



BrM 7.0

BrMUG 2024 | Long Beach, CA | September 17-18



2024 BrMUG Annual Meeting

Long Beach, CA | September 17-18



Contact

Jason Gerstorff

Jason.Gerstorff@mayvue.com



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Migration Overview

- Process Overview
- SNBI Overview
- Data Model Considerations
- User Data





Migration Process



BrM 6.7.1

SNBI MAPPINGS +
Model Changes



DOT_TRANSFORMED

DATA MIGRATION +
Additional Mappings



DOT_7



Process

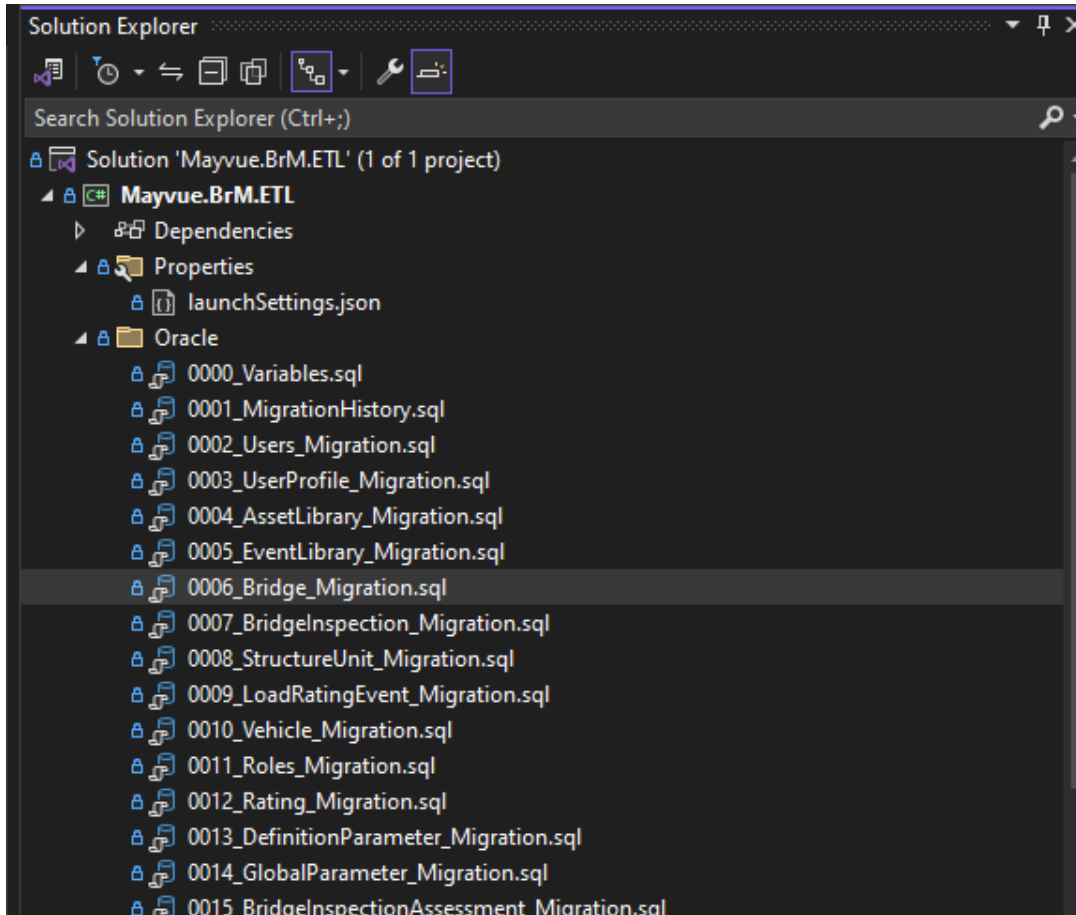
- Why SQL?
 - Custom application – difficult to maintain and change for agency
 - ETL tool – same as above
 - SQL Scripts – flexibility for users to inspect and modify independently
 - More difficult to write...
- Why Transform Database?
 - Allows database modifications while retaining original database
 - No need to restore original database if mistakes
 - Can compare original/modified/SNBI data all at once
 - Note: SNBI transforms are in transform database and SQL scripts both

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Process



```
SET @query = N'INSERT INTO [' + @DATABASE_TARGET + '].dbo.AssetLibrary (ID, AssetTypeID)
SELECT DISTINCT ASSET_GD, '' + @SignAssetTypeID + ''
FROM (SELECT ASSET_GD FROM [' + @DATABASE_SOURCE + '].dbo.SIGN) AS src
WHERE ASSET_GD NOT IN (
    SELECT ID FROM [' + @DATABASE_TARGET + '].dbo.AssetLibrary)';

EXEC sp_executesql @query;

SET @query = N'INSERT INTO [' + @DATABASE_TARGET + '].dbo._MigrationHistory (MigrationId, AppliedOn)
VALUES (''0004_AssetLibrary_Migration.sql'', GETDATE())';

EXEC sp_executesql @query;

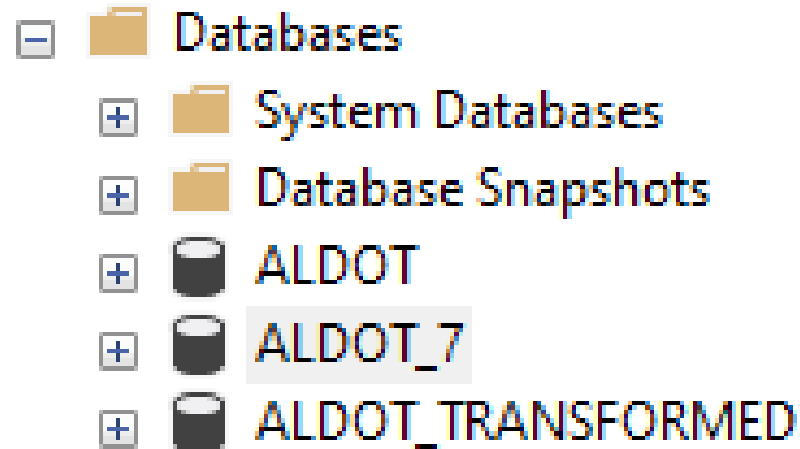
END;

COMMIT TRANSACTION;
END TRY
BEGIN CATCH
    ROLLBACK TRANSACTION;
    PRINT CONCAT(CONVERT(NVARCHAR(50), GETDATE(), 120), ' - BEGIN ERROR DESCRIPTION' ) ;
    SELECT @ErrorMessage = ERROR_MESSAGE(),
           @ErrorSeverity = ERROR_SEVERITY(),
           @ErrorState = ERROR_STATE();
    RAISERROR (@ErrorMessage, @ErrorSeverity, @ErrorState);
    PRINT CONCAT(CONVERT(NVARCHAR(50), GETDATE(), 120), ' - END ERROR DESCRIPTION');
END CATCH;
```



Requirements – Step 1

- Get backup of production database
- Update the backup to BrM 6.7.1 (just the database, not the app)





Requirements – Step 2

- Run Scripts

```
Windows PowerShell
(1 rows affected)
2024-09-05 07:41:39 - DATABASE_TARGET.Bridge

(9622 rows affected)

(9732 rows affected)

(9732 rows affected)

(1 rows affected)
2024-09-05 07:41:40 - DATABASE_TARGET.BridgeInspection

(0 rows affected)

(9719 rows affected)

(1 rows affected)
2024-09-05 07:41:40 - DATABASE_TARGET.StructureUnit

(0 rows affected)

(9652 rows affected)

(0 rows affected)

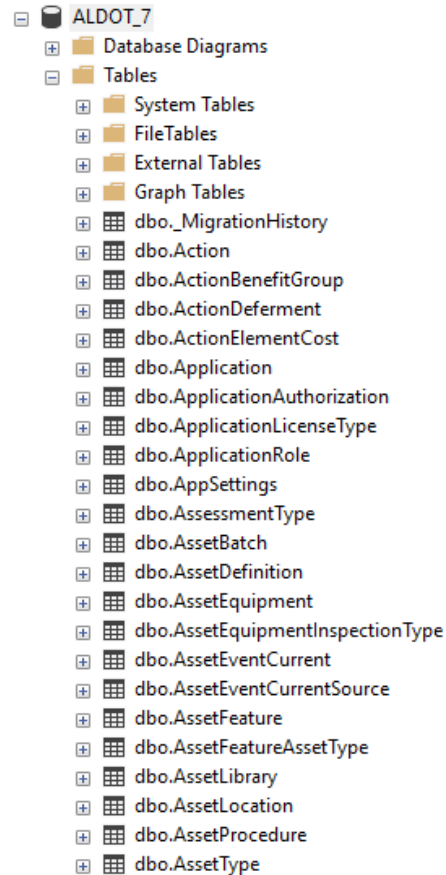
(0 rows affected)

(1 rows affected)
2024-09-05 07:41:40 - DATABASE_TARGET.LoadRatingEvent
```




Requirements – Step 3

- 7.0 Migrated Database!



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SNBI - FHWA

- [Crosswalk](#) – Coding Guide -> SNBI

SNBI ID	Data Tag	SNBI Item Name	SNBI Format	1995 Coding Guide ID	1995 Coding Guide Item Name/ Description	1995 Coding Guide Format (as shown in Appendix E)	Clean Transition?	Transition Notes for Developer
B.LR.01	BLR01	Design Load	AN (8)	31	Design Load	1/N	Yes	See tab.
B.LR.02	BLR02	Design Method	AN (4)	N/A			No	
B.LR.03	BLR03	Load Rating Date	YYYYMMDD	N/A			No	
B.LR.04	BLR04	Load Rating Method	AN (4)	63	Method Used To Determine Operating Rating	1/N - 1/N	Yes	See tab.
B.LR.05	BLR05	Inventory Load Rating Factor	N (4,2)	66	Inventory Rating	3/N	Yes	If Item 65 = 6, 7, 8, D, E, F, do the following: For submittal file, direct transition. For transition of legacy data, divide by 32.4. If Item 65 has a value other than 6, 7, 8, D, E, or F, divide by 32.67.
B.LR.06	BLR06	Operating Load Rating Factor	N (4,2)	64	Operating Rating	3/N	Yes	If Item 63 = 6, 7, 8, D, E, F, do the following: For submittal file, direct transition. For transition of legacy data, divide by 32.4. If Item 63 has a value other than 6, 7, 8, D, E, or F, divide by 32.67.



SNBI – FHWA

- [Code Mapping](#) – Complex Mappings

B.LR.01 - Design Load

CG ID	CG Value	SNBI Value	SNBI Description
31	null	no value	
31	0	U	Unknown
31	1	H10	H-10
31	2	H15	H-15
31	3	HS15	HS-15
31	4	H20	H-20
31	5	HS20	HS-20
31	6	HS20M	HS-20 and Military
31	7	no value	
31	8	RR	Railroad
31	9	HS20Plus	Greater than HS-20
31	A	HL93	HL-93
31	B	HL93Plus	Greater than HL-93
31	C	X	Other



SNBI - Transformation

```
-- BLR01: Updating DESIGNLOAD from CG Values to SNBI Values
PRINT 'BLR01: Updating DESIGNLOAD from CG Values to SNBI Values'
ALTER TABLE BRIDGE ALTER COLUMN DESIGNLOAD VARCHAR(8) NULL;

UPDATE
  BRIDGE
SET
  DESIGNLOAD = CASE
    WHEN DESIGNLOAD IS NULL THEN NULL
    WHEN DESIGNLOAD = '0' THEN 'U'
    WHEN DESIGNLOAD = '1' THEN 'H10'
    WHEN DESIGNLOAD = '2' THEN 'H15'
    WHEN DESIGNLOAD = '3' THEN 'HS15'
    WHEN DESIGNLOAD = '4' THEN 'H20'
    WHEN DESIGNLOAD = '5' THEN 'HS20'
    WHEN DESIGNLOAD = '6' THEN 'HS20M'
    WHEN DESIGNLOAD = '7' THEN NULL
    WHEN DESIGNLOAD = '8' THEN 'RR'
    WHEN DESIGNLOAD = '9' THEN 'HS20Plus'
    WHEN DESIGNLOAD = 'A' THEN 'HL93'
    WHEN DESIGNLOAD = 'B' THEN 'HL93Plus'
    WHEN DESIGNLOAD = 'C' THEN 'X'
    ELSE DESIGNLOAD
  END
```




SNBI - Transformation

```
SELECT SRC_KEY, b.VCLROVER, b.VCLRUNDER,
CASE
  WHEN src.ON_UNDER = '1' AND b.VCLROVER > 98.5 THEN 99.9
  WHEN src.ON_UNDER = '1' THEN ISNULL(CAST(FLOOR(CAST(b.VCLROVER AS numeric(4, 2)) * 10) / 10.0 AS numeric(3, 1)), NULL)
  WHEN b.REFVUC = 'H' and b.VCLRUNDER > 98.5 THEN 99.9
  WHEN b.REFVUC = 'H' THEN ISNULL(CAST(FLOOR(CAST(b.VCLRUNDER AS numeric(4, 2)) * 10) / 10.0 AS numeric(3, 1)), NULL)
  ELSE NULL
END AS MinVerticalClearance,
CASE
```



SNBI - Validation

- [Transition Tool](#)

Bridge Number Transition Preference *

Do Not Trim Leading Zeros Trim All Leading Zeros Trim All But One Leading Zero

Choose Files to Transition *

Select Bridge and Element Files: Inventory_D...2142031.txt

Note: Place both files in the same folder and use "Shift" or "Control" to select multiple files. Use "Shift" to select a range of files and "Control" to select individual files. Use "Control" to select a range of files and "Shift" to select individual files. Use the text file if you do not have an XML file.

