



Utah Transit Authority's  
New Transit Asset Management System

*Complete Inspection and Management Software*

# High-Level Current State of Affairs

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- New Regulations and greater oversight
- Scarcity of resources
- Aging Infrastructure
- High Construction and Maintenance Costs
- Data Overload on Owners



**Bigger Need + Fewer Resources = ?**

**No room for errors or wasted efforts**

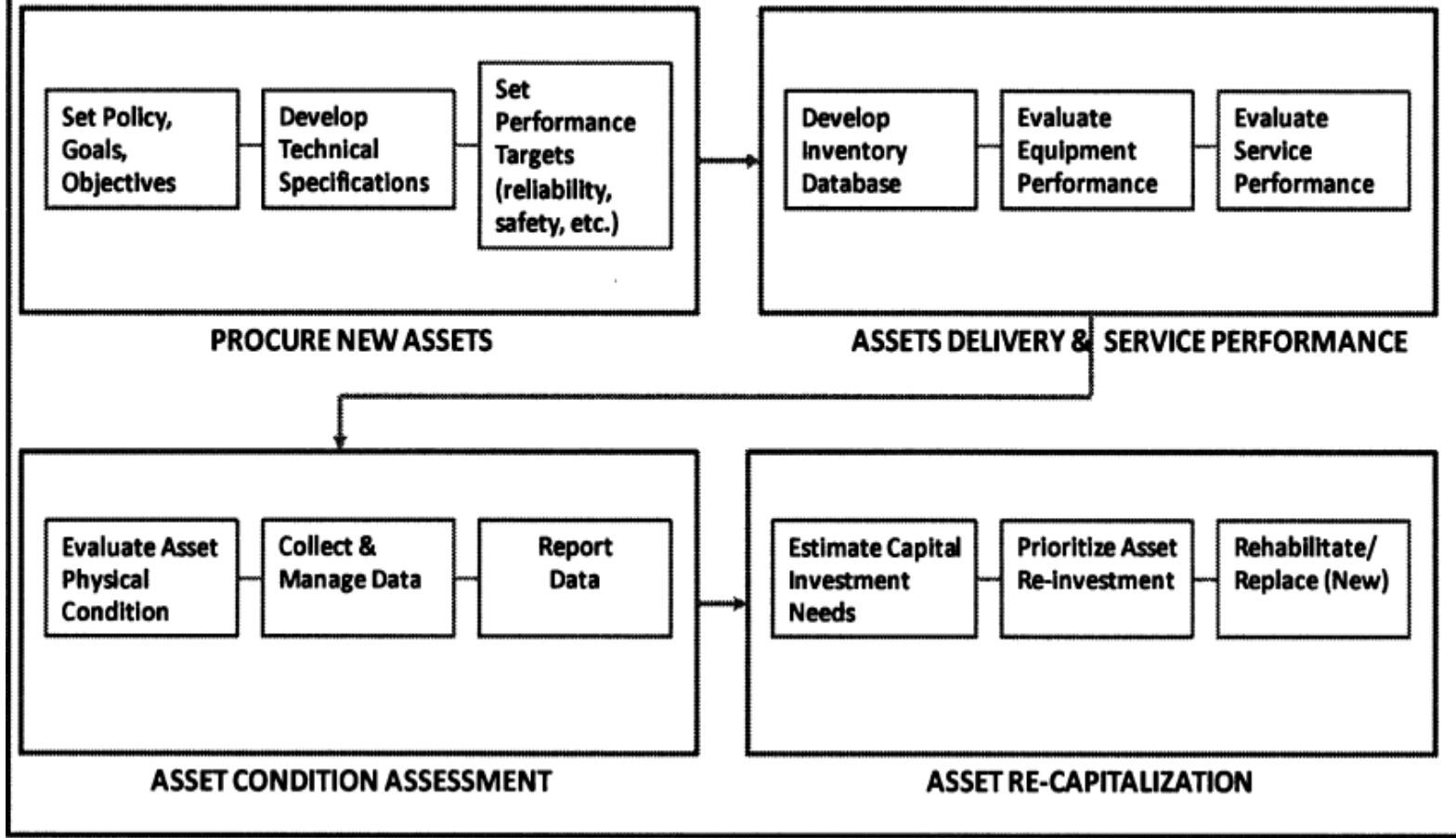
# Overarching Purpose of TAM

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- To ensure a safe and reliable infrastructure for customers/users.
- To protect the investment into the infrastructure by detecting problems before they deteriorate to the point where they create unsafe conditions or threaten operations.
- Creating an optimized strategy to maintain assets in a state of good repair.



## Typical Transportation Asset Management Cycle



# Project Background

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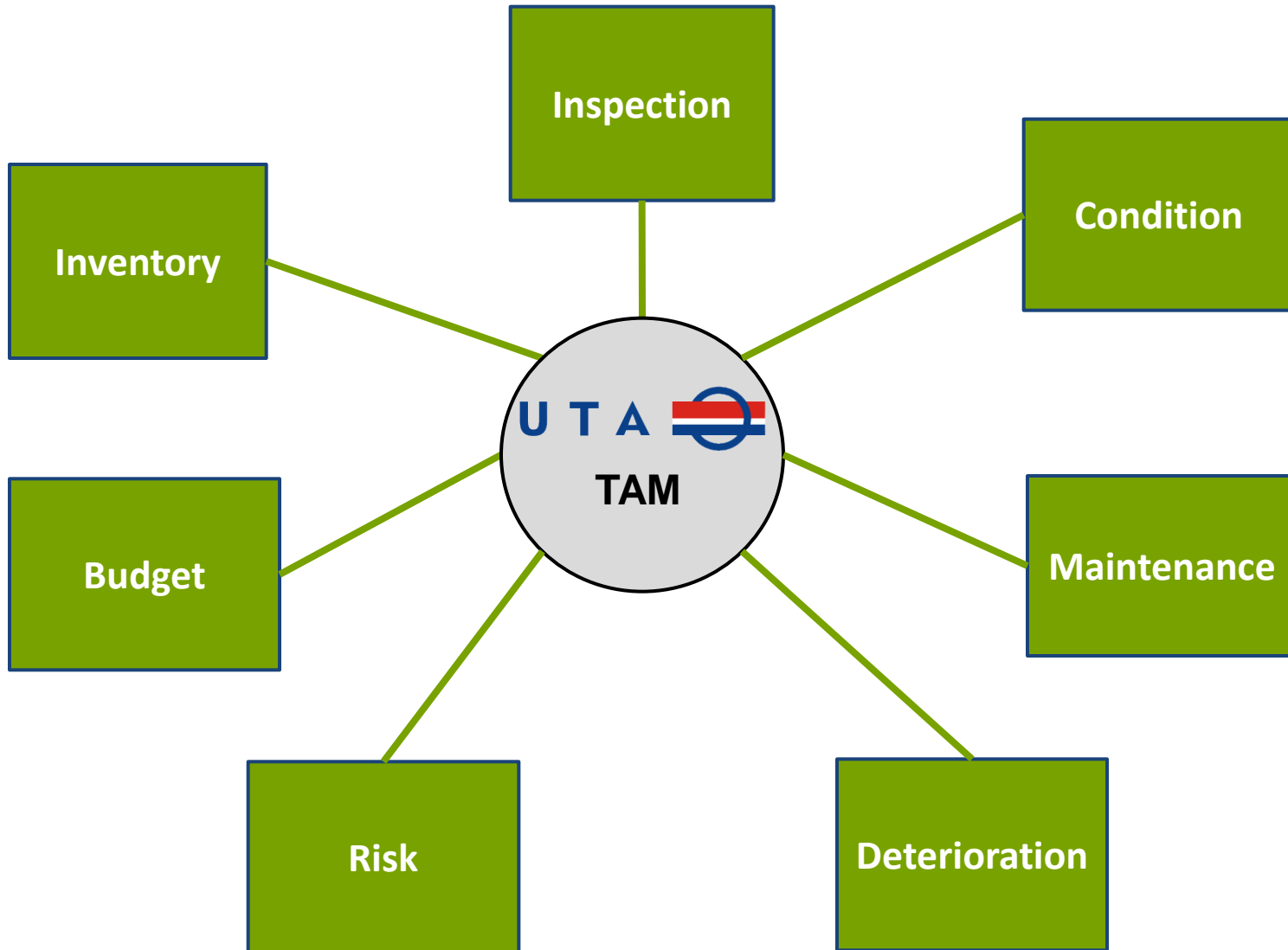
- **Multi-modal public transportation system in the greater Salt Lake City area**
- **National TAM Pilot Software Grantee**
- **Building a new integrated TAM system primarily focused on rail and facility assets (track, signals, crossings, rolling stock, ...)**
- **Adding onto the existing bridge inspection and management system**

