STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
RAILROAD REIMBURSEMENT AGREEMENT
GRADE CROSSING AND CROSSING TRAFFIC CONTROL DEVICES
SOUTH FLORIDA RAIL CORRIDOR ONLY
CITY ROADS RR CROSSINGS ONLY

Financial Project I.D.	Road Name or Number	City Name	Parcel & R/W Number	FAP Number
	Sistrunk Blvd	Ft. Lauderdale		

THIS AGREEMENT, made and entered into this 7th day of July, 2023 by and between the **STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION**, hereinafter called the **DEPARTMENT**; the **CITY OF FORT LAUDERDALE**, a municipal corporation existing under the laws of the State of Florida, acting by and through its City Commission, hereinafter called the **CITY**; and the **SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY,** a body politic and corporate and an agency of the State of Florida created pursuant to Chapter 343, Florida Statutes, hereinafter called **SFRTA**.

WITNESSETH:

WHEREAS, the **DEPARTMENT** and CSX Transportation, Inc., ("**CSXT**") entered into a contract for Installment Sale and Purchase, for the South Florida Rail Corridor ("SFRC") dated May 11, 1988, at which time the **DEPARTMENT** became the owner of said property and **CSXT** retained an exclusive perpetual easement for Rail Freight Operations within the SFRC upon which railroad freight, intercity passenger and commuter rail services are currently being conducted, and

WHEREAS, the **DEPARTMENT** and **CSXT** entered into an Operating and Management Agreement Phase A (OMAPA) pertaining to the line of railroad between West Palm Beach and Miami, Florida and related properties on May 11, 1988 (the "Phase A Agreement"), pursuant to which **CSXT** managed and maintained the SFRC property on behalf of the **DEPARTMENT** until March 28, 2015, and

WHEREAS, the **DEPARTMENT** and **CSXT** entered into an Amended South Florida Operating and Management Agreement (SFOMA) on January 25, 2013, as may be further amended, which provides for termination of OMAPA and transition of management, operation, and maintenance of the SFRC from **CSXT** to the **DEPARTMENT** upon the date determined pursuant to subsection 1(c) of SFOMA (the "SFOMA Commencement Date" was March 29, 2015), and

WHEREAS, the **DEPARTMENT** and **SFRTA** entered into the SFRC Operating Agreement ("Operating Agreement") on June 13, 2013, by which **SFRTA** on behalf of the **DEPARTMENT**, has been managing, operating, maintaining, and dispatching, railroad operations on the SFRC as of the SFOMA Commencement

Date, and also maintains and repairs the rights-of-way, layover facilities and yards, state-owned buildings and facilities, tracks, bridges, communications, signals, and all appurtenances on the SFRC, and

WHEREAS, SFRTA is constructing, reconstructing, or otherwise changing a portion of the Public Road System, which crosses at grade the right-of-way and track(s) of the SFRC at milepost SX 1011.63, FDOT/Association of American Railroads (AAR) Crossing Number 628194W at or near the City of Ft. Lauderdale, Florida and within the **CITY'S** right-of-way, as shown on the Project Location Sheet, attached hereto and made a part hereof, and

WHEREAS, the **CITY** is not a party to any of the aforementioned agreements and now agrees to enter into this Railroad Reimbursement Agreement ("Agreement") with the **DEPARTMENT** and **SFRTA,**

NOW, THEREFORE, in consideration of the mutual undertakings as set forth herein, the parties hereto agree as follows:

1. **SFRTA** shall perform work based on the categories selected below, within the **CITY'S** right-of-way along the SFRC, over its tracks at the above-referenced location, herein referred to as the ("Project").

(a) X Surface Work

If crossing surface work is required for the Project, **SFRTA,** shall provide, furnish or have furnished, all necessary material required for, and will construct at **CITY'S** sole cost and expense a Standard Railroad Crossing Type C - Concrete in accordance with the **DEPARTMENT'S** Standard Plans for Road and Bridge Construction Index No. 830-T01 attached hereto and by this reference made a part hereof, and in accordance with all other Federal Railroad Administration (FRA) and American Railway Engineering and Maintenance of Way Association (AREMA) standards and guidelines. The initial construction cost and the cost of any reconstruction or rehabilitation thereafter shall be paid by the **CITY.** In accordance with the Operating Agreement and the SFOMA Agreement, upon completion of the crossing, **SFRTA** shall be responsible for the following:

1. Single Track crossing: routine maintenance of all trackbed and rail components plus the highway roadbed and surface for the width of the rail ties within the crossing area.
2. Multiple-track crossing: routine maintenance of all trackbed and rail components plus the highway roadbed and surface for the width of the rail ties within the crossing area and between tracks.

Routine maintenance includes but is not limited to regular track inspections and any repairs to the concrete panels or asphalt within the area described as **SFRTA'S** responsibility. The **CITY** shall be responsible for the maintenance of the highway roadbed and surface outside the railway ties that are within the **CITY'S** right-of-way. IT BEING EXPRESSLY UNDERSTOOD AND AGREED that if the **CITY** does not properly maintain the highway roadbed and surface outside the railroad ties, then **SFRTA** may, at its option and upon notification to the **CITY**, perform such maintenance work and bill the **CITY** directly for costs thus incurred. All costs required for any subsequent reconstruction or rehabilitation of the crossing within the **CITY'S** right-of-way, as may be requested by any of the parties to this Agreement, shall be the sole financial responsibility of the **CITY**. This provision shall be governed and reimbursed in accordance with the paragraphs as specified below.

(b) ☐ Signal Work (Non-US Code Title 23, Section 130)

If Railroad Grade Crossing Traffic Control Devices work is required for the Project, **SFRTA**, shall provide, furnish, or have furnished, all necessary material required for, and will install at the **CITY'S** expense, automatic railroad grade crossing traffic control devices at said location in accordance with the **DEPARTMENT'S** Standard Plans for Road and Bridge Construction Index No. 509-070 and/or 509-100 attached hereto, the Operating Agreement, and the SFOMA Agreement. This provision shall be governed and reimbursed in accordance with the paragraphs as specified below.

(c) ☐ Signal Work (US Code Title 23, Section 130)

If traffic control devices are being installed/upgraded under the Signal Safety Program (US Code Title 23, Section 130), then the **DEPARTMENT** will reimburse **SFRTA** for 100% of the costs of installation/upgrades pursuant to the **DEPARTMENTS** Standard Plans for Road and Bridge Construction Index No. 509-070 and/or 509-100 attached hereto, the Operating Agreement, and the SFOMA Agreement. This provision shall be governed and reimbursed in accordance with the paragraphs as specified below.

These paragraphs are applicable to work specified in paragraph 1(a) and/or 1(b):

2. If the Project is for surface work or signal work (Non-US Code Title 23, Section 130) as identified in paragraph 1(a) or 1(b) above; all labor, services, materials, and equipment furnished by **SFRTA** in carrying out work to be performed, shall be billed by **SFRTA** directly to the **CITY.**

3. The **CITY** will reimburse **SFRTA** for the cost of watchmen or flagging service in the carrying out of work within or adjacent to the **SFRC**, or work requiring movement of equipment, employees, or trucks across the **SFRC** within the **CITY'S** right-of-way, or when at times **SFRTA** and/or the **DEPARTMENT** agree that such a service is necessary.

4. The **CITY** hereby agrees to reimburse **SFRTA**, as detailed in this Agreement, for all costs incurred by it in the installation and/or adjustment of said facilities within the **CITY'S** right-of-way, in accordance with the provisions above. It is understood and agreed by and between the parties hereto that preliminary engineering costs incorporated within this Agreement shall also be subject to payment by the **CITY.**

5. It is understood and agreed that, if the Project, is at **CITY** expense, the **CITY** shall receive fair and adequate credit for any salvage as a result of the above adjustment work; otherwise, the **DEPARTMENT** shall receive the salvage credit.

6. Upon completion of the work, **SFRTA** shall, within one hundred eighty (180) days, furnish the **CITY** with three (3) copies of its final and complete billing of all costs incurred in connection with the work performed hereunder, such statement to follow as closely as possible the order of items contained in the estimate attached hereto. The **CITY** shall reimburse **SFRTA** for its portion of all actual costs attributable to the Project subject to other provisions in this Agreement. The total for labor, overhead, travel expenses, transportation, equipment, material and supplies, handling costs, and other services shall be shown in such a manner as will permit ready comparison with the approved plans and estimates. Material shall be itemized where they represent major components of cost in the relocation following the pattern set out in the approved estimate as closely as possible. Salvage credits from recovered and replaced permanent and recovered temporary materials shall be reported in said bills in relative position with the charge for the replacement or the original charge for temporary use.

   The final billing shall show the description and site of the Project; the date on which the first work was performed, or, if preliminary engineering or right-of-way items are involved, the date on which

the earliest item of billed expenses was incurred; the date on which the last work was performed or the last item of billed expenses was incurred; and the location where the records and accounts billed can be audited. Adequate reference shall be made in the billing invoice to **SFRTA'S** records, accounts, and other relevant documents. All cost records and accounts shall be subject to audit by a representative of the **CITY**. Upon receipt of invoices, prepared in accordance with the above reimbursement provisions, the **CITY** agrees to reimburse **SFRTA** in the amount of the actual costs approved by the **CITY'S** auditor.

These paragraphs are applicable to work specified in paragraph 1(c):

7. If the Project is for Signal Safety improvements under Title 23, Section 130, as identified in Paragraph 1c, above; then the **DEPARTMENT** agrees to reimburse **SFRTA** for all costs incurred for the installation and/or adjustment of said Project in accordance with the provisions herein.

8. All labor, services, materials, and equipment furnished by **SFRTA** in carrying out work to be performed, shall be billed by **SFRTA** directly to the **DEPARTMENT**. Separate records as to costs of contract bid terms and force account items performed by **SFRTA** shall also be furnished by **SFRTA** to the **DEPARTMENT**.

9. Upon completion of the work, **SFRTA** shall, within one hundred eighty (180) days, furnish the **DEPARTMENT** with three (3) copies of its final and complete billing of all costs incurred in connection with the work performed hereunder, such statement to follow as closely as possible the order of items contained in the estimate attached hereto. The **DEPARTMENT** shall reimburse **SFRTA** for its portion of all actual costs attributable to the Project subject to other provisions in this Agreement. The total for labor, overhead, travel expenses, transportation, equipment, material and supplies, handling costs, and other services shall be shown in such a manner as will permit ready comparison with the approved plans and estimates. Material shall be itemized where they represent major components of cost in the relocation following the pattern set out in the approved estimate as closely as possible.

   The final billing shall show the description and site of the Project; the date on which the first work was performed; or, if preliminary engineering or right-of-way items are involved, the date on which the earliest item of billed expenses was incurred; the date on which the last work was performed or the last item of billed expenses was incurred; and the location where the records and accounts billed can be audited. Adequate reference shall be made in the billing to **SFRTA'S** records,

accounts, and other relevant documents. All cost records and accounts shall be subject to audit by a representative of the **DEPARTMENT**. Upon receipt of invoices, prepared in accordance with the above reimbursement provisions, the **DEPARTMENT** agrees to reimburse **SFRTA** in the amount of such actual costs approved by the **DEPARTMENT'S** auditor.

10. In accordance with Section 215.422 Florida Statutes, the following provisions are in this Agreement:

Contractors providing goods and services to the **DEPARTMENT** should be aware of the following time frames. Upon receipt, the **DEPARTMENT** has five (5) working days to inspect and approve the goods and services, unless the Agreement specifies otherwise. The **DEPARTMENT** has twenty (20) working days to deliver a request for payment (voucher) to the Department of Banking and Finance. The twenty (20) days are measured from the latter of the date the invoice is received or the date the goods or services are received, inspected, and approved.

