



Intro to BrM 6

User Group Meeting
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Santa Fe, New Mexico



BrM Help Desk

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How big of a change is it?
Not Big

What's gone?

So what's new?

- Patches
- Reports
- Mapping
- Upgrades
- Bug Fixes

So how big of a change is BrM 6?

Not that big, really.

- No database metric / English unit conversions.
- No rewiring of the primary keys.
- No change of database tables.
- No overhaul of the user interface



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So what's gone?

Deprecated features include:

- Old Reports
 - Config001 – Elements
 - Config007 – Misc Sys Params
 - Config010 – App Security
 - Insp001 – SI&A Metric
 - Insp002 – Insp Report Metric
 - Insp006 – Network Elem Sum
 - Insp007 – SI&A English
 - Insp008 – Insp SI&A English
 - Insp011 – Insp Report Metric
 - Insp012 – Insp Report English
 - Insp014 – Insp Report English
 - Insp015 – Insp Report Metric
 - Insp016 – Insp Report English
 - Insp017 – Insp Report English



So what's new in BrM 6?

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Not Big

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- Patches!
- Reports
- Mapping Upgrades
- Tech Manual
- Bug Fixes



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So what's new in BrM 6?

Patches!

First, a change in how we do numbers.

The version number you will probably actually use

BrM Version 6.0.0.178755

For us to track which patches you have





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So what's new in BrM 6?

Patches!

Next comes a change in scheduled patches.

- Patches are now planned for every quarter
 - January, April, July, October
- Critical bug patches will be made available right away.
- Patches will include:
 - All the latest bug fixes
 - New features as they become available
 - All features from the previous patches



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So what's new in BrM 6?

Patches!

Patching is now easy ...

- No need to reinstall, just replace a few files and/or run a script.
- Predictability is (or should be) IT's friend.



So what's new in BrM 6?

Patches!

... And it's going to get easier.

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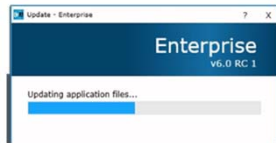
Step 1:
BrM
Patchable



Step 2:
Patches



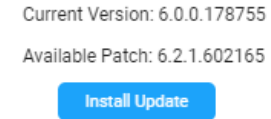
Step 3:
Packaged
patches



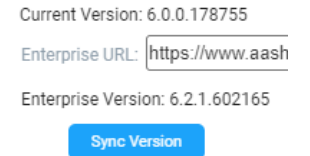
Step 4:
Notifications



Step 5:
Check for
Patches



Step 6:
Sync patches
to workstation





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Current BrM Parameter Options
This report lists the options configured in all the dropdowns for this database. These values can be modified on the page found under Admin > General Config > Parameters.

actypdfs.atypcat			
Sort	Parm Value	Short Description	Long Description
	0	Do Nothing	Do Nothing
	1	Structure Replacement	Structure Replacement
	2	Improvement	Improvement
	3	Rehabilitation	Rehabilitation
	4	Maint&Repair	Maint&Repair
	5	Emergency	Emergency
	6	Other	Other
	7	Painting	Painting

agencyptrole.threshold_state			
Sort	Parm Value	Short Description	Long Description
	1	State 1	State 1
	2	State 2	State 2
	3	State 3	State 3
	4	State 4	State 4
	5	State 5	State 5

bridge.adminarea			
Sort	Parm Value	Short Description	Long Description
	-1	901 - Unknown	Unknown
	-2	902 - Not Applicable	Not Applicable
	0	900 - Not NBI	Not to be included on NBI tape
	A1	1421	SHED 1421
	A2	1422	SHED 1422
	A3	1423	SHED 1423
	A4	1424	SHED 1424
	A5	1425	SHED 1425
	A6	1426	SHED 1426
	A7	1431	SHED 1431
	A8	1432	SHED 1432
	A9	1433	SHED 1433
	AA	1427a	Shed 1427
	B0	1435	SHED 1435
	B1	1436	SHED 1436
	B2	1437	SHED 1437
	B3	2400	SHED 2400
	B4	2421	SHED 2421
	B5	2422	SHED 2422
	B6	2423	SHED 2423
	B7	2424	SHED 2424
	B8	2425	SHED 2425
	B9	2426	SHED 2426
	C0	2427	SHED 2427
	C1	2430	SHED 2430
	C2	2431	SHED 2431
	C3	2432	SHED 2432
	C4	2433	SHED 2433
	C5	2434	SHED 2434
	C6	2435	SHED 2435
	C7	2436	SHED 2436

BrM Parameter List 8/27/2018
Page 1 of 80

All Defined Actions in BrM
This report lists all of the actions available in BrM. These values can be modified, and new actions can be configured, on the Admin > Modeling Config > Action Defs page. Actions appear in this list by sort order and inactive actions appear in gray text.

Sort Order	Action Name	Description	Notes	Network Action	Replace	Required Minimum Cost	Action Type
900	Scour - Place Ajax	Place concrete ajax	Scour Example	Y	N		
900	Scour - Place Riprap	Place riprap to address scour	Scour Example	Y	N		
900	Scour - Concrete Floor	Pave the Channel Floor	Scour Example	Y	N		
900	Scour Hole Repair	Fill in a scour hole	Scour Example	Y	N		
999	Repaint Super/Sub - Network	Repair Paint	Example	Y	N		Network
999	Rehab Deck - Network	Repair deck, joints and parapets	Example	Y	N		Network
999	Rehab Super - Network	Repair beams, paint and bearings	Example	Y	N		Network
999	Rehab Sub - Network	Repair Columns, Piers, Abutments, Piles, Walls	Example	Y	N		Network
999	Replace Deck - Network	Replatac Deck	Example	Y	N		Network
999	Rehab Culvert - Network	Rehab culvert, parapets, approaches	Example	Y	N		Network
999	Replace Super - Network	Replace Super Elements	Example	Y	N		Network
999	Replace Structure - Network	Replace Structure	Example	Y	Y		Network
999	Preserve Deck - Network	Thin-Bonded / Repair Joints	Example	Y	N		Network
999	Paint Sub - Network	First Painting	Example	Y			Network
999	Place Wearing Surface - Network	First Wearing Surface	Example	Y			Network
999	Paint Super - Network	First Painting	Example	Y			Network



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BrM Field Security Summary

This report provides a quick summary of the field level security settings for each field for each role. The roles can be modified on the Admin > Security > Roles page. The access each role has to each field can be modified on the Admin > Security > Roles page, on the security tab to the right, or by searching the Admin > General Config > Standard and Agency pages.