Selected Files:

- Inventory_Data2024712142031.txt (0 KB)



```
"Elements": [],
"Features": [
  {
    "BF01": "H01",
    "BF02": "C",
    "BF03": "COUNTY 27",
    "BH01": "7",
    "BH02": "999999",
    "BH03": "N",
    "BH04": "N",
    "BH05": "N",
    "BH06": "CO00270",
    "BH07": 0.006,
    "BH08": 2,
    "BH09": 513,
    "BH10": 102,
    "BH11": 1989,
    "BH12": 99.9,
    "BH13": 99.9,
    "BH16": 20,
    "BH17": 6,
    "Routes": [
      {
        "BRT01": "R01",
        "BRT02": "27",
        "BRT03": "2-T",
        "BRT04": "4",
        "BRT05": "1"
      }
    ]
  }
],
{
  "BF01": "R01",
  "BF02": "B",
  "BF03": "VIADUCT OVER SO.RR",
  "BRR02": 29.9,
  "BRR03": 60
}
],
"Inspections": [
```



SNBI - Validation

- [SNBI Collector](#)

The screenshot shows the SNBI Collector web application. At the top, there's a navigation bar with 'Bridges' and 'Log In' options. A green notification banner at the top right says 'A new update is available. Click here to update.' Below the navigation, the main heading is 'Bridge List'. There are two radio buttons: 'Use SNBI Transition Coloring' (selected) and 'Use Names as Headers'. A 'VIEW LEGEND' button is on the right. Below this, a section titled 'Features From Bridge: 000008' contains another set of radio buttons for 'Use SNBI Transition Coloring' and 'Use Names as Headers', along with an 'ADD NEW' button. A search bar is present above a table. The table has columns for 'Edit', 'Routes', and various bridge features (BF01, BF02, BF03, BH01, BH02, BH03, BH04, BH05, BH06, BH07). The first row shows 'H01' under Routes, 'C' under BF01, 'COUNTY 27' under BF02, '7' under BH01, '99999' under BH02, 'N' under BH03, 'N' under BH04, 'N' under BH05, 'C000270' under BH06, and '0.006' under BH07. The second row shows 'R01' under Routes, 'B' under BF01, 'VIADUCT OVER SO.RR' under BF02, and empty cells for the other features. At the bottom right, there's a 'CLOSE' button and pagination information: 'Rows per page: 10' and '1-2 of 2'.

Edit	Routes	BF01	BF02	BF03	BH01	BH02	BH03	BH04	BH05	BH06	BH07
EDIT	ROUTES	H01	C	COUNTY 27	7	99999	N	N	N	C000270	0.006
EDIT	ROUTES	R01	B	VIADUCT OVER SO.RR							

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SNBI - Features

- 42a - SRVTYPON

B.F.01, B.F.02, B.F.03 - Feature Type, Feature Location, and Feature Name

Features Carried On Bridge

CG ID 1	CG Value 1	CG Description 1	CG ID 2	CG Value 2	CG Description 2	SNBI Item 1	SNBI Value 1	SNBI Item 2	SNBI Value 2	SNBI Description 2	SNBI Item 3	SNBI Value 3	Note
			42A	1	Highway	B.F.01	H01	B.F.02	C	Carried on bridge	B.F.03	CG Item 7	
			42A	4	Highway - Railroad	B.F.01	H01 & R01	B.F.02	C	Carried on bridge	B.F.03	CG Item 7	2 records.
			42A	5	Highway - Trail	B.F.01	H01 & P01	B.F.02	C	Carried on bridge	B.F.03	CG Item 7	2 records.
			42A	6	Highway	B.F.01	H01	B.F.02	C	Carried on bridge	B.F.03	CG Item 7	
			42A	7	Highway	B.F.01	H01	B.F.02	C	Carried on bridge	B.F.03	CG Item 7	
			42A	8	Highway	B.F.01	H01	B.F.02	C	Carried on bridge	B.F.03	CG Item 7	



SNBI - Features

Feature Types – Highway, Railroad, Waterway, Pathway, etc

dbo.Feature
Columns
ID (PK, varchar(32), not null)
AssetID (FK, varchar(32), not null)
FeatureAssetID (FK, varchar(32), null)
FeatureTypeID (FK, varchar(32), not null)
Name (nvarchar(300), not null)
Type (nvarchar(3), not null)
Location (nvarchar(1), not null)
IsReportToFHWA (bit, not null)
IsCrossingBridge (bit, not null)
SortOrder (int, not null)
HistoryID (FK, int, null)



dbo.Highway
Columns
AssetID (PK, FK, varchar(32), not null)
LRSRouteID (nvarchar(120), null)
DataDate (datetime, null)
MilePoint (numeric(8,3), null)
HighwayLanes (numeric(2,0), null)
FunctionalClassification (nvarchar(3), null)
UrbanCode (nvarchar(5), null)
NHSDesignation (nvarchar(1), null)
FreightNetwork (nvarchar(3), null)
StrahnetDesignation (nvarchar(1), null)
AADT (numeric(8,0), null)
FutureAADT (numeric(8,0), null)
ADTT (numeric(8,0), null)
FutureADTT (numeric(8,0), null)
AADTYear (numeric(4,0), null)

dbo.Railroad
Columns
AssetID (PK, FK, varchar(32), not null)
RailroadBridgeID (FK, varchar(32), null)
RailroadServiceType (nvarchar(2), not null)
RailroadMinVerticalClearance (numeric(3,1), not null)
RailroadMinHorizontalOffset (numeric(3,1), not null)
HistoryID (FK, int, null)
Keys

dbo.AssetDefinition
Columns
ID (PK, varchar(32), not null)
AssetTypeID (FK, varchar(32), not null)
FieldName (varchar(50), not null)
DataType (varchar(16), null)
Precision (int, null)
Scale (int, null)
IsRequired (bit, not null)
IsUnique (bit, not null)
IsIndexed (bit, not null)
UnitID (FK, varchar(32), null)
DefaultValue (nvarchar(45), null)
ShortDescription (nvarchar(50), null)
Description (nvarchar(255), null)
FieldCode (nvarchar(10), null)



SNBI - Features

  AASHTOWare™
Bridge Management

[← Back](#) Bridges > Inventory & Appraisal > Features

Inventory & Appraisal

Identification

Design

Features

Features

Bridge

	Order ↑	Feature Name (B.F.03)	Feature Type (B.F.01)	Feature Location (B.F.02)
↕	1	US 278	H01	C Carried on bridge
↕	3	CSX RAILROAD	R01	B Below bridge



Data Model - Similar

6.7.1

dbo.BRIDGE
Columns
BRKEY (varchar(15), null)
BRIDGE_ID (varchar(30), not null)
STRUCT_NUM (varchar(15), null)
STRUCNAME (varchar(50), null)
FEATINT (varchar(24), null)
FHWA_REGN (varchar(2), null)
DISTRICT (varchar(2), null)
COUNTY (varchar(3), null)
FACILITY (varchar(18), null)
LOCATION (varchar(25), null)
CUSTODIAN (varchar(4), null)
IMPACT (numeric(10,2), null)
OWNER (varchar(4), null)
ADMINAREA (varchar(2), null)
BRIDGEGROUP (varchar(20), null)
NSTATECODE (varchar(3), null)
N_FHWA_REG (char(1), null)
BB_PCT (numeric(2,0), null)
BB_BRDGEID (varchar(15), null)
PROPWORK (varchar(2), null)
WORKBY (char(1), null)



7.0

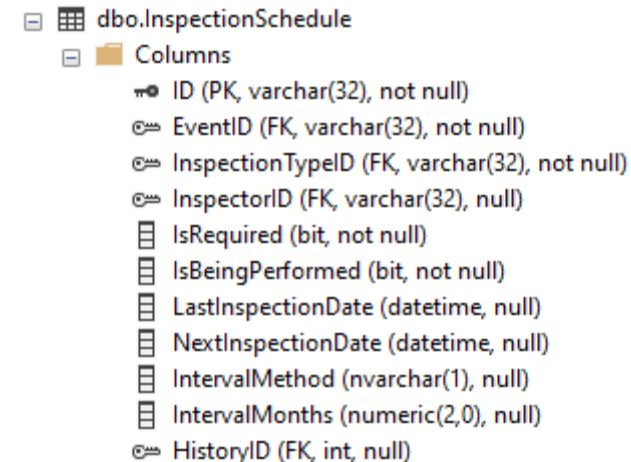
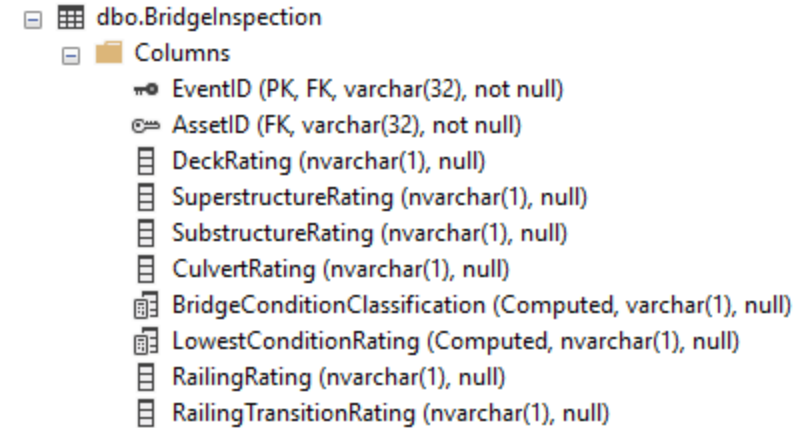
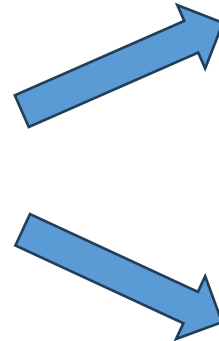
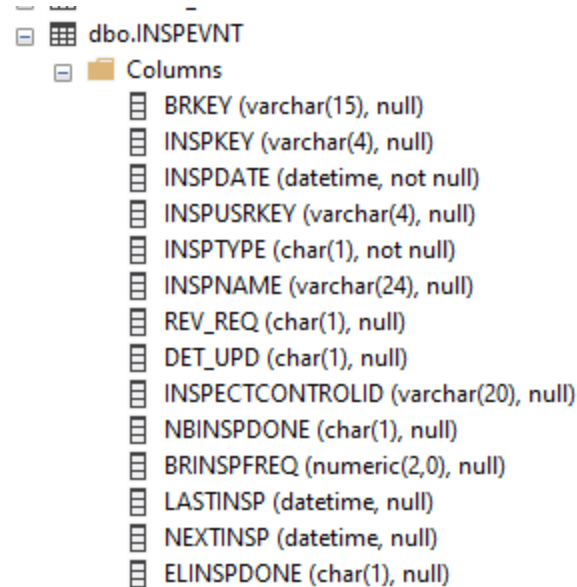
dbo.Bridge
Columns
AssetID (PK, FK, varchar(32), not null)
BridgeNumber (nvarchar(15), not null)
BridgelD (nvarchar(30), not null)
Name (nvarchar(300), not null)
Nickname (nvarchar(50), null)
Status (nvarchar(2), null)
LifecyclePhase (nvarchar(2), null)
ReportToFHWA (bit, not null)
ReportElementsToFHWA (bit, not null)
PastAssetID (FK, varchar(32), null)
FutureAssetID (FK, varchar(32), null)
StateCode (nvarchar(2), not null)
CountyCode (nvarchar(3), not null)
PlaceCode (nvarchar(5), null)
HighwayAgencyDistrict (nvarchar(2), not null)
MetroPlanningOrg1 (nvarchar(5), null)
MetroPlanningOrg2 (nvarchar(5), null)
BridgeLocation (nvarchar(300), not null)
IsBorder (bit, not null)



Data Model – Different

7.0

6.7.1





Data Model

Same IDs / GUIDs

```
14  
15 SELECT *  
16 FROM ALDOT.dbo.BRIDGE b  
17 JOIN ALDOT_7.dbo.Bridge br ON b.BRIDGE_GD = br.AssetID
```

90 %

Results Messages

	BRKEY	BRIDGE_ID	STRUCT_NUM	STRUCNAME	FEATINT	FHWA_REGN	DISTRICT	COL
1	014094	014094	014094	????????????????????	CREEK	4	06	085
2	000458	000458	000458	OLD 75 BRIDGE	MILL CREEK	4	03	009
3	003047	003047	003047	WOODLEY RD.	WHITES SLOUGH	4	06	101
4	004738	004738	004738	????????????????????	MARTIN CREEK	4	07	005
5	018046	018046	018046	N	BEAVER CREEK	4	10	057
6	018189	018189	018189	????????????????????	POND CREEK	4	02	033
7	009875	009875	009875	????????????????????	WARRIOR RIVER RELIEF (-)	4	05	125
8	009640	009640	009640	????????????????????	UT to North River	4	05	125
9	019922	019922	019922		COLDWATER CREEK	4	04	121
10	019199	019199	019199	Wall Triana Hwy	LIMESTONE CREEK	4	01	089
11	001453	001453	001453	????????????????????	BIG COON CREEK RELIEF	4	01	071
12	002554	002554	002554	NNNNNNNNNNNNNNNNNNNN	LITTLE SQUIW PA CREEK	4	08	022



