



**FRA Data Dictionary for External Use  
Grade Crossing Inventory System  
(GCIS) v3.0.0, Released: 01/27/2021  
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**U.S. Department of Transportation  
Federal Railroad Administration**

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**Office of Railroad Safety**

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## Revision Summary

| Revision Date | Document Version # | Revision Class | Summary  |
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| 03/06/2015    | 1.0                | Major          | Initial Availability   |
| 10/02/2015    | 1.1                | Minor          | Added Document Versioning  |
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| 12/18/2015    | 2.1                | Minor          | Updated Document Versioning  |
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| 02/12/2016    | 4.0                | Major          | Updated Data Model<br>Changed CI_CrossingHeader from Lookup table to Data table  |
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| 05/04/2018    | 4.4                | Minor          | Updated Document Versioning  |
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| 02/18/2021    | 4.7                | Minor          | <ul style="list-style-type: none"> <li>Updated Release Version and Dates</li> <li>Section 1 wording has been updated</li> <li>The column “Field Values” has been updated for the following fields: <ul style="list-style-type: none"> <li>AwdIDate</li> <li>AwhornlDate</li> <li>Branch</li> <li>Created</li> <li>HscoRrid</li> <li>SfxHscoRrid</li> <li>LastUpdated</li> <li>RrDiv</li> <li>RrMain</li> <li>RrSubDiv</li> <li>XSurfDate</li> <li>XingOwnr</li> </ul> </li> <li>The column “Description” has spelling correction for the following field: <ul style="list-style-type: none"> <li>ComPower</li> </ul> </li> </ul> |

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## **Section 1. Introduction**

### **1.1. Purpose**

GCIS is a web-based application allowing Railroad, State, and Transit users to directly submit crossing records through three methods: (1) a web user interface, (2) upload of multiple records using FRA pre-approved Excel template(s), and (3) a web Application Programming Interface (API). The data received are stored within a SQL Server database. This document contains the names of tables used in GCIS, and details such as field names, and valid field values. This document can be used as a reference for agencies that use API to get the GCIS data. For electronic data submission instructions, agencies can refer to “*FRA Instructions for Electronic Submission of U.S. DOT Crossing Inventory Data, Grade Crossing Inventory System (GCIS)*”.

### **1.2. Background**

The previous Grade Crossing Inventory System was designed over a decade ago by FRA. The old grade crossing system was replaced by the GCIS web application on March 7, 2015. The previous GCIS was a VB application with a SQL Server backend, and was used by the FRA data entry team to process grade crossing inventory data.

### **1.3. Scope**

This document provides details of the data tables that are used in the GCIS backend database. A brief summary of each table will be provided along with the column name, a description of each column, the value(s) that are stored, field types, and the location of the field within the Grade Crossing Inventory Form (6180.71) (if applicable).

## **Section 2. Overview**

At a high level, the GCIS data model contains two main categories as follows:

- Crossing Records – contains data consisting of all five parts of the Grade Crossing Inventory Form including the Header information
- Lookups – stores the lookup values used throughout the application

### **2.1. Data Model**

The data model provides an overview of the GCIS v2.0 new database structure. The table prefixes are labeled with CI\_ to indicate that those tables capture crossing inventory information. The subsequent sections provide further explanation regarding each table in the GCIS database.