# Objective

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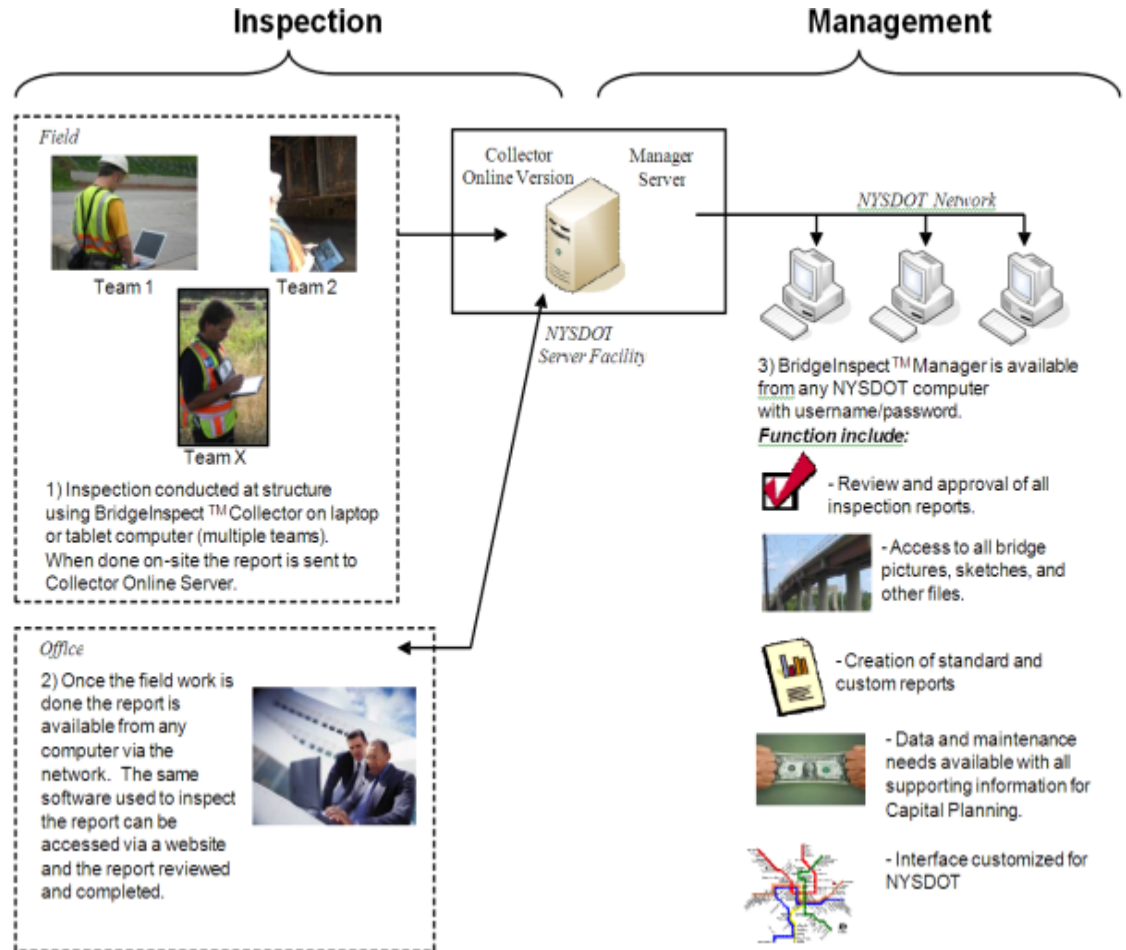
- **Implement an electronic TAM tool that:**
  - Supports critical decisions for safety, planning, and maintenance
  - Provides an overview of the complete asset inventory with its condition and properties
  - Quickly flags safety critical items for immediate repair
  - Provides a risk assessment and schedule of the most economical time to rehabilitate or replace an asset
  - Gives management a tool to set immediate and long term budgets based on the condition of the system as evaluated by the technical staff
  - (FRA Grant Objective) Develop systems and tools which can be easily shared with others interested in the development and/or improvement of the current asset management system

# System Modules



# Integration – Connected/Disconnected

- Start inspection on laptop/tablet
- Submitted to Web-Server when in office
- Report continued from any computer
- Submitted for review
- Reviewed and approved online
- Able to run reporting and searching on data





# Core System used on Multiple Asset Types

The screenshot displays the 'inspecttech' web application interface for the Washington Metropolitan Area Transit Authority. The header includes the WMATA logo, the system name 'Bridge and Structure Inspection System', and the user 'WHATA : Administrator, InspectTech'. A navigation menu at the top contains 'Main', 'Administration', 'Views', and 'Help'. The main content area is a grid of asset categories, each with an icon and a link:

- Bridges
- Bus Garages
- Elevator Structures
- Escalator Structures
- Parking Garages
- ROW/Fences
- ROW/Walls
- Service Pits
- Shafts
- Stations
- Tunnels
- Misc Reports

Additional interface elements include a 'Messages: 0 new' notification, a 'Quick Select' search box, and a 'View asset group' link.

