NEW MEXICO DEPARTMENT OF TRANSPORTATION

NEW MEXICO SECTION 130 FEDERAL AID HIGHWAY-RAIL GRADE CROSSING SAFETY IMPROVEMENT PROGRAM PROCEDURES AND GUIDELINES MANUAL

NMDOT RAIL BUREAU
November 5, 2025

This New Mexico Department of Transportation (NMDOT) Section 130 Highway-Rail Grade Crossing Safety Improvement Program “Procedures and Guidelines” Manual is approved as to form and sufficiency by the NMDOT Cabinet Secretary or Designee.

By: _____ DocuSigned by: Ricky Serna 5910E8A6255842F... _____

Ricky Serna, Cabinet Secretary

Date: 02/03/26 _____

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Introduction

The New Mexico Section 130 Highway-Rail Safety Improvement Program ("Section 130 Program") is a federally-funded initiative aimed at eliminating hazards associated with existing highway–rail grade crossings ("Crossings"). The Section 130 Program is authorized by Title 23, United States Code, Section 130 (23 U.S.C 130) and is administered by the New Mexico Department of Transportation (NMDOT) Rail Bureau.

The objective of the Section 130 Program is to enhance safety for motorists, bicyclists, and pedestrians at Crossings. The Section 130 Program is a collaborative effort involving the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), NMDOT, and railroad companies conducting operations within the State of New Mexico, and local municipalities or counties.

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Section 130 Process

Railroad grade crossings across the State are identified for potential safety improvement initiatives by the NMDOT Rail Bureau, using risk-index data from the Federal Railroad Administration. This project selection process also incorporates field-visit observations and concerns from railroads, NMDOT Districts, tribal agencies, local county and municipal agencies (local agencies), and citizens.

An initial identification of potential projects is achieved by utilizing available data sources to pinpoint crossings that pose a high hazard potential. The evaluation considers a range of factors, including, but not limited to:

- Accident history
- Train volume and speed (including passenger trains)
- Vehicle volume and speed
- Physical conditions of crossing
- Passive or Active Warning
- School bus routes
- Pedestrian issues
- Bicycle issues
- Crossing geometry (including relation to roadway intersections and traffic signals)

The Rail Bureau conducts a systematic evaluation of each identified grade crossing to determine its eligibility and priority in the Section 130 project programming. Initial field assessments of the crossings may be necessary to support this determination. The prioritization of potential projects is based on several key factors, including accident history, the presence of school bus routes, pedestrian activity, hazardous materials and truck transport routes, FRA accident prediction rankings, and the physical condition of the crossings.

A compilation of recommended projects is subsequently forwarded to the NMDOT Cabinet Secretary for final approval. Once approved, the Rail Bureau incorporates them into the State Transportation Improvement Program (STIP) to ensure funding allocation.

Crossing Selection

Not all crossings are eligible for funding under the Section 130 Program. To be eligible, these crossings must be owned and/or maintained by a public authority. Crossings that do not meet these criteria are ineligible for funding and include the following:

- Construction of New Crossings
- Private Crossings
- Crossings used only by Light Rail Vehicles
- Crossings for Station Platforms
- Quiet Zone Applications by local public agencies (defined in 49 CFR Part 222)
- Demonstration or Pilot Projects

Grade-separation projects are eligible for funding under the Section 130 Program; however, they are also not classified within the Section 130 program due to their substantial costs. Instead, these projects may be considered under the Highway Safety Improvement Program (HSIP), which is a federal funding initiative distinct from the Section 130 Program.

Corridor Projects

A Corridor Project consists of two or more crossings that are located in close proximity to each other or within a single city or county jurisdiction. These projects are typically initiated to address specific improvements at multiple crossings without necessarily addressing all identified hazards at each individual location. This approach may arise from changes in standards, such as the Manual on Uniform Traffic Control Devices (MUTCD), or from the recognition that certain identified improvements are best implemented simultaneously across multiple locations to promote efficiency and reduce project costs. Examples include upgrades to signal circuitry or replacing older incandescent flashing lights with Light-Emitting Diodes (LED) lamps to improve visibility for motorists approaching the railroad crossing.

Corridor Projects are usually proposed by local agencies or railroads. Although not required, a substantial financial contribution or matching funds from a railroad or local agency can significantly enhance the feasibility of a Corridor Project.

Review Process

The Rail Bureau conducts a comprehensive review of each Section 130 project request submission to assess its eligibility for funding. The evaluation involves various factors, such as federal program requirements, eligibility criteria (including verification of whether a crossing is public or private), availability of funding, and whether the proposed improvements fall within the defined scope of work. Subsequently, the staff evaluates the crossing conditions and the characteristics of the area it serves. Relevant considerations include the type of development, current development plans, and use of the crossing by pedestrians, school buses, hazardous materials (hazmat), and other heavy truck/bus traffic. Additional factors include FRA Accident Prediction Formula rankings, train volume and speeds, vehicle counts and speeds, accident history, site distance limitations, crossing geometry, and existing warning devices. Field visits are conducted as necessary to enhance the evaluation process. Crossings are prioritized based on their hazard potential and most of their immediate needs.

Once a final project list is established, the projects are submitted to the NMDOT Cabinet Secretary as recommendations for approval. Upon approval, projects are programmed into the State Transportation Improvement Plan (STIP) to secure the necessary funding.

The Rail Bureau arranges diagnostic field reviews of each approved project in collaboration with the respective railroad, NMDOT District, or other local roadway authority (road owner) agencies. Participants in each diagnostic review engage in discussions regarding suggested safety improvements and relevant issues, ultimately reaching a consensus on the scope of the project. Issues associated with railroad crossing issues are identified on-site, and diagnostic attendees agree on the improvements to be incorporated.

Following the diagnostic reviews, the Rail Bureau then finalizes the scope of work and requests project estimates from the respective railroads or roadway authorities, contingent on their designated responsibilities for the various components of a given crossing. Based on these formal estimates, contract agreements are prepared and executed. For more complex projects, separate agreements may be established for design and construction phases. Once funds are obligated through the Federal Highway Administration (FHWA), railroads are provided "Authorization to Proceed" letters in order to begin work.

Safety Improvement Categories

Crossing Elimination

Railroad Track Abandonment:

Railroad track abandonment occurs when railroad operations determine that a specific segment of track is no longer necessary for operations. In such cases, a formal submittal or designation that the track is abandoned is made by the railroad and the tracks are typically dismantled or severed from the mainline. It is important to note that Section 130 funds are not exclusively allocated for the removal of grade crossings on previously abandoned tracks unless such removal is a part of a Section 130 project aimed at enhancing the safety of an adjacent active track crossing. The responsibility to remove a completely abandoned crossing rests with coordinated efforts between the track owner and the appropriate road authority.

Closure:

The closure and removal of a railroad crossing can be regarded as a viable strategy to eliminate the conflict between vehicular traffic and train operations. This process includes decommissioning of the warning devices, removing the crossing surface and approaches, and the construction of barriers or fencing as necessary. Additionally, appropriate signage may be installed to indicate that the crossing has been officially closed.