If a payment is not available, within forty (40) days, a separate interest penalty at a rate as established pursuant to Section 215.422 (3)(b), Florida Statutes, will be due and payable in addition to the invoice amount, to the Contractor. Interest penalties of less than one (1) dollar will not be enforced unless the Contractor requests payment. Invoices, which have to be returned to a Contractor because of Contractor preparation errors, will result in a delay in the payment. The invoice payment requirements do not start until a properly completed invoice is provided to the **DEPARTMENT**.

A Vendor Ombudsman has been established within the Department of Bank and Finance. The duties of the individual include acting as an advocate for contractors/vendors who may be experiencing problems in obtaining timely payment(s) from a state agency. The Vendor Ombudsman may be contacted at (850) 413-5516, or by calling the Division of Consumer Services at 1-877-693-5236.

11. Payment shall be made only after receipt and approval of goods and services unless advance payments are authorized by the **DEPARTMENT'S** Comptroller under Section 334.44(29), F.S., or by the Department of Financial Services under Section 215.422(14), F.S.

12. In accordance with Section 287.058 F.S., the following provisions are in this Agreement: If this contract involves units of deliverables, then such units must be received and accepted in writing by the Contract Manager prior to payments. Bills for fees or other compensation for services or expenses shall be submitted in detail sufficient for a proper pre-audit and post-audit thereof.

13. Bills for travel expenses specifically authorized in this Agreement shall be submitted and paid in accordance with **DEPARTMENT** Rule 14-57.011, Florida Administrative Code, and the Federal Highway Administration Federal Aid Policy Guide, 23 C.F.R. Subchapter B, Part 140, Subpart I "Reimbursement for Railroad Work."

14. In the event this contract is for services in excess of TWENTY-FIVE THOUSAND DOLLARS ($25,000.00) and a term of more than one year, the provisions of Section 339.135 (6)(a), Florida Statutes are hereby incorporated:

The **DEPARTMENT'S** obligation to pay under this contract is contingent upon an annual appropriation by the Florida Legislature in accordance with Section 287.0582, Florida Statutes.

The **DEPARTMENT,** during any fiscal year, shall not expend money, incur any liability, or enter into any contract which, by its terms, involves the expenditure of money in excess of the amounts budgeted as available for expenditure during such fiscal year. Any contract, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such contract. The **DEPARTMENT** shall require a statement from the Comptroller of the **DEPARTMENT** that such funds are available prior to the entering into any such contract or other binding commitment of funds.

Nothing herein contained shall prevent the making of contracts for periods, exceeding one year, but any contract so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years, and this paragraph shall be incorporated verbatim in all contracts of the **DEPARTMENT** which are for an amount in excess of TWENTY-FIVE THOUSAND DOLLARS ($25,000.00) and which have a term for a period of more than one year.

15. In accordance with Section 287.133 (2)(a), Florida Statutes, the following provisions are included in this Agreement:

> A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids, proposals, or replies on leases for real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the

threshold amount provided in section 287.017 for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

16. In accordance with Section 287.134(2)(a), Florida Statutes, the following provisions are included in this agreement:

    An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.

These paragraphs are applicable to any type of work specified (paragraph 1(a), 1(b), or 1(c)):

17. The cost of maintaining all signals at the crossing shall be allocated as follows; fifty percent (50%) of the expense thereof in maintaining the same shall be borne by the **CITY**, and fifty percent (50%) of the cost shall be borne by **SFRTA**, as enumerated by the Schedule of Annual Cost of Automatic Highway Grade Crossing Traffic Control Devices attached hereto and by this reference made a part hereof and subject to future revision. Actual funding for the signals has been provided for in the Operating Agreement. The **CITY** shall submit 50% of the cost of the Annual Maintenance costs to the **DEPARTMENT**. In instances where signals are installed and/or adjusted pursuant to this Agreement and found to be in satisfactory working order by the parties hereto, the same shall be immediately put in service, operated and maintained by **SFRTA** pursuant to the Operating Agreement and the SFOMA Agreement so long as **SFRTA** or successors or assigns shall operate the said signals at said grade crossing; or until it is agreed between the parties hereto that the signals are no longer necessary; or until the said crossing is abandoned; or legal requirements occur which shall cease operation of those signals. **SFRTA** agrees that any future relocation or adjustment of said signals shall be performed by **SFRTA**, but at the expense of the party initiating such relocation. Upon relocation, the maintenance responsibility shall be in accordance with the provisions of this Agreement. It is further agreed that the cost of maintaining any additional or replacement signal equipment at the same location will be shared as provided above.

18. Unless otherwise agreed upon herein, the **CITY** agrees to ensure that the advance warning signs and railroad crossing pavement markings will conform to the Department of Transportation

Manual on Uniform Traffic Control Devices (MUTCD) within 30 days of notification that the railroad signal improvements have been completed and that such signs and pavement markings will be continually maintained in conformance with the MUTCD as applicable.

19. The **DEPARTMENT**, at its discretion, may arrange for the synchronization of the railroad crossing devices with existing or proposed highway traffic control devices at Sistrunk Blvd. Neither of the parties shall disconnect the interconnection circuit or change or cause to be changed the signal sequence without prior notice to the other parties. Each party shall maintain its respective devices from the point of the junction box as provided for the interconnect cable.

20. All work contemplated at this crossing shall at all times be subject to the approvals, obligations, and notice provisions pursuant to the Operating Agreement and the SFOMA Agreement.

21. All contractors working in the SFRC are required to have Railroad Protective Public Liability and Railroad Protective Property Damage Liability insurance where the **DEPARTMENT**, **SFRTA**, and **CSXT** are named insureds, and with limits not less than **$2,000,000.00** combined single limit for bodily injury and/or property damage per occurrence and with an annual aggregate limit of no less than **$6,000,000.00** Contractor will furnish the **DEPARTMENT** and **SFRTA** a Certificate of Insurance showing that the contractor carries liability insurance (applicable to the job in question) in the amounts set forth above. Such insurance is to conform with the requirements of the U.S. Department of Transportation, Federal Highway Administration, Federal Aid Policy Guide, Subchapter G, Part 646, Subpart A, and any supplements thereto or revisions thereof.

22. Each party agrees to be fully responsible for its own acts of negligence, or its employees' acts of negligence when acting within the scope of their employment and agrees to be liable for any damages resulting from said negligence. Nothing herein is intended to nor shall be construed as a waiver of either party's sovereign immunity or of any rights or limits to liability existing under Section 768.28, Florida Statutes.

23. **SFRTA** hereby agrees, as applicable, to install and/or adjust the necessary parts of the SFRC facilities in accordance with the provisions set forth in the:

☐ (A) **DEPARTMENT** Procedure 725-080-002 Appendix D.4 and Rule 14-57.011 "Public Railroad-Highway Grade Crossing Costs", Florida Administrative Code,

☐ (B) Federal Highway Administration's Federal Aid-Highway Policy Guide, 23 C.F.R. Subchapter B, Part 140, Subpart I; and 23 C.F.R. Subchapter G. Part 646, Subpart B.

and any supplements thereto or revisions thereof, which, by reference hereto, are made a part hereof. **SFRTA** further agrees to do all such work with its own forces or by a contractor paid under a contract held by **SFRTA** under the supervision and approval of the **DEPARTMENT**, and the Federal Highway Administration, when applicable.

24. Attached hereto, and by this reference made a part hereof, are plans and specifications of the work to be performed by **SFRTA** pursuant to the terms hereof, and an estimate of the costs thereof in the amount of **$739,200.00.** All work performed by **SFRTA** pursuant hereto, shall be performed according to these plans and specifications as approved by the **DEPARTMENT**, and the Federal Highway Administration, if federal aid participating; and all subsequent plan changes shall likewise be approved by the **DEPARTMENT** and the Federal Highway Administration, when applicable.

25. The **DEPARTMENT** has determined that the method to be used by **SFRTA** in developing future relocation or installation cost shall be actual and related indirect costs accumulated in accordance with a work order accounting procedure prescribed by the applicable Federal or State regulatory body.

26. The **DEPARTMENT** reserves the right to unilaterally cancel this agreement for refusal by the **CITY** or **SFRTA** for refusal to allow public access to all documents, or other material subject to the provisions of Chapter 119, Florida Statutes.

27. Should the use of said crossing be abandoned due to removal of the roadway then all rights hereby granted to the **CITY** shall thereupon cease and terminate and the **CITY** will, at its sole cost and in a manner satisfactory to **SFRTA** and the **DEPARTMENT**, remove said crossing and restore the **SFRC** property to the condition previously found, provided that **SFRTA** may, at its option, remove the said crossing and restore its property, and the **CITY** will, in such event, upon bill rendered, pay to **SFRTA** the entire cost incurred by it in such removal and restoration.

28. Upon execution, this Agreement shall supersede all provisions, relating to said crossing contained in any previous agreements and shall become the permanent agreement of record. This Agreement shall not change, modify, or limit the responsibilities and obligations of SFRTA and the Department for negligent acts as stated in the Operating Agreement, or other prior agreements between SFRTA and the Department.

29. **SFRTA** shall:

    1. Utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the parties during the term of the contract; and

2. Expressly require any subcontractors performing work or providing services pursuant to the state contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term.

30. **SFRTA** or its contractor shall use steel and iron manufactured in the United States, in accordance with the Buy America provisions of 23 CFR 635.410, as amended. Ensure that all manufacturing processes for this material occur in the United States. As used in this paragraph, a manufacturing process is any process that modifies the chemical content, physical shape or size, or final finish of a product, beginning with the initial melting and continuing through the final shaping and coating. If a steel or iron product is taken outside the United States for any manufacturing process, it becomes foreign source material. When using steel or iron materials as a component of any manufactured product (e.g., concrete pipe, prestressed beams, corrugated steel pipe, etc.), these same provisions apply. Foreign steel and iron may be used when the total actual cost of such foreign materials does not exceed 0.1% of the total Contract amount or $2,500, whichever is greater. These requirements are applicable to all steel and iron materials incorporated into the finished work but are not applicable to steel and iron items that **SFRTA** uses but does not incorporate into the finished work. Submit a certification from the manufacturer of steel or iron, or any product containing steel or iron, stating that all steel or iron furnished or incorporated into the furnished product was produced and manufactured in the United States or a statement that the product was produced within the United States except for minimal quantities of foreign steel and iron valued at $ (actual cost). Submit each such certification to **SFRTA** and the **DEPARTMENT** prior to incorporating the material or product into the Project. Prior to the use of foreign steel or iron materials on a Project, submit invoices to document the actual cost of such material; and **SFRTA** must grant written approval prior to incorporating the material into the Project; and

31. **SFRTA** shall Comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964, the regulations of the U.S. Department of Transportation issued thereunder, and the assurance by **SFRTA** pursuant thereto. **SFRTA** shall include the attached Title VI / Nondiscrimination Assurance in all contracts with consultants and contractors performing work on the Project that ensure compliance with Title VI of the Civil Rights Act of 1964, 49 C.F.R. Part 21, and related statutes and regulations.

32. It is understood and agreed by the parties to this Agreement that if any part, term, or provision of this Agreement is held illegal by the courts or in conflict with any law of the State of Florida, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

33. Any questions or matters arising under this Agreement as to validity, construction, enforcement, performance, or otherwise, shall be determined in accordance with the laws of the State of Florida. Venue for any action arising out of or in any way related to this Agreement shall lie exclusively in a state court of appropriate jurisdiction.

34. The parties agree to bear their own attorney's fees and costs with respect to this Agreement.

35. The parties agree that this Agreement is binding on the parties and their assigns and successors in interest as evidenced by their signatures and lawful executions below.

36. A modification or waiver of any of the provisions of this Agreement shall be effective only if made in writing and executed with the same formality as this Agreement.