# Federal Railroad Administration Highway-Rail Crossing Division

Collects Crossing & Ownership  
Info of Major Agencies

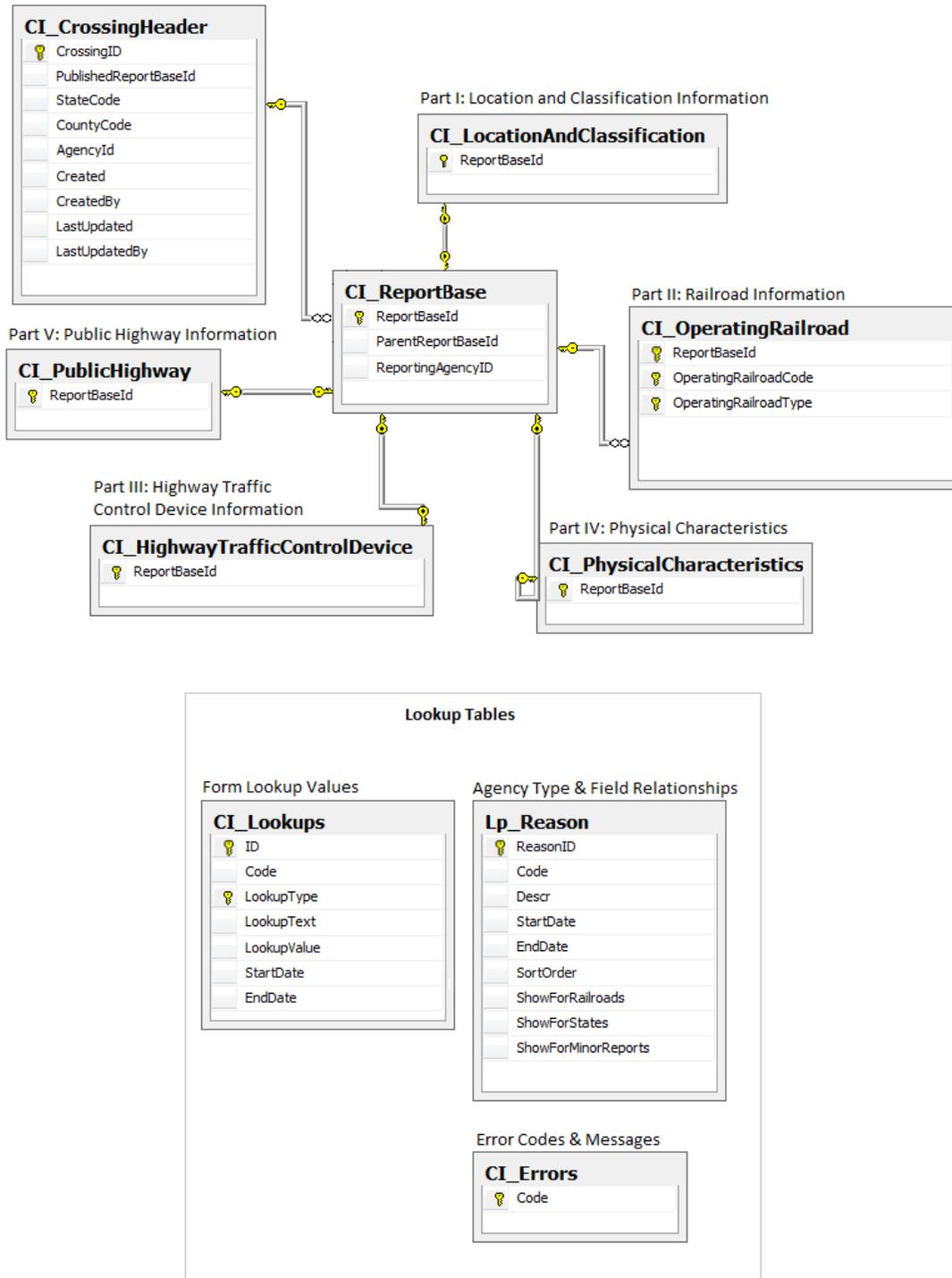


Figure 2-1: GCIS Logical Data Model

**Federal Railroad Administration Highway-Rail Crossing Division**

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**2.2. Data Tables**

2.2.1. Tables Storing Crossing Inventory Records

2.2.1.1. CI\_CrossingHeader

This table contains data related to the crossing and ownership information of the Primary Operating Railroad agency.

| Column Name           | Description   | Field Values   | Type        |
|-----------------------|---|--|-------------|
| AgencyId              | The Reporting Agency Type ID from which the submission originated | 1 = Railroad<br>2 = State<br>3 = Transit<br>4 = FRA Internal | int         |
| CountyCode            | The code assigned to each U.S. County                             |  | varchar(5)  |
| CrossingID            | Primary Key. Also the Crossing Inventory Number.                  |  | varchar(50) |
| PublishedReportBaseId | Foreign key to the CI_ReportBase table                            |  | int         |
| StateCode             | The code assigned to each U.S. State                              |  | varchar(5)  |
| Created               | Date for which the original submission was created                | Date and Time<br>(Eastern Standard Time)                     | datetime    |
| CreatedBy             | Username of the user who originally submitted the records         |  | varchar(50) |
| LastUpdated           | Date for which the existing submission was modified               | Date and Time<br>(Eastern Standard Time)                     | datetime    |
| LastUpdatedBy         | Username of the user who last submitted the updated records       |  | varchar(50) |

**Table 2-1: Fields in CI\_CrossingHeader**

2.2.1.2. CI\_HighwayTrafficControlDevice

This table stores information pertaining to Part III: Highway or Pathway Traffic Control Device Information of the Grade Crossing Inventory Form (6180.71). Detailed information regarding the table is described below.

| Box No. on Form | Column Name | Description                                | Field Values | Type         |
|-----------------|-------------|--|--------------|--------------|
| III.2.D         | AdvW10_1    | Count of Advance Warning Signs W10-1 flag  |              | numeric(1,0) |
| III.2.D         | AdvW10_11   | Count of Advance Warning Signs W10-11 flag |              | numeric(1,0) |
| III.2.D         | AdvW10_12   | Count of Advance Warning Signs W10-12 flag |              | numeric(1,0) |
| III.2.D         | AdvW10_2    | Count of Advance Warning Signs W10-2 flag  |              | numeric(1,0) |
| III.2.D         | AdvW10_3    | Count of Advance Warning Signs W10-3 flag  |              | numeric(1,0) |
| III.2.D         | AdvW10_4    | Count of Advance Warning Signs W10-4 flag  |              | numeric(1,0) |