Up to $100,000 in Section 130 funding is available to provide a match for a crossing closure incentive payment offered by a railroad company to the local agency, intended for the permanent closure of the crossing. The portion of the crossing closure incentive payment received by the local agency from the railroad company may be used at the discretion of the local agency, such as road ,school, or utility improvements. The portion of the crossing closure incentive payment made by NMDOT using Section 130 funding must be allocated by the local agency for a transportation safety project of their choice, provided the project aligns with the criteria established for transportation safety project as defined by FHWA.

Crossing Safety Improvements

Warning Devices:

The Section 130 Program will provide funding for the upgrades of warning devices. This includes initiatives such as the replacement of standalone flashing lights with a combination of flashing lights and gates or cantilevers, as well as the addition of lights to existing masts or cantilevers.

LED flashing lights: All new installations of warning devices will incorporate LED lighting. In instances where the warning devices do not require replacement, existing incandescent flashing lights may upgrade to new LED flashing lights.

Track Circuitry: Train detection circuitry integrated within the track, as well as associated signal circuitry, may be upgraded where necessary to improve the effectiveness and reliability of the warning system.

Interconnection: Traffic signal preemption may be installed or modified where deemed necessary in locations where grade crossings are situated adjacent to traffic signalized road intersections.

Crossing Surfaces:

The Section 130 Program provides funding for the refurbishment of grade crossing surfaces, specifically the section encompassing the track between end of ties. This funding is available when it is determined that the crossing surface has exceeded its anticipated and useful lifespan, and that routine maintenance measures would not sufficiently correct the existing issues.

Roadway Crossing Approach Improvements

Active Advanced Warning:

A train-activated warning device is to be installed in advance of the crossing. This may be a flashing yellow light located at the passive advanced warning sign. The type of active advance warning device will be determined during the field diagnostic meeting.

Medians:

The installation of medians is anticipated to reduce the likelihood of motor vehicles circumventing lowered crossing gate arms and may also contribute to a decrease in vehicle speed as drivers approach crossings. Medians may also be necessary to reduce the length of gate arms. Gate arms typically should be no longer than 30 feet to avoid issues with gate arms breaking or getting hung up during high wind events. The specific type, width, and length of medians may be adjusted based on unique field conditions present at each location.

Illumination:

Installing street lighting can significantly improve visibility at the crossing at night.

Signage and Striping:

Signage and striping may be installed in accordance with the current MUTCD, as well as any applicable state or federal regulations, and to provide for site-specific conditions.

Road Geometry Improvements:

The reconstruction or improvement of road approaches leading to the crossing.

Traffic Control Signals:

Railroad crossings are often located near road intersections. The installations of traffic control signals at these adjacent intersections may be necessary, or modifications to existing traffic signal designs may be warranted.

Utility Relocation:

Utilities, such as overhead wirelines, may require adjustments or relocation to ensure adequate clearance for warning devices at the crossing.

Pedestrian Crossing Improvements:

Improvements may include detectable warning strips, pedestrian flasher lights, pedestrian gates, channelization, emergency exit swing gates, enhancements to crossing surfaces, and signage and striping. Improvements shall comply with the Americans with Disabilities Act (ADA).

Preliminary Engineering:

Preliminary Engineering (design phase) for railroad crossing improvements can be funded through the Section 130 Program under a Preliminary Engineering Agreement. This agreement covers the necessary work to develop comprehensive construction plans, specifications, and estimates required to initiate construction activities. The scope of work includes identifying crossings, conducting field diagnostic reviews, locating utilities, surveying, designing, and other related activities.

Other items:

Certain situations may require submitting additional applications based on specific field conditions. These conditions may include de-acceleration or acceleration lanes, four-quadrant gates and removal of sight-distance obstructions wherever possible.

Non-Eligible Items under Section 130

A road authority may choose to implement additional improvements at its own expense alongside t the Section 130 work. The goal of these improvements is to potentially lower costs related to highway traffic control costs and railroad flagging protection. It is essential that these construction activities are coordinated between the railroad and road authorities. Improvements that are not specifically included in the recommendations for the Section 130 funding will not be covered by the Section 130 Program.

In addition, Section 130 funding cannot be used for the following items:

- Station crossings
- Construction of new crossings
- Widening of a roadway for capacity improvements
- Purchase of right-of-way or easements
- Costs incurred by the railroad or public road authority prior to execution of a project agreement with NMDOT (these costs cannot be reimbursed by NMDOT).
- Environmental studies
- Significant geometric changes such as relocation or realignment of roadway or railroad track.
- Railroad crossing maintenance costs**†**.
- Structures providing grade separation of road from railroad **‡**.

† *Section 130 funds will not be used for routine maintenance costs for crossing surfaces, approaches or flashing lights and gates. The railroad is typically responsible for maintaining the crossing surface between the rails and between end of ties, crossbuck assembly signage and flashing lights and gates. Beyond this, the road owner is typically responsible for maintaining the road surface, pavement marking, striping, and advanced warning signage.*

‡ *While technically eligible for Section 130 funding, grade separation requests cannot be accommodated under the Section 130 Program due to the large magnitude of costs for a single project. Grade Separation requests will be referred to the HSIP selection committee for their consideration.*

Project Construction

Upon the recommendation by the Rail Bureau and subsequent approval by the NMDOT Cabinet Secretary, a project will be programmed under the State Transportation Improvement Program (STIP) to secure funding. The railroad or roadway authority is responsible for providing a detailed cost estimate for the project. NMDOT will establish a formal agreement with the railroad or roadway authority to facilitate construction. For more complex projects, separate agreements may be executed for design and construction.

The Rail Bureau will obtain the necessary federal certifications for project construction and submit both the agreement and certifications to the FHWA for project authorization. Once authorization is granted, the Rail Bureau staff will issue a formal "Authorization to Proceed" letter to the railroad or local road agency to begin construction. The railroad will be tasked with obtaining any required permits and approvals from the Roadway Authority and ensuring the implementation of all necessary temporary traffic control measures. The Rail Bureau will conduct one or more inspections to verify that the construction work meets the completion standards.

It is imperative that the railroad or roadway authority completes construction work and invoices in a timely manner to avoid transitioning the project into an 'inactive' status. Proper and complete invoices may be submitted to NMDOT on a progressive basis for reimbursement as costs are incurred. Projects that experience inactivity over time may lead to the FHWA withdrawing remaining federal funds. In such cases, the railroad or roadway authority would be liable for any costs incurred that remain unreimbursed at the time of fund withdrawal by the FHWA.

A Section 130 project is not considered fully complete until the NMDOT formally closes the project out with FHWA. Closure of a project is contingent upon the NMDOT conducting a final and satisfactory field inspection and upon the railroad or local agency submitting and paying all associated invoices. To ensure full reimbursement of the project expenses under the Section 130 agreement, it is imperative that all outstanding invoices be submitted to the NMDOT within the specified timeframe following construction completion, in accordance with the terms of the Section 130 agreement. Timely project closure is essential to facilitate the return of any remaining project funds to the FHWA for allocation towards other Section 130 projects.