37. If the Operating Agreement between the **DEPARTMENT** and **SFRTA** ceases to exist, the responsibilities of **SFRTA** may be assigned to a party operating the railroad.

[Remainder of page left intentionally blank.]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their respective and duly authorized officers the day and year first written above.

SFRTA

South Florida Regional Transportation Authority, a politic and corporate and an agency of the State of Florida.

DocuSigned by:

By: David W. Dech
SFRTA Executive Director

Approved as to form and legal sufficiency

By: ______________________
SFRTA General Counsel

DEPARTMENT

State of Florida, Department of Transportation, an Agency of the State of Florida

DocuSigned by:

By: Steven Braun
86FB79A6F1EF4EE...
Director of Transportation Development

Legal Review/Approved as to form:

DocuSigned by:

By: Francine Steelman
43DE6BB3D3BF464...
Francine Steelman, D-4 Assistant General Counsel

CITY OF FORT LAUDERDALE, a municipality of the State of Florida

By: ______________________
Dean Trantalis, Mayor
24 day of June, 2023

By: ______________________
Greg Chavarria, City Manager
23rd day of June, 2023

Legal Review/Approved as to form:

D'Wayne M. Spence, Interim City Attorney

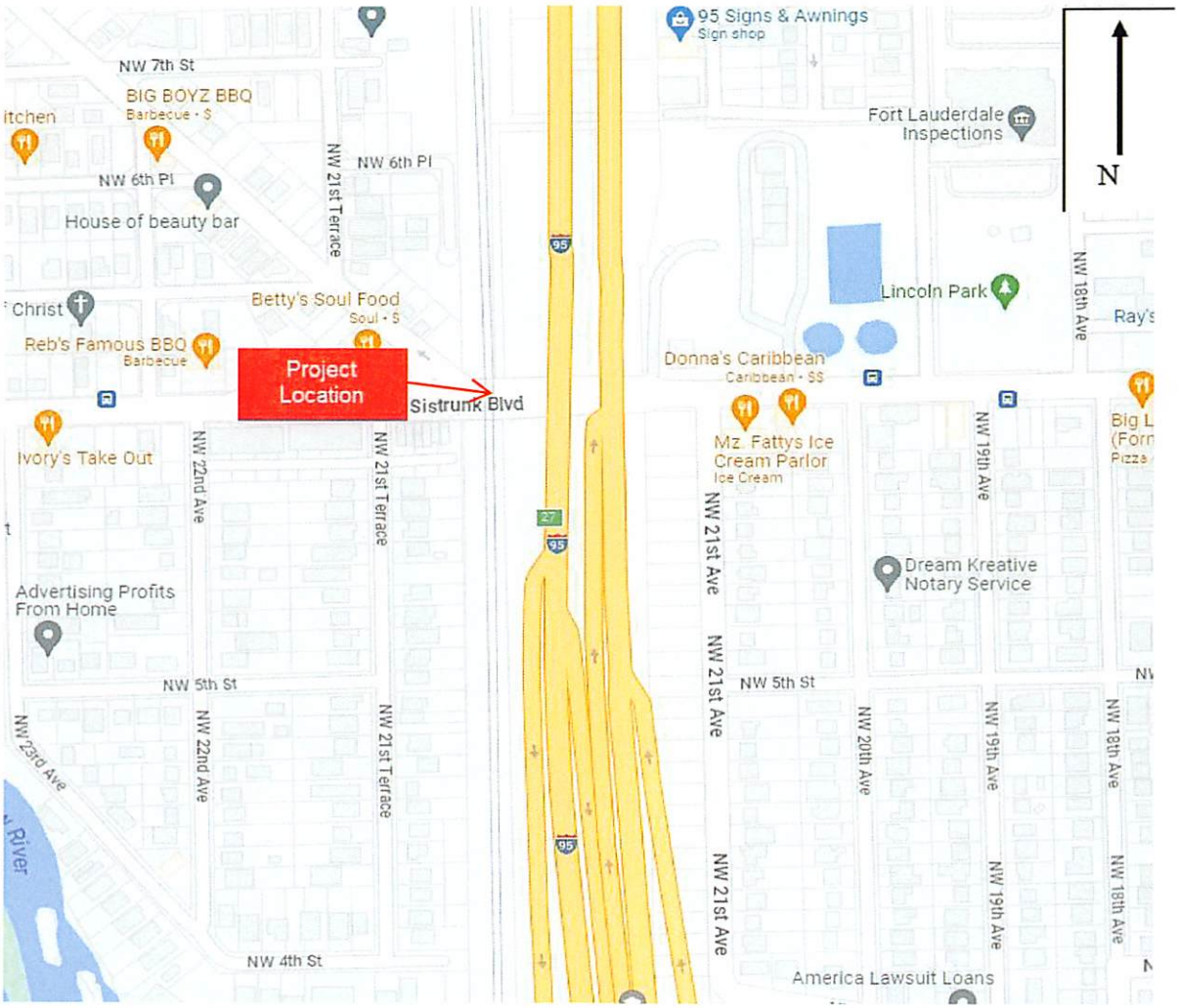
By: ______________________
Kimberly Cunningham Mosley, Assistant City Attorney

ATTEST:

BY: ______________________
David R. Soloman, City Clerk

CITY OF FORT LAUDERDALE ESTABLISHED MARCH 27, 1911 BROWARD COUNTY, FLORIDA SEAL

PROJECT LOCATION SHEET
(COMPOSITE PGS 1 OF 2)

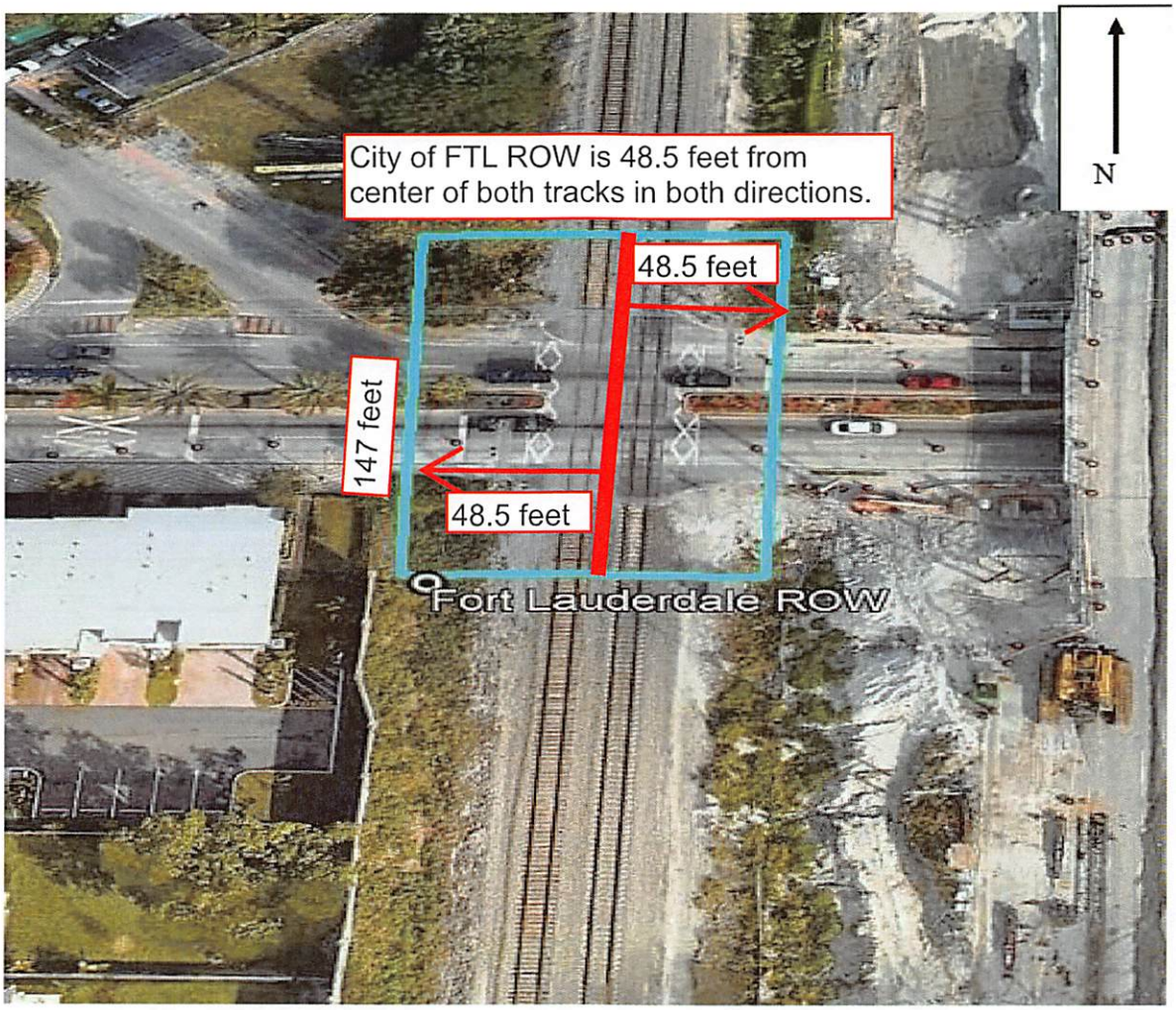


LOCATION MAP

SFRTA

LOCATION:	Sistrunk Boulevard
COUNTY:	Broward
FINANCIAL PROJECT NO.:	N/A
CROSSING NO.:	628194W
RAILROAD MILEPOST:	SX 1011.63

PROJECT LOCATION SHEET
(COMPOSITE PGS 2 OF 2)



LOCATION MAP

City of Fort Lauderdale right-of-way

LOCATION:	Sistrunk Boulevard
COUNTY:	Broward
FINANCIAL PROJECT NO.:	N/A
CROSSING NO.:	628194W
RAILROAD MILEPOST:	SX 1011.63

CROSSING SURFACES	
Type	Definition
C	Concrete
R	Rubber
RA	Rubber/Asphalt
TA	Timber/Asphalt

STOP ZONE FOR RUBBER CROSSING	
Design Speed (mph)	Zone Length (Distance From Stop)
45 Or Less	250'
50 - 55	350'
60 - 65	500'
70	600'

Notes:

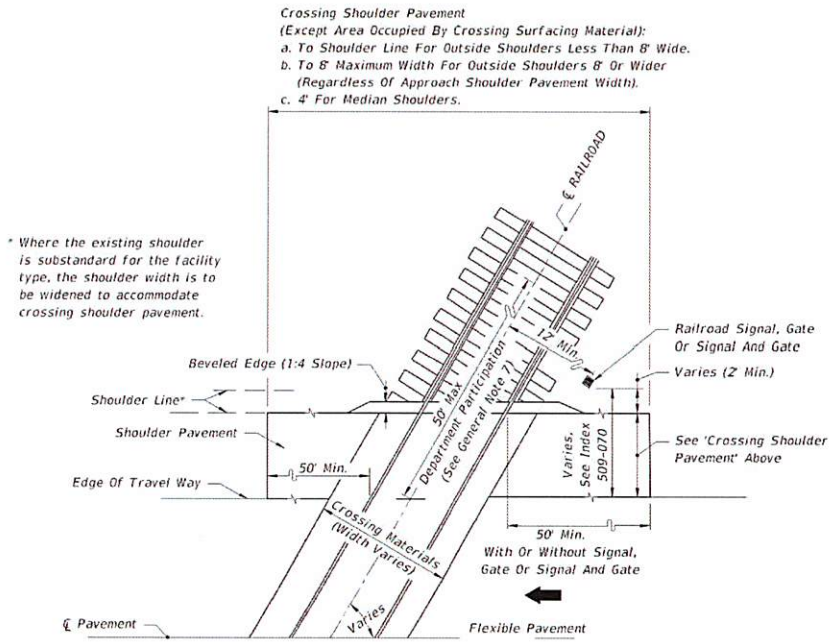
1. Type R Crossings are NOT to be used for multiple track crossings within zones for an existing or scheduled future vehicular stop. Zone lengths are charted above.
2. Single track Type R Crossings within the zones on the chart may be used unless engineering or safety considerations dictate otherwise.