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| Box No. on Form | Column Name   | Description  | Field Values   | Type         |
|-----------------|---------------|--|--|--------------|
| III.2.D         | AdvWarn       | Advance Warning Signs  | 0 = None<br>1 = W10-1<br>2 = W10-2<br>3 = W10-3<br>4 = W10-4<br>11 = W10-11<br>12 = W10-12                     | varchar(32)  |
| III.3.F         | AwdlDate      | Installation Date of Current Active Warning Devices                                | MMYYYY<br>(-1 indicates "Not Required")  | varchar(6)   |
| III.3.G         | AwhornChk     | Wayside Horn   | 1 = Yes<br>2 = No  | varchar(1)   |
| III.3.G         | AwhornlDate   | Wayside Horn Installed On (date)   | MMYYYY   | varchar(6)   |
| III.3.I         | Bells         | Number of Bells  |  | numeric(2,0) |
| III.3.D         | Bkl_FlashPost | Mast Mounted Flashing Lights: Back Lights Included                                 | 1 = Yes<br>2 = No  | varchar(32)  |
| III.3.C         | CFlashType    | Type of Cantilevered (or Bridged) Flashing Light Structures                        | 0 = None<br>1 = Incandescent<br>2 = LED  | varchar(32)  |
| III.2.G         | Channel       | Channelization Devices/Medians   | 1 = All Approaches<br>2 = One Approach<br>3 = Median – All Approaches<br>4 = Median – One Approach<br>5 = None | varchar(1)   |
| III.2.I         | EnsSign       | ENS Sign Displayed   | 1 = Yes<br>2 = No  | varchar(1)   |
| III.2.H         | Exempt        | EXEMPT Signs   | 1 = Yes<br>2 = No  | varchar(1)   |
| III.3.C         | FlashNov      | Count of Cantilevered (or Bridged) Flashing Light Structures Not Over Traffic Lane |  | numeric(2,0) |
| III.3.K         | FlashOth      | Other Flashing Lights or Warning Devices: Count                                    |  | numeric(2,0) |
| III.3.K         | FlashOthDes   | Other Flashing Lights or Warning Devices: Specify type                             |  | varchar(256) |
| III.3.C         | FlashOv       | Count of Cantilevered (or Bridged) Flashing Light Structures Over Traffic Lane     |  | numeric(2,0) |
| III.3.E         | FlashPai      | Total Count of Flashing Light Pairs  |  | numeric(2,0) |
| III.3.D         | FlashPost     | Mast Mounted Flashing Lights (count)   |  | numeric(2,0) |

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| Box No. on Form | Column Name    | Description  | Field Values  | Type         |
|-----------------|----------------|--|---|--------------|
| III.3.D         | FlashPostType  | Mast Mounted Flashing Lights Type                  | 0 = None<br>1 = Incandescent<br>2 = LED   | varchar(32)  |
| III.3.B         | GateConf       | Gate Configuration                                 | 1 = 2 Quad<br>2 = 3 Quad<br>3 = 4 Quad  | varchar(32)  |
| III.3.B         | GateConfType   | Type of Gate Configuration                         | 4 = Full (Barrier) Resistance<br>6 = Median Gates                               | varchar(32)  |
| III.3.A         | GatePed        | Count of Pedestrian Gate Arms                      |   | numeric(2,0) |
| III.3.A         | Gates          | Count of Roadway Gate Arms                         |   | numeric(2,0) |
| III.5           | HwtrfPsig      | Highway Traffic Pre-Signals                        | 1 = Yes<br>2 = No   | varchar(1)   |
| III.5           | HwtrfPsigIndis | Stop Line Distance (count)                         |   | numeric(3,0) |
| III.5           | HwtrfPsigdis   | Storage Distance (count)                           |   | numeric(3,0) |
| III.4.A         | HwynrSig       | Does Nearby Hwy Intersection have Traffic Signals? | 1 = Yes<br>2 = No   | varchar(1)   |
| III.3.H         | HwyTrafSignl   | Highway Traffic Signals Controlling Crossing       | 1 = Yes<br>2 = No   | varchar(1)   |
| III.4.B         | Intrprmp       | Hwy Traffic Signal Interconnection                 | 1 = Not Interconnected<br>2 = For Traffic Signals<br>3 = For Warning Signs      | varchar(32)  |
| III.2.L         | Led            | LED Enhanced Signs                                 |   | varchar(256) |
| III.2.E         | Low_Grnd       | Low Ground Clearance Signs                         | 1 = Yes<br>2 = No   | varchar(1)   |
| III.2.E         | Low_GrndSigns  | Number of Low Ground Clearance Signs               |   | numeric(2,0) |
| III.6           | MonitorDev     | Highway Monitoring Devices                         | 0 = None<br>1 = Yes-Photo/Video Recording<br>2 = Yes-Vehicle Presence Detection | varchar(32)  |
| III.1           | NoSigns        | Are there Signs or Signals?                        | 1 = Yes<br>2 = No   | varchar(1)   |
| III.2.J         | OthDes1        | Specify Type of Other MUTCD Signs                  |   | varchar(10)  |
| III.2.J         | OthDes2        | Specify Type of Other MUTCD Signs 2                |   | varchar(10)  |
| III.2.J         | OthDes3        | Specify Type of Other MUTCD Signs 3                |   | varchar(10)  |
| III.2.J         | OthSgn         | Other MUTCD Signs                                  | 1 = Yes<br>2 = No   | varchar(1)   |

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| Box No. on Form | Column Name   | Description   | Field Values   | Type         |
|-----------------|---------------|---|--|--------------|
| III.2.J         | OthSgn1       | Number of Other MUTCD Signs                                 |  | numeric(2,0) |
| III.2.J         | OthSgn2       | Number of Other MUTCD Signs 2                               |  | numeric(2,0) |
| III.2.J         | OthSgn3       | Number of Other MUTCD Signs 3                               |  | numeric(2,0) |
| III.2.F         | PaveMrkIDs    | Pavement Markings   | 0 = None<br>1 = Stop Lines<br>2 = RR Xing Symbols<br>3 = Dynamic Envelope                              | varchar(32)  |
| III.4.C         | PrempType     | Highway Traffic Signal Preemption                           | 1 = Simultaneous<br>2 = Advance  | varchar(1)   |
| III.2.K         | PrvxSign      | Private Crossing Signs                                      | 1 = Yes<br>2 = No  | varchar(1)   |
|                 | ReportBaseId  | Foreign Key to the CI_ReportBase table                      |  | int          |
| III.3.D         | Sdl_FlashPost | Must Mounted Flashing Lights: Side Lights Included          | 1 = Yes<br>2 = No  | varchar(32)  |
| III.3.J         | SpecPro       | Non-Train Active Warning                                    | 0 = None<br>1 = Flagging/Flagman<br>2 = Manually Operated Signals<br>3 = Watchman<br>4 = Floodlighting | varchar(20)  |
| III.2.B         | StopStd       | Number of STOP Signs  |  | numeric(1,0) |
| III.2.A         | XBuck         | Number of Crossbuck Assemblies                              |  | numeric(2,0) |
| III.2.C         | YieldStd      | Number of YIELD Signs                                       |  | numeric(1,0) |
|                 | WdCode        | Warning Device Code   |  | varchar(1)   |
|                 | Created       | Date for which the original submission was created          | Date and Time<br>(Eastern Standard Time)   | datetime     |
|                 | CreatedBy     | Username of the user who originally submitted the records   |  | varchar(50)  |
|                 | LastUpdated   | Date for which the existing submission was modified         | Date and Time<br>(Eastern Standard Time)   | datetime     |
|                 | LastUpdatedBy | Username of the user who last submitted the updated records |  | varchar(50)  |