NMDOT Section 130 Program Recommended Minimum Installation Guidelines

These minimum guidelines are designed to promote consistency and uniformity in projects associated with NMDOT Section 130 projects. It is essential to acknowledge that these standards are not meant to supplant the sound judgment and expertise of professional highway-rail grade crossing engineers and designers. The implementation of these standards should incorporate informed judgment and engineering experience through a collaborative design team that spans multiple disciplines and agencies, tailored to specific conditions and scenarios encountered in the field. Additionally, individual railroads may implement their own standards that may exceed these minimum guidelines.

All highway-rail grade crossings must adhere to all applicable regulations set forth by the FRA, New Mexico Public Regulation Commission, as well as any other applicable Federal or State regulatory requirements. Compliance with the MUTCD standards and recommendations. This manual is not meant to be a comprehensive source of recommendations, standards, rules, or regulations.

Crossing surfaces:

When a crossing surface has surpassed its functional lifespan and a replacement is deemed necessary under the Section 130 Program, the new crossing surfaces should at a minimum incorporate the following elements:

- Concrete panel crossing surfaces for the full width of the roadway, including shoulders, plus at least three feet beyond the roadway on each end of the crossing surface. The proposed new crossing width should consider whether the road authority has near-term plans to install sidewalks where none currently exist. Custom curved crossing panels should be used for crossings in curves with a three-degree or greater radius.

- Roadway approaches should be smoothly transitioned from the existing road surface to the edge of the new railroad crossing surface. For paved roads, hot mix or warm mix asphalt should be used in accordance with the road authority's pavement mix and design standards. Generally, the new asphalt transitions should consist of a thickness ranging from 6 inches to 7 inches, extending a length of 4 feet to 25 feet, depending on existing pavement conditions. The existing pavement must be appropriately saw-cut and removed prior to the application of the new transition asphalt.

- New track panel consisting of new 10 foot long hardwood timber ties on 19.5 inch centers, new anchors, tie plates, spikes or elastic fasteners extending to the limits of the 10' ties (preferred). Solid anchors should be applied to keep ties in place.

- Minimum rail size of 115 pounds should be used. Beyond this minimum, the rail should match the adjoining rail sizes as approved by the owning railroad.

- No bolted rail joints should be allowed within the rail crossing. Welded rail joints should be avoided within the crossing where possible.

- No bolted rail joints should be within 20 feet from the edge of the crossing.

- New 10 foot hardwood transition ties should extend out on each track approach from the ends of the new crossing surface a distance of 10 ties.

- Sufficient subgrade compaction is needed to prevent the track structure from sinking (preferably a hardpan under the track such as an 8 inch layer of asphalt)

- Design should be considered for proper drainage; water should be diverted away from track. The crossing surface should not act as drainage for the highway.

- Sufficient full-depth ballast a minimum of 8 inches to 12 inches under the ties.

Active warning devices (flashing lights and gates):

Each passive crossing, which is defined as those crossings that utilize only signage for warning purposes, shall be evaluated under the Section 130 Program for the potential installation of an active warning system, such as flashing lights, or a combination of flashing lights and gates, if deemed necessary **†.** Crossings that currently have existing active warning devices may also be assessed for

upgrades to current standards or product availability as older signal components may no longer be manufactured or supported.

New flashing lights and gates installed at Section 130 Program crossings should have:

- 12" LED lights
- Constant Warning Time train approach detection circuitry ǂ.
- Flashing light and gate masts should be installed between 12' and 15' distance from the centerline of track. Distance of flashing lights and gate mast from the edge of road shall be governed by MUTCD by standards.
- Signal Control boxes should be installed a minimum of 30 feet from edge of road and at least 25 feet from the centerline of the track.
- Overhead or Cantilevered lights and structures should not contain break-away posts. Frequency of oversized truck loads need to be considered when determining vertical clearance.
- Placement of active warning devices should comply with current MUTCD standards.
- Crossing signage should comply with current MUTCD standards.

Passive Crossing Signage:

The installation of passive crossing signage as part of a Section 130 Program must adhere to the current standards outlined in the MUTCD, and relevant regulations set forth by the FRA. This signage should be appropriately sized and positioned in accordance with these established guidelines:

- Retro reflective crossbuck (R15-1), required at both passive and active warning crossings.
- Retro-reflective yield sign (R1-2). A stop sign (R1-1) may be placed in lieu of a yield sign due to field conditions and engineering judgements. Required at passive warning crossings only.
- Emergency Notification System (ENS) sign facing each direction of traffic that contains the unique USDOT crossing number for the crossing, a railroad emergency phone number, and milepost and/or road name. Required at both passive and active warning crossings.
- Retro-reflective 'multiple track' sign (R15-2P) if more than one track exists at crossing. Required at both passive and active warning crossings.
- Signage should be mounted on break-away posts or other collision protection measures and should be mounted at least 15 feet from edge of track.
- All signs described above should be mounted, where possible, on the same post facing each direction of traffic at the crossing and installed on the right side of the roadway of each approach. The post shall also contain retro-reflective strips. This is known as the "Crossbuck Assembly". See Exhibit A for signage examples.

- Crossbuck Assembly signage is typically the maintenance responsibility of the railroad, once installed. In lieu of Section 130 assistance, it is the railroad's responsibility to install Crossbuck Assemblies at crossings at their own cost unless set forth otherwise in a crossing agreement between the railroad and the road owner.

- Placement of passive warning signage shall comply with current MUTCD standards.

Advanced Crossing Warning Signage and Striping:

Advanced Warning signage and striping shall comply with MUTCD standards and will typically consist of:

- Advanced Warning sign (W10-1) placed in advance of each approach to the railroad crossing, or in the case that the approach is less than 75 feet from an intersecting highway, the Advanced Warning Sign (W10-2, W10-3, W10-4)) shall be installed on the intersected highway on each approach to the highway intersection.

- Advanced warning striping should be placed typically adjacent to the Advanced Warning sign (W10-1). Stop bar pavement markings should be placed immediately in front of the crossbuck assembly or flashing lights and gate mast, but no closer than 15' from the rail, indicating to vehicles where to come to a safe stop in order to look for or wait for trains to pass. This signage is typically the maintenance responsibility of the road authority (i.e. City, County, or State) that owns the road once installed under the Section 130 Program.

- Railroad crossings should be signed and striped as a "No Passing Zone".

- In lieu of Section 130 assistance, it is typically the road owner's responsibility to install signage and striping at their cost. See Exhibit A for signage examples. See Exhibit B for a striping example.

- Placement of advanced warning signage and pavement markings should follow current MUTCD standards.

Other Warning Signage:

The installation of additional signage may be necessary at a railroad crossing, such as "Do Not Stop on Tracks" or "Stop Here on Red". These signs are commonly used at locations where a grade crossing is situated in close proximity to a highway intersection. The responsibility for the installation and maintenance of such signage typically falls to the road authority, which incurs the costs. The need for these additional signs can be determined from a field diagnostic review. See Exhibit A for sign examples.