User Columns

- User data migrated
 - Bridge
 - Inspection
 - Structure Unit
 - Roadway
- Defined in COPTIONS
 - XTRNBRDGTABLE etc...
 - Defaults: USERBRDG, USERINSP, USERSTRUNIT, USERRWAY
- 7.0 Destination
 - Bridge, BridgeInspection, StructureUnit, Highway



User Columns

Format: <AGENCY_PREFIX>_COLUMN_NAME

- ☐ UserKey13 (nvarchar(32), null)
- ☐ UserKey14 (nvarchar(32), null)
- ☐ UserKey15 (nvarchar(32), null)
- ☐ AL_MPO_ID (nvarchar(2), null)
- ☐ AL_ST_REL_POS_CD (numeric(5,0), null)
- ☐ AL_CONG_DIST_ID (nvarchar(2), null)
- ☐ AL_SEN_DIST_ID (nvarchar(2), null)
- ☐ AL_HOU_DIST_ID (nvarchar(3), null)
- ☐ AL_PJ_REF_ID (nvarchar(9), null)
- ☐ AL_ST_AJCNT_MLINE_ID (numeric(10,0), null)
- ☐ AL_ST_PREVST_ID (numeric(10,0), null)
- ☐ AL_FA_PREFX_ID (nvarchar(25), null)
- ☐ AL_ST_INSPN_RESPBY_CD (nvarchar(2), null)
- ☐ AL_ST_NA_ASGND_BY_CD (nvarchar(1), null)
- ☐ AL_ST_PREV_ST_2_ID (numeric(10,0), null)
- ☐ AL_ST_LOCL_COMSN_CD (nvarchar(4), null)



AL_MPO_ID	AL_ST_REL_POS_CD	AL_CONG_DIST_ID	AL_SEN_DIST_ID	AL_HOU_DIST_ID	AL_PJ_REF_ID
00	0	07	23	069	NNNNNNNNN
00	0	04	17	034	NNNNNNNNN
??	0	02	25	075	NNNNNNNNN
00	0	02	28	084	NNNNNNNNN
00	0	04	06	016	NNNNNNNNN
11	0	05	01	003	10009339
00	-1	07	24	072	NNNNNNNNN
12	0	06	05	014	NNNNNNNNN
00	0	03	11	035	100033401
00	0	??	??	???	100044281
??	0	??	??	???	?????????
00	0	07	22	065	?????????
12	-1	07	21	063	NULL
00	0	04	09	025	NNNNNNNNN

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Page Builder Highlights

- Improved User Experience
- Listing / Edit Views
- Field Input
- Other Highlights
 - Field Grid
 - Jump to Parameters
- Documentation





User Experience

- Form Creation – Look and Feel (BrM 6)

Admin > General Config > Visual Form Editor

Task Selection

Select a Tab and Task to Begin.

Tab Name: Tasks:

▲ **Toolbox**

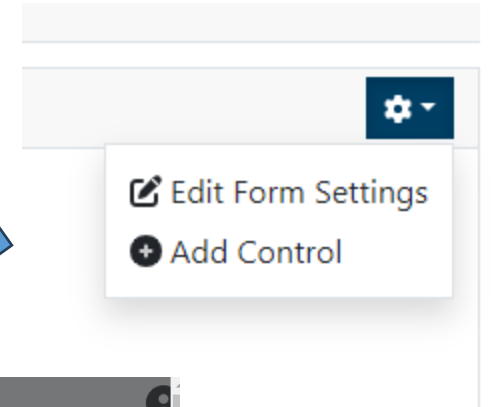
Form Elements

<input type="text" value="Group Box"/>	<input type="text" value="Custom Control"/>	<input type="text" value="Dropdown List"/>	<input type="button" value="Save Button"/>	<input type="button" value="Button"/>
<input type="text" value="Header Box"/>	<input type="text" value="Text Box"/>	<input type="checkbox"/> Checkbox	<input type="button" value="Save & Close Button"/>	<input type="button" value="Delete Bridge Inspection Button"/>
<input type="text" value="Footer Box"/>	<input type="text" value="Text Box (Parameter)"/>	<input type="text" value="Text Label"/>	<input type="button" value="Cancel Button"/>	<input type="text" value="Calendar"/>



User Experience

- Form Creation – Look and Feel (BrM 7)



Edit Menu Item

Name *
Jasons Form

Alias

Active
 Read Only
 Page Builder

Security

Role	Active	Read Only
Admin	<input type="checkbox"/>	<input type="checkbox"/>
Admin Read-Only	<input type="checkbox"/>	<input type="checkbox"/>
AdminAnalysis	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>
Analysis	<input type="checkbox"/>	<input type="checkbox"/>

Form Settings

Name *
Jasons Form

Asset Type *
Bridge

Event Type

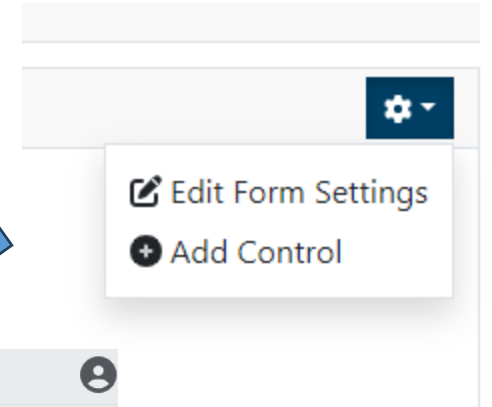
Form Type *
Standard

Menu Item Location *
Root



User Experience

- Form Creation – Look and Feel (BrM 7)





User Experience

- Form Creation – Asset/Event Selector Reminder

Asset Page

Settings » General Configuration » Pages & Dashboards » Page Builder

Edit Form

Validation Messages 1

⚠ An asset selector is required for this page

Jasons Form

No controls to display

Event Page

Settings » General Configuration » Pages & Dashboards » Page Builder

Edit Form

Validation Messages 2

⚠ An asset selector is required for this page

⚠ An event selector is required for this page

Jason Inspection Page

No controls to display



User Experience

- Form Creation – Control Filtering

Bridge

Crossing Asset Selects and saves a Feature associated with a Crossing Asset
Field Grid A customizable grid that houses Field Input Controls
Generate Report Button Upon click, generates and downloads a report
Latest Inspections Latest Inspections Listing

Bridge Inspection

Crossing Asset Selects and saves a Feature associated with a Crossing Asset
Detour Route Detour Route List and Edit View
Dolphins Dolphins List and CRUD View
Element Condition Grid Element Condition Listing and CRUD View
Equipment Used in This Inspection Equipment Used in This Inspection Listing and Create/Edit Modal



User Experience

- Form Creation – Button Reminder

Settings > General Configuration > Pages & Dashboards > Page Builder

Edit Form

Validation Messages 1

⚠ This page contains controls that save data but no buttons for submitting data

Jasons Form

Asset Selector *

BridgeID * i

Cancel Delete



User Experience

- Form Creation – Direct Add

Jasons Form

Asset Selector * BridgeID * i

Required Fields

No controls to display

Cancel Delete



Jasons Form

Asset Selector *

Required Fields

BridgeID * i

Cancel Delete

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Listing View

- List View Component

AASHTOWare™ Bridge Management

Bridges > Bridge List

Bridge List

Selected Bridge
none

Filter: None | Layout: Bridge List | Jump to Bridge: 000066 | [Export](#) | [Add New](#)

BridgeID	Highway Agency District (B.L.04)	County Code (B.L.02)	Owner (B.CL.01)	Maintenance Re
000002	Fayette	Walker	L01 County highway agency	L01 County high
000003	Fayette	Walker	L01 County highway agency	L01 County high
000004	Fayette	Walker	L01 County highway agency	L01 County high
000005	Fayette	Lamar	L03 City or municipal highway agency	L03 City or muni
000006	Montgomery	Lee	L03 City or municipal highway agency	L03 City or muni
000007	Guntersville	Dekalb	L01 County highway agency	L01 County high
000008	Tuscaloosa	Bibb	L01 County highway agency	L01 County high



Listing View

- Custom Asset View

Edit Asset Type

Details Fields Aspects Child Asset Types

Name *

Space Elevator

Table Name *

SpaceElevator

Layout

▼

● Schema Status Refresh Schema

Save Save & Close Generate Script Cancel Delete



```
1 CREATE TABLE SpaceElevator (  
2   AssetID VARCHAR(32) NOT NULL PRIMARY KEY,  
3   HistoryID INT NULL,  
4   PowerSystem nvarchar(32) NOT NULL,  
5   AnchorPoint nvarchar(32) NULL,  
6   CounterWeight nvarchar(32) NULL,  
7   Cable nvarchar(32) NOT NULL,  
8 );  
9 ALTER TABLE SpaceElevator ADD CONSTRAINT FK_SpaceEle  
10 ALTER TABLE SpaceElevator ADD CONSTRAINT FK_SpaceEle  
11  
12
```



Listing View

- Custom Asset View

Form Type – Standard / Listing

Menu Item Location

Security

Listing Type – Standard / Layout

Form Settings

Name *
Space Elevator List

Asset Type *
Space Elevator

Form Type *
Listing

Menu Item Location *
root

Listing Configuration

Display Add New
[Edit Add New Security](#)

Display Copy

Display Delete
[Edit Delete Security](#)

Listing Type *

[Save & Close](#) [Cancel](#)



Listing View

- Page Active / Inactive

Settings > General Configuration > Pages & Dashboards > Page Builder

Edit Form

Space Elevators

AnchorPoint * ⓘ

PowerSystem * ⓘ

Save & Close Cancel

Cancel Delete

Edit Menu Item

Name *
Space Elevators

Alias

Active
 Read Only

Page Builder

Security

Role	Active	Read Only
Admin	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Admin Read-Only	<input type="checkbox"/>	<input type="checkbox"/>
AdminAnalysis	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>
Analysis	<input type="checkbox"/>	<input type="checkbox"/>
AncillaryAdmin	<input type="checkbox"/>	<input type="checkbox"/>
Atom	<input type="checkbox"/>	<input type="checkbox"/>
Basic	<input type="checkbox"/>	<input type="checkbox"/>

Form Settings

Name *
Space Elevators

Asset Type *
Space Elevator

Form Type *
Listing

Menu Item Location *
Root

Edit Menu Item

Listing Configuration

Display Add New
Edit Add New Security

Display Copy

Display Delete
Edit Delete Security

Listing Type *



Listing View

- Custom Asset Grid View

AASHTOWare™ Bridge Management

Space Elevators

Space Elevators

Search [Export](#) [Add New](#)


AnchorPoint ↑	Cable ↑↓	CounterWeight ↑↓	PowerSystem ↑↓	
Concrete	Carbon Nanotubes	Asteroid	Energy Beam	
Steel	Space Metal	Space Station	Nuclear	

<< < 1 > >> 1 - 2 of 2 15 ▾






Listing View


- Custom Asset Edit View

 User Profile

Space Elevators Settings

Add Space Elevator

AnchorPoint * 	Cable * 	CounterWeight * 
<input type="text" value="Concrete"/>	<input type="text" value="Carbon Nanotubes"/>	<input type="text" value="Asteroid"/>

PowerSystem * 



Field Input

Bridge Number (string)

Data Field —

Type *
Bridge

Field *
BridgeNumber*
*Required field

Control Specific

Show Field Code

Lines *
1

Max Characters
15

Default Value Override

IsBorder (boolean)

Form Data

Read Only

Data Field —

Type *
Bridge

Field *
IsBorder*
*Required field

Control Specific

Default Value Override

County Code (parameterized)

Form Data

Read Only

Data Field —

Type *
Bridge

Field *
CountyCode*
*Required field

Control Specific

Show Field Code



Field Input

- Asset / Event / User ID Fields

Form Data

Required

Read Only

Data Field

Type *
Bridge Inspection

Field *
EnteredByID

Control Specific

Data Type
UserID

Limit to Roles with Inspector Permission

Qualifications

[Edit](#)

No items selected

[Save](#) [Save & Close](#) [Cancel](#)



Jason Bridge Inspection Demo

[+](#) [✎](#) [🗑️](#)

EnteredByID ⓘ

[⊘](#)

- Abdalla, Ramy
- Abernathy, David
- Abrams, John
- Adams, Tammy
- Admin, Mayvue
- Anderson, Brian
- Anderson, Kathryn
- Antley, Casey
- Arias, Anthony



Field Input

- Go To Parameter

Form Data

Read Only

Data Field

Type *
Bridge

Field *
CountyCode*

*Required field

[Go to Parameter](#)

Control Specific

Show Field Code

Is Multi-Select



Settings > General Configuration > Parameters

Parameters

Asset/Event Global Sets

Type: Bridge Field: CountyCode

	Order ↑↓	Value	Name	Description
↕	1		[null]	[null]
↕	99	109	Pike	Pike
↕	99	097	Mobile	Mobile
↕	99	055	Etowah	Etowah
↕	99	013	Butler	Butler
↕	99	047	Dallas	Dallas



Field Grid

Edit Form

Field Grid Configuration

Editor Preview

Show Grid Lines

	A	B
1		
2		



Field Grid

Steel	Space Metal
Space Station	Nuclear

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Documentation

The screenshot shows the documentation interface for the 'Page Builder' feature. On the left is a navigation sidebar with a search filter and a tree view of categories including Security, General Configuration, Inspection, Pages & Dashboards, and Page Builder. The 'Page Builder' category is expanded, showing sub-items like 'Page Builder Form Basic Controls', 'Page Builder Form Advanced Controls', 'Page Builder Dashboard Basic Controls', and 'Page Builder Dashboard Advanced Controls'. The main content area features the title 'Page Builder', a breadcrumb trail, a search bar, and a table of contents. The table of contents lists various actions like 'Form Tab, Add New, Creating a Form Page' and 'Form Tab, Edit Form Settings'. Below the table of contents is a preview of the 'Page Builder' interface, which includes a sidebar with navigation options and a main panel with a search bar and a table of asset types and event types.