GENERAL NOTES:

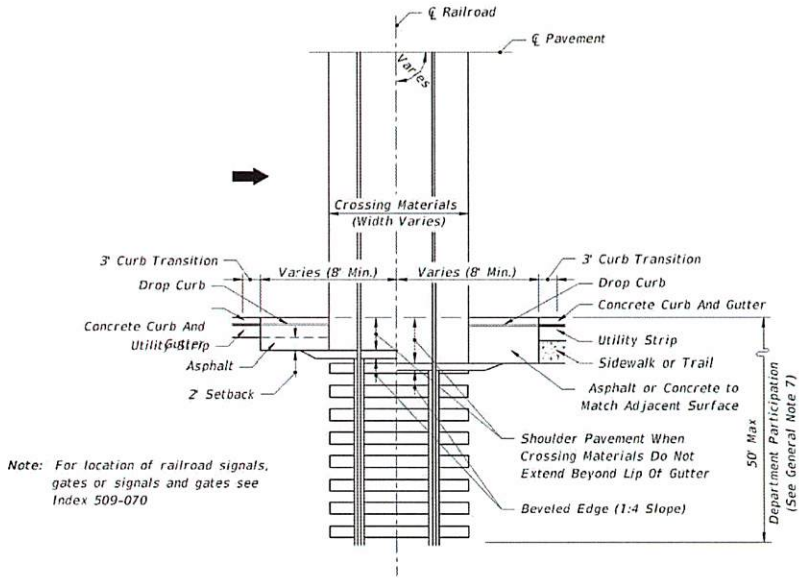
1. The Railroad Company will furnish and install all track bed (ballast), crossties, rails, crossing surface panels and accessory components. All pavement material, including that through the crossing, will be furnished and installed by the Department or its Contractor, unless negotiated otherwise.
2. When a railroad grade crossing is located within the limits of a highway construction project, a transition pavement will be maintained at the approaches of the crossing to reduce vehicular impacts to the crossing. The transition pavement will be maintained as appropriate to protect the crossing from low clearance vehicles and vehicular impacts until the construction project is completed and the final highway surface is constructed.
3. The Central Rail Office will maintain a list of currently used Railroad Crossing Products and will periodically distribute the current list to the District Offices as the list is updated.
4. The Railroad Company shall submit engineering drawings for the proposed crossing surface type to the Construction Project Engineer and/or the District Rail Office for concurrence along with the List of Railroad Crossing Products. The approved engineering drawings of the crossing surface type shall be made a part of the installation agreement.
5. Sidewalks shall be constructed through the crossing between approach sidewalks of the crossing. Sidewalks shall be constructed with appropriate material to allow unobstructed travel through the crossing in accordance with ADA requirements.
6. Install pavement in accordance with the Specifications.
7. The Department will participate in crossing work, that requires adjustments to rail outside of the crossing, no more than 50 feet from the edge of the travel way.

10/6/2022 2:43:44 PM

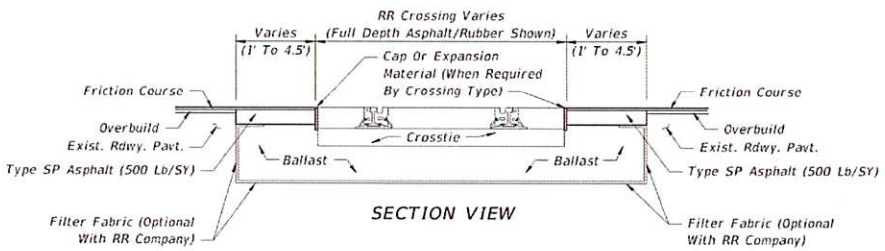
LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2023-24 STANDARD PLANS	RAILROAD (GRADE) CROSSING	INDEX	SHEET
11/01/17					830-T01	1 of 2



HALF PLAN
ROADWAYS WITH FLUSH SHOULDERS

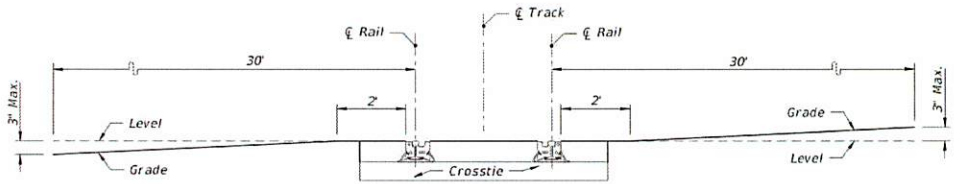


HALF PLAN
CURBED ROADWAYS



SECTION VIEW

TYPICAL CROSSING MATERIAL REPLACEMENT AT RR CROSSINGS

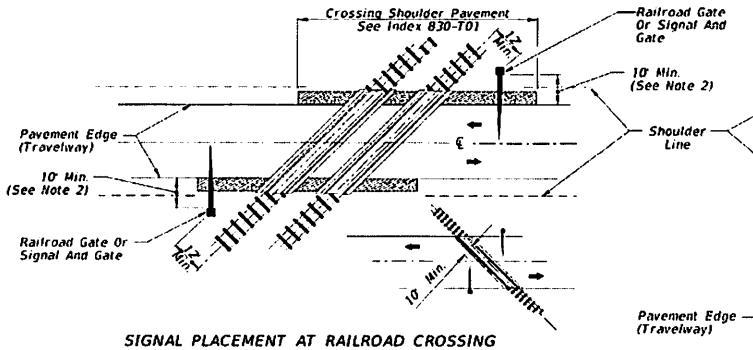


To prevent low-clearance vehicles from becoming caught on the tracks, the crossing surface should be at the same plane as the top of the rails for a distance of 2 feet outside the rails. The surface of the highway should also not be more than 3 inches higher or lower than the top of the nearest rail at a point 30 feet from the rail unless track superelevation makes a different level appropriate. Vertical curves should be used to traverse from the highway grade to a level plane at the elevation of the rails. Rails that are superelevated, or a roadway approach section that is not level, will necessitate a site specific analysis for rail clearances.

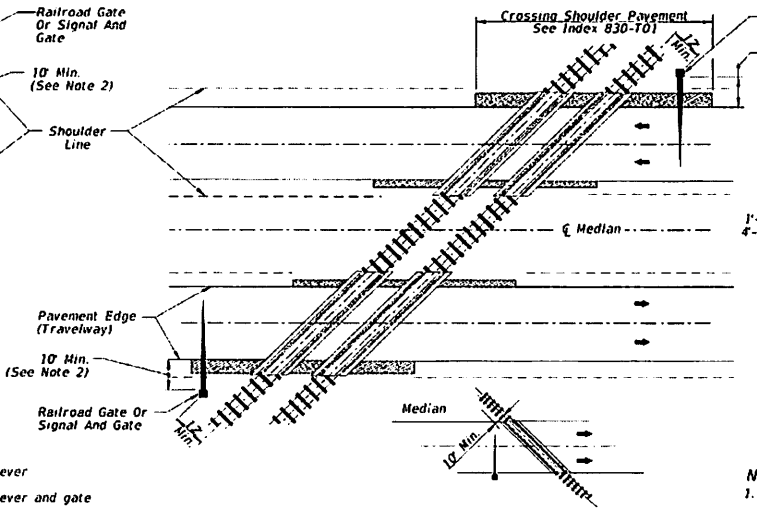
VERTICAL ROADWAY ALIGNMENT THROUGH A RAILROAD CROSSING

10/6/2022 2:43:45 PM

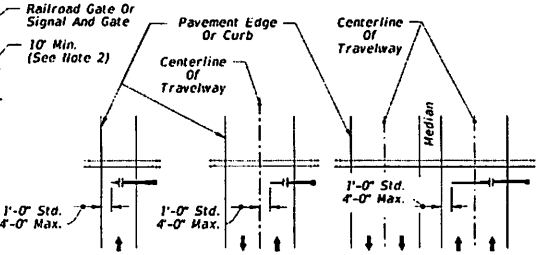
LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2023-24 STANDARD PLANS	RAILROAD (GRADE) CROSSING	INDEX	SHEET
11/01/19						830-T01	2 of 2



SIGNAL PLACEMENT AT RAILROAD CROSSING
(2 - LANE DESIGN)



SIGNAL PLACEMENT AT RAILROAD CROSSING
(4 - LANE DESIGN)



NOTE: Arrows denote direction of travel not pavement markings.

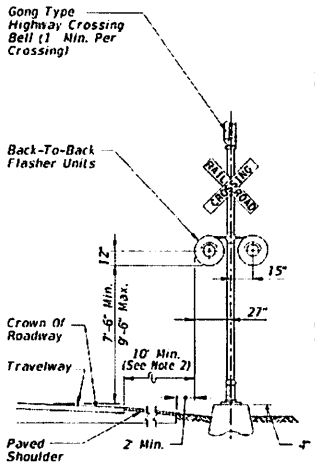
FIGURE 1

GENERAL NOTES:

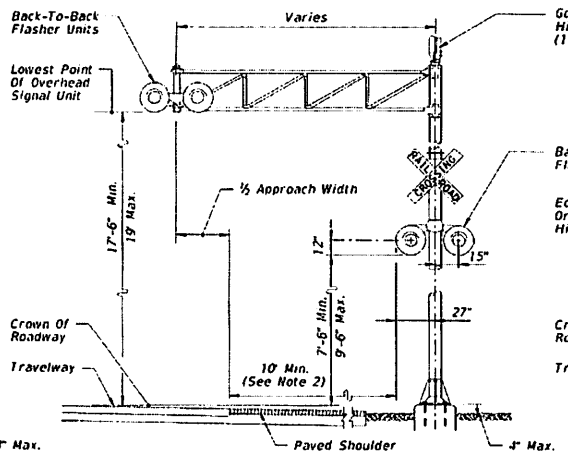
1. No guardrail is proposed for signals; however, some form of impact attenuation device may be specified for certain locations.
2. Advance flasher to be installed when and if called for in Plans or Specifications.
3. Top of foundation shall be no higher than 4" above finished shoulder grade.
4. Type of traffic control device
   - I Flashing warning devices
   - II Flashing warning devices with cantilever
   - III Flashing warning devices with gate
   - IV Flashing warning devices with cantilever and gate
   - V Gate
5. Class of traffic control devices (Not Shown)
   - I 2 Quadrant flashing warning devices-one track
   - II 2 Quadrant flashing warning devices-multiple tracks
   - III 2 Quadrant flashing warning devices and gates-one track
   - IV 2 Quadrant flashing warning devices and gates-multiple tracks
   - V 3-4 Quadrant flashing warning devices and gates-one track
   - VI 2-4 Quadrant flashing warning devices and gates-multiple tracks

NOTE:

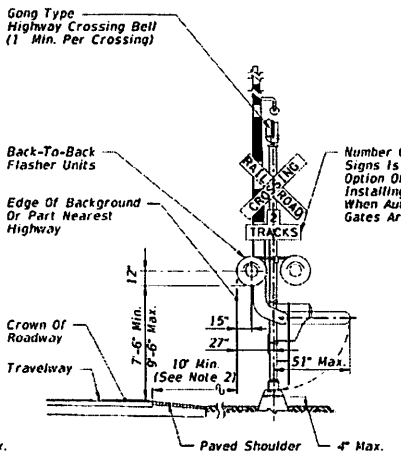
1. Two separate foundations may be required (one for signals, one for gate), depending on type of equipment used.
2. When 10' is deemed impractical the control device can be located as close as 2' from the edge of a paved shoulder but not less than 6' from the edge of the near traffic lane.