Medians:

Medians must possess adequate length to discourage vehicles from driving around lowered gates. Although no specific regulations establish a minimum length, it is advisable to implement a minimum of 100 feet in length, except in instances where adjacent roadway intersections or nearby driveways make such a length unattainable. In these circumstances, a minimum of 60 feet in length is preferred. Medians should have non-traversable curbs on roads where speed limits are below 45 mph and where road width or other factors permit. The use of delineators attached to the median is also recommended to improve visibility and to encourage vehicles to slow on approach to the crossing. In situations where non-traversable curbs are not permitted or possible, or as a cost-effective alternative, utilization of "Qwick Kurb" may be an option to considered, although if not properly maintained, Qwick Kurb can quickly loose its intended purpose. It is essential that the end of the median is positioned no closer than 10 feet from the center-line of track. While the end of the median may be placed further than 10 feet from the centerline of track, it must not exceed the distance of the gate masts.

Quad Gate installations:

Quad Gate installations involve the implementation of a gate at each entrance and exit quadrant of a crossing. These installations are designed to prevent vehicles from circumventing lowered gates, a common issue associated with standard two gate installations. Quad gate installation are regarded as more effective solution than the use of medians; however, they also entail significantly higher installation cost. It is important to note that a railroad may stipulate that the requesting entity assumes responsibility for the costs of associated with maintenance of any additional exit gate installations.

† *Not all passive crossings may have conditions that will warrant the best use of funds for installation of lights and gates. Considerations will include factors such as sight distance for motorists while approaching or stopped at a crossing, train speeds, train volumes, and roadway speed and traffic volume (is a crossing heavily used in a commercial, residential, or institutional area, or is the crossing rural with very few users?)*

‡ *Constant Warning Time approach circuitry may not be required in certain field conditions where heavy switching activity exists near industry tracks or yards, or on certain sidings, or where the track speed is approximately 10-15 mph.*

END OF TEXT DOCUMENT

Exhibit A-1 **Figure 8B-1. Regulatory Signs and Plaques for Grade Crossings MUTCD 11th Edition**

Figure 8B-1. Regulatory Signs and Plaques for Grade Crossings

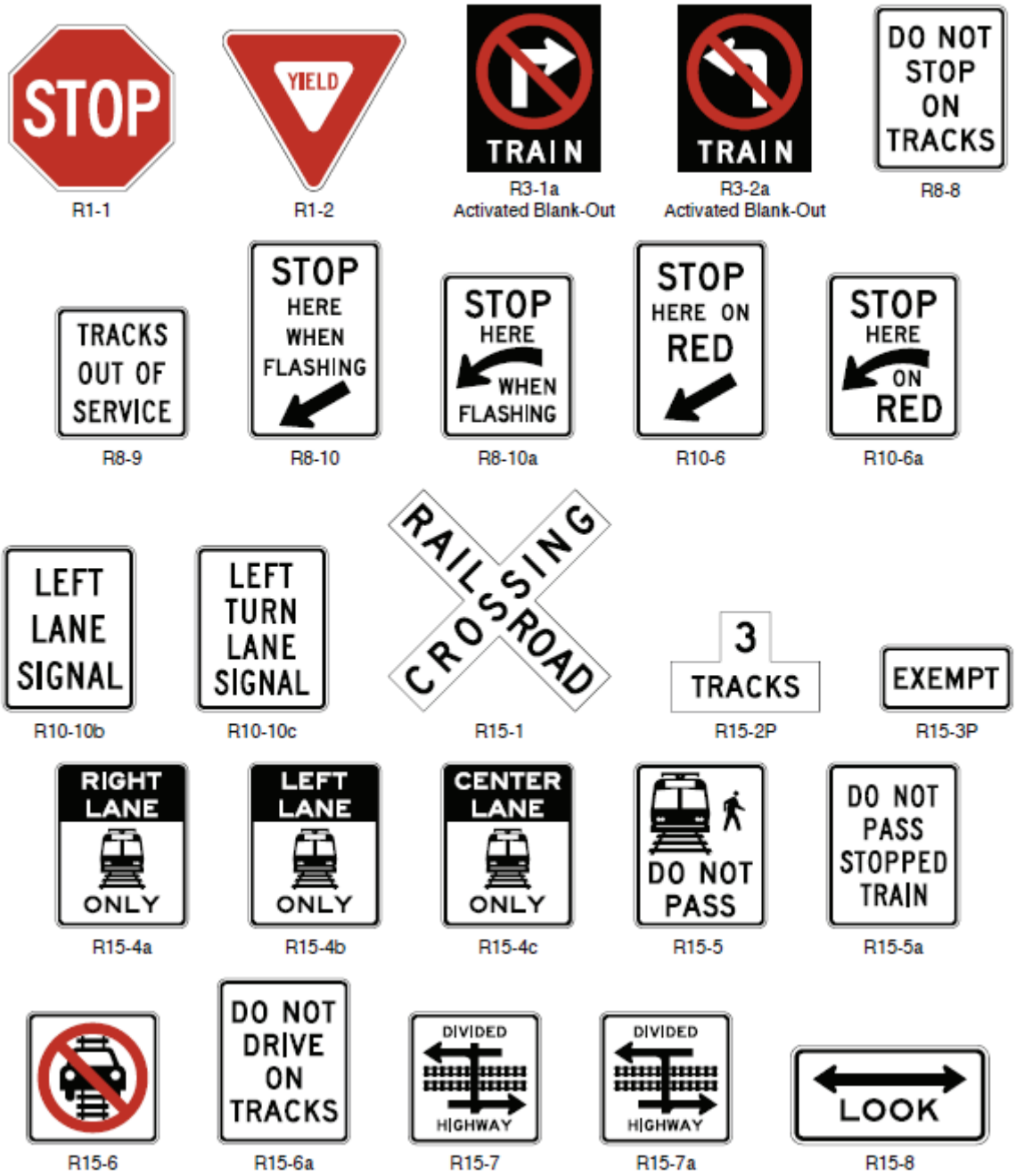
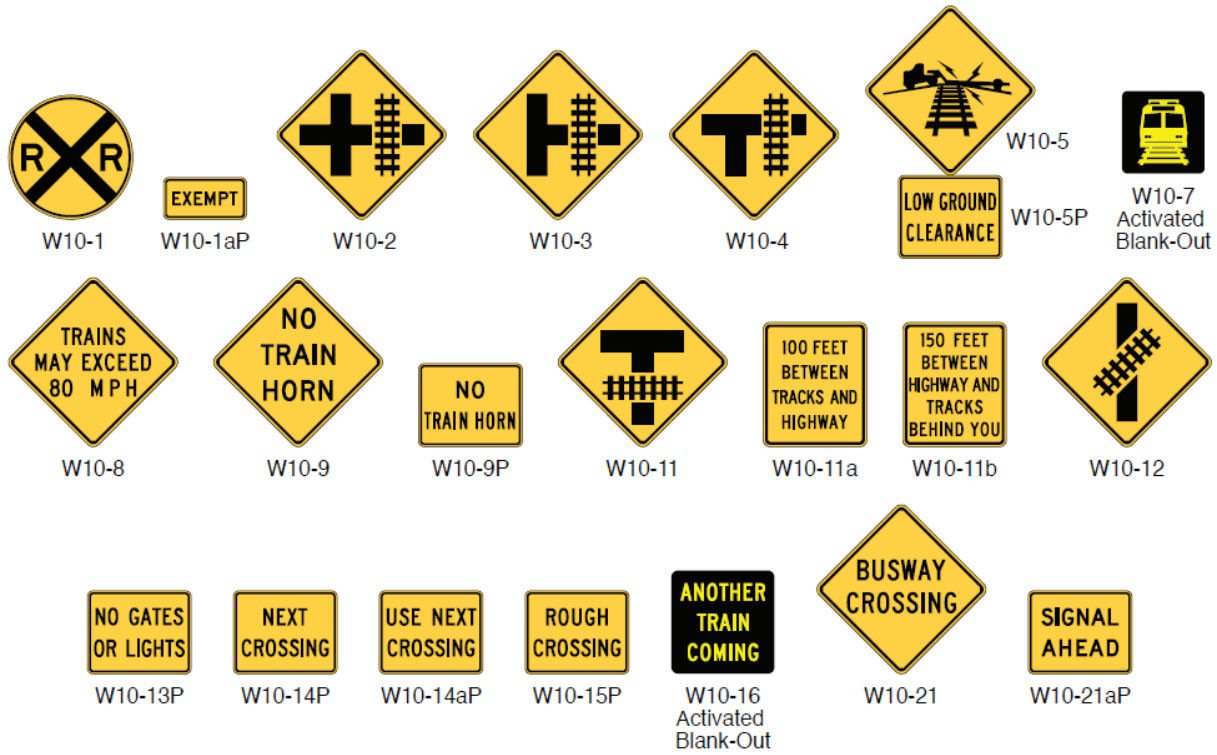