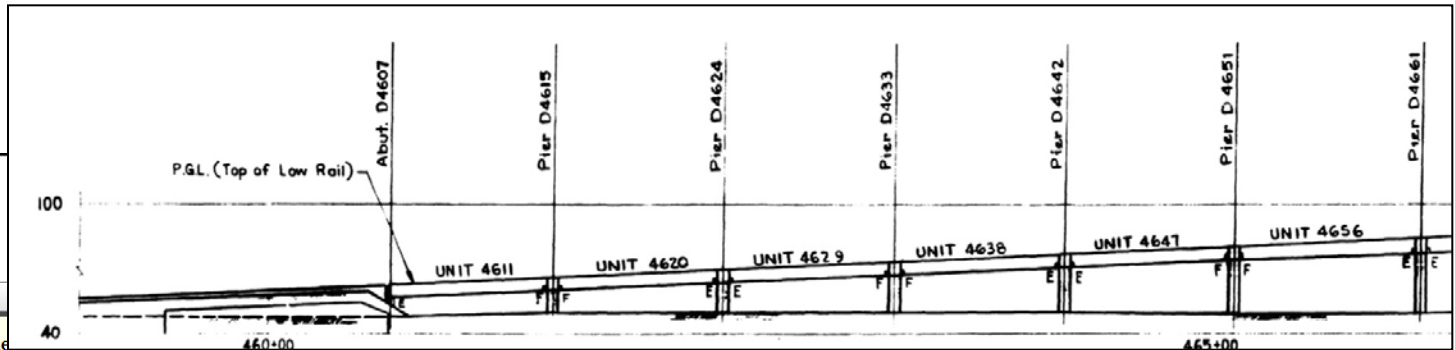


# Extensive Structure Details



Main Administration

Minnesota Avenue Aerial Structure



Inspection Date	Asset Code	Asset Name	Owner	Asset Type	Submitted To	Status
12/08/2009	Minnesota Avenue Aerial Structure	<a href="#">Minnesota Avenue Aerial Structure</a>	Webb, Gerald	Bridge		Approved on 6/24/2010

## Minnesota Avenue Aerial Structure Sub-Assets:

Show Assets in  by   Displayed Inspection Type:

Inspection Date	Asset Code	Asset Name	Sub-Assets	Owner	Asset Type	Submitted To	Status
12/08/2009	1116600	<a href="#">Abutment 2432 IB&amp;OB</a>	None	Webb, Gerald	Bridge		Approved on 6/24/2010
12/08/2009	1116700	<a href="#">Span 2437_IB</a>	None	Webb, Gerald	Bridge		Approved on 6/24/2010
12/03/2009	1116800	<a href="#">Span 2437_OB</a>	None	Limones, Jose	Bridge		Approved on 6/24/2010
12/03/2009	1116900	<a href="#">Crossbox/Pier 2442_IB&amp;OB</a>	None	Limones, Jose	Bridge		Approved on 6/24/2010
12/08/2009	1117000	<a href="#">Span 2447_IB</a>	None	Webb, Gerald	Bridge		Approved on 6/24/2010
12/03/2009	1117100	<a href="#">Span 2447_OB</a>	None	Limones, Jose	Bridge		Approved on 6/24/2010
12/03/2009	1117200	<a href="#">Crossbox/Pier 2452_IB&amp;OB</a>	None	Limones, Jose	Bridge		Approved on 6/24/2010
12/08/2009	1117300	<a href="#">Span 2457_IB</a>	None	Webb, Gerald	Bridge		Approved on 6/24/2010
12/03/2009	1117400	<a href="#">Span 2457_OB</a>	None	Limones, Jose	Bridge		Approved on 6/24/2010
02/04/2010	1117500	<a href="#">Crossbox/Pier 2462_IB&amp;OB</a>	None	Webb, Gerald	Bridge		Approved on 6/24/2010
02/04/2010	1117600	<a href="#">Span 2467_IB</a>	None	Webb, Gerald	Bridge		Approved on 6/24/2010
12/07/2009	1117700	<a href="#">Span 2467_OB</a>	None	Limones, Jose	Bridge		Approved on 6/24/2010

# Example of Inspection Forms

Bridgelspect Collector - Windows Internet Explorer

http://wmata.bridgelspect.com/inspection.aspx?id=67048.type=1

Span 5398 OB

Box Girder Rpt. Info

Grosvenor Aerial Structure Main Menu

Fracture Critical Areas Form 22 Box Girder Exterior Box Girder Interior Track Bed and Deck Form 22 Bearings Flags

**TRACK BED AND DECK**

1. Inspect:	Rating	Remarks
a. Deck	6	
b. Conduits	N	
c. Exposed or deteriorating rebars	6	
d. Grout Pads	6	
e. Handrails	6	
f. Acoustic Panels	N	
g. Fencing	N	
h. Safety Walk	4	- Safety walk plate at 539+55 not attached. 65 of the 242 safety walk screws are missing
i. Unit Alignment	6	
j. Joints (Expansion, construction, cold)	6	

**Safety Walk Remarks**

Details

- Safety walk plate at 539+55 not attached.

- 65 of the 242 safety walk screws are missing, 5 plates completely unattached.

**Flags:**  
EEA  | SH  | E  | A

A flag is present for this item. Go to the Flags form for more details.

**Description:**

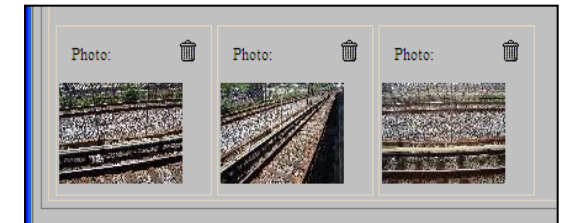
Pictures

Central Database Value

Field History

**Flags:**

EEA  | SH  | E  | A



# Critical Parts of Inventory/Inspection

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- **Inventory of all Assets**
  - Need to know what is there and basic properties
  - Geometric data, material information
  - Drawings/Plans (with all repairs/rehabs)
- **Condition data on all Assets**
  - Current information
  - Past information

# Inspection Condition Data

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- **Quantification via a Rating Scale**
  - Need to be able to compare relative conditions within an asset and between assets
- **Subjective results via Narrative Text**
  - Need to be able to have descriptions indicating the scope and nature of the condition