• ✓ means visible with edit rights.
• ✗ means visible but read only.

			Admin	AdminAnalysis	AdvancedAnalysis	Basic	Default	
Bridges	New Inspection	Create New Inspection	Controls					
		Insp date		✓	✓	✗		
		Primary type		✓	✓	✗		
		Inspector		✓	✓	✗		
		Entered by		✓	✓	✗		
		Engineer of record		✓	✓	✗		
		Controls						
	Types of Insp Performed	Routine		✓	✓	✗		
		Element		✓	✓	✗		
		Fracture Critical		✓	✓	✗		
		Underwater		✓	✓	✗		
		Other special		✓	✓	✗		
	Sufficiency Ratings	No Caption	Controls					

BrM Field Security Summary

		Admin	AdminAnalysis	Advanced	Analysis	Basic	Default	
Inspection	Condition	Condition Ratings -Subgroup 1						
		Controls						
		Deck (58)	✍	✍	✍	✍	✍	✍
		Superstructure (59)	✍	✍	✍	✍	✍	✍
	Substructure (60)	✍	✍	✍	✍	✍	✍	
	Condition Ratings Subgroup 2							
	Controls							



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BrM Health Index Detailed Calculation

This report exemplifies the values and factors used to determine the Health Index for a particular structure. The elements and quantities for a given structure are modified on the Inspection > Condition page, and the factors and weights for an element are modified on the Admin > Modeling Config > Element Defs page. Defects and protective systems are not included.

$$HI = \frac{\sum_{All\ Elements} W_E \left(\sum_{CS1}^{CS4} C_n Q_n \right)}{\sum_{All\ Elements} W_E Q_{total}}$$

Where:

HI = the Health Index, a measure of remaining health, 0% to 100%

W = the relative weight of an element.

C = the condition state coefficient, between 1 and 0

Q = Quantity in a condition state or Quantity Total, from inspection data

Elem/Env	Q					W	W * Q Total	C				ΣCQ	w * ΣCQ	
	Total	CS1	CS2	CS3	CS4			CS1	CS2	CS3	CS4			
12 / 1	752	752	0	0	0	2	1,503	1.00	0.67	0.33	0.00	752	1,503	
109 / 1	406	406	0	0	0	30	12,180	1.00	0.67	0.33	0.00	406	12,180	
215 / 1	27	23	4	0	0	80	2,170	1.00	0.67	0.33	0.00	26	2,074	
225 / 1	30	30	0	0	0	850	25,500	1.00	0.67	0.33	0.00	30	25,500	
234 / 1	46	46	0	0	0	53	2,423	1.00	0.67	0.33	0.00	46	2,423	
301 / 1	18	0	18	0	0	1	18	1.00	0.67	0.33	0.00	12	12	
302 / 1	18	18	0	0	0	7	128	1.00	0.67	0.33	0.00	18	128	
304 / 1	27	27	0	0	0	1	27	1.00	0.67	0.33	0.00	27	27	
310 / 1	48	48	0	0	0	100	4,800	1.00	0.67	0.33	0.00	48	4,800	
321 / 1	111	111	0	0	0	2	223	1.00	0.67	0.33	0.00	111	223	
331 / 1	135	135	0	0	0	7	945	1.00	0.67	0.33	0.00	135	945	
							ΣW * Q Total	49,918					ΣW * ΣCQ	49,816

HI = 99.79%



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Network Element Distribution

This report shows all instances of an element in your batch of selected bridges, along with their current conditions in the latest inspection. At the end, it also gives the summary in graphical form to compare against the deterioration rate found on Admin > Modeling Config > Element Specs.