**Table 2-2: Fields in CI\_HighwayTrafficControlDevice**

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2.2.1.3. CI\_LocationAndClassification

This table stores information pertaining to Part I: Location and Classification Information of the Grade Crossing Inventory Form (6180.71).

| Box No. on Form | Column Name | Description                           | Field Values  | Type         |
|-----------------|-------------|---------------------------------------|---|--------------|
| I.5             | BlockNumb   | Block Number                          |   | varchar(6)   |
| I.4             | CityCD      | The code assigned to each U.S. City   |   | varchar(10)  |
| I.3             | CntyCD      | The code assigned to each U.S. County |   | varchar(10)  |
| I.23            | DevelTypID  | Type of Land Use                      | 11 = Open Space<br>12 = Residential<br>13 = Commercial<br>14 = Industrial<br>15 = Institutional<br>16 = Farm<br>17 = Recreational<br>18 = RR Yard | varchar(32)  |
| I.6             | Highway     | Highway Type & No.                    |   | varchar(256) |
| I.26            | HscoRrid    | HSR Corridor ID                       | ID (identifier) from the GCIS Look Up reference table<br><br>(-1 indicates "N/A")<br><br>Related Field: SfxHscoRrid                               | varchar(4)   |

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| Box No. on Form | Column Name   | Description  | Field Values   | Type         |
|-----------------|---------------|--|--|--------------|
| I.35            | HwyCont       | State Contact (Telephone No.)                            |  | varchar(10)  |
| I.27            | Latitude      | Latitude   |  | varchar(256) |
| I.29            | LLsource      | Lat/Long Source  | 1 = Actual<br>2 = Estimated                                    | varchar(1)   |
| I.28            | Longitude     | Longitude  |  | varchar(256) |
| I.7             | MultFrmsFiled | Do Other Railroads Operate a Separate Track at Crossing? | 1 = Yes<br>2 = No  | varchar(1)   |
| I.4             | Nearest       | In/Near  | 0 = In<br>1 = Near   | varchar(1)   |
| I.20            | OpenPub       | Public Access (If Private Crossing)                      | 1 = Yes<br>2 = No  | varchar(1)   |
| I.33            | PolCont       | Emergency Notification Telephone No.                     |  | varchar(10)  |
| I.19            | PosXing       | Crossing Position  | 1 = At Grade<br>2 = RR Under<br>3 = RR Over                    | varchar(1)   |
| I.1             | Railroad      | The code associated with the Primary Operating Railroad  |  | varchar(32)  |
|                 | ReportBaseId  | Foreign Key to the CI_ReportBase table                   |  | int          |
| I.34            | RrCont        | Railroad Contact (Telephone No.)                         |  | varchar(10)  |
| I.13            | RrID          | Line Segment   |  | varchar(256) |
| I.15            | RrMain        | The code associated with the Parent Railroad             | Valid Railroad or Company Code<br>(-1 is a code meaning "N/A") | varchar(32)  |
| I.32.A          | RrNarr        | Railroad Narrative                                       |  | varchar(max) |