Exhibit A-2 **Figure 8B-4. Warning Signs and Plaques for Grade Crossings MUTCD 11th Edition**

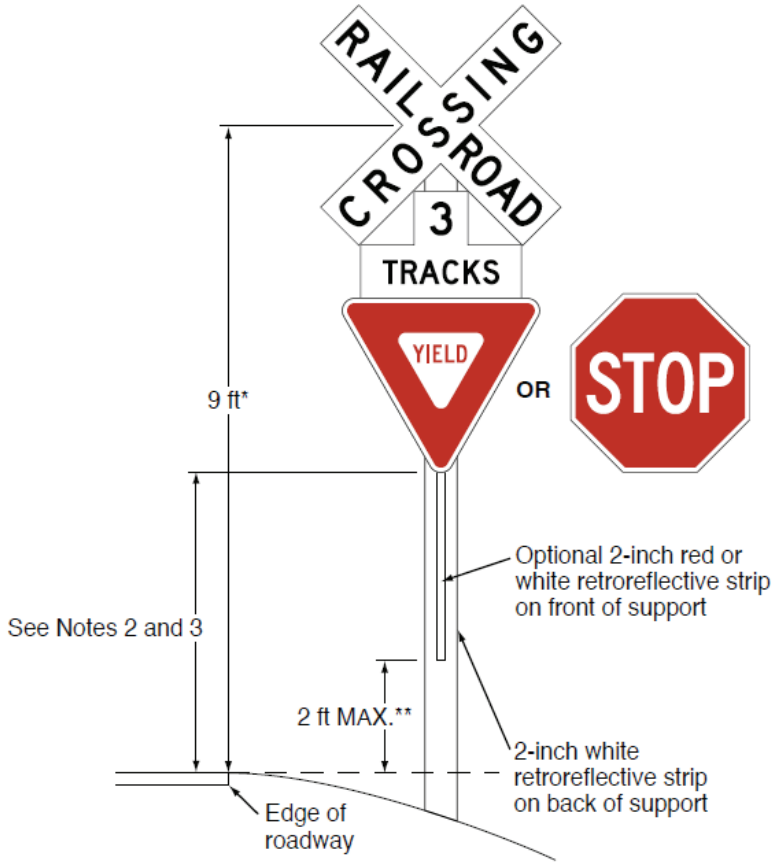
Figure 8B-4. Warning Signs and Plaques for Grade Crossings



Note: The W10-11 sign is a W10-3 sign modified for geometrics. Other signs can be oriented or revised as needed to better portray the geometrics of the roadways and the tracks.

Exhibit A-3 Figure 8B-2. Crossbuck Assembly with a YIELD or STOP Sign on the Crossbuck Sign Support Crossings - MUTCD 11th Edition

Figure 8B-2. Crossbuck Assembly with a YIELD or STOP Sign on the Crossbuck Sign Support



* Height may be varied as required by local conditions and may be increased to accommodate signs mounted below the Crossbuck sign

** Measured to the elevation of the near edge of the roadway

Notes:

1. YIELD or STOP signs are used only at passive crossings. A STOP sign is used only if an engineering study determines that it is appropriate for that particular approach.
2. Mounting height shall be at least 4 feet for installations of YIELD or STOP signs on existing Crossbuck sign supports.
3. Mounting height shall be at least 5 feet for new installations in rural areas and at least 7 feet for new installations in areas where parking or pedestrian movements are likely to occur.

Exhibit B-1 Figure 8C-1. Example of Placement of Warning Signs and Pavement Markings at Grade Crossings - MUTCD 11th Edition

Figure 8C-1. Example of Placement of Warning Signs and Pavement Markings at Grade Crossings