All quantities and occurrences for Element 12

Bridge ID	Facility	Feature Intersected	Count	Str Unit	Enviro.	Quantities				
						Total	CS1	CS2	CS3	CS4
4-4-6	Cont Conc 3sl-15 (SR-15) NBL	SR-68, 500 SOUTH STREET	1	101	Mod.	12,672.00 sq.ft	12,042.31	629.69	0.00	0.00
4-5-5	Truss 1span SR-311	STRAWBERRY RIVER	1	101	Low	1,493.30 sq.ft	595.83	597.32	300.15	0.00
4-6-6	Steel 5span COUNTY ROAD	I-80 (SR-80) EBL & WBL	1	101	Mod.	8,937.50 sq.ft	0.00	8,043.75	893.75	0.00
4-6-7	Steel 3span I-15 (SR-15) SBL	UNION PACIFIC RAILROAD	1	101	Mod.	23,844.80 sq.ft	4,768.96	11,922.40	6,676.54	476.90
5-5-6	Steel Cont 3sl-15 (SR-15) NBL	RAMP, I-15SB TO US-89SB	1	101	Mod.	16,008.00 sq.ft	4,642.32	7,523.76	3,841.92	0.00
6-5-6	Steel Arch SR-163	SAN JUAN RIVER	1	101	Mod.	5,577.60 sq.ft	4,783.60	790.00	4.00	0.00
6-6-4	Cont Conc 3sl-15 (SR-15) NBL	RAMP, I-15NB TO US-89NB	1	101	Mod.	8,910.00 sq.ft	8,374.00	409.00	127.00	0.00
6-6-5	Cont Conc 3sl-15 (SR-15) NBL	McELMO CREEK	1	101	Mod.	4,959.00 sq.ft	4,463.10	495.90	0.00	0.00
6-6-5	PS Conc 1sp US-6 (SR-6)	SR-147	1	101	Sev.	6,876.90 sq.ft	6,864.90	12.00	0.00	0.00
6-6-6	Steel 1span COUNTY ROAD	DIAMOND FORK CREEK	1	101	Low	3,000.90 sq.ft	2,841.85	150.05	9.00	0.00
6-6-6	Steel 3span SR-128	COLORADO RIVER	1	101	Low	24,880.60 sq.ft	0.00	24,880.60	0.00	0.00
7-4-6	Steel Arch SR-18	SANTA CLARA RIVER	1	101	Low	10,079.20 sq.ft	10,079.20	0.00	0.00	0.00
7-7-6	PS Conc 4sp 5TH AND 6TH EAST	I-15 (SR-15) NBL AND SBL	1	101	Mod.	9,154.20 sq.ft	9,146.20	8.00	0.00	0.00
7-7-7	Steel 1span MEADOW LANE	MILL CREEK WETLANDS	1	1	Low	7,503.01 sq.ft	7,503.01	0.00	0.00	0.00
7-9-9	Steel 2span I-80 (SR-80) WBL	Silver Creek & Bike	1	1	Low	14,638.00 sq.ft	14,052.48	585.52	0.00	0.00
9-9-9	PS Conc 1sp I-15 (SR-15) NBL	SR-68, 500 SOUTH STREET	1	101	Low	9,379.00 sq.ft	9,379.00	0.00	0.00	0.00
9-9-9	PS Conc 2sp SR-131, 400 NO.ST.	I-15 (SR-15) NBL & S	1	101	Low	14,861.69 sq.ft	14,861.69	0.00	0.00	0.00
9-9-9	Steel 1span I-15 (SR-15) NBL	1500 SOUTH STREET	1	101	Low	6,639.92 sq.ft	6,639.92	0.00	0.00	0.00
9-9-9	Steel 3span SR-154	SR-68	1	1	Low	21,941.20 sq.ft	21,941.20	0.00	0.00	0.00

There are 19 instances of Element 12 on 19 structures and a total quantity of 211,357 sq.ft.

68% in CS1	27% in CS2	6% in CS3	0% in CS4
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So what's new in BrM 6?

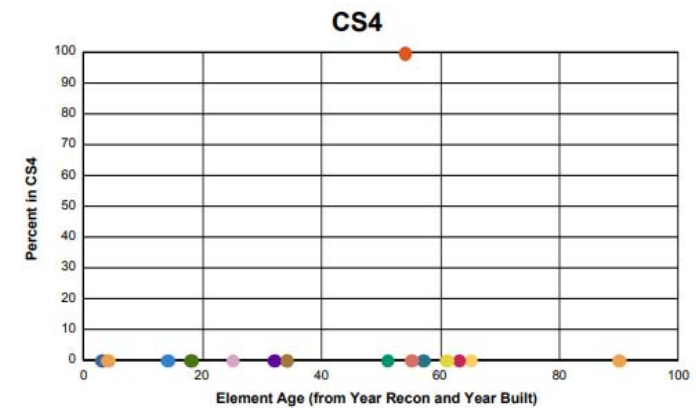
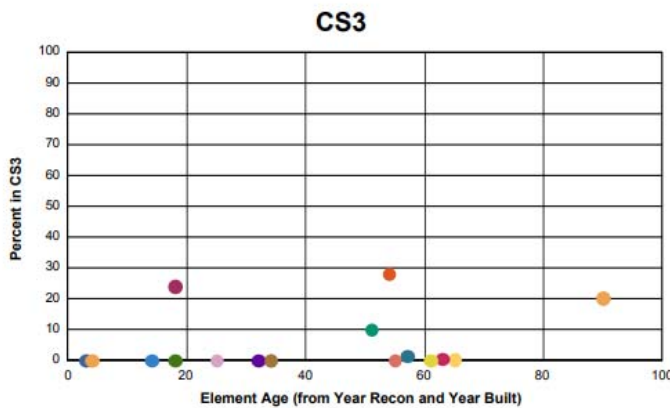
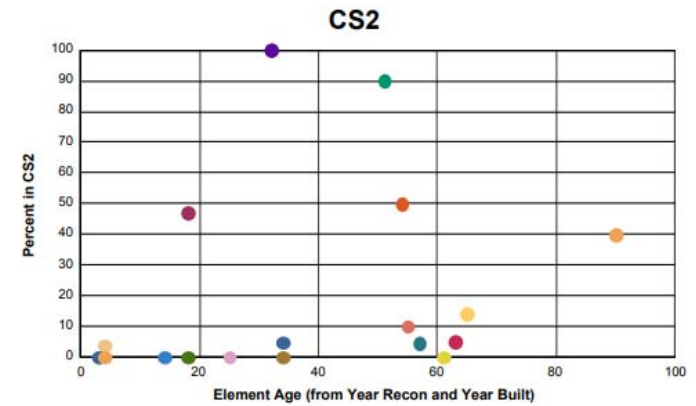
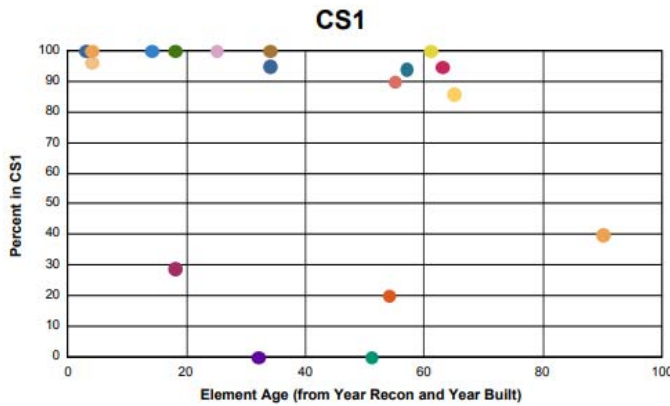
Reports

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Bridge Condition Summary

This report provides a summary of the bridge condition data of the selected bridges as of a certain date. At the conclusion of the report, some calculations about the most common performance measures are provided. The deck area does not use *bridge.deck_area* but rather the FHWA formula defined in April 2018 (FHWA-HIF-18-023).