Page Builder

Updated on 27 Aug 2024 • 15 Minutes to read

The **Settings** > **General Configuration** > **Pages & Dashboards** > **Page Builder** page allows the user to create forms, listing pages and dashboards.

The page consists of two tabs:

- **Form**, which allows the user to create standard forms and listing forms, on which asset (Bridge, Tunnel, etc) and/or event (Bridge Inspection, Bridge Load Rating, Tunnel Inspection, etc) records can be created, edited and deleted.
- **Dashboard**, which allows the user to create dashboards consisting of filter counts, asset table grids and/or charts, but does not allow for creation or modification of database record data

Name	Event Type	Standard
Assessments	Bridge Inspection Assessment	True
Bridge List		True
Condition	Bridge Inspection	True
Critical Findings	Bridge Critical Finding	True

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Contact

Leanna Zaccone

Leanna.Zaccone@mayvue.com



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Inventory & Appraisal Data

- Identification
 - Replaces Inspection › Inventory › Admin
- Design
 - Replaces Inspection › Inventory › Design
- Features
 - Replaces Inspection › Inventory › Roads



Identification – New Functionality

- Past / Future Bridge IDs
- Border Bridge data
- Mapping

The screenshot displays the 'AASHTOWare Bridge Management' software interface. The main heading is 'Identification'. Below this, there are several input fields and sections:

- Bridge ID ***: 007641
- Details**:
 - Bridge Number (B.ID.01) ***: 007641
 - Agency Bridge ID ***: 007641
 - Bridge Name (B.ID.02) ***: R.B. RUSSELL
 - Bridge Nickname**: US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER
 - Bridge Status**: 3 Active
 - Bridge Life Cycle Phase**: 1 Service
 - Report Bridge to FHWA**
 - Report Elements to FHWA**
- Bridge Notes**: Imported with XML on 01/12/2015 00:00:00.
- Past and Future Bridges**:
 - Past Bridge ID (B.ID.03)**: [Empty]
 - Future Bridge ID**: [Empty]
- Location Data**:
 - State Code (B.L.01) ***: 1 Alabama
 - County Code (B.L.02) ***: Barbour
 - Place Code (B.L.03)**: EUFAULA
 - Highway Agency District (B.L.04) ***: Troy
 - Metro Planning Org 1 (B.L.12)**: [Empty]
 - Metro Planning Org 2 (B.L.12)**: [Empty]



Identification – Mapping

- Stores locations for beginning, middle, end of bridge
- Indicates which is the reportable location (also the one used for mapping throughout BrM)

Location

Export Add New

Type ↑	Latitude ↑↓	Longitude ↑↓	Elevation (ft) ↑↓	Report for Location B.L.05 and B.L.06 ↑↓
Beginning of Bridge	31.89145	-85.13531		★
End of Bridge	31.88815	-85.11049		
Middle of Bridge	31.89008	-85.12211		

Navigation: << < 1 > >> 1 - 3 of 3 15



Design – New Functionality

- Per SNBI, capturing more information about design:
 - Superstructure Sets
 - Substructure Sets
 - Structure Units
 - Link to Superstructure and/or Substructure Set

The screenshot displays the 'Design' section of the AASHTOWare Bridge Management system. It includes fields for Bridge ID (007641), Bridge Name (R.B. RUSSELL), and Bridge Nickname (US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER). Below these are three main sections: Superstructure Sets, Substructure Sets, and Structure Units, each with an 'Export' button and an 'Add New' button.

Superstructure Sets

Order #	Span Configuration Designation (B.SB.01)	Name	Number of Spans (B.SP.02)	Span Material (B.SP.04)	Span Continuity (B.SP.05)	Span Type (B.SP.06)	Deck Material and Type (B.SP.09)	Wearing Surf
3	M01	0BBA14EBFE864D15B010EB9C3AE35ABF	4					0 None
4	A01	DDAC4F8211744ECSA091A530FEC7649F	5		1 Simple or single span			0 None

Substructure Sets

Order #	Substructure Configuration Designation (B.SB.01)	Name	Number of Substructure Units (B.SB.02)	Substructure Material (B.SB.03)	Substructure Type (B.SB.04)	Foundation Type (B.SB.06)
No records to display.						

Structure Units

Order #	Name	Unit Number	Default	Number of Elements	Superstructure Set Name	Substructure Set Name
1	1_1	1	★	36		



Features – New Functionality

- Multiple Feature Types including:
 - Highway
 - Railroad
 - Waterway
- Automatically numbered upon creation
 - Can renumber by dragging to reorder
- Indicate which records to report to FHWA

The screenshot shows the AASHTOWare Bridge Management software interface. The breadcrumb navigation is 'Bridges > Inventory & Appraisal > Features'. Below the breadcrumb is a search bar for 'Bridge' with the value '007641'. To the right of the search bar is an 'Add New' button. Below the search bar is a table with the following columns: 'Order #', 'Feature Name (B.F.03)', 'Feature Type (B.F.01)', 'Feature Location (B.F.02)', and 'Report to FHWA'. The table contains two rows of data. The first row has '1' in the Order # column, 'US 82 MP 239.816' in the Feature Name column, 'H01' in the Feature Type column, 'C Carried on bridge' in the Feature Location column, and 'True' in the Report to FHWA column. The second row has '4' in the Order # column, 'CHATTAHOOCHEE RIVER' in the Feature Name column, 'W01' in the Feature Type column, 'B Below bridge' in the Feature Location column, and 'True' in the Report to FHWA column. There are double-headed arrows next to the Order # column and edit/delete icons at the end of each row.

Order #	Feature Name (B.F.03)	Feature Type (B.F.01)	Feature Location (B.F.02)	Report to FHWA
1	US 82 MP 239.816	H01	C Carried on bridge	True
4	CHATTAHOOCHEE RIVER	W01	B Below bridge	True



Features – Highway

- Additional fields are dependent on the Feature Location selected
- Multiple route records per highway record

The screenshot displays the 'Edit Feature' form in the AASHTOWare Bridge Management system. The form is organized into several sections:

- Agency Bridge ID:** 007641
- Bridge Name (B.ID.02):** R.B. RUSSELL
- Bridge Nickname:** US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER
- Feature Details:**
 - Feature Name (B.F.03):** US 82 MP 239.816
 - Feature Type (B.F.01):** H Highway
 - Feature Location (B.F.02):** C Carried on bridge
 - Report to FHWA
- Route Information:** A table with the following data:

Designation (B.RT.01)	Route Number (B.RT.02)	Route Direction (B.RT.03)	Route Type (B.RT.04)	Service Type (B.RT.05)
R01	82		2 U.S. route	1 Mainline
- Highway Information:**
 - LRS Route ID (B.H.06):** AL00060
 - LRS Data as of Date:** mm/dd/yyyy
 - LRS Mile Point (B.H.07):**
 - Lanes on Highway (B.H.08):**



Features – Highway, Crossing Bridge

- Above bridge or below bridge can indicate a crossing bridge to prevent duplicate entry of data

Crossing Bridge

Crossing Bridge ID

Feature Name (B.F.03)

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Inspection Data

- General Configuration
 - Inspection Types
 - Equipment
 - Procedures
- Future Inspection Plan – sets up data to be added to future events
 - Equipment
 - Procedures
- Inspection List – create new inspection
- Inspection Plan
- Condition
- Schedule



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Inspection Data

- **General Configuration**

- Inspection Types
- Equipment
- Procedures

- **Future Inspection Plan – sets up data to be added to future events**

- Equipment
- Procedures

- **Inspection List – create new inspection**

- **Inspection Plan**

- **Condition**

- **Schedule**



General Configuration – Inspection Types

- Can create agency-defined inspection types
- Set default interval for each type
- Configure for assignment
- Add qualifications based on:
 - Experiences
 - Certifications
- Require signature and/or stamp
- Set roll-up for any agency-defined inspection types to SNBI types for submittal

Name	Description	Default Interval (months)	Reportable Inspection Type	Show in Insp. Assign Module	Active	Standard		
Damage				False	True	True		
In-Depth		24		True	True	True		
Initial				False	True	True		
NSTM		24		True	True	True		
Routine		24		True	True	True		
Scour Monitoring				False	True	True		
Service				False	True	True		
Special		12		True	True	True		
Underwater		60		True	True	True		



General Configuration – Equipment

- Set inspection types for each equipment record
- Set roll-up for any agency-defined equipment to SNBI equipment for submittal

Settings > General Configuration > Inspection > Equipment Types

Equipment Types

Inspection Type: All | Filter: Active

Search: [] [Export]

[Add New]

Name	Equipment Roll-Up	Inspection Types	Active	Standard	
A01 Ladder			True	True	[Edit] [Delete]
A02 Bucket lift vehicle			True	True	[Edit] [Delete]
A03 Under bridge inspection vehicle			True	True	[Edit] [Delete]
A04 Rigging			True	True	[Edit] [Delete]
A05 Waders			True	True	[Edit] [Delete]
A06 Boat			True	True	[Edit] [Delete]
A07 Snorkel			True	True	[Edit] [Delete]
A08 SCUBA			True	True	[Edit] [Delete]
A09 Surface supplied air			True	True	[Edit] [Delete]
A10 Remotely Operated Vehicle (ROV)			True	True	[Edit] [Delete]
A11 Video pole			True	True	[Edit] [Delete]
A12 Borescope			True	True	[Edit] [Delete]
A13 Unmanned aerial systems (UAS)			True	True	[Edit] [Delete]
A14 Service Traveler			True	True	[Edit] [Delete]




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General Configuration – Procedures

- Create agency-level set of procedures that should be completed as part of specific inspection types
- These are later configured at a bridge level

Type	Name	Inspection Type	Description	
Photos	One-off photo	Routine	take a one-off photo based on specific inspection needs	 
Posting	Posting Sign Photo	Routine	confirm posting sign in place and take photo	 

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Inspection Data

- General Configuration
 - Inspection Types
 - Equipment
 - Procedures
- **Future Inspection Plan** – sets up data to be added to future events
 - Equipment
 - Procedures
- Inspection List – create new inspection
- Inspection Plan
- Condition
- Schedule



Future Inspection Plan – Equipment

- Set up the equipment that will automatically be added for a specific bridge when new inspection event is created
- Also displays in Assignment module
- Can skip to avoid any equipment being added automatically

The screenshot shows the 'Equipment' management interface in AASHTOWare Bridge Management. The page is titled 'Equipment' and is part of a navigation path: 'Bridges > Inspection > Future Inspection Plan > Equipment'. It displays details for a bridge with ID '007641' and name 'R.B. RUSSELL US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER'. Below this, there is a search bar and an 'Export' button. A table lists the equipment items:

Name	Alternative	Inspection Types	Description
A02 Bucket lift vehicle		Routine	
A06 Boat		Underwater	boat must be reserved ahead of inspection

At the bottom of the table, there are pagination controls showing '1 - 2 of 2' items and a total of '15' items.



Future Inspection Plan – Procedures

- Set up the procedures that will automatically be added for a specific bridge when new inspection event is created
- Also displays in Assignment module
- Frequency of
 - Once
 - Once on or after
 - Every

The screenshot shows the 'Procedures' section in the AASHTOWare Bridge Management software. The interface includes a search bar, an 'Export' button, and an 'Add New' button. Below these is a table with columns for Procedure Type, Inspection Type, Procedure Template, Frequency, Date, Custom Details, and Details. The table contains two rows of data.

Procedure Type	Inspection Type	Procedure Template	Frequency	Date	Custom Details	Details
Photos	Routine	One-off photo	Once	True	take a photo of scour	
Posting	Routine	Posting Sign Photo	Every	False	confirm posting sign in place and take photo	

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Inspection Data

- General Configuration
 - Inspection Types
 - Equipment
 - Procedures
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 - Equipment
 - Procedures
- **Inspection List** – create new inspection
- Inspection Plan
- Condition
- Schedule





Inspection List – Create New Inspection

- Instead of separate menu item, on inspection list

The screenshot shows the 'Inspection List' page in the AASHTOWare Bridge Management system. The page header includes the AASHTOWare logo and 'Bridge Management'. Below the header, there are fields for 'Bridge' (007641), 'Bridge Name' (R.B. RUSSELL), and 'Bridge Nickname' (US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER). There are tabs for 'List View' and 'Element Condition History'. A table of inspection records is displayed, with columns for 'Inspection Begin Date (B.IE.02)', 'Inspection Types', 'Status', 'Deck Rating (B.C.01)', 'Super Rating (B.C.02)', 'Sub Rating (B.C.03)', and 'Culvert Rating (B.C.04)'. The table contains 15 rows of data. At the bottom right of the table, there is a blue 'Add New' button.

