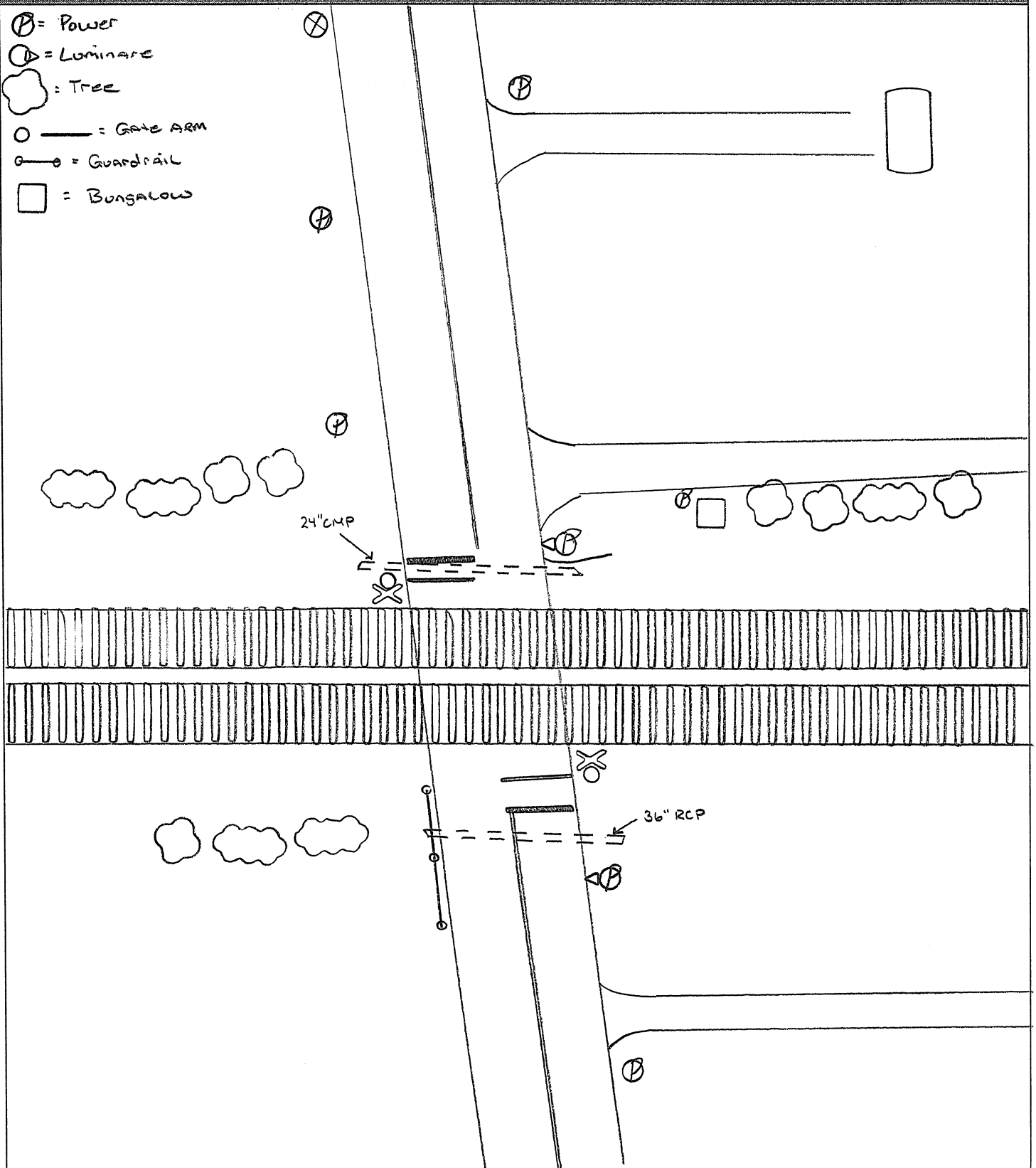
⊙ = Luminare

☁ = Tree

○ — = Gate Arm

— ⊙ = Guardrail

□ = Bungalow



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

Sketch by: ST

### 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.

### 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.





Diagnostic Review  
(SUM – Stow Road, DOT # 503541T)

4/15/2016

Please print:

NAME	AGENCY	EMAIL ADDRESS	PHONE
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**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**7/20/2018 12:57:48 PM**

**in**

**Case No(s). 18-1137-RR-FED**

Summary: Application In the Matter of a Request for an Upgrade at the Norfolk Southern Railway Crossing, Stow Road DOT#503-541T, in Summit County, Ohio. electronically filed by Mrs. Jill A Henry on behalf of PUCO/Rail Division