Data as of: 2017-01-01

Bridge ID	Facility Carried	Feature Intersected	Deck Area	Length	Deck Width	Insp Date	Deck	Super	Sub	Culv	Chan	SD
6-3-6 PS T-Beam	LARCHWOOD DRIVE	JORDAN & SALT LAKE	1,422.00	24.0	59.3	8/12/2015	6	3	6	N	7	Structurally Deficient
7-7-6 Cont Conc	SARATOGA SPRGS.R	JORDAN RIVER	2,981.43	90.0	33.1	9/29/2015	7	7	6	N	6	Not Deficient
7-7-7 Steel 1span	MEADOW LANE	MILL CREEK WETLANI	7,992.65	137.6	58.1	9/29/2015	7	7	7	N	7	Not Deficient
6-6-6 Steel 1span	COUNTY ROAD	DIAMOND FORK CREE	3,570.31	77.3	46.2	10/26/2015	6	6	6	N	6	Not Deficient
8-8-8 Slab 1span	6800 NORTH	AMERICAN FORK CRE	1,089.07	22.0	49.5	9/28/2015	8	8	8	N	6	Not Deficient
4-5-5 Truss 1spar	SR-311	STRAWBERRY RIVER	1,525.00	71.5	21.3	5/27/2015	4	5	5	N	5	Structurally Deficient
6-5-6 Steel Arch	SR-163	SAN JUAN RIVER	5,484.49	228.5	24.0	8/11/2015	6	5	6	N	8	Not Deficient
7-4-6 Steel Arch	SR-18	SANTA CLARA RIVER	10,079.27	295.0	34.2	6/24/2015	7	4	6	N	8	Structurally Deficient
4-6-6 Steel 5span	COUNTY ROAD	I-80 (SR-80) EBL & WB	8,997.06	299.9	30.0	8/4/2014	4	6	6	N	N	Structurally Deficient
6-6-6 Steel 3span	SR-128	COLORADO RIVER	24,921.71	593.4	42.0	9/15/2015	6	6	6	N	7	Not Deficient
Data as of: 2017-01-01							Number of Bridges:	25	Number of Culverts:			20
							Bridge Deck Area:	254,305.89	Culvert Deck Area:			3,386.76
6-6-6 Concre	Deck Average (Count):		6.28	Deck Average (Area):		6.23	Total Poor Area:		97,789.77			
6-6-5 Cont C	Super Average (Count):		6.48	Super Average (Area):		6.63	Total Poor Count:		9			
5-5-4 Conc S	Sub Average (Count):		6.68	Sub Average (Area):		6.80	Pct Poor (Area):		38.45%			
8 Conc Culve	Culvert Average (Count):		6.67	Culvert Average (Area):		6.00	Pct Poor (Count):		32.14%			
6-6-4 Cont Conc	RP.US89NB to I15NB	RAMP,I-15NB to US-89	8,810.52	270.0	32.6	7/7/2014	6	6	4	N	N	Structurally Deficient
9-9-9 PS Conc 1s	I-15 (SR-15) NBL	SR-68, 500 SOUTH STI	9,544.85	115.0	83.0	10/21/2015	9	9	9	N	N	Not Deficient



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Inspection Report

5-5.4 Conc Slab 1span
Single Span RC Slab Poor Condition

04/03/2015

<p>IDENTIFICATION</p> <p>Bridge Key: DD 820</p> <p>NBI Number: Single Span RC Slab Poor Condition</p> <p>Structure Name: Single Span RC Slab Poor Condition</p> <p>Location (9): 0.47 MI SOUTH OF THATCHER</p> <p>Carries (7): SR-102</p> <p>Type of Service (42A): 1 Highway</p> <p>Feature Crossed (6): WEST CANAL</p> <p>Type of Service (42B): 5 Waterway</p> <p>Placecode (4): Unknown</p> <p>County (3): Box Elder</p> <p>State (1): 49 Utah</p> <p>Station: 1432</p> <p>Region (2): Region 1</p> <p>Latitude (16): 41.69</p> <p>Longitude (17): -112.30</p> <p>Owner (22): State Highway Agency</p> <p>Custodian (21): State Highway Agency</p> <p>Year Built (27): 1935 <small>Revised State: Not Applicable (P)</small></p> <p>Year Recon (106): 0 <small>Border Number: Not Applicable</small></p> <p>Historical (37): 4 <small>Has sign not defined</small> % Responsibility: 0</p>	<p>INSPECTION</p> <p>Date of Inspection (90): 4/3/2015</p> <p>Frequency (91): 24</p> <p>Next Inspection: 4/3/2017</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Inspection Type</th> <th>Freq (92)</th> <th>Last Insp (93)</th> <th>Next Insp</th> </tr> <tr> <td>Element</td> <td>24</td> <td>4/3/2015</td> <td>4/3/2017</td> </tr> <tr> <td>Fracture Critical (A)</td> <td>-1</td> <td>1/1/1901</td> <td>1/1/1901</td> </tr> <tr> <td>Underwater (B)</td> <td>-1</td> <td>1/1/1901</td> <td>1/1/1901</td> </tr> <tr> <td>Special Insp (C)</td> <td>-1</td> <td>1/1/1901</td> <td>1/1/1901</td> </tr> </table> <p>LOAD RATING AND POSTING</p> <p>Posting Status (41): A Open, no restriction</p> <p>Posting % (70): 5 At/Above Legal Loads</p> <p>Rating Date: 8/20/2014</p> <p>Design Load (31): 2 M 13.5 (H 15)</p> <p>Opr Method (63): 8 LRFRR (HLR3)</p> <p>Opr Rating (64): 35.71 Tons</p> <p>Inv Method (65): 8 LRFRR (HLR3)</p> <p>Inv Rating (66): 28.70 Tons</p>	Inspection Type	Freq (92)	Last Insp (93)	Next Insp	Element	24	4/3/2015	4/3/2017	Fracture Critical (A)	-1	1/1/1901	1/1/1901	Underwater (B)	-1	1/1/1901	1/1/1901	Special Insp (C)	-1	1/1/1901	1/1/1901
Inspection Type	Freq (92)	Last Insp (93)	Next Insp																		
Element	24	4/3/2015	4/3/2017																		
Fracture Critical (A)	-1	1/1/1901	1/1/1901																		
Underwater (B)	-1	1/1/1901	1/1/1901																		
Special Insp (C)	-1	1/1/1901	1/1/1901																		