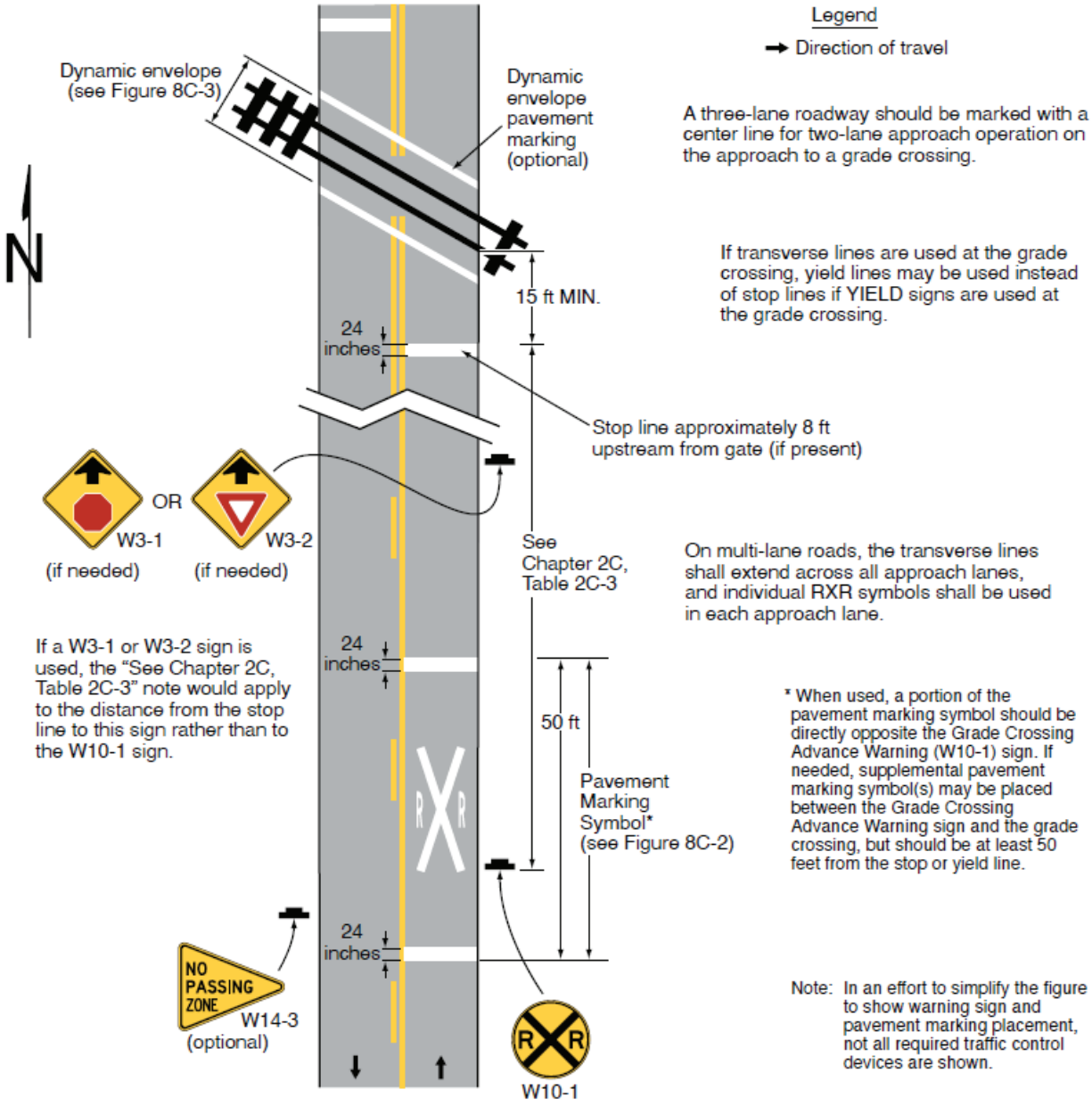
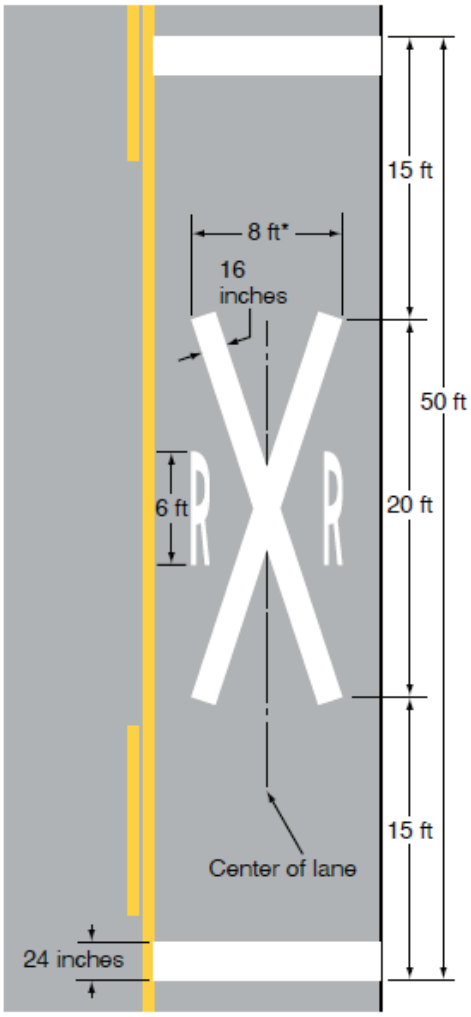


Exhibit B-2 Figure 8C-2. Grade Crossing Pavement Markings - MUTCD 11th Edition

Figure 8C-2. Grade Crossing Pavement Markings

A – Grade crossing pavement marking symbol



*Width may vary according to lane width

Note: Refer to Figure 8C-1 for placement

B – Grade crossing alternative (narrow) pavement marking symbol

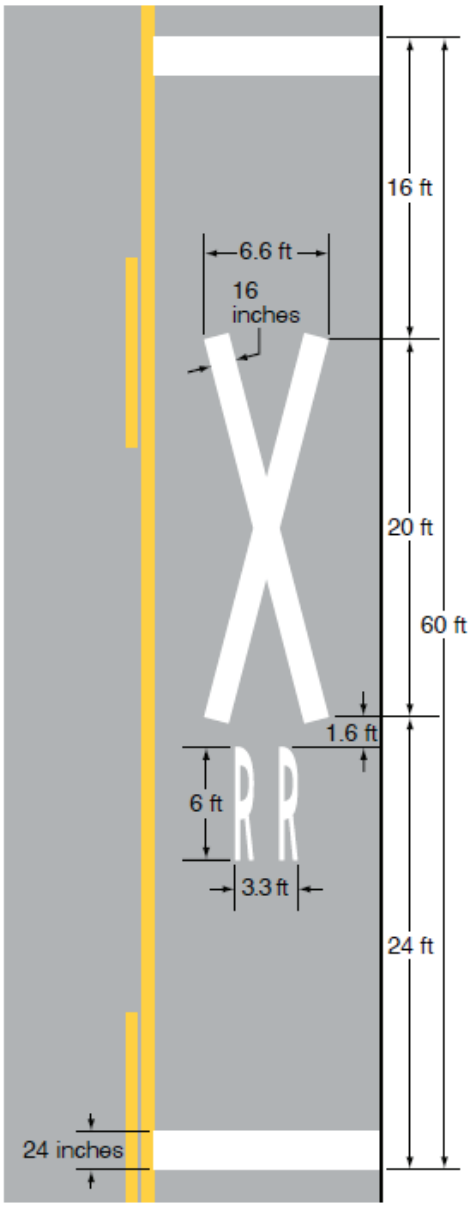


Exhibit B-3 **Figure 8E-3. Example of Signing and Markings at a Pathway Grade Crossing Markings - MUTCD 11th Edition**