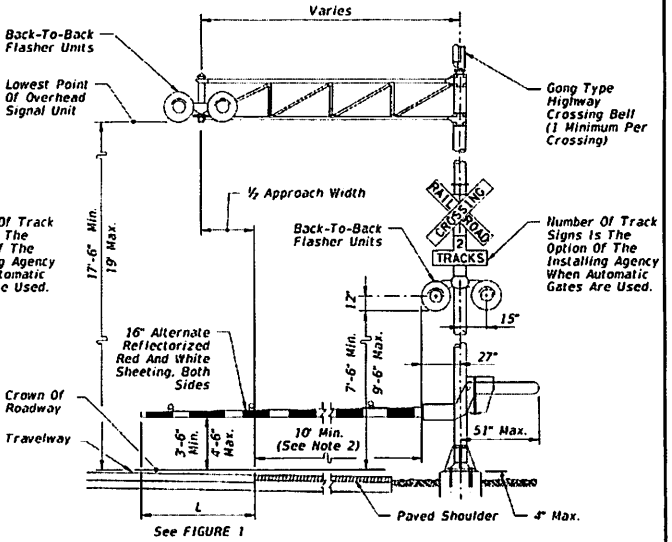
TYPE I



TYPE II



TYPE III AND TYPE V

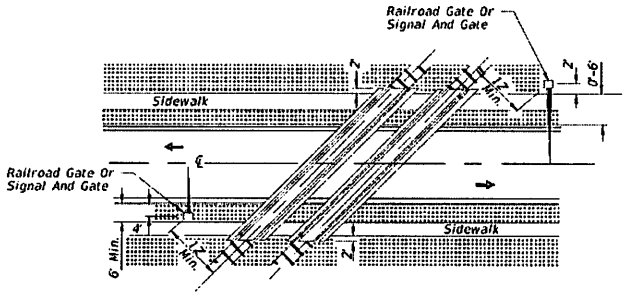


TYPE IV AND TYPE VI

TRAFFIC CONTROL DEVICES FOR FLUSH SHOULDER ROADWAY

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
02/05/21			FDOT FY 2022-23 STANDARD PLANS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	509-070	1 of 3

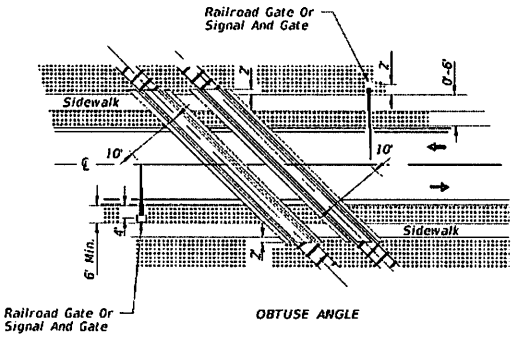
9/21/2021 2:53:34 PM



ACUTE ANGLE (AND RIGHT ANGLE)

SIGNAL PLACEMENT AT RAILROAD CROSSING

(2 LANES, CURB & GUTTER)



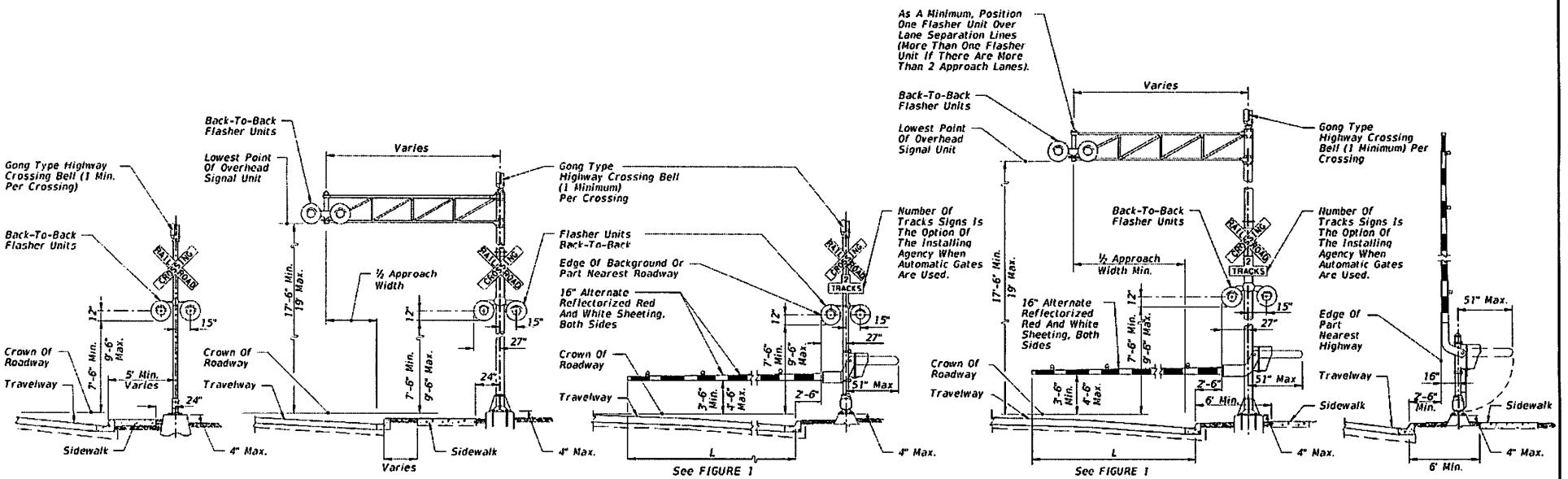
OBTUSE ANGLE

SIGNAL PLACEMENT AT RAILROAD CROSSING

(2 LANES, CURB & GUTTER)

NOTES:

1. The location of flashing warning devices and stop lines shall be established based on future (or present) installation of gate with appropriate track clearances.
2. Where plans call for railroad traffic control devices to be installed in curbed medians, the minimum median width shall be 12'-6".
3. Location of railroad traffic control device is based on the distance available between face of curb & sidewalk. 0' to 6' - Locate device outside sidewalk. Over 6' - Locate device between face of curb and sidewalk.
4. Stop line to be perpendicular to edge of roadway, approx. 15' from nearest rail; or 8' from and parallel to gate when present.
5. When a cantilevered-arm flashing warning device is used, the minimum vertical clearance shall be 17'-6" from above the Crown of Roadway to the Lowest Point of the Overhead Signal Unit.

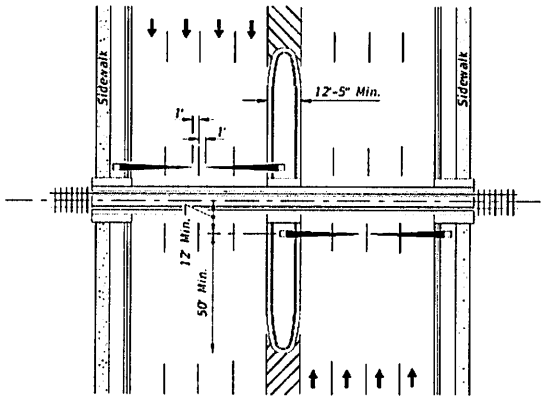


TYPE I TYPE II TYPE III TYPE IV TYPE V

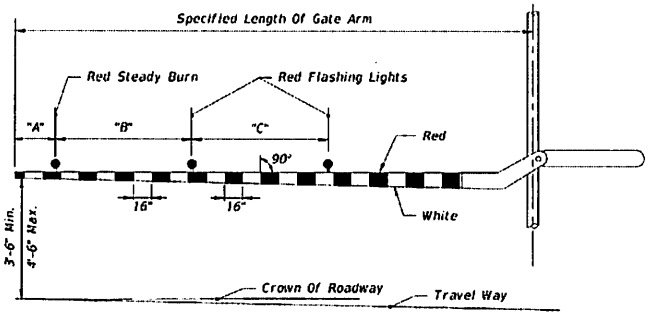
TRAFFIC CONTROL DEVICES FOR CURBED ROADWAY

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX	SHEET
02/05/21						509-070	2 of 3

9/21/2021 2:25:55 PM



PLAN

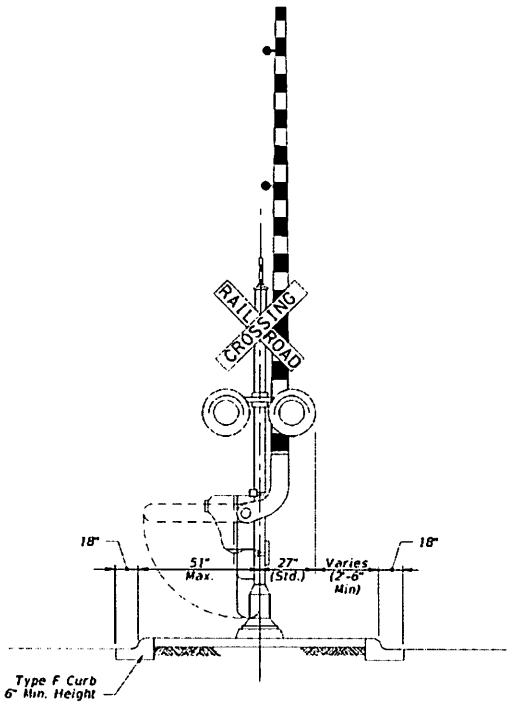


GATE ARM DETAIL

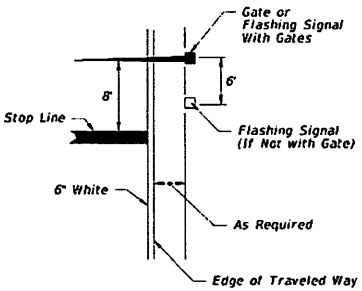
RAILROAD GATE ARM LIGHT SPACING			
Specified Length Of Gate Arm	Dimension "A"	Dimension "B"	Dimension "C"
14 Ft.	6"	36"	5'
15 Ft.	18"	36"	5'
16-17 Ft.	24"	36"	5'
18-19 Ft.	28"	41"	5'
20-23 Ft.	28"	4'	5'
24-28 Ft.	28"	5'	5'
29-31 Ft.	36"	6'	6'
32-34 Ft.	36"	7'	7'
35-37 Ft.	36"	9'	9'
38 And Over	36"	10'	10'

NOTE:

For additional information see the "Manual On Uniform Traffic Control Devices", Part 8; The "Traffic Control Handbook" , Part VIII; and AASHTO "A Policy On Geometric Design Of Streets And Highways".



MEDIAN SECTION AT SIGNAL GATES



MEDIAN SIGNAL GATES FOR MULTILANE UNDIVIDED URBAN SECTIONS

(Three or More Driving Lanes in one Direction, 45 mph or less)

RELATIVE LOCATION OF CROSSING TRAFFIC CONTROL DEVICES

9/21/2021 2:25:56 PM

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2022-23 STANDARD PLANS	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX	SHEET
02/05/21						509-070	3 of 3

220 Railroads

220.1 General

This chapter provides requirements for highway-railroad crossings on the State Highway System.

220.1.1 Railroad Companies

State-owned rail corridors include the Central Florida Rail Corridor and South Florida Rail Corridor.

Railroad companies currently operating in the state of Florida include:

(1) CSX Transportation, Incorporated

(2) Norfolk Southern Corporation

(3) Florida East Coast Railway Company

Short line railroad companies and terminal switching companies also operate in the state of Florida.

220.1.2 Work Near or Within Railroad R/W

A flagger must be present while any work within railroad R/W is being performed. Railroad companies often impose additional requirements as deemed necessary.

When roadway improvements are adjacent, near, above, or below the railroad R/W, there is potential for impacts to the railroad during construction or for construction materials and equipment to foul the tracks.