<p>DECK GEOMETRY</p> <p>Deck Geometry (68): > Above Tolerable</p> <p>Deck Area: 23,844.80</p> <p>Deck Type (107): 1 Concrete-Cast-in-Place</p> <p>Wearing Surface (108A): 6 Bituminous</p> <p>Membrane (108B): 1 Built-up</p> <p>Deck Protection (108C): None</p> <p>O. to O. Width (52): 63.42</p> <p>Curb / Sidewalk Width L (58A): 0.00</p> <p>Curb / Sidewalk Width R (58B): 0.00</p> <p>Median (33): 3 Closed Med w/Barriers</p>	<p>DECK CONDITION</p> <p>Deck Rating (58): 5 Fair</p> <p>Bridge Rail (36A): 0 Substandard</p> <p>Transition (36B): 0 Substandard</p> <p>Approach Rail (36C): 0 Substandard</p> <p>Approach Rail Ends (36D): 0 Substandard</p>
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<p>SUPERSTRUCTURE GEOMETRY</p> <p># of Main Spans (45): 3</p> <p># of Approach Spans (46): 0</p> <p>Main Material (43 A): 3 Steel</p> <p>Main Design (43 B): 02 Stringer/Girder</p> <p>Max Span Length (48): 164.00</p> <p>Structure Length (49): 389.99</p> <p>NBIS Length (37): Long Enough</p> <p>Temp Structure (103): Not Applicable (P)</p> <p>Skew (34): 67</p> <p>Structure Flared (35): 0 No flare</p> <p>Parallel Structure (101): No bridge exists</p> <p>Approach Alignment (72): 0 Equal Desirable Crit</p>	<p>SUPERSTRUCTURE CONDITION</p> <p>Superstructure Rating (59): 5 Fair</p> <p>Structure Evaluation (67): 4 Minimum Tolerable</p>
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Inspection Report

5-5.4 Conc Slab 1span
Single Span RC Slab Poor Condition

04/03/2015

SUBSTRUCTURE GEOMETRY

Navigation Control (38): NA-no waterway

Nav Vert Clearance (39): 0.00

Nav Horiz Clearance (40): 0.00

Pier Protection (111): 1 Not Required

Lift Bridge Vertical Clearance (116): -3.28

Scour Rating (113): 8 Stable Above Footing

Waterway Adequacy (71): 6 Equal Minimum

ROUTE ON STRUCTURE: SR-102

ROADWAY LOCATION		ROADWAY CLASSIFICATION		CLEARANCES	
Pos Prefix (5A):	Route On Structure	Funct Class (26):	07 Rural Mj Collector	Vertical (110):	99.99
Kind of Hwy (5B):	3 State Hwy	Level Service (5C):	1 Mainline	Min Vert Over (53):	99.02 0.00
Route Num (5D):	00102	NHS (104):	0 Not on NHS	Vert Ref (54A):	N Feature not Hwy or RR
LRIS Route (13A/B):	0000000102000	Defense Hwy (100):	0 Not a STRAHNET Hwy	Horizontal (47):	30.00
Milepost (11):	8.13 mi (13.08 km)	Toll Facility (20):	3 On free road	Min Lat Left (96):	0.00
Suffix (5E):	0 N/A (NBI)	ADT (29):	343 Cars/Day	Min Lat Right (55B):	0.00
Lanes On (28A):	2	Pot Trucks (109):	33.00%	Horiz Ref (55A):	N Feature not Hwy or RR
Detour Length (19):	1.88 mi (3.00 km)	ADT Year (30):	2012	Underclearance (95):	N Not applicable (NBI)

PROPOSED IMPROVEMENTS

Bridge Cost \$:	\$	Type of Wk TR:	Unknown (P)
Roadway Cost \$:	\$	Length of Improvement TR:	-3.18
Total Cost \$:	\$	Funds ADT 116:	439
Year of Cost Estimate \$:	Unknown	Year of Funds ADT 116:	2012

ELEMENT CONDITION SUMMARY

Elem Unit	Elem	Description	Total Qty	% in 1	Qty, SR 1	% in 2	Qty, SR 2	% in 3	Qty, SR 3	% in 4	Qty, SR 4
2	388	Re Concrete Slab	1,888.40	99%	1,792.88	9%	0.00		94.42	0%	0.00
2	510	Wearing Surfaces	1,888.40	99%	1,869.52	1%	18.88	0%	0.00	0%	0.00
2	2163	Re Conc Abutment	156.00	26%	39.75	9%	0.00	16%	79.50	26%	39.75
2	5513	Re Conc Bridge Rating	188.00	100%	188.00	0%	0.00	0%	0.00	0%	0.00

ELEMENT NOTES

STRUCTURE UNIT: 2

ELEM	ELEMENT NAME	ENV	QUANTITY	UNITS	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
38	Re Concrete Slab	3	1,888.40	sq ft	1,793.98	0.00	94.42	0.00

Top of slab is covered with asphalt overlay and not visible for inspection. Bottom surface of slab is in fair condition with spalling along construction joints of old sections. A section 3' x 4' has heavily spalled up to 2.5" deep with exposed rebar near southeast corner with approximately 12% section loss. Another length 4' in length has spalled near east construction joint with exposed rebar with minimal section loss. Headwalls on both ends have extensive cracking and spalling along entire length. Rebar is heavily rusted with approximately 20 percent section loss. Outer edge that has cracked through has detached on west side is hanging from rebar. East side headwall has spalled along entire length with exposed rebar. Minor section loss in this particular area. Approximately 3 percent meets CS3 due to cracking and exposed rebar. 2.5' utility spanning south side, 5.5' utility spanning north side.