Figure 8E-3. Example of Signing and Markings at a Pathway Grade Crossing

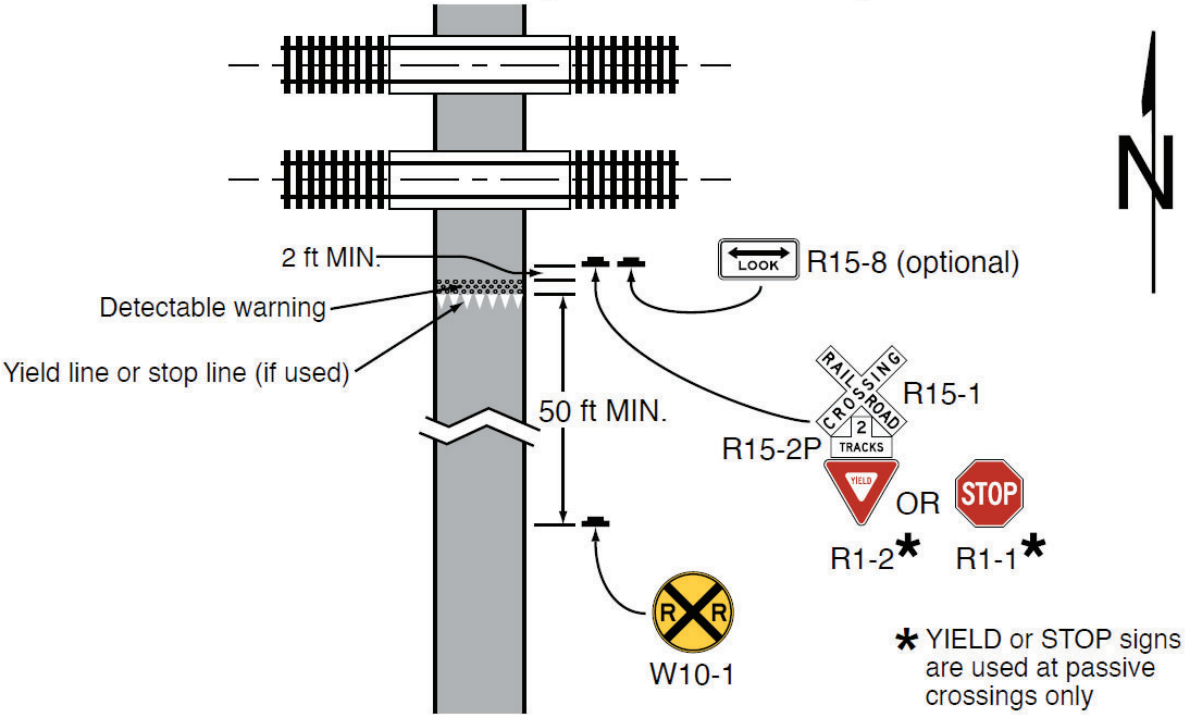
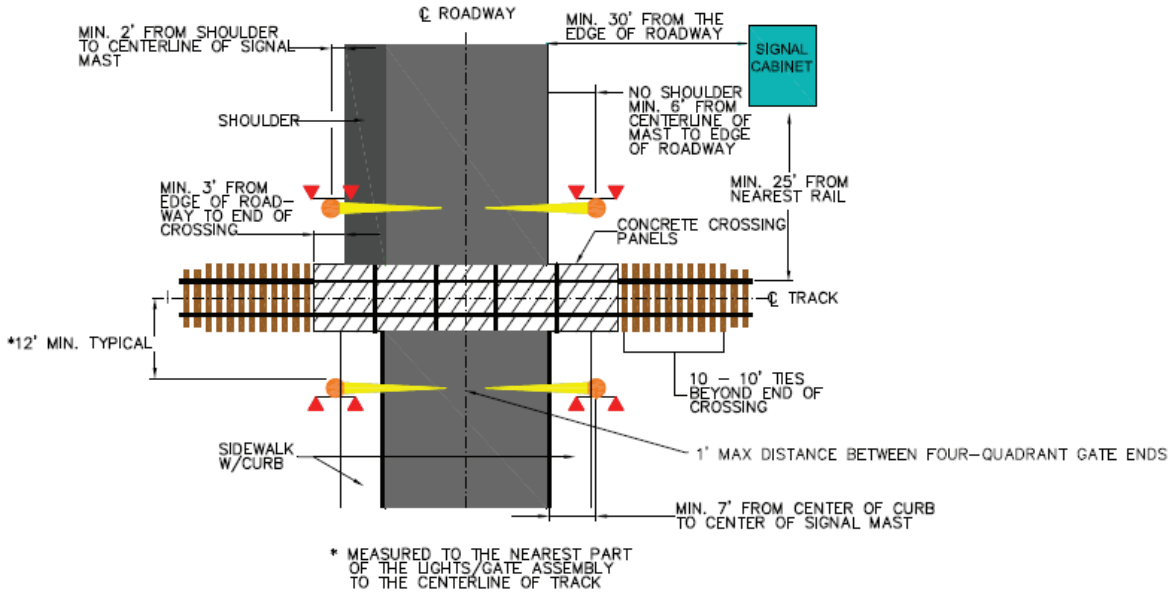
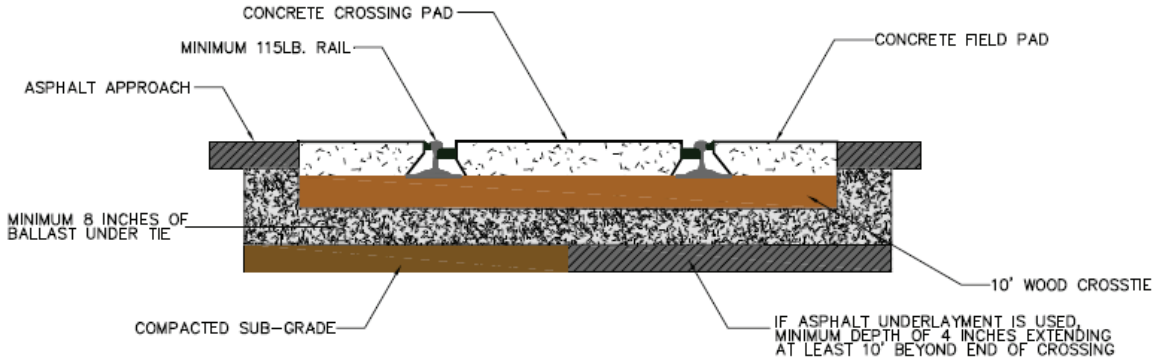


Exhibit C At-Grade Crossing Layout Plan / Cross Section



AT-GRADE CROSSING LAYOUT PLAN



AT-GRADE CROSSING CROSS SECTION

Exhibit D Railroad Crossing Inventory and Diagnostic Evaluation Report

NMDOT RAIL

HIGHWAY-RAIL GRADE CROSSING DIAGNOSTIC EVALUATION REPORT

Street/Road Name:	USDOT Crossing No.:	Date:

DIAGNOSTIC INFORMATION

Funded By:	☐ SECTION130 ☐ STATE ☐ RR ☐ OTHER	Purpose of Diagnostic:
Initiated By:	☐ STATE ☐ RR ☐ LOCAL ☐ OTHER _____	

LOCATION INFORMATION

Railroad Name:	County:	City *(In or Near)*:

R.R. Line / I.D.:	Nearest R.R. Timetable Station:	R.R. Milepost:	ENS Sign Present? ☐	If Yes, #:

RAILROAD INFORMATION

DAILY TRAIN MOVEMENT*		MAXIMUM SPEED OF TRAIN		TYPE AND NUMBER OF TRACKS		
PASSENGER		PASSENGER	mph	MAIN		If Other, Specify:
FREIGHT		FREIGHT	mph	OTHER		

*CHECK IF LESS THAN ONE MOVEMENT PER DAY ☐	CROSSING ANGLE:	Can two trains occupy crossing at same time? ☐ Yes ☐ No	
Crossing is Quiet Zone? ☐ Yes ☐ No		Can one train block the motorist's view of another train at the crossing? ☐ YES ☐ NO	If Yes, explain:

Xing Surface	TRACK	SURFACE TYPE	WIDTH (Feet)	CONDITION (Poor, Fair, Good, New)

Crossing adjacent or within railyard? ☐ Yes ☐ No	

TEN-YEAR ACCIDENT DATA

TOTAL ACCIDENTS		Number with Injuries		Number with Fatalities		Number with Property Damage Only	

Have any near misses occurred? ☐ Yes ☐ No	Explain:

Adjacent Railroad Crossings within ¼ Mile

USDOT No.	Street/Road Name	Warning Devices	AADT

HIGHWAY-RAIL GRADE CROSSING DIAGNOSTIC EVALUATION REPORT

Street/Road Name:	USDOT Crossing No.:	Date:

EXISTING WARNING DEVICES

Type of Passive Warning Device

Type	Qty	NB	SB	WB	EB	Type	Qty	NB	SB	WB	EB
☐ R15-1						☐ R1-2					
☐ R15-2						☐ W3-2					
☐ W10-1						☐ R8-10					
☐ W10-2						☐ R10-6					
☐ W10-3						☐ W10-5					
☐ W10-4						☐ W10-11					
☐ R8-8						☐ W10-12					
☐ R1-1						☐ R15-8					
☐ W3-1						☐ W10-9					
☐ R3-5						Note: Choose direction that is closest to direction of traffic flow over crossing.					