220.1.3 Required Coordination

Coordinate projects within or near railroad R/W as follows:

(1) New at-grade railroad crossings must be permitted in accordance with ***Section 335.141, Florida Statutes (F.S.)***. Early coordination with the Central Office is required concerning the Rail Crossing Opening/Closure Program.

(2) Coordinate the design of traffic control devices with the District Rail Coordinator who will then coordinate with the railroad company. Warning devices that are on within railroad R/W or interact with trains are installed by the railroad company.

(3) Coordinate with the District Traffic Operations Engineer to determine if a preemptive system is required.

(4) Coordinate with the Department's Central Office Freight and Multimodal Operations Office to determine if a highway-railroad at grade crossing is located within a designated Quiet Zone.

(5) Coordinate with the District Rail Coordinator when a waiver is being considered for standard lateral offset requirements for structures; see ***FDM 220.3.2***.

Some railroads may require an increase in Railroad Protective Liability Insurance greater than what is provided in the ***Standard Specifications***. The District Specifications Engineer and the District Rail Coordinator will develop a Modified Special Provision and submit it through the Central Specifications Office for special processing. For projects involving CSX Railroad use Special Provision SP0071303.

Modification for Non-Conventional Projects:
Delete ***FDM 220.1.3*** and see RFP for requirements.

220.2 Highway–Railroad At-Grade Crossing

The roadway should cross the railroad at an angle of or near 90 degrees.

Selection of the warning devices to be used is a function of the geometrics of highway-railroad at-grade crossing (e.g., alignment, profile, sight distance, cross section of both the roadway and the railroad), available R/W, and proximity to signalized intersections.

A highway-railroad at-grade crossing with a high-profiled vertical geometry is considered a "hump crossing" and can adversely affect the safety and operations of road users, posing a risk of low-clearance vehicles and trailers (e.g., low-profile vehicles, vehicles with long wheelbase, "lowboy" towing trailers) becoming stuck on the tracks. A hump crossing is defined as an at-grade crossing not meeting the dimensions and description of the detail entitled, "*Vertical Roadway Alignment Through A Railroad Crossings*" contained in ***Standard Plans***, ***Index 830-T01***.

Ensure all new construction and reconstruction at-grade crossings are in accordance with ***Standard Plans***, ***Index 830-T01***. For existing humped crossings to remain, install a Low Ground Clearance Grade Crossing (MUTCD W10-5) warning sign with LOW GROUND CLEARANCE (W10-5P) plaque.

Design considerations are discussed in the ***Florida Greenbook*** and the ***AASHTO Green Book***.

220.2.1 Traffic Control Devices

Traffic control devices (both roadway and pedestrian) for highway-railroad at-grade crossings consist primarily of signs, pavement markings, flashing light signals, and automatic gates. Consider the following when designing these devices:

(1) Roadway type

(2) Volume of vehicular traffic

(3) Volume of railroad traffic

(4) Speed of vehicular traffic

(5) Volume of pedestrian and bicycle traffic

(6) Crash data

(7) Geometrics of the crossing

Evaluate highway-railroad at-grade crossings and any of the following as a network to avoid blocking the crossing:

- Stop condition
- Roundabout
- Reduction in the number of lanes

Standards and criteria for design, placement, installment and operation of traffic control devices are located in the ***Manual on Uniform Traffic Control Devices (MUTCD),*** the Department's ***Standard Plans***, and ***Rule 14-57.013, Florida Administrative Code (F.A.C.)***.

When warning signs or signals are used in advance of a highway-railroad at grade crossing, they must be placed so as not to obstruct the view of the crossing signals.

220.2.1.1 Signing and Pavement Markings

Exhibits 220-1 through ***220-4*** provide typical signing and pavement markings for Active Grade Crossings. Refer to the ***MUTCD*** for definitions and signing and pavement markings at Passive Grade Crossings.

Do not place turning movement lane-use pavement markings on the upstream approach between the railroad crossing pavement message and the tracks.

Where intersections occur between the W10-1 sign shown in ***Exhibits 220-1*** through ***220-4*** and the tracks, place an additional W10-1 sign between the intersection and the railroad gate.

Include Railroad Dynamic Envelope (RDE) pavement markings at Active and Passive Grade Crossings on:

- State Roads,
- State-owned rails, and
- State-owned property.

Design Variations to not install an RDE are to be approved by the Chief Engineer.

The determination of slightly or significantly skewed railroad crossing is at the discretion of the EOR.

Detail RDE pavement markings in the Plans in accordance with ***Standard Plans, Index 711-001*** and the details shown in ***Exhibits 220-1*** through ***220-4***. Ensure the details in the plans include the following:

(1) Orient RDE pavement markings:

(a) In the direction of the travel lanes at all approaches upstream of the crossing (i.e., transverse to the travel lanes).

i. For slightly skewed railroads extend the RDE markings transverse across all lanes, as shown in ***Exhibits 220-2*** and ***220-3***.

ii. For significantly skewed railroads, step the RDE markings transverse across each lane, as shown in ***Exhibit 220-4***.

(b) Along the railroad (i.e., parallel to the railroad tracks) for areas between tracks and downstream of the crossing.

(c) To maximize the visibility of the RDE pattern for both the upstream and downstream sides of the track. Locate markings in a manner to ensure the "X" pattern is identifiable to the motorists and bicyclists and centered in the lanes to the extent practicable.

(2) Place RDE markings through the foul area as shown in ***Exhibits 220-3*** and ***220-4***. If the railroad owner will not allow the RDE markings through the foul area, or the substrate material will not provide an appropriate bonding surface for the markings, keep the RDE markings outside of the railroad's foul area as shown in ***Exhibits 220-1*** and ***220-2***.

(3) Replace all skip lane lines with solid lines for the following distance: From stop bar to stop bar of each approach, then upstream and downstream for a Distance "A" plus 15 feet. For Distance "A", see table in ***Exhibit 220-1***.

(4) Continue solid longitudinal edge line, lane line, and centerline markings through the RDE pattern, maintaining a 9-inch clear space between the RDE pattern and the longitudinal lane lines or gore areas.

(5) Refurbish all existing longitudinal lane lines, edge lines, and centerlines to remain in-place for the following minimum distance: From stop bar to stop bar of each approach, then upstream and downstream for a Distance "A" plus 15 feet. For Distance "A", see table in ***Exhibit 220-1***.

(6) Place RPMs at 10' maximum on center for the following distance: From stop bar to stop bar of each approach excluding the foul area, then upstream and downstream for a Distance "A" plus 15 feet. For Distance "A", see table in ***Exhibit 220-1***.

(7) For conditions where multiple tracks are configured non-parallel to each other, maintain the typical RDE pattern and fill the gap between the tracks, as necessary.

(8) RDE markings must not interfere with any pedestrian crosswalk.

(9) Consider extending the RDE markings beyond any railroad gates to reduce potential for railroad gates to close on top of stopped vehicles.

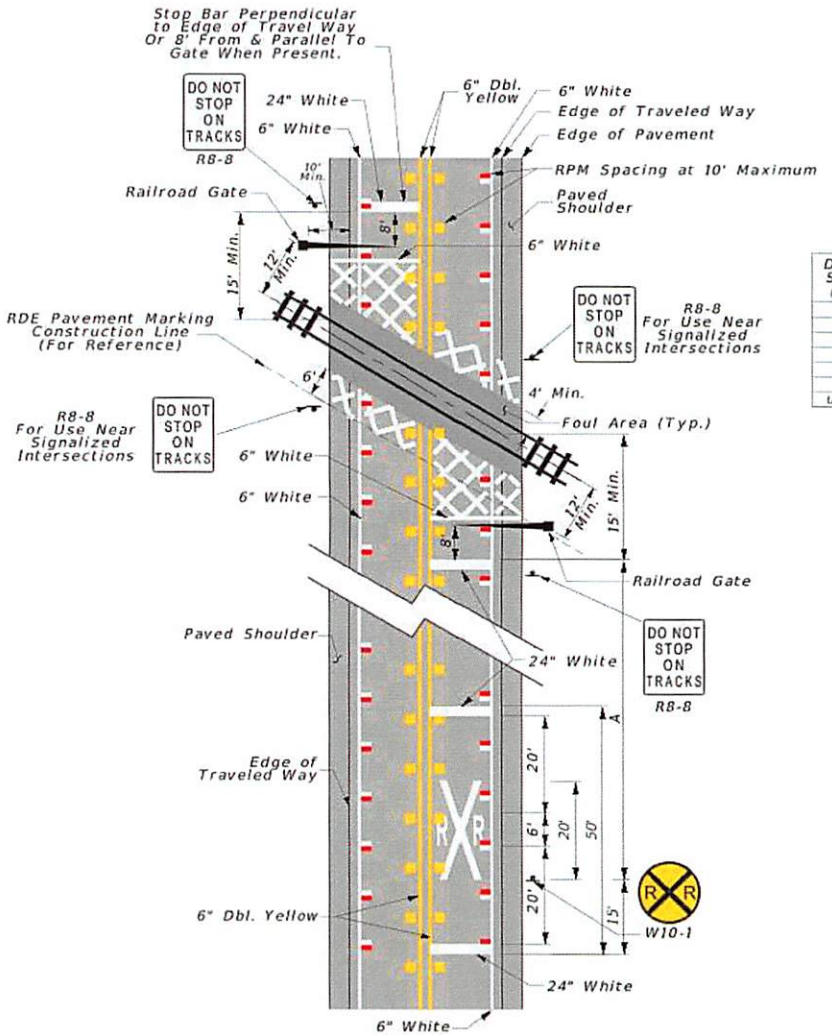
Consider the following additional provisions for Active and Passive Grade Crossings:

- For significantly skewed angles, corridor highway lighting for the following minimum distance: From stop bar to stop bar of each approach, then upstream and downstream for a Distance "A" plus 15 feet. For Distance "A", see table in ***Exhibit 220-1***.

- For significantly skewed angles, curves, and intersections directly adjacent to crossings, consider using additional channelization techniques for the roadway alignment. Some channelization techniques include Internally Illuminated RPMs and Tubular Markers. When crest vertical curves impede the visibility of RPMs, Tubular Markers should be used.
- Consider excluding downstream RDE pattern when traffic queuing is not expected.
- Consider the use of through lane-use arrows. For turn lanes, a route shield may be used in conjunction with the through lane-use arrow.
- Remove all existing traffic control signs and pavement markings (e.g., turning signs and turning arrow lane-use pavement markings) from the upstream approach that may lead to driver confusion on the correct turning point for downstream turning movements.
- Ensure placement of all signs allow a clear sight line to all rail signal flasher units. Sight line distance requirements vary by rail company. Consult with the operating railroad for project-specific determination of sight line distance.

For pavement marking material selection, see ***FDM 230***.
For side roads with Active and Passive Grade Crossings within 100 feet of the edge of traveled way, include W10-2, W10-3 or W10-4 signs on the mainline state road in accordance with the ***MUTCD***. Include W10-5 with W10-5P as described above in ***FDM 220.2***.