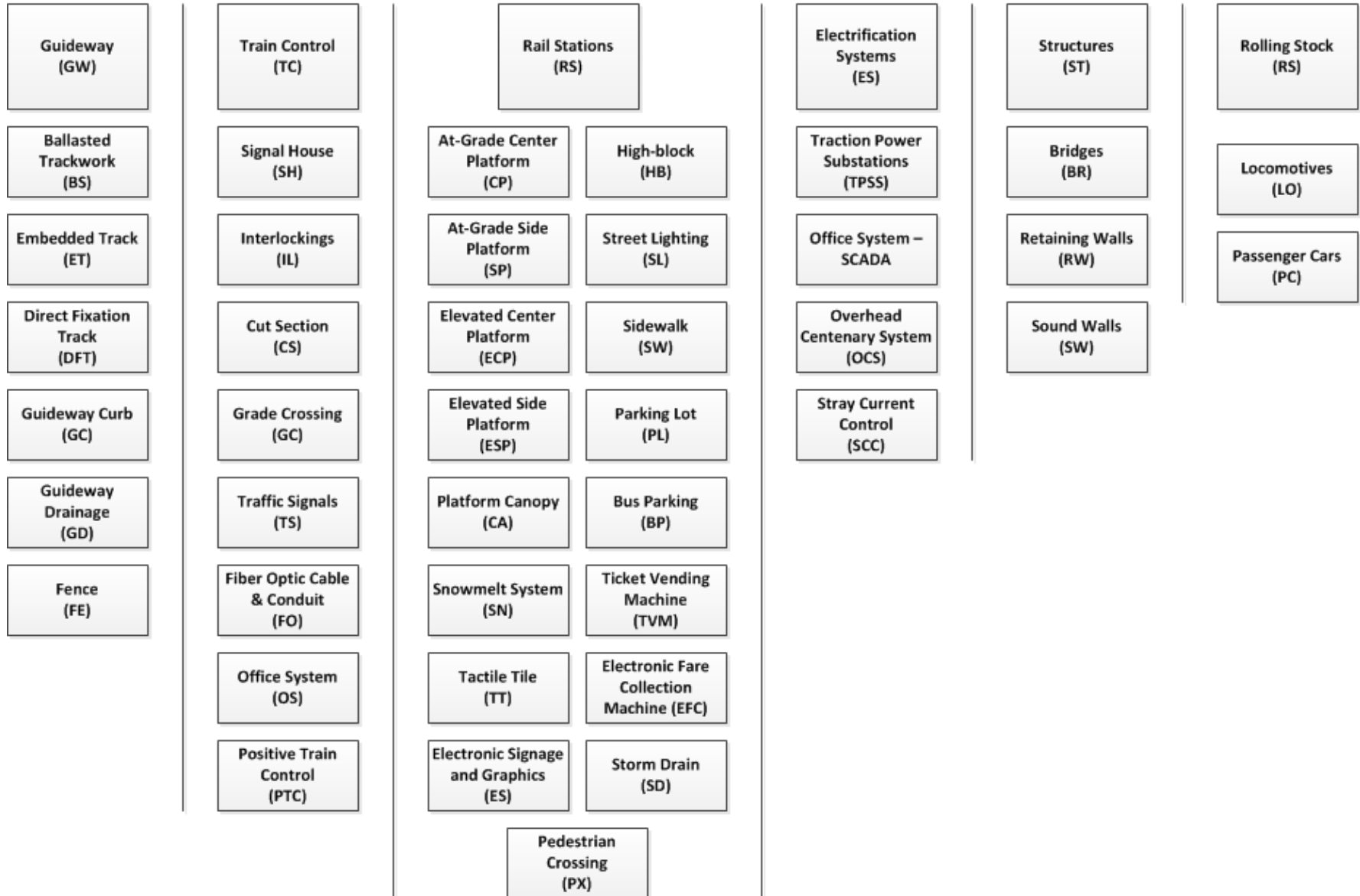
# Supporting Information

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- **Pictures**
  - Digital pictures for overall inventory and every deficiency
- **Videos**
  - Can be appropriate to show time based effects of live loads or multiple angles
- **Sketches/Drawings**
- **Test/Sensor Results**
  - Boring information, Stress readings

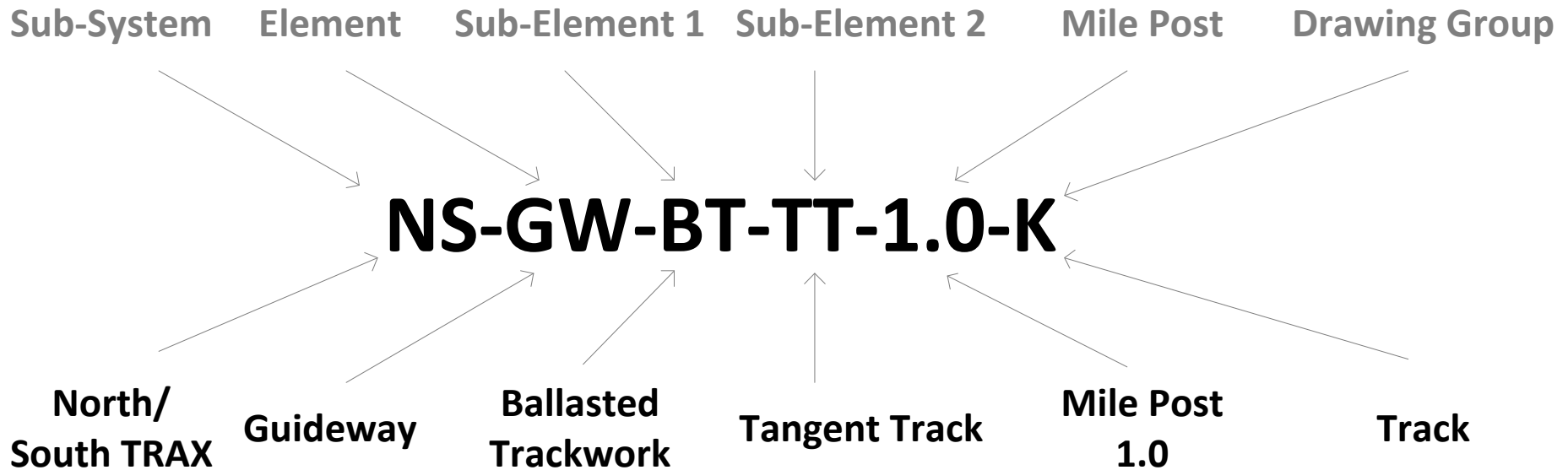
# UTA TAM Inventory

## Utah Transit Authority Elements (Level 1 & 2)



# Asset Naming Convention

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# Main Screen – Asset Search