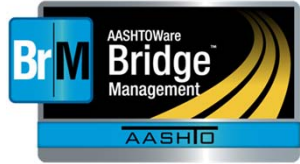
510	Wearing Surfaces	3	1,888.40	sq ft	1,869.52	18.88	0.00	0.00
215	Re Conc Abutment	3	156.00	ft	39.75	0.00	79.50	39.75

BRIDGE NOTES

INSPECTION NOTES

Inspection Report

Tue 08/28/2018
Page 2 of 3



So what's new in BrM 6?

Reports

How big of a change is it?
Not Big

What's gone?

So what's new?

- Patches
- Reports
- Mapping
- Upgrades
- Bug Fixes

Reports > Generate

Report Generation

Report: ⓘ

Format: PDF Text Excel RTF Word HTML

Arguments

Inspection One Previous Inspection per Structure in List

Batch Key All structures
 49 structure(s) in the list
 Specific structure (enter its Bridge ID)

Show Elem Notes

Show Photos

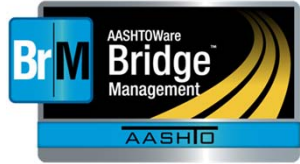
Show Work History

Show Work Candidates

Recently Generated Reports

	Type
insp018_example_inspection_report (Crystal) ⓘ	PI
insp018_example_inspection_report (Crystal) ⓘ	PI

[Clear](#)



So what's new in BrM 6?

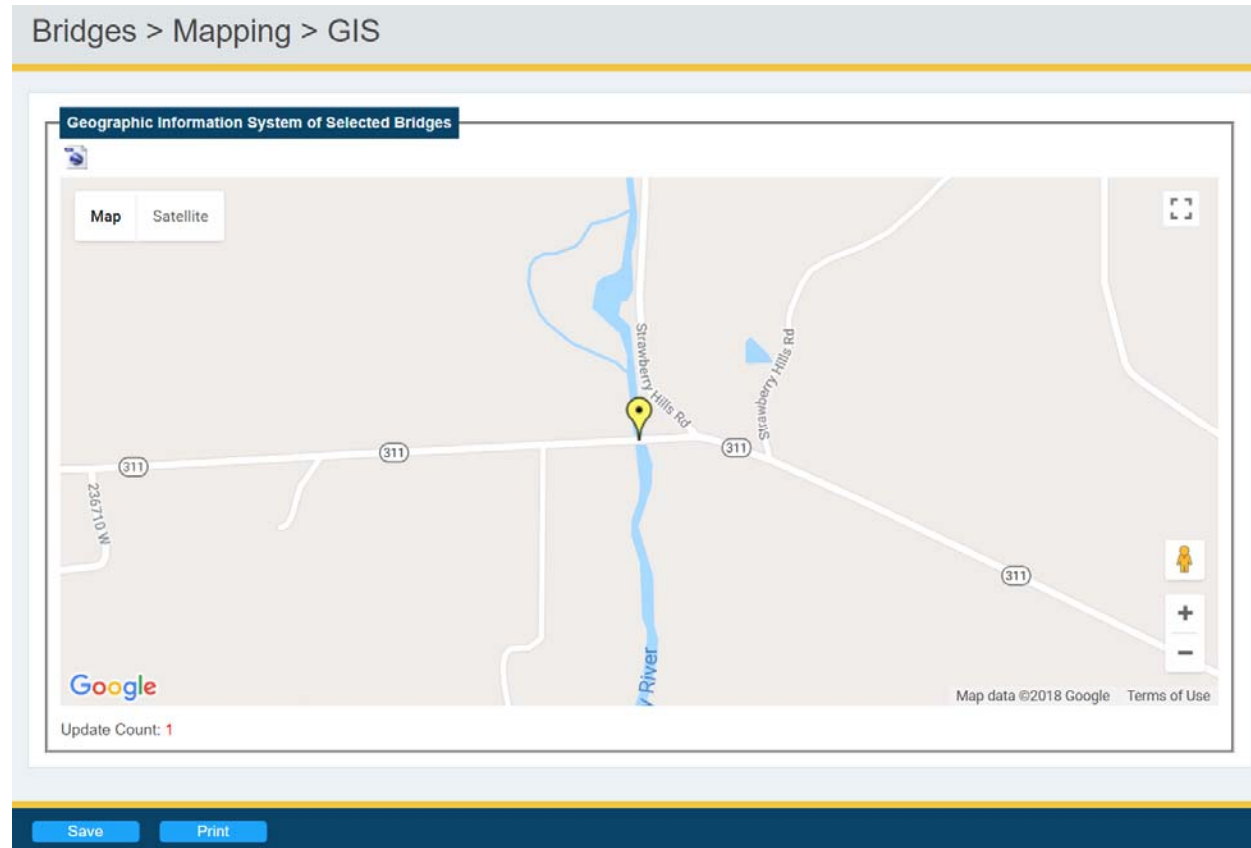
Mapping Upgrades

How big of a change is it?
Not Big

What's gone?

So what's new?

- Patches
- Reports
- Mapping Upgrades
- Bug Fixes





So what's new in BrM 6?