RAILROAD CROSSING AT TWO-LANE ROADWAY

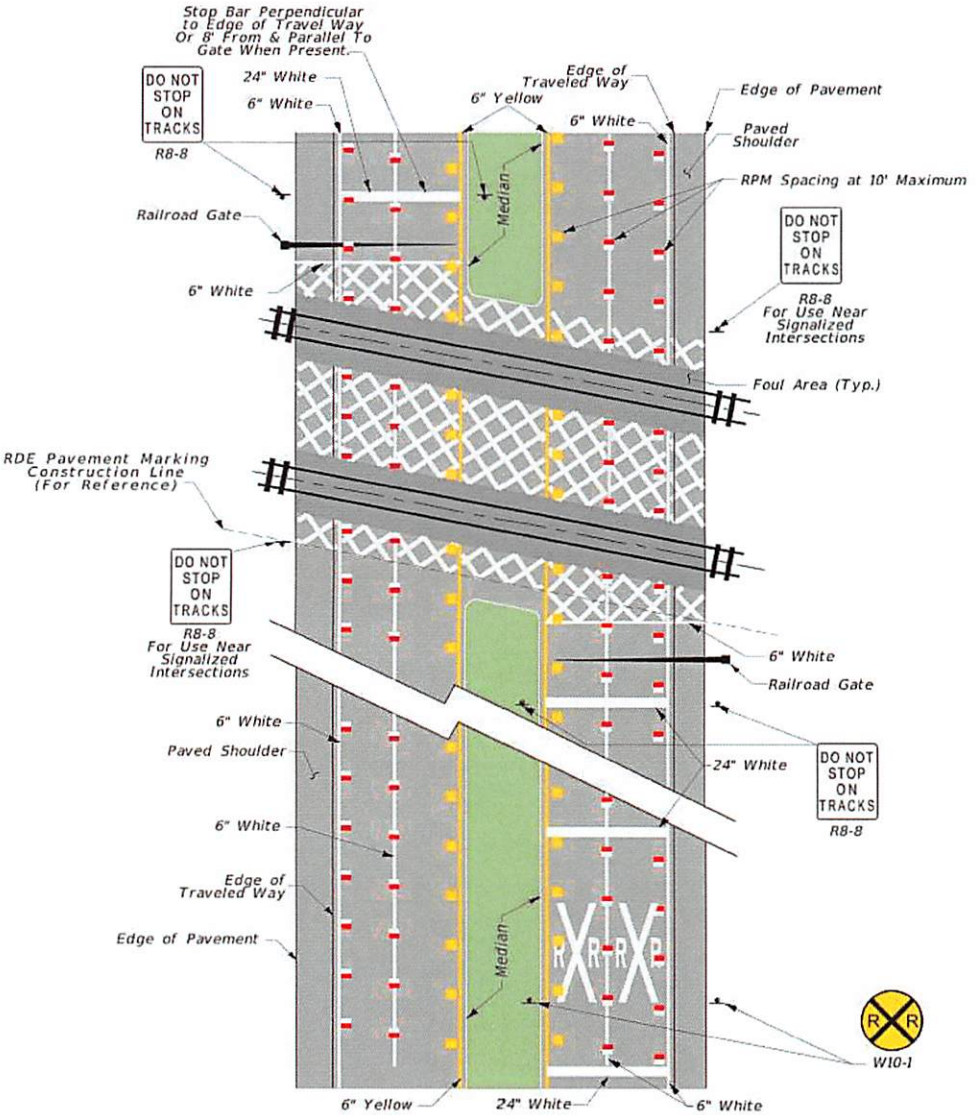


Design Speed (mph)	Distance "A" (ft)
60	400
55	325
50	250
45	175
40	125
35	100
URBAN	85 Min.

NOT TO SCALE

EXHIBIT 220-1
02/05/2021

RAILROAD CROSSING AT MULTILANE ROADWAY

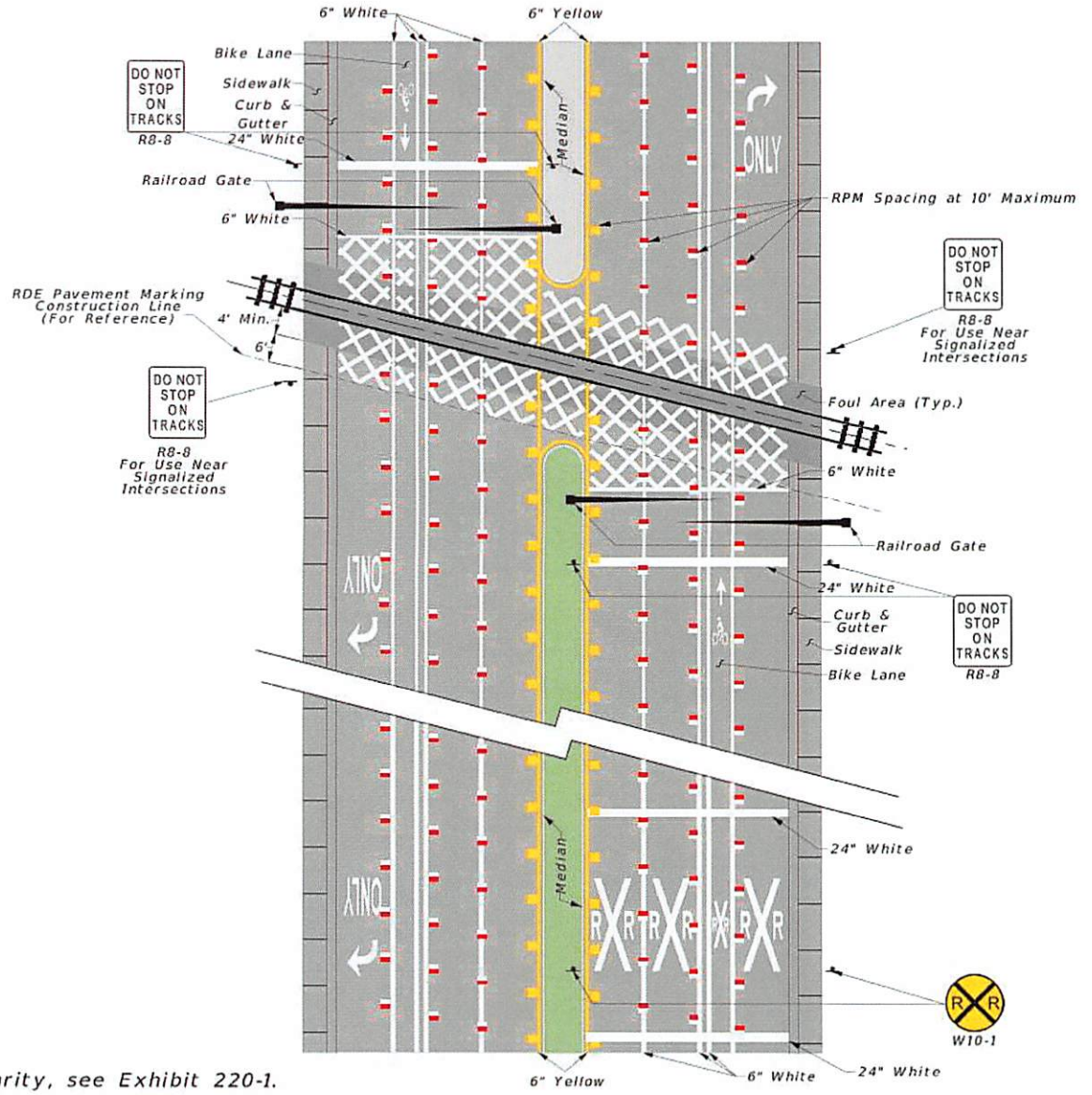


NOT TO SCALE

Dimensions not shown for clarity, see Exhibit 220-1.

EXHIBIT 220-2
02/05/2021

RAILROAD CROSSING AT URBAN MULTILANE ROADWAY WITH TURN LANE

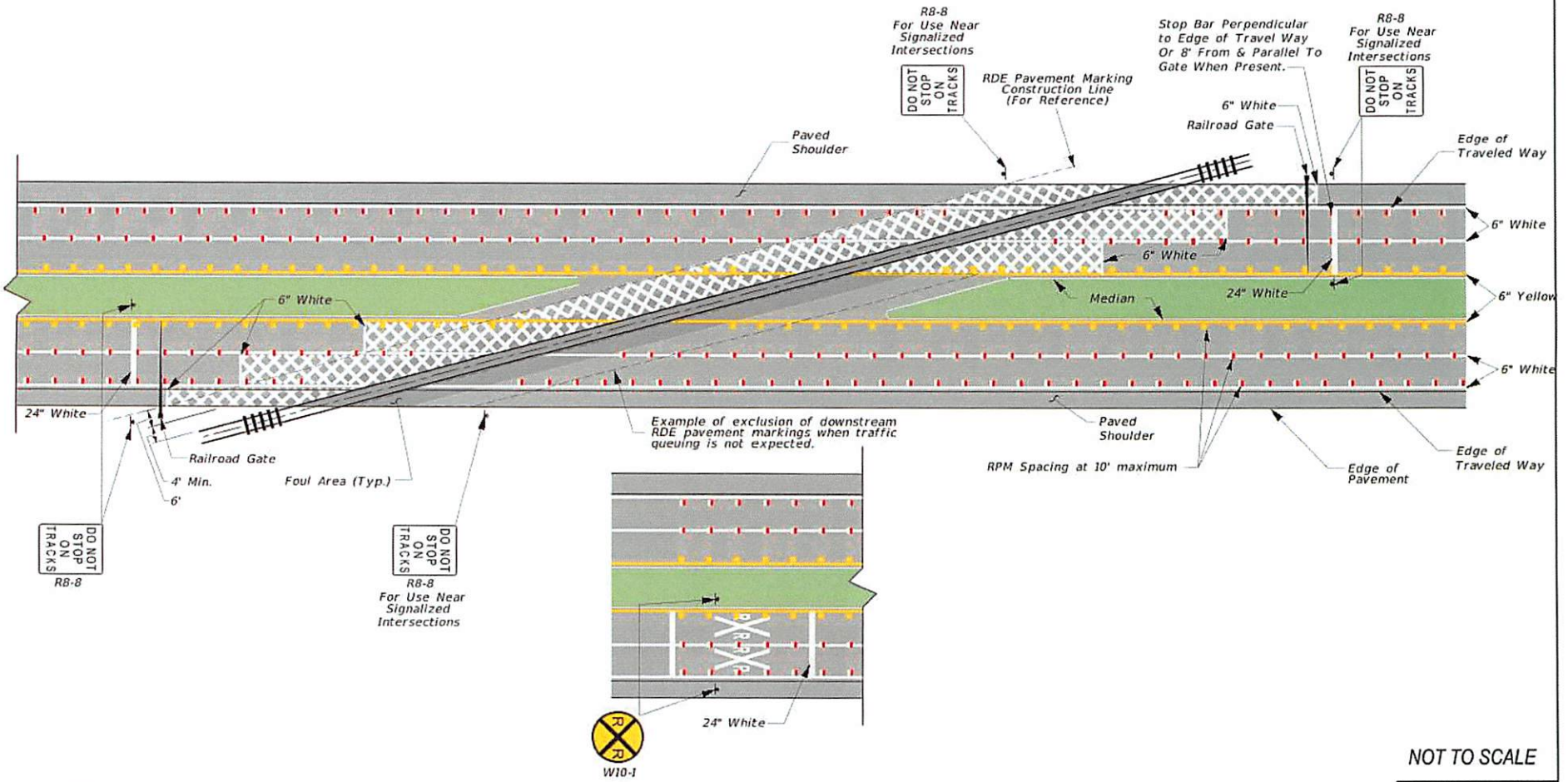


Dimensions not shown for clarity, see Exhibit 220-1.

NOT TO SCALE

EXHIBIT 220-3
02/05/2021

RAILROAD CROSSING WITH SIGNIFICANT SKEW TO THE ROADWAY



NOT TO SCALE

Dimensions not shown for clarity, see Exhibit 220-1.