Is the crossing illuminated? ☐ Yes ☐ No

See "Typical MUTCD Signs at Highway-Rail Crossings" on page following.

Pavement Striping

Type		Qty.	Location(s)
☐	Stop Bars		
☐	RxR		
☐	No Passing		
☐	Lane Lines		
☐	Other		

Type of Active Warning Device

Flashing Light Type		Qty.	Lenses 8"	Lenses 12"	LED
☐	Mast Mounted Flashing Lights				
☐	Cantilever Flashing Lights				
☐	Back Lights				
☐	Side Lights				

Gate Type		Qty.	Location(s)
☐	Entrance		
☐	Exit		
☐	Pedestrian		
☐	Pedestrian Swing		

Other Devices		Qty.	Location(s)
☐	Bells		
☐	Modified Blank Out Sign w/ Train Indicator		
☐	R3-1 Blank Out Sign		
☐	R3-2 Blank Out Sign		
☐	Other Blank Out Sign ( )		
☐	Other Specify:		

Device Notes:

TRAFFIC SIGNAL INTERCONNECTION AND PREEMPTION

Are highway traffic signals interconnected?	☐ Yes ☐ No	Is preemption existent at the crossing?	☐ Yes ☐ No
Do pre-signals exist at the crossing?	☐ Yes ☐ No		

CLOSURE

Can roadway realignment be accomplished to allow crossing consolidation? If yes, provide sketch.	☐ Yes ☐ No	Sketch:
Impact of Closure:		

R1-1

R1-2

R3-1a
Activated Blank-Out

R3-2a
Activated Blank-Out

R8-8

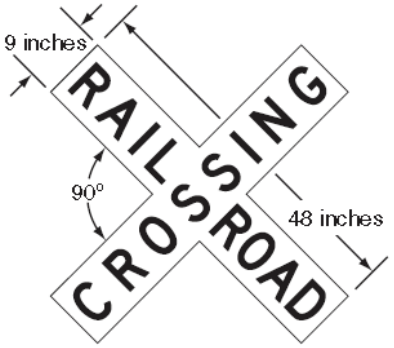
R8-9

R8-10

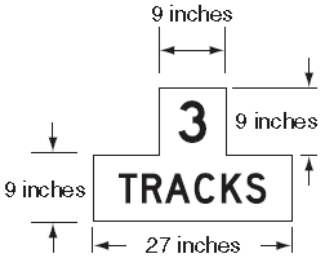
R8-10a

R10-6

R10-6a



R15-1



R15-2P

R15-3P

R3-5 is a left turn oriented example.

R3-5

W10-1

W10-1aP

W10-2

W10-3

W10-4

W10-5

W10-5P

W10-7
Activated
Blank-Out

W10-8

W10-9

W10-9P

W10-11

W10-11a

W10-11b

W10-12

W10-13P

W10-14P

W10-14aP

W10-15P

Note: The W10-11 sign is a W10-3 sign modified for geometrics. Other signs can be oriented or revised as needed to better portray the geometrics of the roadways and the tracks.

R15-8

Sign examples from pages 753 & 759 of 2009 MUTCD. R3-5 example is from http://www.trafficsign.us/r3.html

HIGHWAY-RAIL GRADE CROSSING DIAGNOSTIC EVALUATION REPORT

Street/Road Name:	USDOT Crossing No.:	Date:

ROADWAY INFORMATION

Agency Having Jurisdiction (Road Owner):	Highway Type:	AADT:	Truck Traffic: %

Vehicle Speeds	School Bus Operation	Hazardous Materials	Pedestrians	Roadway Surface:
Posted _____ m.p.h.	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	Roadway Width:
Typical _____ to _____ m.p.h.	**No. / Day**	**No. / Day**	**Curb & Gutter** ☐ Yes ☐ No	Roadway Condition:

Is Shoulder Present? ☐ Yes ☐ No	If Yes, Width:	Is Shoulder Surfaced? ☐ Yes ☐ No	Is Sidewalk Present? ☐ Yes ☐ No	If Yes, Width:

Channelization (Medians w/ Gates): ☐ All Approaches ☐ One Approach ☐ None

Special Conditions Required as a Result of Nearby Highway Intersections:

TYPE OF DEVELOPMENT

☐ Open Space ☐ Residential ☐ TOD ☐ Industrial ☐ Institutional ☐ Commercial

Planned developments that could affect AADT? ☐ Yes ☐ No ☐ Unknown	If yes, explain:

SHARED PATHWAY CROSSING INFORMATION

Yes	No	Crossing Information	Pedestrian and Bike Trips	AADT
☐	☐	Is Crossing Surface Smooth?	Pedestrian:	
☐	☐	Is Adequate Lighting Available?	Bicycle:	
☐	☐	Does Crossing Panel Extend 1' Behind Back of Path?	Notes:	
☐	☐	Is Path Width Adequate? (48" Minimum)		
☐	☐	Are Flange Gaps 2½" or Less, or Flange Fillers Used?		

☐ **Yes** ☐ **No**	Is the crossing adjacent to a passenger station? If yes, sketch access from station:

HIGHWAY-RAIL GRADE CROSSING DIAGNOSTIC EVALUATION REPORT

Street/Road Name:	USDOT Crossing No.:	Date:

COMPREHENSIVE SKETCH OF CROSSING

(Include location of warning devices, nearby schools, emergency services facilities, and other landmarks):

HIGHWAY-RAIL GRADE CROSSING DIAGNOSTIC EVALUATION REPORT

Street/Road Name:	USDOT Crossing No.:	Date:

RECOMMENDATIONS

ARE IMPROVEMENTS TO THE CROSSING RECOMMENDED?	☐ Yes ☐ No	If No, Explain:
If Yes, what improvements?		

Yes	No	Type of Improvement	Describe
		Sight Improvement	
		Crossing Surface	
		Roadway Approaches	
		Highway Traffic Signs	
		Crossing Signals	
		Crossing Closure	

Prepared By:	Title:	Date:

Comments:

HIGHWAY-RAIL GRADE CROSSING DIAGNOSTIC EVALUATION REPORT

Street/Road Name:	USDOT Crossing No.:	Date:

DIAGNOSTIC ATTENDANCE				
No.	Name	Affiliation	Phone No.	E-Mail
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

CONTACTS
(Contact name, agency or company, department, address, phone number, e-mail address)
School District:
Other (Specify):
Other (Specify):
Other (Specify):
Other (Specify):
Other (Specify):
Other (Specify):