Inspection Begin Date (B.IE.02)	Inspection Types	Status	Deck Rating (B.C.01)	Super Rating (B.C.02)	Sub Rating (B.C.03)	Culvert Rating (B.C.04)
09/05/2024	Damage	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
11/01/2022	Underwater	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
05/05/2022	NSTM	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
08/26/2021	Routine	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
05/13/2021	NSTM	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
11/02/2020	Underwater	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
05/06/2020	NSTM	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
08/13/2019	Routine	3 Active	5 Fair	6 Satisfactory	6 Satisfactory	N Not Applicable
05/01/2019	NSTM	3 Active	5 Fair	6 Satisfactory	5 Fair	N Not Applicable
11/05/2018	Underwater	3 Active	5 Fair	6 Satisfactory	5 Fair	N Not Applicable
05/14/2018	NSTM	3 Active	5 Fair	6 Satisfactory	5 Fair	N Not Applicable
08/22/2017	Routine	3 Active	5 Fair	6 Satisfactory	5 Fair	N Not Applicable
05/15/2017	NSTM	3 Active	5 Fair	6 Satisfactory	5 Fair	N Not Applicable



Inspection List – Create New Inspection

- Non-assignment inspection types
- New to 7.0: selecting an inspector for each inspection type
- Validates inspector against configured qualifications / signature / stamp for that inspection type
- Shows parking location

The screenshot displays the 'Create Bridge Inspection' form in the AASHTOWare Bridge Management application. The form includes the following fields and sections:

- Bridge:** 007641
- Bridge Name:** R.B. RUSSELL
- Bridge Nickname:** US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER
- Inspection Begin Date (B.IE.02):** 09/04/2024
- Entered By:** Admin, Mayvue
- Inspection Types:** A section with an 'Add New' button and a table with columns 'Inspection Type' and 'Inspector'. The table currently shows 'No records to display.'
- Parking Location:** Fields for Latitude (31.893051) and Longitude (-85.13466).
- Parking Notes:** A text area for notes.
- Map:** A Google Maps view showing the location near Eufaula, Alabama, with a red pin and labels for 'Chevalle Creek' and 'ALABAMA GEORGIA'.

At the bottom of the form, there are 'Save' and 'Cancel' buttons.

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Inspection Data

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 - Procedures
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- **Inspection Plan**
- Condition
- Schedule





Inspection Plan

- Parking Location
- Procedures
 - Automatically added
 - Checklist for completion with comment field
- Equipment
 - Displayed by inspection type
 - Automatically added if configured
 - Can add from previous inspection event of same type or from overall list of equipment

The screenshot displays the 'Inspection Plan' form in the ASHTOWare Bridge Management system. The form includes fields for Bridge ID (007541), Bridge Name (R.B. RUSSELL), Bridge Nickname (US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER), Inspection Date (09/04/2024), and Parking Location (Latitude: 31.893051, Longitude: -85.13466). A map shows the location near Eufaula, Alabama. Below the form is a table of 'Inspection Procedures' with columns for Complete, Type, Name, Inspection Type, and Details. The table lists 'Photos' and 'Posting' procedures. There are also sections for 'Equipment Used in This Inspection', divided into 'Routine Equipment' (listing an A02 Bucket lift vehicle) and 'Underwater Equipment' (listing an A06 Boat). The interface includes 'Save', 'Save & Close', 'Cancel', and 'Delete Bridge Inspection' buttons at the bottom.

Complete	Type	Name	Inspection Type	Details
<input type="checkbox"/>	Photos	One-off photo	Routine	take a photo of scour
<input type="checkbox"/>	Posting	Posting Sign Photo	Routine	confirm posting sign in place and take photo

Name	Hours	Bridge-Level Equipment Detail
A02 Bucket lift vehicle		
A06 Boat		boat must be reserved ahead of inspection

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Inspection Data

- General Configuration
 - Inspection Types
 - Equipment
 - Procedures
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 - Equipment
 - Procedures
- Inspection List – create new inspection
- Inspection Plan
- **Condition**
- Schedule



Condition

- Similar to Inspection > Condition from 6.X
- New to 7.0 – additional condition rating fields

The screenshot displays the 'Condition' form in the AASHTOWare Bridge Management system. The form is titled 'Condition' and includes the following fields:

- Bridge *:** 007641
- Bridge Name (B.ID.02):** R.B. RUSSELL
- Bridge Nickname:** US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER
- Inspection *:** 09/04/2024 (WZRR)
- Condition Ratings:**
 - Deck Condition Rating (B.C.01):** 5 Fair
 - Substructure Condition Rating (B.C.03):** 6 Satisfactory
 - Bridge Condition Classification (B.C.12):** F Fair
 - Bridge Railing Condition Rating (B.C.05):** (Empty)
 - Bridge Bearings Condition Rating (B.C.07):** (Empty)
 - Channel Condition Rating (B.C.09):** 5 Fair
 - Scour Condition Rating (B.C.11):** [MI-T] FIX PARAM VALUES
 - Underwater Inspection Condition (B.C.15):** (Empty)
 - Superstructure Condition Rating (B.C.02):** 6 Satisfactory
 - Culvert Condition Rating (B.C.04):** N Not Applicable
 - Lowest Condition Rating Code (B.C.13):** 5
 - Bridge Railing Transitions Condition Rating (B.C.06):** (Empty)
 - Bridge Joints Condition Rating (B.C.08):** (Empty)
 - Channel Protection Condition Rating (B.C.10):** (Empty)
 - NSTM Inspection Condition (B.C.14):** (Empty)



Condition – Element Condition Data

- Similar to Element Condition Grid in 6.X but new UI
- Captures data for elements, protective systems and defects
- Has “Inspected” check box indicator that determines which fields are editable

Inspected	ID	Name	Structure Unit	Type	Environment	Total Quantity	Units	CS 1 Qty	CS 2 Qty	CS 3 Qty	CS 4 Qty	
<input checked="" type="checkbox"/>	107	Steel Opn Girder/Beam	1,1	Element	Benign	7354	ft	7344	10	0	0	
<input type="checkbox"/>	1000	Corrosion	1,1	Defect	Benign	10	ft	0	10	0	0	
<input checked="" type="checkbox"/>	515	Steel Protective Coating	1,1	Protective System / Wearing Surface	Benign	101694	sq.ft	101644	0	50	0	
<input type="checkbox"/>	3420	Peel/Bub/Crack(SR Protect Coat)	1,1	Defect	Benign	50	sq.ft	0	0	50	0	
<input type="checkbox"/>	113	Steel Stringer	1,1	Element	Benign	2592	ft	2592	0	0	0	
<input type="checkbox"/>	12	Re Concrete Deck	1,1	Element	Benign	74712	sq.ft	14329	58978	1405	0	
<input type="checkbox"/>	152	Steel Floor Beam	1,1	Element	Benign	1824	ft	1824	0	0	0	
<input type="checkbox"/>	205	Re Conc Column	1,1	Element	Benign	22	each	16	6	0	0	

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Inspection Data

- General Configuration
 - Inspection Types
 - Equipment
 - Procedures
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 - Procedures
- Inspection List – create new inspection
- Inspection Plan
- Condition
- **Schedule**



Schedule

- Inspection Types required for bridge
 - Includes agency-defined inspection types
- Inspection Types being performed
 - Inspector for each type
- Interval and Due Date
- Submit for Review button

Schedule

Bridge * 007641 Name (B.ID.02) R.B. RUSSELL Nickname US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER

Inspection * 09/04/2024 (WZRY)

Summary

Inspection Begin Date (B.IE.02) 09/04/2024 Inspection Completion Date (B.IE.03) 09/04/2024 Date Entered 09/04/2024

Entered By Admin, Mayvye QA Date (B.IE.08) mm/dd/yyyy QC Date (B.IE.09) mm/dd/yyyy

Inspection Data Update Date (B.IE.10) mm/dd/yyyy Bridge Group [0] FIX PARAM VALUES Admin Area [06] FIX PARAM VALUES

Inspection Needs

NSTM Inspection Required (B.IR.01) Y NSTM inspection required Fatigue Details (B.IR.02) Complex Features (B.IR.04)

Underwater Inspection Required (B.IR.03)

Schedule

Inspection Type	Required for Bridge	Inspection Being Performed (B.IE.01)	Inspector	Most Recent Inspection Date	Interval Method (B.IE.07)	Interval (months) (B.IE.05)	Inspection Due Date (B.IE.06)	Inspection Assignment Name	Inspector
Damage	<input type="checkbox"/>	<input type="checkbox"/>							
In-Depth	<input type="checkbox"/>	<input type="checkbox"/>							
Initial	<input type="checkbox"/>	<input type="checkbox"/>							
NSTM	<input checked="" type="checkbox"/>	<input type="checkbox"/>		05/05/2022		12	05/05/2023		
Routine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Admin, Mayvye	09/04/2024		24	09/04/2026		
Routine Complex	<input type="checkbox"/>	<input type="checkbox"/>							
Scour Monitoring	<input type="checkbox"/>	<input type="checkbox"/>							
Service	<input type="checkbox"/>	<input type="checkbox"/>							
Special	<input type="checkbox"/>	<input type="checkbox"/>		05/19/2014			01/01/1901		
Underwater	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Admin, Mayvye	09/04/2024		24	09/04/2026		

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Inspection Events – Additional Functionality

- Sketches
- Cross Sections
- Scour Plan of Action

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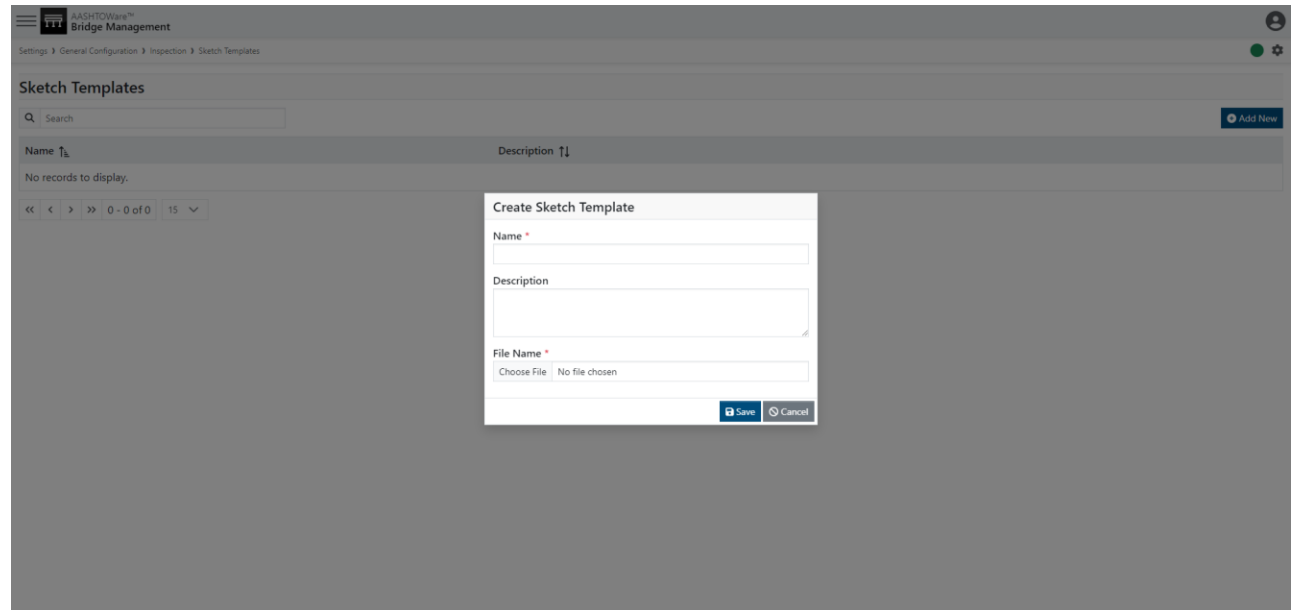
Inspection Events – Additional Functionality