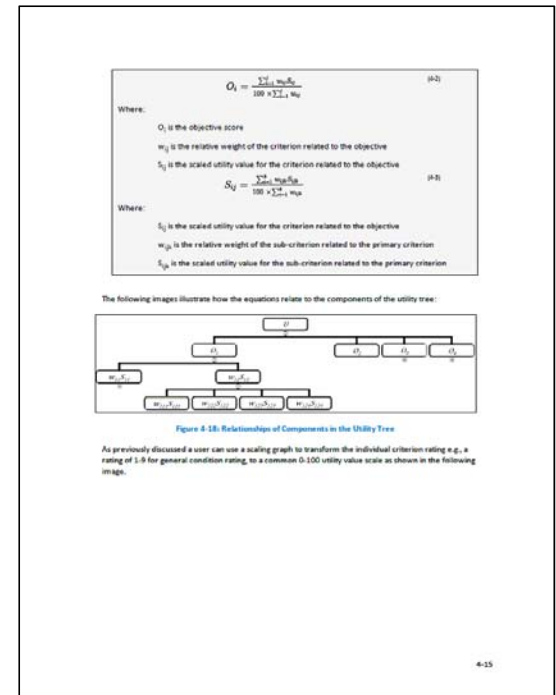
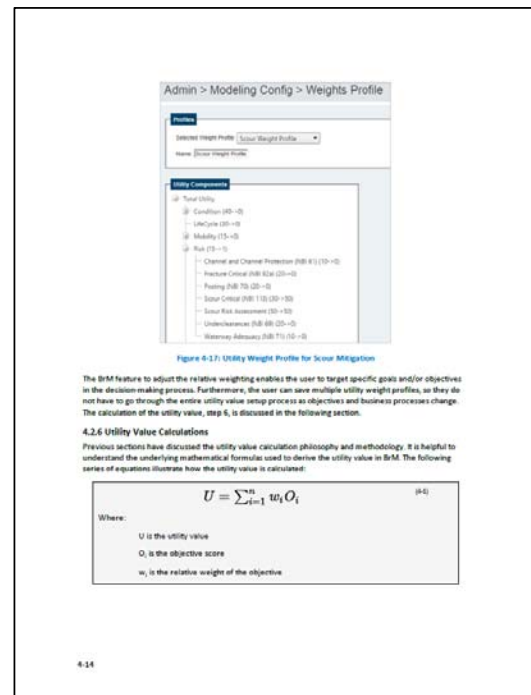
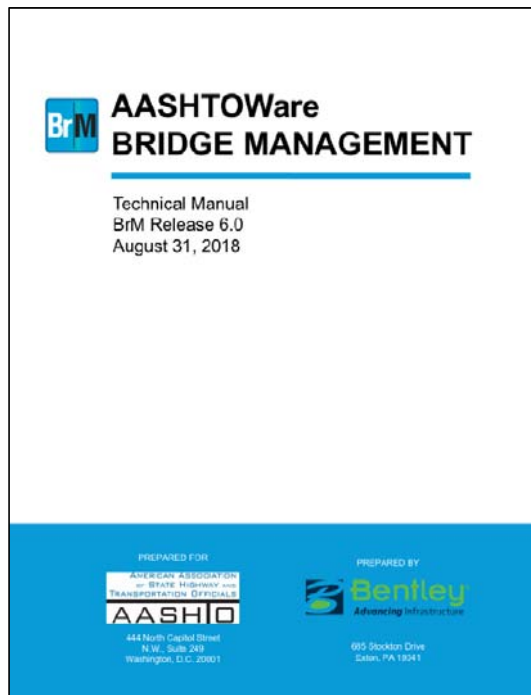
Technical Manual

How big of a change is it?
Not Big

What's gone?

So what's new?

- Patches
- Reports
- Mapping
- Upgrades
- Bug Fixes





How big of a change is it?
Not Big

What's gone?

So what's new?

- Patches
- Reports
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- Bug Fixes

So what's new in BrM 6?

Bug Fixes

NBI Items:

- Item 64, 66.: Rounding errors related to metric data entry addressed.
- Item 55b: The order of rounding operations caused discrepancies in sufficiency rating between FHWA and BrM. FHWA's order has been followed.
- Item 39, 40: better error handling for the metric values at the NBI limit.

NTI Items:

- NTI Item D1: Item was not included in some XML creation. This has been resolved.
- Item D.4: the unchecked checkbox would not properly populate in the NTIS Submittal file. This has been fixed.



How big of a change is it?
Not Big

What's gone?

So what's new?

- Patches
- Reports
- Mapping Upgrades
- Bug Fixes

So what's new in BrM 6?

Bug Fixes

Bridges > Manage Filters

- Better error handling for null parameters.

Bridges > Suff Rate

- Better error handling for no bridge selected.

Bridges > Copy Structure

- Fixed error where copying bridges without on-records produced a blank copy.

Bridges > Mapping

- The full-screen icon would sometimes appear under the close icon.



So what's new in BrM 6?

Bug Fixes

How big of a change is it?
Not Big

What's gone?

So what's new?

- Patches
- Reports
- Mapping Upgrades
- Bug Fixes

Inspection > Create New Inspection

- Special Inspection Type dropdown observes isActive parameter flags. Also better error handling for null special type.

Inspection > Condition

- Bug fixed where Inspection > Conditions element quantity warnings would pop up over the element that needed to be fixed.
- Bug where element grid when parent-child quantity rule enforcement is changed, prevented saving.
- Hovering over the Checked-out icon once again shows the user who checked it out.
- Error message updated to indicate quantities are not equal, as opposed to one always being less than the other, which is not always the case.
- Element grid, interaction with the C-Options metric unit updated.
- A version of Oracle 10 caused NBI conversion to fail.
- An error was encountered when using arrow keys to navigate a locked inspection. This has been fixed.
- The 5.3 condition grid did not populate the Elem_PctState fields. These are now populated again.
- Support added for invalid elem_createdatetime and elem_modtime.
- Quantity check errors correctly identify the child element containing the conflict.
- Checked out bridge warning has text updates.
- Bug fixed with maximum allowable value in the elem total quantity.
- Fixed bug causing Checked Out Bridge icon to not appear sometimes.
- A bug would cause deleted elements to not disappear in some circumstances. This has been fixed.
- Element grid: better error handling for canceling after deleting an element.
- Notes log the user ID that accepted the sufficiency rating, in place of the user guid.