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| Box No. on Form | Column Name    | Description  | Field Values   | Type         |
|-----------------|----------------|--|--|--------------|
| I.30.A          | RrNarr1        | Railroad narrative A   |  | varchar(256) |
| I.30.B          | RrNarr2        | Railroad narrative B   |  | varchar(256) |
| I.30.C          | RrNarr3        | Railroad narrative C   |  | varchar(256) |
| I.30.D          | RrNarr4        | Railroad narrative D   |  | varchar(256) |
| I.8.            | SameInd        | Do Other Railroads Operate Over Your Track at Crossing?                                | 1 = Yes<br>2 = No  | varchar(1)   |
| I.8.            | SameRr1        | The code associated with the Railroad selected in the 1st drop-down list for field I.8 |  | varchar(32)  |
| I.8.            | SameRr2        | The code associated with the Railroad selected in the 2nd drop-down list for field I.8 |  | varchar(32)  |
| I.8.            | SameRr3        | The code associated with the Railroad selected in the 3rd drop-down list for field I.8 |  | varchar(32)  |
| I.8.            | SameRr4        | The code associated with the Railroad selected in the 4th drop-down list for field I.8 |  | varchar(32)  |
| I.7             | SepInd         | Do Other Railroads Operate a Separate Track at Crossing?                               | 1 = Yes<br>2 = No  | varchar(1)   |
| I.7             | SepRr1         | The code associated with the Railroad selected in the 1st drop-down list for field I.7 |  | varchar(32)  |
| I.7             | SepRr2         | The code associated with the Railroad selected in the 2nd drop-down list for field I.7 |  | varchar(32)  |
| I.7             | SepRr3         | The code associated with the Railroad selected in the 3rd drop-down list for field I.7 |  | varchar(32)  |
| I.7             | SepRr4         | The code associated with the Railroad selected in the 4th drop-down list for field I.7 |  | varchar(32)  |
| I.26            | SfxHscoRrid    | HSR Corridor ID Suffix   | Rail-Section Identifier (numeric 1-9) or 'X' if numeric not used.  | varchar(4)   |
| I.2             | StateCD        | The code assigned to each U.S. States  |  | varchar(2)   |
| I.32.B          | StNarr         | State Narrative  |  | varchar(max) |
| I.31.A          | StNarr1        | State narrative A  |  | varchar(256) |
| I.31.B          | StNarr2        | State narrative B  |  | varchar(256) |
| I.31.C          | StNarr3        | State narrative C  |  | varchar(256) |
| I.31.D          | StNarr4        | State narrative D  |  | varchar(256) |
| I.5             | Street         | Street or Road Name  |  | varchar(256) |
| I.14            | Ttstn          | Timetable Station  |  | varchar(6)   |
| I.14            | TtstnNam       | Nearest RR Timetable Station   |  | varchar(256) |
| I.21            | TypeTrnSrvcIDs | Type of Train Service  | 11 = Freight<br>12 = Intercity Passenger<br>13 = Commuter<br>14 = Transit<br>15 = Shared Use Transit<br>16 = Tourist/Other | varchar(32)  |
| I.17            | TypeXing       | Crossing Type  | 2 = Private<br>3 = Public  | varchar(1)   |

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| Box No. on Form | Column Name   | Description   | Field Values   | Type        |
|-----------------|---------------|---|--|-------------|
| I.25            | Whistban      | Quiet Zone  | 0 = No<br>1 = 24 hr<br>2 = Partial<br>3 = Chicago Excused          | varchar(1)  |
| I.25            | WhistDate     | Date Established (Quiet Zone)                               |  | datetime    |
| I.24            | XingAdj       | Is there an Adjacent Crossing with a Separate Number?       | 1 = Yes<br>2 = No  | varchar(1)  |
| I.16            | XingOwnr      | Crossing Owner (RR ID)                                      | Valid Railroad or Company Code<br><br>(-1 is a code meaning "N/A") | varchar(32) |
| I.24            | XngAdjNo      | If Yes, Provide Crossing Number                             |  | varchar(7)  |
| I.18            | XPurpose      | Crossing Purpose  | 1 = Highway<br>2 = Pathway, Pedestrian<br>3 = Station, Pedestrian  | varchar(1)  |
|                 | Created       | Date for which the original submission was created          | Date and Time<br>(Eastern Standard Time)                           | datetime    |
|                 | CreatedBy     | Username of the user who originally submitted the records   |  | varchar(50) |
|                 | LastUpdated   | Date for which the existing submission was modified         | Date and Time<br>(Eastern Standard Time)                           | datetime    |
|                 | LastUpdatedBy | Username of the user who last submitted the updated records |  | varchar(50) |

**Table 2-3: Fields in CI\_LocationAndClassification**

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### 2.2.1.4. CI\_OperatingRailroad

This table contains 2 Primary Keys consisting of the OperatingRailroadCode and OperatingRailroadType that distinctly identifies that the record is a Multiple Forms Filed (MFF) record and the ReportBaseId that is a foreign key to the CI\_ReportBase table capturing the Header information. It also captures data for Part II: Railroad Information of the Grade Crossing Inventory Form (6180.71).

| Box No. on Form | Column Name           | Description   | Field Values  | Type         |
|-----------------|-----------------------|---|---|--------------|
| I.11            | Branch                | Branch or Line Name   | Any Alphanumeric Data<br>(#N/A is a code meaning "None")  | varchar(256) |
| II.1.A          | DayThru               | Total Daylight Thru Trains  |   | numeric(3,0) |
| II.7.A          | EMonitorDvce          | Event Recorder  | 1 = Yes<br>2 = No   | varchar(1)   |
| II.7.B          | HealthMonitor         | Remote Health Monitoring  | 1 = Yes<br>2 = No   | varchar(1)   |
| II.4            | IndustryTrk           | Number of Industry tracks   |   | numeric(2,0) |
| II.1.E          | LtlMov                | Check if Less Than One Movement Per Day   | 1 = Less Than One Movement Per Day<br>2 = One or More Movements Per Day   | varchar(1)   |
| I.22            | LtlPassMov            | Average Passenger Train Count Per Day: Less Than One Per Day  | 1 = Yes<br>2 = No   | varchar(1)   |
| II.4            | MainTrk               | Number of Main tracks   |   | numeric(2,0) |
| II.3.B          | MaxSpd                | Typical Speed Range Over Crossing - MaxTypical Speed Range Over Crossing (maximum)  |   | numeric(3,0) |
| II.3.A          | MaxTtSpd              | Maximum Timetable Speed   |   | numeric(3,0) |
| I.12            | MilePost              | RR Milepost Number  |   | varchar(8)   |
| II.3.B          | MinSpd                | Typical Speed Range Over Crossing (minimum)   |   | numeric(3,0) |
| II.1.B          | NghtThru              | Total Night time Thru Trains  |   | float        |
|                 | OperatingRailroadCode | Primary Key. The code associated with the Primary Operating Railroad  |   | varchar(32)  |
|                 | OperatingRailroadType | Primary Key. The type distinguishing whether the operating Railroad is the Primary, Operate a Separate Track, or Operate Over a Track | Primary = Primary Operating Railroad<br>Samerr = Operate Over Your Track at Crossing<br>Sepr = Operate a Separate Track at Crossing | varchar(10)  |