EXHIBIT 220-4
02/05/2021

220.2.1.2 Preemption

Highway-railroad at grade crossings may require preemption of traffic signals where signalized highway intersections are in close proximity to a railroad crossing. Preemption requires the railroad and traffic signal control equipment to be interconnected with the traffic signal preempted to operate in a special control mode when trains are approaching. Preemption is required for any of the following conditions:

(1) Traffic Signal is within 200 ft of a highway-railroad at-grade crossing

(2) Highway traffic queues have the potential for extending across a nearby railroad crossing, or

(3) Highway traffic backed up from a nearby downstream railroad crossing could interfere with signalized highway intersections. A study to determine the need for preemption is required for a traffic signal within 500ft of a highway-railroad at-grade crossing

220.2.2 Surfaces

The roadway travel lanes at a highway-railroad at-grade crossing should be constructed for a suitable length with all-weather surfacing. A roadway section equal to the current or proposed cross section of the approach roadway, including any existing or proposed pedestrian walkways, should be carried through the railroad crossing. The railroad crossing surface itself should have a riding quality equivalent to that of the approach roadway. When selecting the type of crossing and the material to be used in its construction, consideration should be given to the character and volume of traffic using the roadway.

220.2.3 Quiet Zones

An at-grade railroad crossing within a designated Quiet Zone must comply with the ***Code of Federal Regulations (C.F.R.), Part 222*** and the ***Standard Plans, Index 509-070***. Quiet Zone means a segment of a rail line that includes public highway-railroad crossings at which locomotive horns are not routinely sounded.

A public highway-railroad at-grade crossing within a Quiet Zone should be equipped with a Supplemental Safety Measure identified in ***C.F.R., Part 222, Appendix A***. Allowable measures include:

(1) Gates with medians, or channelization using Type IV concrete traffic separators or Type F curb and gutter. Use of temporary channelization devices is not permitted.

(2) Four quadrant gate and three quadrant gates systems

(3) One-way streets with gates

(4) Permanent crossing closures

The railroad crossing should be evaluated to determine if driveways, minor side streets, or turn lanes in close proximity to the crossing require an additional gate.

220.2.4 Railroad Crossing Near or Within Project Limits

Review Federal-aid projects to determine if a railroad-highway at-grade crossing is within the limits of or near the terminus of the project. If such crossing exists, the project must be upgraded to meet the latest ***MUTCD*** requirements in accordance ***Title 23 United States Code (U.S.C.), Chapter 1, Section 109(e)*** and ***C.F.R. 646.214(b)***. These requirements are located in ***Chapter 8*** of the ***MUTCD***. "Near the terminus" is defined as being either of the following:

(1) If the project begins or ends between the crossing and the MUTCD-mandated advanced placement distance for the advanced (railroad) warning sign. See ***MUTCD, Table 2C-4*** (Condition B, column "0" mph) for this distance.

(2) An intersection traffic signal within the project is connected to the crossing's flashing light signal and gate.

220.2.5 Bicycle and Pedestrian Facilities

Extend proposed or existing sidewalks, bike lanes or shared use paths through the rail crossing. See ***FDM 222.2.4*** for additional information.

When a new bicycle or pedestrian crossing is added to an existing roadway, it is considered a new crossing if it is separated from the roadway. See ***FDM 220.1.3*** for information on coordinating new crossings.

220.3 Grade Separated Highway- Railroad Crossing

For railroad crossing over a roadway, the bridge must be designed to carry railway loadings in conformance with the ***American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering***. See ***FDM 260.6*** for required vertical clearances between the facilities.

Coordinate the following with the governing railroad company:

- Clearances, Geometrics and Utilities
- Provisions for future tracks
- Maintenance road requirements for off-track equipment
- Need for, and location of crash walls

The railroad company's review and approval is based on the completed Bridge Development Report (BDR)/30% Structures Plans.

Prepare the Structures Plans in accordance with the criteria obtained from the railroad company, the ***Structures Manual***, the ***Standard Plans***, and this manual.

Figure 220.3.1 illustrates the dimensions that are to be obtained from or approved by the railroad company before preparing the BDR/30% Structures Plans.

220.3.1 Bridge Width

For railroad over roadway crossing, the railroad bridge typical section is based on project requirements. For roadway over railroad crossings, see ***FDM 210*** for information on highway typical sections.

220.3.2 Lateral Offset to Face of Structure

For a roadway over a railroad crossing, measure lateral offset in accordance with ***Figure 220.3.1*** and ***Table 220.3.1***. The railroad company may accept a waiver from standard lateral offset requirements for the widening or replacement of existing bridges.

Lateral offset is measured from the centerline of outside track to the face of pier cap, bent cap, or any other adjacent structure. Minimum lateral offsets are shown in ***Table 220.3.1***.

Figure 220.3.1 Track Section

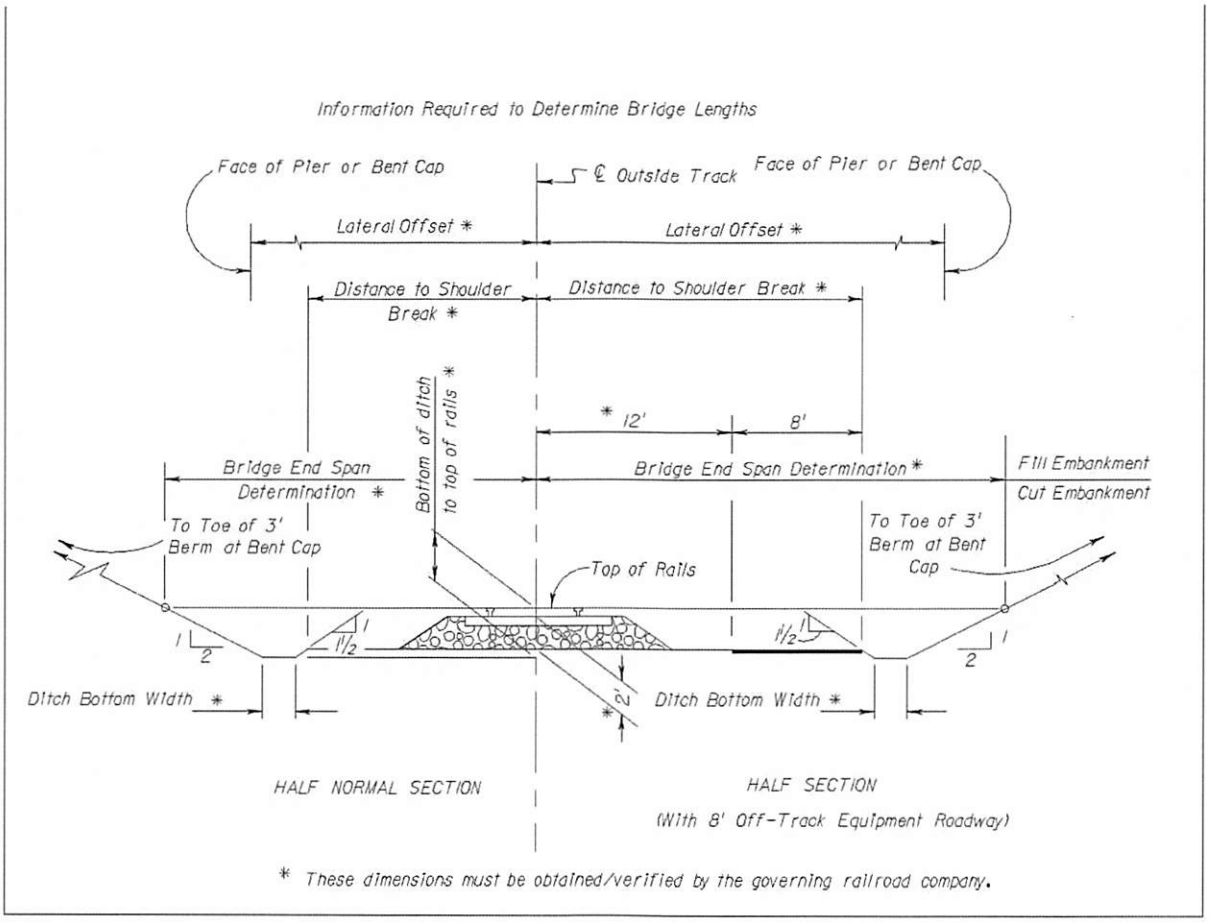


Table 220.3.1 Lateral Offsets for Railroads

Minimum Clearance Requirements	Normal Section	With 8 ft. Required Clearance for Off-Track Equip.	Temporary Falsework Opening
With Crash Walls*	18 ft.	22 ft.	10 ft.
Without Crash Walls	25 ft.	25 ft.	N/A

* See the ***Structures Design Guidelines, Section 2.6.7*** for crash wall requirements.

Provide an additional 8-ft. clearance for off-track equipment only when requested by the railroad company.

220.3.2.1 Adjustments for Track Geometry

Increase the minimum lateral offset by a rate of 1.5 inches for each degree of curvature when the track is on a curve.

Increase the minimum lateral offset on the inside of the curve by 3.5 inches horizontally per inch of superelevation when the track is superelevated.

Meet lateral offset requirements found in the ***AREMA Manual for Railway Engineering*** for extremely short radius curves.

220.3.2.2 Adjustments for Physical Obstructions

Columns or piles should be kept out of the ditch to prevent obstruction of drainage. Provide adequate lateral offset to avoid the need for crash walls unless extenuating circumstances dictate otherwise.

Figure 220.3.1 shows horizontal dimensions from the centerline of track to the points of intersection of a horizontal plane at the rail elevation with the embankment slope. This criteria may be used to establish the preliminary bridge length which normally is also the length of bridge eligible for FHWA participation; however, surrounding topography, hydraulic conditions, and economic or structural considerations may warrant a decrease or an increase of these dimensions.

220.3.2.3 Required Foundation Clearances

Place edges of footings no closer than 11 feet from centerline of the track to provide adequate room for sheeting.

220.3.3 Crash Walls

See the ***Structures Design Guidelines*** for crash wall requirements.

220.3.4 Special Considerations

Projects may include any of the following special considerations:

(1) Shoring and Cribbing requirements during construction should be accounted for in the preparation of the preliminary plans to assure compliance with required

clearances. Anything within the railroad R/W (e.g., cofferdams, footings, excavation) requires coordination with the District Rail Coordinator for approval by the railroad company.

(2) Overpasses for electrified railroads may require protection screens.

(3) Substructure supports may be located between adjacent tracks or an outside track and the off-track equipment road.

(4) Convey drainage from the bridge above the railroad away from the railroad R/W. Open scuppers are to be no closer than 25 feet to the centerline of the nearest track.

(5) The District Rail Coordinator must be contacted to see if there are any other requirements when constructing in or near their R/W.

(6) Additional consideration should be given to any utilities that may be located within the railroad R/W

220.3.5 Widening of Existing Bridge over Railroad

The requirements for widening an existing roadway or pedestrian bridge over railroad are as follows:

(1) If existing horizontal or vertical clearances are less than those required for a new structure, the design of the new portion of the structure is not to encroach into the existing clearances.

(2) Minimum vertical clearance should take into account the track grade and the cross slope of the bridge superstructure. It is desirable to widen on the ascending side of the bridge cross slope.

(3) Minimum lateral offset should take into account future changes to track geometry, physical obstructions or foundation clearances.

(4) Temporary construction vertical clearances less than 22 feet and lateral offsets less than 10 feet must be approved by the railroad company. It may not be possible to reduce already restricted vertical clearances on high volume rail lines.

(5) Meet drainage design requirements for new bridges when widened approach fills are necessary.

(6) Evaluate the need for crash wall protection if new substructures provide less than 25 feet lateral offset from center line of track.

(7) If the existing railroad is in a cut section, special considered should be given to the length, depth, and type material of the existing cut section.

(8) In cases where demolition of the existing structure is required for attachment of the new structure over the railroad's tracks, a method of debris collection should be provided so as not to encroach within the railroad R/W.

Provide a cross section at a right angle to the centerline of the track where the centerline of bridge intersects the centerline of track in the BDR/30% Structures Plans. Where the substructure is not parallel to the track, or the track is curved, provide a section perpendicular to the centerline of the track at each substructure end.

Figure 220.3.2 Section Thru Tracks