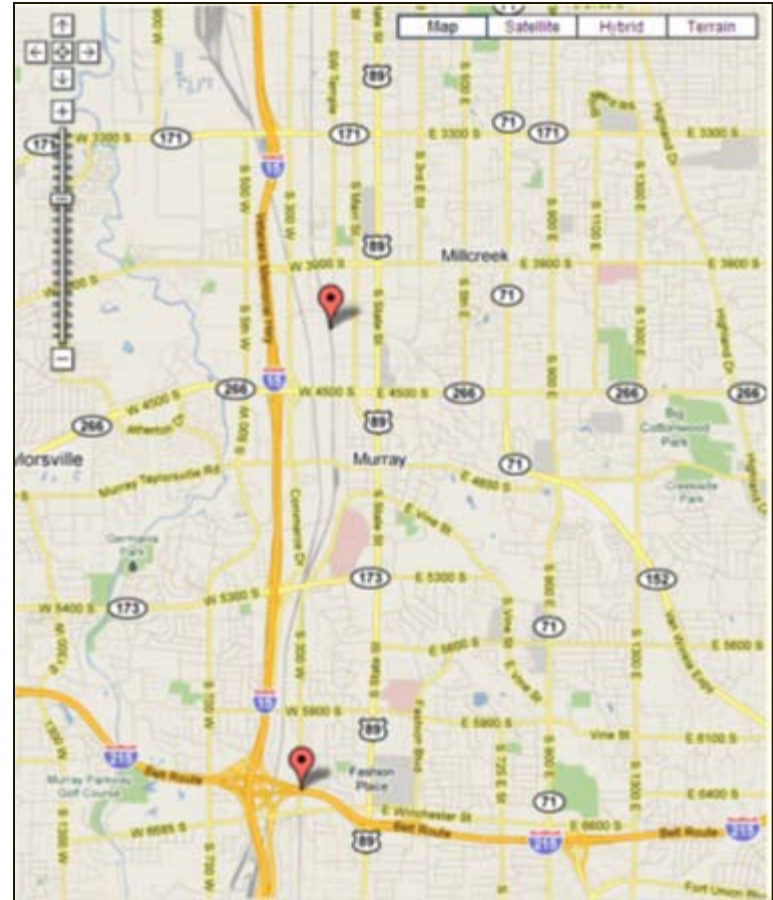
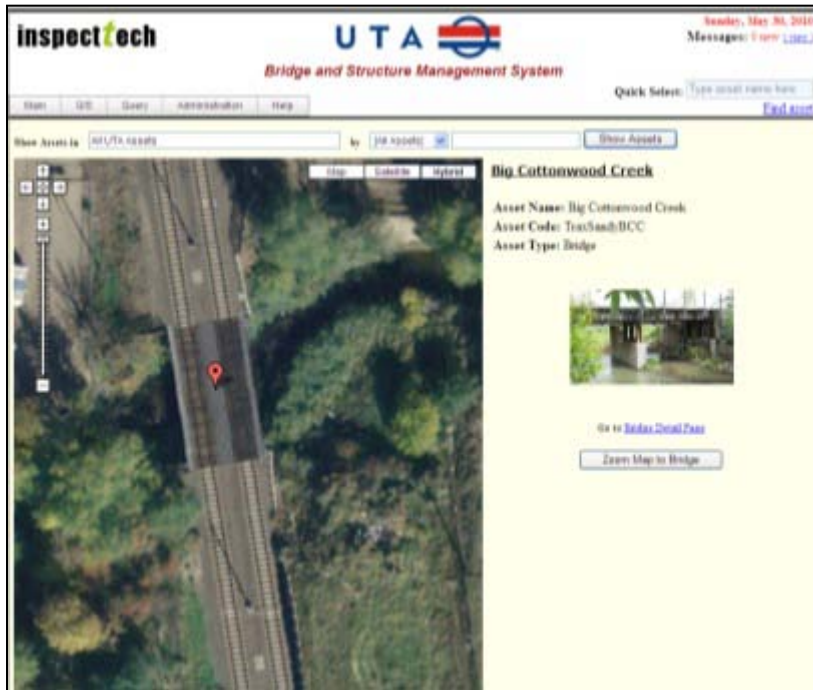
Search by Map

Search by Asset ID

The screenshot shows a web browser window displaying the Utah Transit Authority (UTA) Asset Search interface. The browser address bar shows the URL <https://utatam.bridgeinspect.com>. The page header includes the UTA logo, the text "Utah Transit Authority Transit Asset Management", and the "inspecttech" logo. A navigation menu contains "Main", "Administration", "Views", "GIS", and "Help". A "Messages: 0 new (view)" notification is present in the top right corner, along with a search input field labeled "Type Asset name here" and a "View Asset group" link. The main content area is titled "Utah Transit Authority Sub-Systems" and contains seven buttons: "Airport TRAX", "FrontRunner North", "FrontRunner South", "Intermodal Hub Extension", "Mid Jordan TRAX", "North/South TRAX", "University TRAX", and "West Valley TRAX". A "Logout" link is visible in the top right corner of the page content.

Search by Line

# Visualization (Mapping)



# Asset Type Search – Asset Tree

Line

Asset  
Types

The screenshot displays the InspectTech web application interface. At the top, the Utah Transit Authority logo and "Transit Asset Management inspecttech" branding are visible. A navigation menu includes "Main", "Administration", "Views", "GIS", and "Help". The main content area is titled "North/South TRAX" and shows a hierarchical tree structure of assets. A red arrow labeled "Line" points to the "Main" menu item. Another red arrow labeled "Asset Types" points to the "Signal House" category in the tree. A large red bracket on the right side of the tree is labeled "Assets", encompassing the list of individual asset identifiers.

Utah Transit Authority  
Transit Asset Management  
inspecttech

Messages: 0 new (view)  
Type Asset name here  
[View Asset group](#)

InspectTech : Administrator, InspectTech (Logout)

Main Administration Views GIS Help

North/South TRAX

- NS Guideway
  - NS Train Control
    - Grade Crossing
    - Interlocking
    - Signal House
      - NSE-TC-SH-SEH-1.5-NSSL S9809
      - NSE-TC-GC-GCEH-1.6-NSSL S9797
      - NSE-TC-SH-SEH-1.8-NSSL S9776
      - NSE-TC-GC-GCEH-2.2-NSSL S9741
      - NSE-TC-SH-SEH-2.3-NSSL
      - NSE-TC-GC-GCEH-2.7-NSSL S9686
      - NSE-TC-GC-GCEH-3.1-NSSL S9654
      - NSE-TC-GC-GCEH-4.0-NSSL S9560
      - NSE-TC-SH-SEE-4.2-NSSL S9544
      - NSE-TC-GC-GCEH-4.5-NSSL S9505
      - NSE-TC-GC-GCEH-5.4-NSSL S9419
      - NSE-TC-SH-SEH-5.5-NSSL S9407
      - NSE-TC-SH-SEE-5.6-NSSL S9399
      - NSE-TC-GC-GCEH-5.7-NSSL S9387
      - NSE-TC-GC-GCEH-6.3-NSSL S9370

# Asset Details

The screenshot shows the 'inspecttech' web application interface. At the top, the Utah Transit Authority logo is on the left, and the text 'Utah Transit Authority Transit Asset Management inspecttech' is in the center. On the right, there are navigation links for 'Messages: 0 new (view)', a search box 'Type Asset name here', and a 'View Asset group' link. Below the header is a navigation menu with 'Main', 'Administration', 'Views', 'GIS', and 'Help'. The user is logged in as 'InspectTech : Administrator, InspectTech (Logout)'. The main content area displays 'Parent Asset: Signal House' and 'Asset Name: NSE-TC-SH-SEH-1.5-NSSL S9809'. A red bracket groups these details with the label 'Asset Details'. To the right, a red arrow points to a 'Create Report' button, labeled 'Create New Inspection'. Below this is a table of 'In Progress Reports' with columns for Creation Date, Inspection Date, Report Type, Report Status, Edit, and Action. A red arrow points from the 'Inspection Date' column to the label 'Inspection Report Status' at the bottom of the page. There are also two red arrows pointing from the 'Inspection Date' column to the 'Approved Reports' table below.