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| Box No. on Form | Column Name   | Description   | Field Values   | Type         |
|-----------------|---------------|---|--|--------------|
| I.22            | PassCnt       | Average Passenger Train Count Per Day: Number per day       |  | numeric(3,0) |
| I.12            | PrfxMilePost  | RR Milepost Prefix  |  | varchar(3)   |
|                 | ReportBaseId  | Foreign key to the CI_ReportBase table                      |  | int          |
| I.9             | RrDiv         | Railroad Division or Region                                 | Any Alphanumeric Data<br>(#N\A is a code meaning "None")   | varchar(256) |
| I.10            | RrSubDiv      | Railroad Subdivision or District                            | Any Alphanumeric Data<br>(#N\A is a code meaning "None")   | varchar(256) |
| I.12            | SfxMilePost   | RR Milepost Suffix  |  | varchar(3)   |
| II.6            | Sgnleqp       | Is Track Signaled?  | 1 = Yes<br>2 = No  | varchar(1)   |
| II.4            | SidingTrk     | Number of Siding tracks                                     |  | numeric(2,0) |
| II.5            | SpselIDs      | Train Detection   | 0 = None<br>11 = Constant Warning Time<br>12 = Motion Detection<br>14 = Other<br>16 = AFO<br>17 = PTC<br>18 = DC | varchar(32)  |
| II.1.D          | TotalLtr      | Total Transit Trains  |  | float        |
| II.1.C          | TotalSwt      | Total Switching Trains                                      |  | float        |
| II.4            | TransitTrk    | Number of Transit tracks                                    |  | numeric(2,0) |
| II.1.E          | WeekTrnMov    | How many Trains per Week?                                   |  | float        |
| II.4            | YardTrk       | Number of Yard tracks                                       |  | numeric(2,0) |
| II.2            | YearTrnMov    | Year of Train Count Data                                    |  | float        |
|                 | Created       | Date for which the original submission was created          | Date and Time<br>(Eastern Standard Time)   | datetime     |
|                 | CreatedBy     | Username of the user who originally submitted the records   |  | varchar(50)  |
|                 | LastUpdated   | Date for which the existing submission was modified         | Date and Time<br>(Eastern Standard Time)   | datetime     |
|                 | LastUpdatedBy | Username of the user who last submitted the updated records |  | varchar(50)  |

Table 2-4: Fields in CI\_OperatingRailroad

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### 2.2.1.5. CI\_PhysicalCharacteristics

This table stores information pertaining to Part IV: Physical Characteristics of the Grade Crossing Inventory Form (6180.71).

| Box No. on Form | Column Name  | Description                                      | Field Values  | Type         |
|-----------------|--------------|--|---|--------------|
| IV.8            | ComPower     | Is Commercial Power Available?                   | 1 = Yes<br>2 = No   | varchar(1)   |
| IV.3            | Downst       | Does Track Run Down a Street?                    | 1 = Yes<br>2 = No   | varchar(1)   |
| IV.6            | HwynDist     | Approximate Intersecting Roadway Distance (feet) |   | numeric(4,0) |
| IV.6            | HwyNear      | Intersecting Roadway within 500 feet?            | 1 = Yes<br>2 = No   | varchar(1)   |
| IV.2            | HwyPved      | Is Roadway/Pathway Paved?                        | 1 = Yes<br>2 = No   | varchar(1)   |
| IV.4            | Illumina     | Is Crossing Illuminated?                         | 1 = Yes<br>2 = No   | varchar(1)   |
|                 | ReportBaseId | Foreign key to the CI_ReportBase table           |   | int          |
| IV.1            | TrafficLn    | Number of Traffic Lanes Crossing Railroad        |   | varchar(2)   |
| IV.1            | TraflnType   | Traffic Lane Type                                | 1 = One-way Traffic<br>2 = Two-way Traffic<br>3 = Divided Traffic | varchar(1)   |
| IV.7            | XAngle       | Smallest Crossing Angle                          | 1 = 0° - 29°<br>2 = 30° - 59°<br>3 = 60° - 90°                    | varchar(1)   |

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| <b>Box No. on Form</b> | <b>Column Name</b> | <b>Description</b>  | <b>Field Values</b>  | <b>Type</b>  |
|------------------------|--------------------|---|--|--------------|
| IV.5                   | XSurfaceIDs        | Crossing Surface  | 11 = 1. Timber<br>12 = 2. Asphalt<br>13 = 3. Asphalt and Timber<br>14 = 4. Concrete<br>15 = 5. Concrete and Rubber<br>16 = 6. Rubber<br>17 = 7. Metal<br>18 = 8. Unconsolidated<br>19 = 9. Composite<br>20 = 10. Other (specify) | varchar(32)  |
| IV.5                   | XSurfDate          | Crossing Surface Installation Date                          | MMYYYY   | varchar(6)   |
| IV.5                   | XSurfLength        | Crossing Surface Length                                     |  | numeric(3,0) |
| IV.5                   | XSurfWidth         | Crossing Surface Width                                      |  | numeric(3,0) |
| IV.5                   | XSurOthr           | Other Crossing Surface (description)                        |  | varchar(256) |
|                        | Created            | Date for which the original submission was created          | Date and Time<br>(Eastern Standard Time)   | datetime     |
|                        | CreatedBy          | Username of the user who originally submitted the records   |  | varchar(50)  |
|                        | LastUpdated        | Date for which the existing submission was modified         | Date and Time<br>(Eastern Standard Time)   | datetime     |
|                        | LastUpdatedBy      | Username of the user who last submitted the updated records |  | varchar(50)  |