- Sketches
- Cross Sections
- Scour Plan of Action



Sketches - Configuration

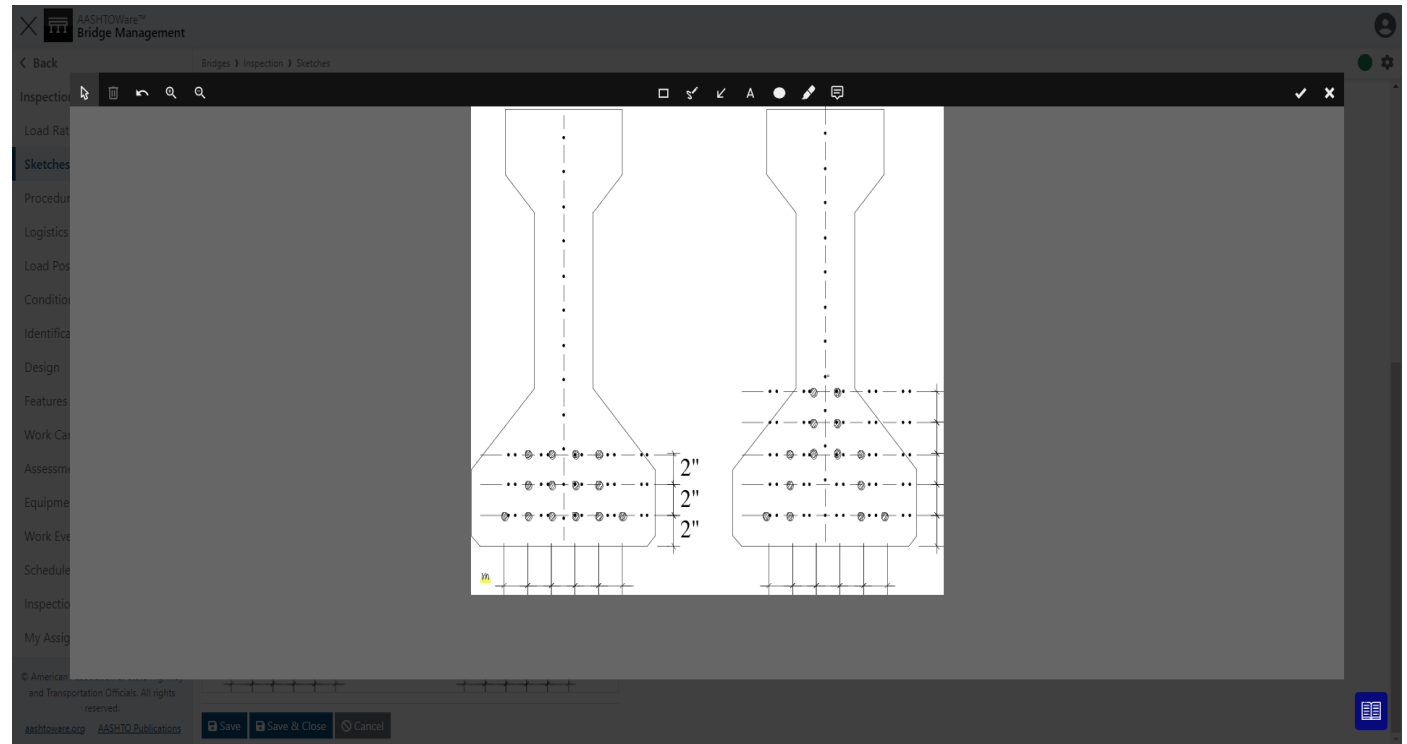
- Upload agency sketch templates





Sketches

- Stored at inspection event level
- Ability to sketch on image files
 - Shapes
 - Callouts / text
 - Freeform drawing
- Start from:
 - Existing sketch
 - Multimedia image
 - New
 - Sketch template



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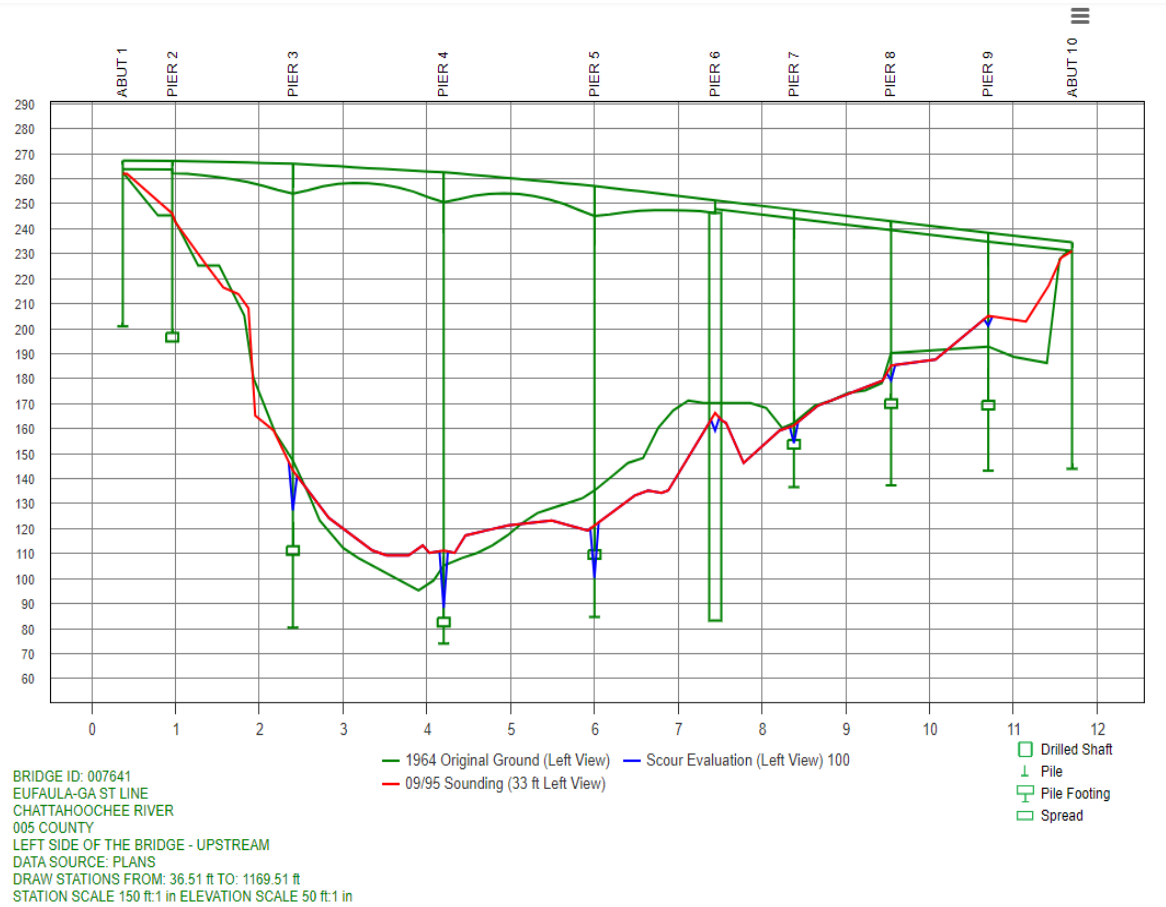
Inspection Events – Additional Functionality

- Sketches
- **Cross Sections**
- Scour Plan of Action



Cross Sections

- Structure Detail
- Original Streambed Elevation
- Scour Resistant Layer
- Streambed Cross Section
- Scour Potential Evaluation





Cross Sections – Data Input

- Left and Right Orientations
- Multiple Offsets
- Station Equation and Elevation Equation for x-axis and y-axis shifts
- Customization of line colors, types for graphing

Graph Line Settings

Name *
Structure Details

Style *
Solid

Color *
#008000

General Information

High Water Elevation ft

High Water Year

Upstream Side

Downstream Side

Station Equation
0 Stations
+
0 ft
=
0 Stations
+
0 ft

Elevation Equation
0 ft
=
0 ft

Station Direction
Increasing

Location of Base Measurement

Bent Direction
Increasing

Elevation Basis
Assumption

Source
FIELD BOOK

Details

[Add New](#)

Station #	Reference Curb/Rail Elevation (ft)	Deck Elevation (ft)	Bottom Footing Elevation (ft)	Critical Pier Scour Depth (ft)	Pile Tip Elevation (ft)	Footing Type	Superstructure Thickness (ft)
0 + 0	103	100	82.6001			Spread Footing on Rock	0.833
0 + 18.5	103	100	82.7001			Spread Footing on Rock	0.833
0 + 36	103	100	82.6001			Spread Footing on Rock	0.833
0 + 54.1001	103	100	81.3999			Spread Footing on Rock	0.833
1 + 54.1001	103	100	87.8999			Spread Footing on Rock	0.833
1 + 71.2001	103	100	90.1001			Spread Footing	0.833

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Inspection Events – Additional Functionality

- Sketches
- Cross Sections
- **Scour Plan of Action**



Scour Plan of Action

- New page builder form
- Part of inspection event
- Captures:
 - Scour vulnerability
 - Substructure data
 - Monitoring data
- Plan of Action authors shows last edited by

Scour Plan of Action

Bridge * 007641 Inspection * 09/05/2024 (BPHF)

Details

Created By Admin, Mayvue Agency 12 Risk Rating *

Plan of Action Authors

Name ↑↓	Agency ↑↓	Phone ↑↓	Email ↑↓	Last Edited Date ↑↓
Admin, Mayvue	ALDOT	555-555-5555	T@T.COM	9/5/2024

Scour Vulnerability

Scour Condition Rating (B.AP03) AB-T FIX PARAM VALUES Overtopping Likelihood (B.AP02) Channel Condition Rating (B.C.09) 5 Fair

Executive Summary Scour Evaluation

Calculated Values

Scour Analysis Frequency	25 Year	50 Year	100 Year	500 Year	Comments
Anticipated Surface Elevation (ft):					



Scour Plan of Action – Responsible Contacts

- Create and manage contact list not limited to BrM users
- Indicate who is responsible for bridge closing / bridge opening

Responsible Contacts

Search [Export](#) [Add Existing](#) [Add New](#)

Last Name ↑	First Name ↑↓	Title ↑↓	Agency ↑↓	Work Phone ↑↓	Cell Phone ↑↓	Email ↑↓	Responsible For Asset Closure ↑↓	Responsible For Asset Opening ↑↓	
Moore	Jane			724-555-5555	724-555-5555	jane.moore@email.com	False	True	Edit Delete
Smith	Joe			412-555-5555	412-555-5555	joe.smith@email.com	True	False	Edit Delete

<< < 1 > >> 1 - 2 of 2 15 ▾



Scour Plan of Action – Detour Route

- Select and map bridges within five miles of the given bridge

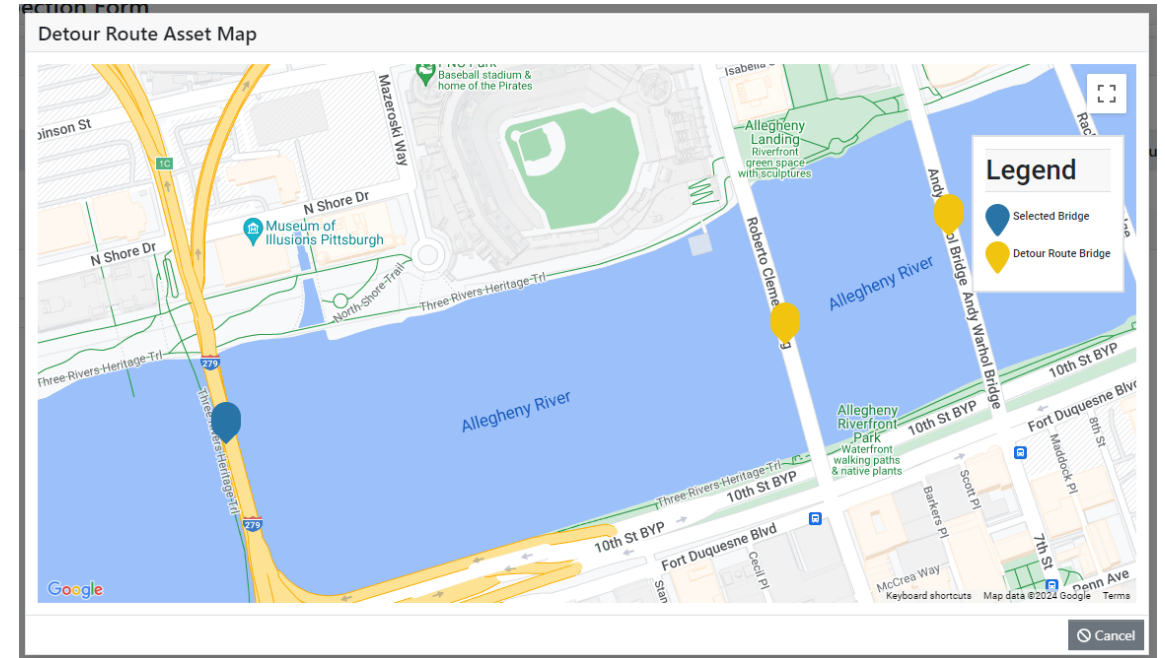
Edit Detour Route

Search

<input type="checkbox"/>	Bridge ID ↑	County Code (B.L.02) ↑↓	Scour Rating (B.C.11) ↑↓	Load Posting Status (B.PS.01) ↑↓
<input type="checkbox"/>	222	Allegheny	7 Some minor scour	PO
<input type="checkbox"/>	333	Allegheny	6 Widespread minor or isolated moderate scour	PO
<input type="checkbox"/>	444	Allegheny	7 Some minor scour	PR

<< < 1 > >> 1 - 3 of 3 15

Save Cancel



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Inspection Assignment

- Inspection Types
- Inspection Management
- My Assignments



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Inspection Assignment

- Inspection Types
- **Inspection Management**
- My Assignments





Inspection Assignment

- Creation of Assignments (grouped by due date and assignee)
- Can assign to BrM Groups or to individual BrM users
- Can configure security so that users get access to bridges during inspection
- Tracks progress of assignments

Name	All Inspections Performed By	All Reviews Completed By	Group	Recurring Number of Months	Expected Cost	Number of Inspections	Not Started	Er
August 2024 Inspections	8/31/2024	10/31/2024	Inspector Group			10	10	
September 2024 Inspections	9/30/2024	11/30/2024	Inspector Group			0	0	
October 2024 Inspections	10/31/2024	12/31/2024	Inspector Group			0	0	