Parent Asset: Signal House  
Asset Name: NSE-TC-SH-SEH-1.5-NSSL S9809  
Asset Code: NSE-TC-SH-SEH-1.5-NSSL  
Asset Type: Signal House

**Asset Details**

**Create New Inspection**

Create Report

**Report Details**

**In Progress Reports:**

Creation Date	Inspection Date	Report Type	Report Status	Edit	Action
04/03/2012	04/03/2012	Signal Inspection	In progress		
03/30/2012	03/30/2012	Signal Inspection	In progress		

**Reports Pending Approval:**  
No reports

**Approved Reports**

Creation Date	Inspection Date	Report Type	Report Status	Edit	Action
04/04/2012	04/04/2012	Signal Inspection	Approved on 04/04/2012		
04/03/2012	04/03/2012	Signal Inspection	Approved on 04/03/2012		

**Inspection Report Status**

# Guideway Inspections

Guideway Inspection	Frequency	
Hi-Rail Truck Inspection and/or Walking Inspection	Weekly	Identify FRA Defects for all Guideway Sub-Elements
Switch Inspection	Monthly	Identify FRA Switch Defects for all Guideway Crossover and Turnout Sub-Elements
Mechanized Cross-tie Inspection	Annual	Identify FRA Defects for all Guideway Sub-Elements based on Mechanized Cross-tie Inspection
Ultrasound Inspection	Annual	Identify FRA Defects for all Guideway Sub-Elements based on Ultrasound Inspection
Geometry Car Test Inspection	Annual	Identify FRA Defects for all Guideway Sub-Elements based on Geometry Car Test
Joint Bar Inspection	Biannual	Identify FRA <b>Joint Bar</b> Defects for all Guideway Trackwork (Ballasted, Embedded, Direct Fixaction) Sub-Elements
Special	As Needed	Identify FRA Defects for all Guideway Sub-Elements when needed outside of normal inspection schedule

# Current Guideway Inspection Form

Report # \_\_\_\_\_

UTA Track Inspection Report

Date \_\_\_\_\_

## FrontRunner North

Inspector Name \_\_\_\_\_

Employee Number \_\_\_\_\_

Track Traversed N/B S/B	Location or Mile Post	FRA Defect Found	Remedial Action Taken	Date of Repair

Comments:

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Sign: \_\_\_\_\_

# Guideway FRA Defect Tracking Form

The screenshot shows a web browser window with two tabs for "BridgeInspect Collector". The address bar shows "https://utatam.bridg...". The application interface includes a breadcrumb trail: "NS Guideway" > "Inspection" > "Photos/Files". There are also navigation tabs for "Inspection Info", "Inspection Report", "Maintenance", and "Print Report".

The main content area is titled "New | None Assigned" and contains the following form fields:

- Status:
- GPS Location:
- FRA Defect Group:
- FRA Defect ID:
- Remedial Action Taken:  Date of Repair:

Below the form fields is a "Details:" section with a large text area. At the bottom of the form, there are two summary boxes:

- 
-

# Signal House Inspections

Signal Inspection	Frequency	
Ground Test	30-Day Inspection	
Standby Power Test		
Signals and Housing Inspection		
Impedance Bond Inspection		
Track Condition		90-Day Inspection
Relay Test		2-4 Year Inspection*
Insulation Resistance Test		10 Year Inspection
Special Inspection	As Needed	Complete Tests and log Maintenance Items for Signal House when needed outside of normal inspection schedule

\* Each relay, the functioning of which affects the safety of train operations or that affects the proper operation of a crossig warning system shall be tested at least once every four years. Alternating current vane type relays shall be tested once every two years.



# Current Signal House Inspection Form

## SIGNAL INSPECTION

SIGNAL HOUSE # \_\_\_\_\_

TEST DATE	MONTHLY				3 MONTHS	SIGNATURE
	GROUND 236.2	STANDBY POWER	SIGNAL & HOUSINGS	IMPEDANCE BONDS	TRACK CONDITION	

- C- Test complete. Equipment in satisfactory condition.
- \*R- Repairs or replacement needed.
- \*A- Adjustment made and test complete. Equipment in satisfactory condition.
- \*N- Does not apply.
- \* Explain on back of form.

# Current Signal House Inspection Form

Relay Test

FRA 236.106

Railroad: \_\_\_\_\_

Division: \_\_\_\_\_

Date Of Test	Location & MP	Relay Name	Manuf & Type	Coil Ohms	No. of Contacts	Serial Number	Drop Away	Pick Up	Working	Condition Left*

\* C= test complete equipment in satisfactory condition  
 R= repair or replacement required

A = adjustment made & test complete equipment in satisfactory condition  
 S= repair or replacement complete equipment in satisfactory condition

Explain A, R, S on back

Instrument Used: \_\_\_\_\_

Calibration Due Date: \_\_\_\_\_

Performed By: \_\_\_\_\_

Date: \_\_\_\_\_

UTA 005  
 02/07/07

# Signal House Test Tracking Form

The screenshot shows a web browser window with the URL <https://utatam.bridg...> and a tab titled "BridgeInspect Collector". The application interface includes a breadcrumb trail: "Signal House" > "Main Mer". A navigation menu at the top contains tabs for "Report Information", "30 Day", "90 Day", "Other", and "Photos/Files". Below this is a secondary menu with "Ground", "Standby Power", "Signals and Housing", and "Impedance Bond".

The main content area is titled "Add New Ground Test" and features a "+" icon. The form fields are as follows:

- Open | None Assigned**: A status indicator with a "+" and a trash icon.
- Date of Test:** A text input field containing "04/16/2012".
- Test Result\*:** A dropdown menu.
- \* All Test Results of R, A, or S require an Explanation in the Details field. All Tests Results of A or R also require the creation of a Maintenance Item**: A note below the dropdown.
- Details:** A large text area for providing an explanation.
- No maintenance items linked.**: A message with an "Add Maintenance Item" button.
- No pictures linked.**: A message with a "Select New Picture/File" button and a file upload icon.