**Table 2-5: Fields in CI\_PhysicalCharacteristics**

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### 2.2.1.6. CI\_PublicHighway

This table stores information pertaining to Part V: Public Highway Information of the Grade Crossing Inventory Form (6180.71).

| Box No. on Form | Column Name    | Description   | Field Values   | Type         |
|-----------------|----------------|---|--|--------------|
| V.7             | Aadt           | Annual Average Daily Traffic (AADT) Count                                   |  | varchar(6)   |
| V.7             | AadtYear       | Annual Average Daily Traffic (AADT) Year                                    |  | varchar(4)   |
| V.10            | EmrgncySrvc    | Emergency Services Route  | 1 = Yes<br>2 = No  | varchar(1)   |
| V.2             | HwyClassCD     | Functional Classification of Road at Crossing: Rural or Urban               | 0 = (0) Rural<br>1 = (1) Urban   | varchar(1)   |
| V.2             | HwyClassrdtpID | Functional Classification of Road at Crossing: Type of Highway/Roadway (ID) | 11 = (1) Interstate<br>12 = (2) Other Freeways and Expressways<br>13 = (3) Other Principal Arterial<br>16 = (4) Minor Arterial<br>17 = (5) Major Collector<br>18 = (6) Minor Collector<br>19 = (7) Local | varchar(32)  |
| V.4             | HwySpeed       | Highway Speed Limit   |  | numeric(3,0) |
| V.4             | HwySpeedps     | Highway Speed Limit: Posted or Statutory                                    | 1 = Posted<br>2 = Statutory  | varchar(1)   |
| V.1             | HwySys         | Highway System  | 1 = (01) Interstate Highway System<br>2 = (02) Other Nat Hwy System (NHS)<br>3 = (03) Federal Aid, Not NHS<br>8 = (08) Non-Federal Aid   | varchar(2)   |
| V.6             | LrsMilePost    | LRS Milepost  |  | varchar(256) |
| V.5             | LrsRouteid     | Linear Referencing System (LRS Route ID)                                    |  | varchar(256) |
| V.8             | PctTruk        | Estimated Percent Trucks  |  | varchar(2)   |
|                 | ReportBaseId   | Foreign key to the CI_ReportBase table                                      |  | int          |
| V.9             | SchlBsCnt      | Average Number School Bus Count per Day                                     |  | numeric(3,0) |
| V.9             | SchlBusChk     | Regularly Used by School Buses?   | 1 = Yes<br>2 = No  | varchar(1)   |
| V.3             | StHwy1         | Is Crossing on State Highway System?  | 1 = Yes<br>2 = No  | varchar(1)   |

**Federal Railroad Administration Highway-Rail Crossing Division**

|  |               |   |  |             |
|--|---------------|---|--|-------------|
|  | Created       | Date for which the original submission was created          | Date and Time<br>(Eastern Standard Time) | datetime    |
|  | CreatedBy     | Username of the user who originally submitted the records   |  | varchar(50) |
|  | LastUpdated   | Date for which the existing submission was modified         |  | datetime    |
|  | LastUpdatedBy | Username of the user who last submitted the updated records | Date and Time<br>(Eastern Standard Time) | varchar(50) |

**Table 2-6: Fields in CI\_PublicHighway**

2.2.1.7. CI\_ReportBase

This table stores the Header information, as well as the crossing records where the Primary Operating Railroad selected the value of Yes for field I.7 Do Other Railroads Operate a Separate Track at Crossing?. This means that the Primary Operating Railroad is listing up to four (4) additional railroads to submit their railroad and train count data. These submissions will be flagged with a value of 1 in the database, denoting that the record is a Multiple Forms Filed (MFF) record. Detailed information regarding the table is described in the table below.

| Box No. on Form | Column Name        | Description                               | Field Values   | Type        |
|-----------------|--------------------|---|--|-------------|
|                 | CrossingClosed     | Crossing Closed Indicator                 | 1 = Closed<br>2 = Open   | int         |
| D               | CrossingID         | DOT Crossing Inventory Number             |  | varchar(20) |
| D               | CrossingIdSuffix   | Crossing ID suffix                        |  | varchar(20) |
|                 | MultipleFormsFiled | Multiple Forms Filed (boolean)            | 1 = Yes<br>2 = No  | int         |
|                 | ParentReportBaseId | Unique ID for all crossings in this table |  | int         |
| A               | PostmarkDate       | Submission Date                           |  | Datetime    |
| C               | ReasonID           | Reason for Update                         | 14 = Change in Data<br>15 = New Crossing<br>16 = Closed<br>19 = Re-Open<br>20 = Date Change Only<br>21 = Change in Primary Operating RR<br>22 = Admin. Correction<br>23 = Quiet Zone Update<br>24 = No Train Traffic | int         |
|                 | ReportBaseId       | Foreign key to the CI_ReportBase table    |  | int         |
|                 | ReportingAgencyID  | Reporting Agency ID                       |  | int         |