Inspection Assignment – Inspections

- Detailed searching to locate and select unassigned inspections

Add Inspection

<input type="checkbox"/>	Inspection Types ▾	Due Date ↑↓ ▾	Bridge ID ↑↓ ▾	Highway Agency District (B.L.04) ↑↓ ▾	County Code (B.L.02) ↑↓ ▾	Owner (B.L.01) ▾
<input type="checkbox"/>	Routine	08/28/2024	222			S01 State
<input type="checkbox"/>	NSTM	08/28/2024	222			S01 State
<input type="checkbox"/>	Underwater	08/28/2024	222			S01 State
<input type="checkbox"/>	Routine	08/27/2024	111			S01 State
<input type="checkbox"/>	NSTM	08/27/2024	111			S01 State
<input type="checkbox"/>	Underwater	08/27/2024	111			S01 State
<input type="checkbox"/>	Special	08/27/2024	111			S01 State
<input type="checkbox"/>	Routine	08/29/2024	333			S01 State
<input type="checkbox"/>	NSTM	08/29/2024	333			S01 State
<input type="checkbox"/>	Underwater	08/29/2024	333			S01 State

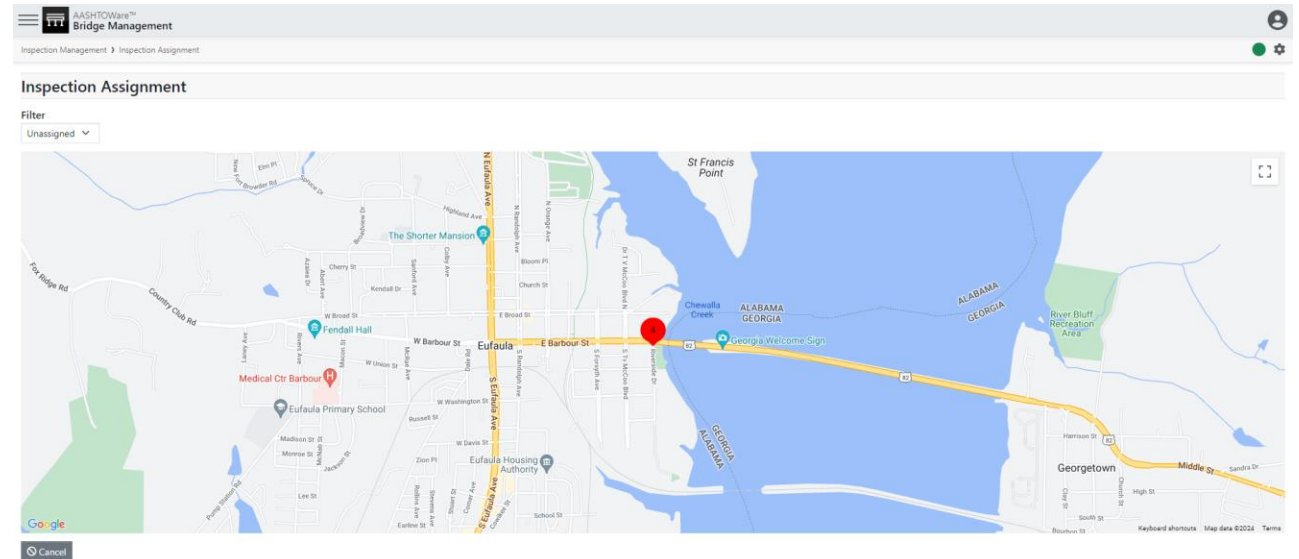
<< < 1 > >> 1 - 10 of 10 15 ▾

Ok Cancel



Inspection Assignment – Inspection Map

- Map of unassigned or assigned inspections





Inspection Assignment – Summary

- Lists all:
 - Inspection types
 - Due dates
 - Equipment needed (configured at bridge-level)
 - Qualifications needed

The screenshot displays the 'Edit Inspection Assignment' page in the AASHTOWare Bridge Management system. The page is divided into several sections:

- Navigation:** A sidebar on the left contains links for 'Inspection Management', 'Critical Findings Dashboard', 'Inspection Assignment' (highlighted), 'Inspection Reviews', and 'Manage Certifications'. The top navigation bar includes 'Back' and 'Inspection Management > Inspection Assignment'.
- Page Title:** 'Edit Inspection Assignment' is displayed at the top of the main content area.
- Summary Tab:** The 'Summary' tab is selected, showing a table with four columns: 'Inspection Types %', 'Months Due %', 'Equipment Needed %', and 'Qualifications Needed %'.

Inspection Types %	Months Due %	Equipment Needed %	Qualifications Needed %
NSTM	Aug 2024	A06 Boat	Inspection Team Leader
Routine			
Special			
Underwater			
- Actions:** At the bottom of the summary section, there are buttons for 'Save', 'Save & Close', 'Cancel', and 'Delete'.
- Footer:** The bottom of the page contains copyright information: '© American Association of State Highway and Transportation Officials. All rights reserved. aashtoware.org AASHTO Publications'.

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Inspection Assignment

- Inspection Types
- Inspection Management
- **My Assignments**



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My Assignments

- List of assignments for the logged in user

The screenshot shows the 'My Assignments' page in the AASHTOWare Bridge Management system. The interface includes a sidebar menu on the left with options like 'Inspection', 'My Assignments', 'My Pending Inspection Reviews', 'Inspection List', 'Inspection Plan', 'Condition', 'Sketches', 'Cross Sections', 'Scour Plan of Action', 'Assessments', 'Work Candidates', 'Critical Findings', 'Schedule', and 'Future Inspection Plan'. The main content area displays a table of assignments with columns for Name, All Inspections Performed By, All Reviews Completed By, Group, Recurring Number of Months, Expected Cost, Number of Inspections, and Not Started. There are also navigation controls at the bottom of the table.

Name ↑↓	All Inspections Performed By ↑↓	All Reviews Completed By ↑↓	Group ↑↓	Recurring Number of Months ↑↓	Expected Cost ↑↓	Number of Inspections ↑↓	Not Started ↑↓	Enter
August 2024 Inspections	8/31/2024	10/31/2024	Inspector Group			10	7	🔍
September 2024 Inspections	9/30/2024	11/30/2024	Inspector Group			0	0	🔍
October 2024 Inspections	10/31/2024	12/31/2024	Inspector Group			0	0	🔍



My Assignments – Assignment Details

- Shows which inspections have been started
- Allows user to:
 - Start an inspection
 - Request reassignment
- Shows procedure and equipment details for each inspection type

My Assignments

August 2024 Inspections
06/31/2024

All Inspections Performed By
06/31/2024

All Reviews Completed By
10/31/2024

Search Export Map

Status	Inspection Type	Bridge ID	District	County Code	Owner (B.CL.01)	Maintenance Responsibility	Procedures	Equipment
Entered in BrM	Routine	111			S01 State transportation department	S01 State transportation department	0	0
Entered in BrM	Special	111			S01 State transportation department	S01 State transportation department	0	0
Not Started	NSTM	222			S01 State transportation department	S01 State transportation department	0	0
Entered in BrM	NSTM	111			S01 State transportation department	S01 State transportation department	0	0
Not Started	Underwater	333			S01 State transportation department	S01 State transportation department	0	1
Not Started	Routine	333			S01 State transportation department	S01 State transportation department	0	0
Not Started	Underwater	111			S01 State transportation department	S01 State transportation department	0	0
Not Started	Underwater	222			S01 State transportation department	S01 State transportation department	0	0
Not Started	Routine	222			S01 State transportation department	S01 State transportation department	0	0
Not Started	NSTM	333			S01 State transportation department	S01 State transportation department	0	0

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Inspection Review

- Configuration
- My Pending Inspection Reviews
- Inspection Management



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Inspection Review

- **Configuration**
- My Pending Inspection Reviews
- Inspection Management





Inspection Review – Configuration

- Define distinct Review Steps
 - Generate report upon step completion
- Define Conditions for each Step
 - Review Group
 - Percent of Inspections
 - By inspector, inspection type, field value
- Lock inspection during review
- Include validation before submitting for review

Order #	Name	Days to Complete	Generate Report	Updated By	Updated On
1	QC Review	30		Admin, Mayvue	8/27/2024
2	Field Review	60		Admin, Mayvue	8/27/2024

Order #	Name	Reviewer Group	% of Inspections	Expiration Date	Updated By	Updated On
1	Inspected by Contractor Firm A	Contractor Firm A	100		Admin, Mayvue	8/27/2024
2	District 1 Bridges	District 1 Reviewers	100		Admin, Mayvue	8/27/2024
3	District 2 Bridges	District 2 Reviewers	100		Admin, Mayvue	8/27/2024

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Inspection Review

- Configuration
- **My Pending Inspection Reviews**
- Inspection Management





My Pending Inspection Reviews

- Shows inspection reviews for logged in user including:
 - Inspections Pending Review – in my group but not picked up by any user yet
 - Due Date and Days Remaining
 - Step
 - My In-Progress Reviews – in progress by logged in user

The screenshot displays the 'My Pending Inspection Reviews' page in the AASHTOWare Bridge Management system. The interface includes a sidebar with navigation options like 'Inspection', 'My Assignments', and 'My Pending Inspection Reviews'. The main content area shows a table of pending reviews with columns for 'Due Date for Review', 'Days Remaining for Review', 'Step', 'BridgelD', 'District', 'County', 'Inspection Types', 'Inspection Begin Date (B.I.E.02)', and 'Previous Review Completed By'. There are three rows of data, each with a trash icon on the right. A search bar and an 'Export' button are located above the table. The footer contains copyright information for the American Association of State Highway and Transportation Officials.

Due Date for Review	Days Remaining for Review	Step	BridgelD	District	County	Inspection Types	Inspection Begin Date (B.I.E.02)	Previous Review Completed By
8/25/2024	30	Step 1	666			Routine Complex	7/26/2024	
8/25/2024	30	Step 1	444			Scour Monitoring, Routine	7/26/2024	
8/25/2024	30	Step 1	555			Routine Complex, NSTM, Underwater	7/26/2024	



My Pending Inspection Reviews – Begin Review

- Data:
 - Details
 - Procedures & Equipment
 - Data Values & Elements
 - Schedule
 - Multimedia
 - Cross Sections

The screenshot displays the AASHTOWare Bridge Management interface. The left sidebar contains a navigation menu with options: Inspection, My Assignments, My Pending Inspection Reviews (selected), Inspection List, Inspection Plan, Condition, Sketches, Cross Sections, Assessments, Work Candidates, Critical Findings, Schedule, and Future Inspection Plan. The main content area is titled 'My Pending Inspection Reviews' and shows details for bridge C.L. Hussey Memorial (B.ID.02). The interface includes tabs for Details, Procedures & Equipment, Data Values & Elements, Schedule, Multimedia, and Cross Sections. Key information includes: Agency Bridge ID 00110, Bridge Name (B.ID.02) C.L. Hussey Memorial, Bridge Nickname C.L. Hussey Memorial, Owner (B.CL.01) S01 State transportation department, Maintenance Responsibility (B.CL.02) S01 State transportation department, Date Entered 7/26/2024, Entered By Admin, Mayvue, Inspection Begin Date (B.IE.02) 7/26/2024, and Inspection Completion Date (B.IE.03) 7/26/2024. The Inspection Types are Routine Complex, Underwater. A table at the bottom shows the Review Information for Step 1, with Reviewer Admin, Mayvue, Completed Date blank, Completed # of Days Since Inspection Begin Date blank, and Days Remaining for Review 30. At the bottom of the interface are buttons for Send Back to Previous Step, Submit to Next Step, Close, and Cancel Review.



My Pending Inspection Reviews – Review

- Approve
- Flag
- Add Comment
- Send Back to Previous Step
 - Can go back to any of the inspectors if no previous steps
- Submit to Next Step
 - Checks for no flagged items
 - Does not require all items to be approved
 - Checks for next configured step

My Pending Inspection Reviews

Agency Bridge ID: 111 | Bridge Name (B.ID.02): Test Bridge 1 | Bridge Nickname: Test Bridge 1

Filter: All

Details | Procedures & Equipment | Data Values & Elements | **Schedule** | Multimedia | Cross Sections

Inspection Type %	Required For Bridge	Inspection Being Performed (B.IE.01)	Inspector	Most Recent Inspection Date	Interval Method (B.IE.07)	Interval (months) (B.IE.05)	Inspection Due Date (B.IE)	
Damage	False	False						⊙ □ ▢
In-Depth	False	False				24		⊙ □ ▢
Initial	False	False		8/27/2024			8/27/2024	⊙ □ ▢
NSTM	True	True	Zaccone, Leanna	8/27/2024		24	8/27/2026	⊙ □ ▢
Routine	True	True	Zaccone, Leanna	8/27/2024		24	8/27/2026	⊙ □ ▢
Scour Monitoring	False	False						⊙ □ ▢
Service	False	False						⊙ □ ▢
Special	True	True	Zaccone, Leanna	8/27/2024		12	8/27/2025	⊙ □ ▢
Underwater	True	False				60	8/27/2024	⊙ □ ▢

Send Back to Previous Step | Submit to Next Step | Close | Cancel Review

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Inspection Review

- Configuration
- My Pending Inspection Reviews
- **Inspection Management**





Inspection Management – Reviews

- Overview of all in-progress reviews
- Can cancel review to remove from a specific user and send back to group

Due Date for Review ↑	Reviewer ↓	Days Remaining for Review ↑	Step ↑	BridgeID ↑	District ↑	County ↑	Inspection Types ↑	Inspection Begin Date (B.IE.02) ↑	Previous Review Completed By ↑
8/15/2024	Admin, Mayvue	17	Step 1	777			Routine, Underwater	7/16/2024	
8/21/2024		23	Step 1	999			Scour Monitoring	7/22/2024	
9/13/2024	Zaccone, Leanna	46	Step 2	555			Routine Complex	7/15/2024	Admin, Mayvue

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Critical Findings

- Configuration
- Critical Findings



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Critical Findings

- **Configuration**
- Critical Findings





Critical Findings – Configuration

- Configure reviewers to confirm new critical findings based on rules
 - Default as a catch-all for any critical findings not matching specific rules
- Enable / disable second level of review
- Send to FHWA always / manually / never
- Email CC addresses

Critical Findings

Reviewers: FHWA Email CCs

Level 1 Review Rules

Order	Name	Review Groups	Description
1	District 1	District 1 Reviewers	bridge is in District 1
2	District 2	District 2 Reviewers	bridge is in District 2

Default Review Groups *

Central Office

Level 2 Review Rules

Level 2 Enabled

No records to display.