# Signal House AC Relay Test Form

https://utatam.bridgei... BridgeInspect Collector

NSE-TC-SH-SEH-2.3-NSSL

Report Information 30 Day 90 Day Other Photos/Files





Signal House Main Men

AC Relay Test DC Relay Test Insulation Resistance

## Add AC Relay Test

Open | None Assigned

+ -

**Date of Test:**

**GPS Location:**   **Mile Post:**

**Instrument Used:**  **Calibration Due Date:**

**Relay Name:**  **Manufacturer:**  **Type:**

**Coil Ohms:**  **Number of Contacts:**  **Serial Number:**


**Drop Away:**  **Pick Up:**  **Working:**

**Test Result\*:**

\* All Test Results of R, A, or S require an Explanation in the Details field. All Tests Results of A or R also require the creation of a Maintenance Item

**Details:**

No maintenance items linked.

No pictures linked.  

# Signal House Maintenance Form

https://utatam.bridg... BridgeInspect Collector

NSE-TC-SH-SEH-2.3-NSSL

Report Information 30 Day 90 Day Other Photos/Files

Inspection Info History Maintenance Print Report Close Report

Signal House Main Mer

### Add Maintenance Item

New | None Assigned

Status:

Tracking Code:

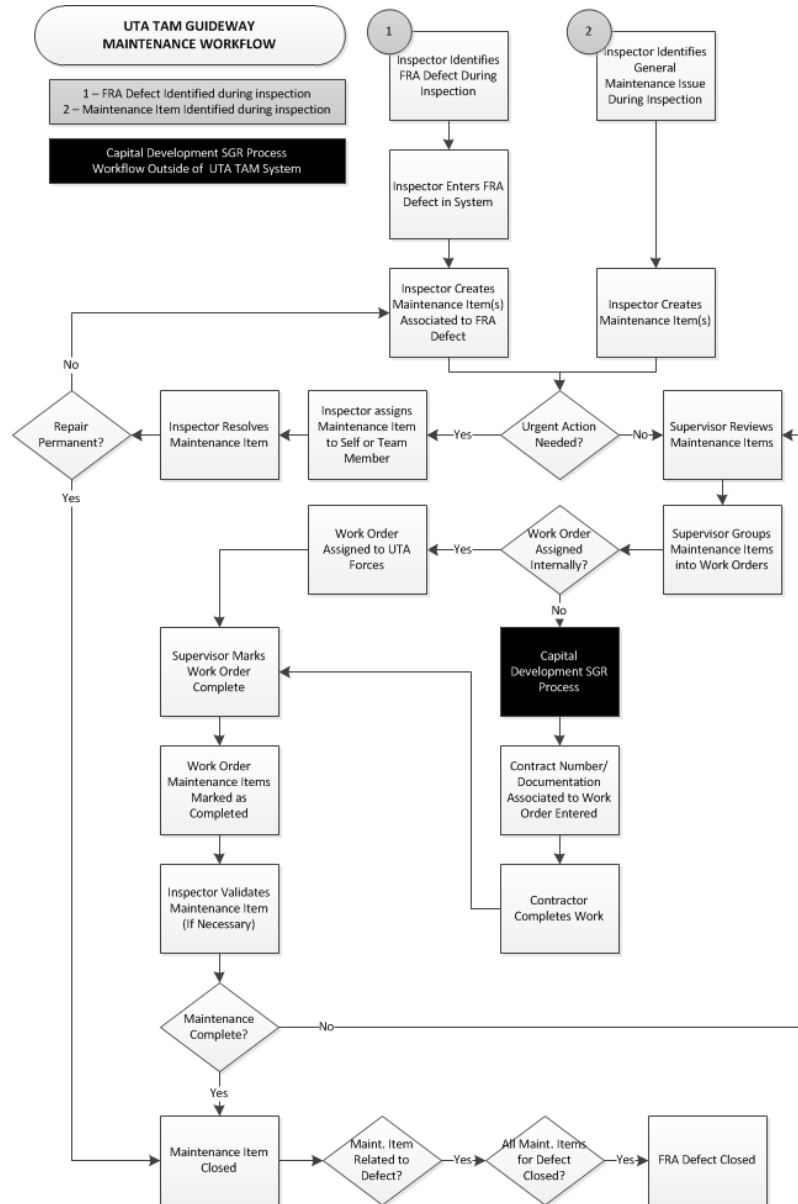
GPS Location:

Category	Severity	Activity Code	Description	Quantity
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Details:

No pictures linked.

# Maintenance Workflow



# Condition Rating Form

Browser: <https://utatam.bridgesins...> BridgeInspect Collector

NS Guideway | Condition Rating | Photos/Files | North/South TRAX | Main Men

Rating | Print Report

## UTA Track Condition Rating

Create Date: 04/16/2012  
Inspection Date: 03/15/2012

**Condition Ratings:**

**Ballasted Trackwork:** 6) Adequate (FTA TERM)

**Embedded Track:** 8) Good (FTA TERM)

**Fence:** 6) Adequate (FTA TERM)


**Guideway Drainage:** 7) Satisfactory

**Overall:** 5) State-of-Good Repair (FTA TERM)

**Condition Description:** An asset is in the state of good repair when the physical condition of that asset is at or above a condition rating of 5. The level of investment required to attain and maintain a SGR is therefore that amount required to rehabilitate and replace all assets with an estimated condition of 5 or less. Asset performs its assigned function

**Condition Details:**

**Detailed field-level Data**



### Ballasted Trackwork Condition Rating

Details

- 6) Adequate (FTA TERM)
- 10) Excellent (FTA TERM)
- 9) Very Good
- 8) Good (FTA TERM)
- 7) Satisfactory
- 6) Adequate (FTA TERM)
- 5) State-of-Good Repair (FTA TERM)
- 4) Marginal (FTA TERM)
- 3) Concern
- 2) Poor (FTA TERM)
- 1) Critical

Pictures / Files

Central Database Value

Field History

All Field History

# Inspection Input Forms

Inspection Info

**Inspection Report Information**

Create Date: 04/03/2012  
Inspection Date: 04/03/2012  
Inspection Type: Signal Inspection

**User Assignment:**

Inspector: Hofer, Dan

**Available Users:** Administrator, InspectTech

**Assigned Users:** Hofer, Dan

Set as Inspector

**Report History:**

Inspection Date	Sub-Assets	Inspector	Inspectors	Inspection Type	Status
04/04/2012	none	Hofer, Dan	Hofer, Dan	Track	Approved on 04/04/2012
04/03/2012	none	Hofer, Dan	Hofer, Dan	Track	Approved on 04/03/2012



# Photos/Files Upload

The screenshot displays the BridgeInspect Collector web application interface. At the top, the browser address bar shows the URL <https://utatam.b...> and the page title "BridgeInspect Collector". The application header includes navigation tabs: "Report Information", "30 Day", "90 Day", "Other", "Photos/Files" (highlighted), "Signal House", and "Main Men". Below the header, there are sub-tabs: "Manage Photos/Files" and "Asset Files".