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| Box No. on Form | Column Name           | Description   | Field Values  | Type          |
|-----------------|-----------------------|---|---|---------------|
| B               | ReportingAgencyTypeID | Reporting Agency Type ID                                    | 1 = Railroad<br>2 = State<br>3 = Transit<br>4 = FRA Internal  | int           |
|                 | ReportStatus          | The status of the submission                                | Bulk Upload Error<br>Cancelled<br>Expired<br>Pending<br>Published   | varchar(20)   |
|                 | ReportType            | Major or Minor Railroad (used for MFF)                      | Major = Primary Operating Railroad Submitting the Full Crossing Inventory Record<br>Minor = A Railroad agency submitting only the railroad and train count data | varchar(20)   |
| A               | RevisionDate          | Revision Date   |   | Datetime      |
|                 | ValidationErrors      | Stores all the error code(s) that failed validations        |   | varchar(4000) |
|                 | Created               | Date for which the original submission was created          | Date and Time<br>(Eastern Standard Time)  | datetime      |
|                 | CreatedBy             | Username of the user who originally submitted the records   |   | varchar(50)   |
|                 | LastUpdated           | Date for which the existing submission was modified         | Date and Time<br>(Eastern Standard Time)  | datetime      |
|                 | LastUpdatedBy         | Username of the user who last submitted the updated records |   | varchar(50)   |

**Table 2-7: Fields in CI\_ReportBase**

## Federal Railroad Administration Highway-Rail Crossing Division

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### 2.2.2. Tables that Store Lookup Values

#### 2.2.2.1. CI\_Errors

This table contains all the validation error messages that are returned by the system.

| Column Name         | Description  | Field Values   | Type         |
|---------------------|--|--|--------------|
| Code                | Primary Key. Also the unique code assigned to each error.  |  | varchar(10)  |
| Description         | The description of each error message  |  | varchar(MAX) |
| Section             | Stores the section name of the crossing inventory form   | Header<br>Part I: Location and Classification Information<br>Part II: Railroad Information<br>Part III: Highway or Pathway Traffic Control Device Information<br>Part IV: Physical Characteristics<br>Part V: Public Highway Information | varchar(100) |
| ShowForMinorReports | Identify whether the error message should be returned for users submitting the short form (Railroad Data Only) | 0 = True<br>1 = False  | int          |
| ShowForRailroads    | Identify whether the error message should be returned for Railroad users                                       | 0 = True<br>1 = False  | int          |
| ShowForStates       | Identify whether the error message should be returned for State users  | 0 = True<br>1 = False  | int          |
| SortOrder           | Stores the sort order number   |  | int          |
| Created             | Date for which the original error was created  | Date and Time<br>(Eastern Standard Time)   | datetime     |
| CreatedBy           | Username of the user who originally created the records  |  | varchar(50)  |
| LastUpdated         | Date for which the existing error was modified   | Date and Time<br>(Eastern Standard Time)   | datetime     |
| LastUpdatedBy       | Username of the user who last modified the record  |  | varchar(50)  |

Table 2-8: Fields in CI\_Errors

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### 2.2.2.2. CI\_Lookups

This table contains all the valid values available when completing a crossing record.

| Column Name   | Description   | Field Values                             | Type         |
|---------------|---|--|--------------|
| Code          | The unique code associated with each lookup type  |  | varchar(50)  |
| EndDate       | The date in which the item is no longer active  |  | datetime     |
| ID            | Primary Key   |  | varchar(50)  |
| LookupText    | Description of the lookup value   |  | varchar(500) |
| LookupType    | The type of lookup  |  | varchar(50)  |
| LookupValue   | The value the lookup is stored as in the database (compared to what is displayed on the front-end UI) |  | varchar(50)  |
| StartDate     | The date in which the item was made active  |  | datetime     |
| Status        | Active/Inactive   | 0 = Inactive<br>1 = Active               | bit          |
| Created       | Date for which the original submission was created  | Date and Time<br>(Eastern Standard Time) | datetime     |
| CreatedBy     | Username of the user who originally submitted the records   |  | varchar(50)  |
| LastUpdated   | Date for which the existing submission was modified   | Date and Time<br>(Eastern Standard Time) | datetime     |
| LastUpdatedBy | Username of the user who last submitted the updated records   |  | varchar(50)  |

Table 2-9: Fields in CI\_Lookups

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### 2.2.2.3. Lp\_Reason

This table stores all the available values that will populate the drop-down list field in Box C. Reason for Update of the Grade Crossing Inventory Form (6180.71).

| Column Name         | Description  | Field Values          | Type        |
|---------------------|--|-----------------------|-------------|
| ReasonID            | Primary Key for this table   |                       | tinyint     |
| Code                | Unique code assigned to each item in this table  |                       | varchar(3)  |
| Descr               | The description of each reason for update  |                       | varchar(50) |
| StartDate           | The date in which the item was made active   |                       | datetime    |
| EndDate             | The date in which the item was made inactive   |                       | datetime    |
| SortOrder           | Username of the user who originally submitted the records  |                       | int         |
| ShowForMinorReports | Identify whether the error message should be returned for users submitting the short form (Railroad Data Only) | 0 = True<br>1 = False | int         |
| ShowForRailroads    | Identify whether the error message should be returned for Railroad users                                       | 0 = True<br>1 = False | int         |
| ShowForStates       | Identify whether the error message should be returned for State users  | 0 = True<br>1 = False | int         |

**Table 2-10: Fields in Lp\_Reason**