Inspection > Appraisal

- Better load handling for invalid migrated data.
- SHV load rating data would not appear properly in some instances. This has been fixed.
- SHV load rating error messages improved.

Inspection > Inventory > Design

- Support added for structure unit names to include apostrophes.

Inspection > Schedule

- Users were sometimes able to indicate it was an 'Other Special' inspection without indicating a special inspection type.

- Error did not apply "to be an inspector" permission properly. This has been fixed.
- Hidden duplicate controls caused confusion in the Visual Forms Editor. They have been removed.

Inspection > Element Condition Ratings

- Bug fixed where new elements would not appear.

Inspection > Load Ratings

- When a new load rating event was created, it was not selected for editing. This has been fixed.
- Better error handling for navigating from one bridge to another.

Inspection > Cross Sections

- Bug fixed where the Cross-Section module would stay on the last bridge where data was entered and not with to the last selected structure.
- Spelling fixed for a header.
- Various fixes to graph the correct values, and properly account for offsets.



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So what's new in BrM 6?

Bug Fixes

Tunnels List

- Fixed various security access bugs.

Tunnels > Tunnel Inspection

- Bug fixed where Tunnel Inspection team leader would persist from a deleted inspection to the next created inspection.
- User Guide: more detail added to checking out tunnel inspections.
- Hiding the element grid would prevent saving. This has been fixed.
- Creating a clone of the Tunnel Inspection page and trying to create a new inspection would produce an error. This has been resolved.
- Tunnel > Inspection page had problems when an inspector was marked inactive. This has been fixed.
- Update scripts would make tunnel placecodes '00000' when it should be '0'. Fixed.
- Better error handling for inactive parameters and parameters larger than the field.
- Element grid updated to respect the Option ElemInspAllowChdQtyGtrParent.

Analysis > Work Candidates > Comparison

- Page used to encounter an error when changing results for pages to a list. Fixed.

Analysis > LCCA

- A bug caused some intermediate Utility data to display incorrectly, though the initial and final results were correct.

Projects > Create / Edit > Management

- Better error handling for milestone parameters.

Projects > Summary

- Costs updated to reflect human-defined costs on human-defined projects.
- Better error handling on navigation.
- Functionality added to select Utility Weight Profiles on projects pages.

Programs > Optimizer

- Optimizer keeps projects frozen to a program.
- In some instances, it would end and return results but the progress bar would display that the optimization failed.
- The optimizer task would stop if an error was encountered. It now attempts to

restart.

- Results export to excel now includes the Utility column.
- Better error handling for no segments and for zero-cost actions.

Programs > Create / Edit Scenarios

- Scenarios could not be deleted after creation. This has been fixed.



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So what's new in BrM 6?

Bug Fixes

Admin > General Config > Paramtrs

- Update scripts would reset the isActive flag on standard items. This has been fixed.
- Better error handling for missing db columns.

Admin > General Config > Options

- The C-Option LoadTaskOnTabClick behavior corrected.

Admin > General Config > Data Dictionary

- Better error handling for Oracle when adding tables.

Admin > General Config > Visual Forms Editor

- Text parameter fields would crash pages.
- the Visual Form Editor did not like some custom headers, this has been fixed.
- Re-ordering tabs and then duplicating the Tunnel inspection page created an error. This has been fixed.
- Oracle datadictionary draws were case sensitive. Fixed.
- Error messages clarify you cannot add the Work Candidate controls without the Work Candidate grid.

Admin > General Config > Tunnels

- Tunnel Elements: Leakage (Elem 80003) units have been corrected to 'each' to conform with other defects.

Admin > General Config > Manage Asset Types

- Better error handling for date types of different databases.

Admin > Modeling Config > Benefits

- The 'Contains' filter contained a bug which has been fixed.

Admin > Modeling Config > Network Policies

- Where Network Policies wouldn't trigger based on percents in certain condition states.
- Network Policies: better error-handling for deleting Network Policies.

Admin > Modeling Config > Utility

- Utility: Base Utility Value formulas now recognize Varchar database fields.

.dcAdmin Screen

- where updating the optimizer configuration file would overwrite the .dbAdmin configuration.

Reports > Generate

- Page would run reports for 'All' instead of a certain number of structures.
- Tunnel Report: Item I.18 was improperly labeled C.8. The report has been fixed.
- Tunnel Report: fixed items C.5, D.5, L.11, L.12 and N.3

Reports > Register

- Reports: better error handling for registering reports.

Gateway > Export

- Tables containing nulls can be exported to PDI.
- The default export is returned to XML and not PDI.
- It is now possible to export just the datadict
- The Gateway>Override page Bridge-key column has been changed to Bridge-ID.
- The Export and Import processes have been improved to batch extremely large files, to prevent timeout.
- Fixed errors which occurred trying to import PDI's with load ratings.

Gateway > Import

- PDI imports where parent elements are null is now allowed.
- For Import using PDI with notes fields which are too long, Oracle only.
- PDI imports no longer fail on unusual character validation.
- It was possible to get an error switching from Gateway>Import to Gateway>Export pages in certain conditions.
- Was being slowed by Health Index calculations.
- Better error handling for Oracle with metric conversion errors.
- Check in has better error handling for unusual parent-elements.

Miscellaneous

- Login screen: better error handling for users who try to reach the URL of a specific page without logging in.
- Excel exports of grids have had their formatting improved.
- Improved excel export for many grids in the user interface.
- The 'View Data Table' on in-software graphs now includes a 'Close' button.



BrM Help Desk

AASHTOWareBridge.com

BrM@Bentley.com

JIRA tickets: bridgeware.atlassian.net

Zachary Boyle, PE

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Or add '@ZacBoyle' to your JIRA tickets