Default Review Groups *

Central Office

Save Cancel

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Critical Findings

- Configuration
- **Critical Findings**





Critical Findings

- Has workflow:
 - Pending Level 1 Review
 - Pending Level 2 Review
 - In Progress
 - Resolved
- Can email FWHA when moved to In Progress and when moved to Resolved

The screenshot displays the 'Critical Findings' form within the AASHTOWare Bridge Management application. The interface includes a left-hand navigation menu with options like 'Inspection', 'My Assignments', and 'Critical Findings'. The main form area is titled 'Critical Findings' and contains the following sections:

- Critical Finding Status:** A table with columns for 'Status' (Pending Level 1 Review), 'Current Priority Level', and 'Sent to FHWA' (False).
- Critical Finding Data:** A form with fields for 'Reporter', 'Reporter Phone', 'Reporter Email', 'Date/Time of Finding' (07/21/2024), 'Discovered During Inspection', 'Category', 'Initial Priority', 'Initial Action Taken', 'Bridge Owner Contacted Date/Time' (07/21/2024), 'Contacted Name', and 'Contacted Phone'. A 'Description' field is also present.

At the bottom of the form, there are buttons for 'Save', 'Save & Close', and 'Cancel'. The footer of the application includes the copyright notice: '© American Association of State Highway and Transportation Officials. All rights reserved. aashware.org AASHTO Publications'.



Critical Findings – Log and Task Assignment

- Log shows all actions taken on critical finding
- Outstanding Tasks allows for assignment of event that needs to be completed (inspection, load rating, etc) by a specific BrM user
 - Can be marked as completed once entered in BrM

Critical Findings Log

Search Select Action

Action Date/Time ↕	User	Action	Due Date	Comment
07/23/2024 06:23 AM	Admin, Mayvue	Saved New Critical Finding		
07/23/2024 06:24 AM	Admin, Mayvue	Completed Level 1 Review		sent to FHWA
07/23/2024 06:24 AM	Admin, Mayvue	Sent to FHWA		BrM sent auto-generated email to the following FHWA contacts:
07/23/2024 06:24 AM	Admin, Mayvue	Updated Critical Finding Priority		Updated Priority to Restrictive
07/23/2024 06:24 AM	Admin, Mayvue	Linked Event		Linked to Bridge Inspection '07/22/2024'
07/23/2024 06:25 AM	Admin, Mayvue	Added Comment		completed bridge inspection

<< < 1 > >> 1 - 6 of 6 15 ▾

Critical Findings Outstanding Tasks

Add New

Event Type ↕	Assignee ↕	Due Date ↕	Days Remaining	Comment
Bridge Inspection	Admin, Mayvue	7/30/2024	7	perform damage inspection

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Load Ratings & Load Postings

- Vehicle Configuration
- Load Ratings
- Load Postings

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Load Ratings & Load Postings

- **Vehicle Configuration**
- Load Ratings
- Load Postings



Load Ratings & Load Posting – Configuration

- Sign Types
 - Set roll-up for any agency-defined sign types to SNBI Posting Types for reporting
- Vehicle Types
 - Create agency-defined vehicle types with reportable codes
 - Map vehicles to sign types
 - Indicate which vehicles are automatically added to new load rating event

Order No.	Code	Name	Description	Default Analysis Type	Gross	Sign Types	Add to Event	Active	Standard
1	HS20 O	HS-20 Operating	HL-20 Operating	0 Design	20	Gross Load, No Commercial Vehicles, Single Axle Load, Truck Load	True	True	True
2	HS20 I	HS-20 Inventory	HS-20 Inventory	0 Design	20	Gross Load, No Commercial Vehicles, Single Axle Load, Truck Load	True	True	True
3	HL93 O	HL-93 Operating	HL-93 Operating	0 Design	32	Gross Load, No Commercial Vehicles, Single Axle Load, Truck Load	True	True	True
4	HL93 I	HL-93 Inventory	HL-93 Inventory	0 Design	32	Gross Load, No Commercial Vehicles, Single Axle Load, Truck Load	True	True	True
5	3	AASHTO Type 3	AASHTO Type 3	1 Legal	25	Gross Load, No Commercial Vehicles, Single Axle Load, Tandem Axle Load, Truck Load	True	True	True
6	3S2	AASHTO Type 3S2	AASHTO Type 3S2	1 Legal	36	Gross Load, No Commercial Vehicles, Single Axle Load, Tandem Axle Load, Truck Load	True	True	True
7	3-3	AASHTO Type 3-3	AASHTO Type 3-3	1 Legal	40	Gross Load, No Commercial Vehicles, Single Axle Load, Tandem Axle Load, Truck Load	True	True	True
8	NRL	AASHTO Notational Rating Load	AASHTO Notational Rating Load	2 Permit	40	Gross Load, No Commercial Vehicles, Single Axle Load, Truck Load	True	True	True
9	SU4	AASHTO SU4 truck	AASHTO SU4 truck	2 Permit	27	Gross Load, No Commercial Vehicles, Single Axle Load, Tandem Axle Load, Truck Load	True	True	True
10	SU5	AASHTO SU5 truck	AASHTO SU5 truck	2 Permit	32	Gross Load, No Commercial Vehicles, Single Axle Load, Tandem Axle Load, Truck Load	True	True	True
11	SU6	AASHTO SU6 truck	AASHTO SU6 truck	2 Permit	69.5	Gross Load, No Commercial Vehicles, Single Axle Load, Tandem Axle Load, Truck Load	True	True	True
12	SU7	AASHTO SU7 truck	AASHTO SU7 truck	2 Permit	38.75	Gross Load, No Commercial Vehicles, Single Axle Load, Tandem Axle Load, Truck Load	True	True	True
13	EV2	FHWA Type EV2 emergency vehicle	FHWA Type EV2 emergency vehicle	2 Permit	28.75	Gross Load, Single Axle Load, Truck Load	True	True	True
14	EV3	FHWA Type EV3 emergency vehicle	FHWA Type EV3 emergency vehicle	2 Permit	43	Gross Load, Single Axle Load, Truck Load	True	True	True

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Load Ratings & Load Postings

- Vehicle Configuration
- **Load Ratings**
- Load Postings



Load Ratings

- Report This Event indicates which event is used for submittal and for load posting events
- Configured vehicles are automatically added
 - Can manually add additional vehicles
 - Can add duplicate records per vehicle

The screenshot displays the 'Edit Bridge Load Rating' form in the AASHTOWare Bridge Management application. The form includes fields for Agency Bridge ID (007641), Bridge Name (R.B. RUSSELL), Bridge Nickname (US 82 MP 239.816 OVER CHATTAHOOCHEE RIVER), Event Name (01_25009), Load Rating Date (08/13/2015), Load Rater (TRM), Reviewer (1), Software Used, Load Rating Method (LFR Load Factor Rating), Routine Permit Loads (B.LR.08), Wearing Surface / Fill Depth (in) (0), and Category. Below the form is a 'Ratings' table with columns for Vehicle (B.EP.01), Rating Factor (B.EP.02), Tons, Analysis Type, Limit State, Location, Description, Default Rating for Vehicle, Inventory Load Rating Factor (B.LR.05), Operating Load Rating Factor (B.LR.06), and Control. The table lists various vehicle types such as HS-20 Operating, HS-20 Inventory, H-TRUCK, TANDEM AXLE, TRIAXLE DUMP, CONCRETE, 18-WHEELER, 6-AXLE, and SCHOOL BUS, each with a star icon in the Control column. At the bottom of the interface are buttons for Save, Save & Close, Cancel, and Delete Bridge Load Rating.

Vehicle (B.EP.01)	Rating Factor (B.EP.02)	Tons	Analysis Type	Limit State	Location	Description	Default Rating for Vehicle	Inventory Load Rating Factor (B.LR.05)	Operating Load Rating Factor (B.LR.06)	Control
HS-20 Operating	1.89	37.80					★			✎
HS-20 Inventory	1.13	22.60					★			✎
H-TRUCK	1.14	0.00					★			✎
TANDEM AXLE	1.63	0.00					★			✎
TRIAxLE DUMP	1.48	0.00					★			✎
CONCRETE	1.48	0.00					★			✎
18-WHEELER	2.21	0.00					★			✎
6-AXLE	2.21	0.00					★			✎
SCHOOL BUS	1.58	0.00					★			✎

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Load Ratings & Load Postings

- Vehicle Configuration
- Load Ratings
- **Load Postings**



Load Postings

- New event type in 7.0
- Applies the correct posting status based on inputs

The screenshot displays the 'Edit Bridge Load Posting Status' form in the AASHTOWare Bridge Management application. The form is organized into several sections:

- Agency Bridge ID:** 00110
- Bridge Name (B.ID.02):** C.L. Hussey Memorial
- Bridge Nickname:** C.L. Hussey Memorial
- Bridge Facility Carried:** (Empty field)
- Bridge Feature Intersected:** (Empty field)
- Load Posting Status & Values:**
 - Posting Status Change Date (B.PS.02):** 09/06/2024
 - Open/Posted/Closed:** Weight
 - Permanent/Temp/Supported:** Permanent
 - Load Posting Status (B.PS.01):** PP
- Load Posting Status & Signs:**
 - Text of Load Posting Signs:** (Empty text area)
- Table of Posting Values:**

Sign Type	Posting Type (B.EP03)	Posting Value (B.EP.04)
Gross Load	Gross Load	15

At the bottom of the form, there are navigation buttons: Save, Save & Close, Cancel, and Delete Bridge Load Posting Status. A pagination bar shows '1 - 1 of 1' and '15' items.



Load Postings

- Each sign type has the associated vehicle types
- Automatically uses the Report This Event load rating event

Create Load Posting Status Sign

Sign Type *
No Commercial Vehicles

Posting Type (B.EP.03)
No Commercial Vehicles

Posting Value (B.EP.04) *

Vehicle (B.EP.01) ↑	Rating Factor (B.EP.02) ↓	Tons ↓
HS-20 Operating		
HS-20 Inventory		
HL-93 Operating		
HL-93 Inventory		
AASHTO Type 3		
AASHTO Type 3S2		
AASHTO Type 3-3		
AASHTO Notational Rating Load		
AASHTO SU4 truck		
AASHTO SU5 truck		
AASHTO SU6 truck		
AASHTO SU7 truck		

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Work Candidates & Work Events

- Work Candidates
- Work Events

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Work Candidates & Work Events

- **Work Candidates**
- **Work Events**



Work Candidates

- Similar to 6.X but with updated UI
- Capture prospective work

Name ↑↓	Action ↑↓	Date Recommended ↑↓	Target Year ↑↓	Estimated Cost ↑↓	Status ↑↓	Work Assignment ↑↓	Priority ↑↓	Structure Unit ↑↓	Date Completed ↑↓	Source ↑↓
9C49F33-0ECA-090919-C4FA3F51C7	B25 BRIDGE PAINTING-COMplete	8/26/2021	2021	\$128,641.00		Agency	High	1_1		Inspector Recomm
8606	B06 MINOR DECK REP - CONCRETE	8/26/2021	2021	\$76,000.00	Under Review	Agency	High	1_1		
8605	B04 JOINT REPAIR - SEALED	8/26/2021	2021	\$6,435.00	Under Review	Agency	High	1_1		

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Work Candidates & Work Events

- Work Candidates
- **Work Events**



Work Events

- New event type in 7.0
- Captures work completed each year
- Save & Reset in modal to save but keep modal open to facilitate multiple entries

Work Events

Bridge * 00110 Bridge Facility Carried Bridge Feature Intersected

Work Events for Bridge

Year Work Performed (B.W.02) ↓ ↑ 1	Work Performed (B.W.03) ↓ ↑ 2	Description ↑ ↓	
2023	DK4 Overlaid		✎ ✖
2022	SP6 Coating (New or Replaced)		✎ ✖
2022	DK1 Replaced		✎ ✖

Navigation: << < 1 > >> 1 - 3 of 3 15

Create Work Event

Year Work Performed (B.W.02) *

Type of Work *

Description

Buttons: Save Save & Reset Cancel

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Contact

Jason Gerstorff

Jason.Gerstorff@mayvue.com

Leanna Zaccone

Leanna.Zaccone@mayvue.com



Questions?