The main content area is titled "Attach Files/Picture" and contains the following form fields:

- File To Attach:** A text input field with a "Browse..." button.
- Type:** A dropdown menu currently set to "Sketch".
- File Date (i.e. Date Picture Taken):** A date picker.
- Description:** A large text area.
- Set description to file name on Attach
- ABC
- Attach** button

Below the main form is a "Filter Files/Pictures" section with the following fields:

- File Date:** "From:" and "To:" date pickers.
- File Name:** A text input field.
- File Description:** A text input field.
- Filter** button

At the bottom, there is a "Sketches" section with the text "No Sketches found".

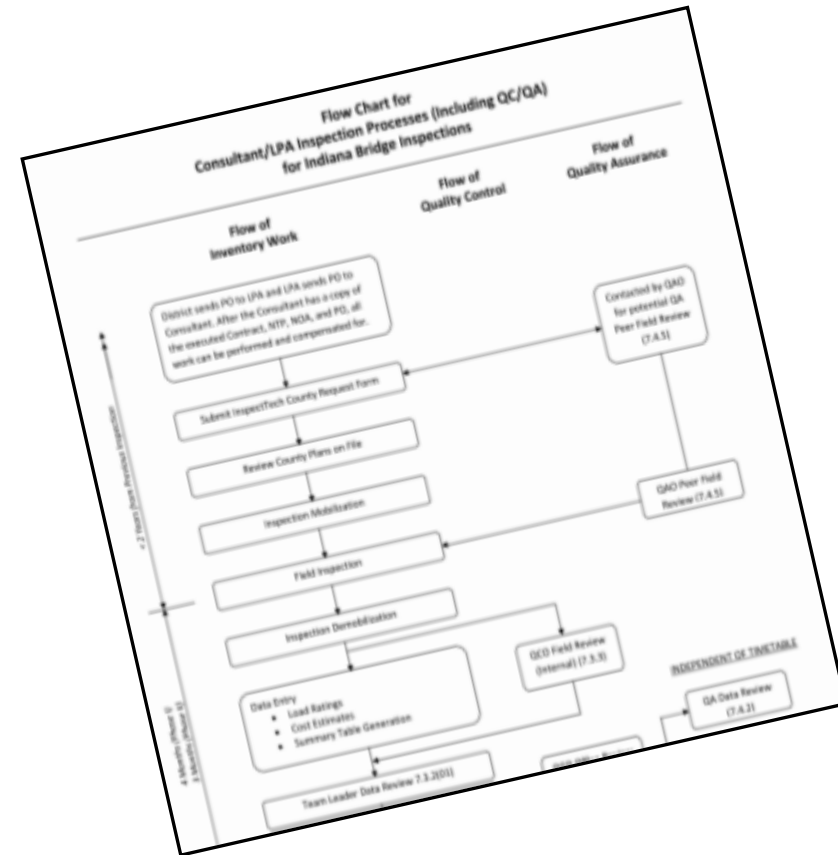
Two red arrows point to specific elements: one points to the "Photos/Files" tab in the header, and the other points to the "Type" dropdown menu.

Photos/Files

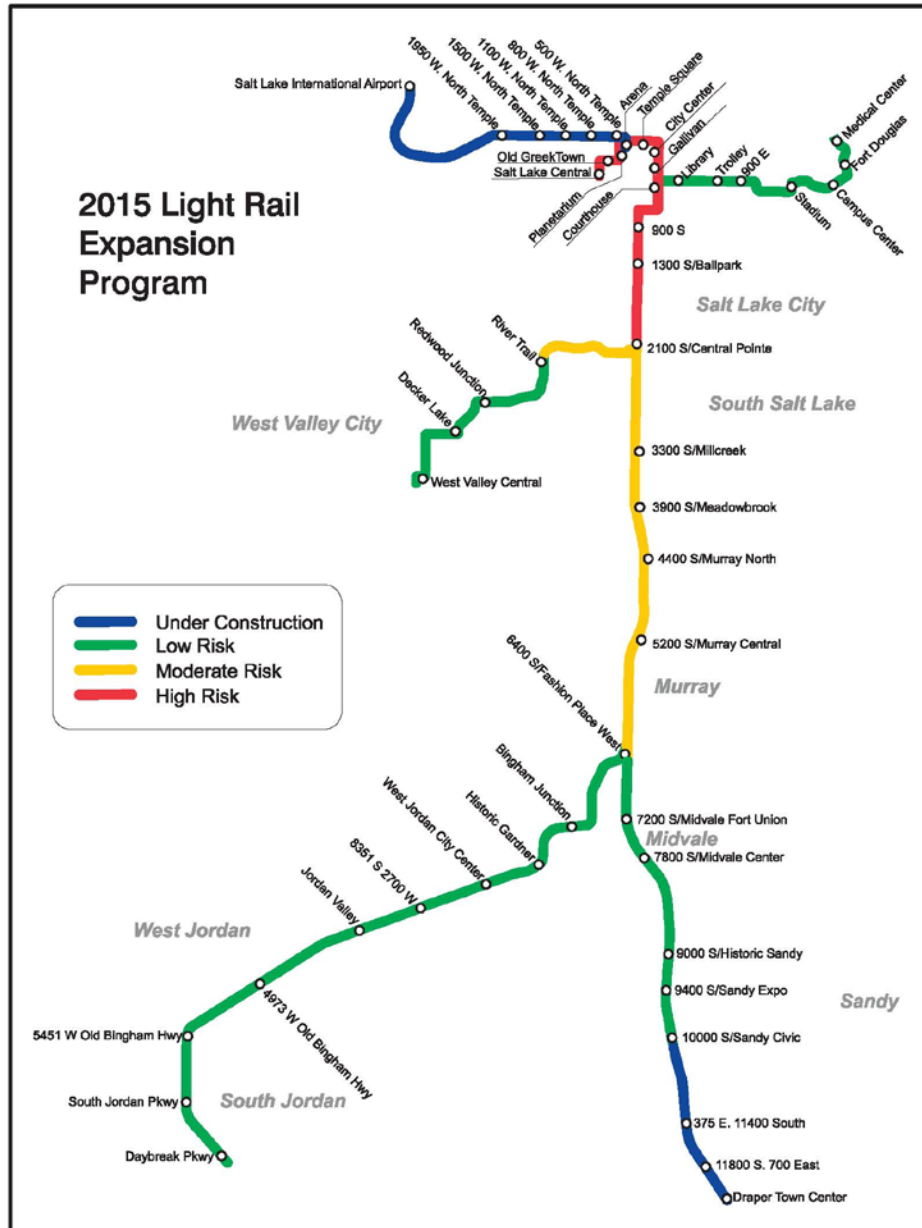
Upload Inspection Related Photos/Files

# Report Review/Approval

- Reports have full lifecycle and accountability
- Tabs clearly show status of reports
- Clearly documented who did the inspection
- What changes were made
- Who reviewed and when
- Ability to set approval chain based on asset
- Information not entered into official database until it is approved
- Auto-flag certain assets for review

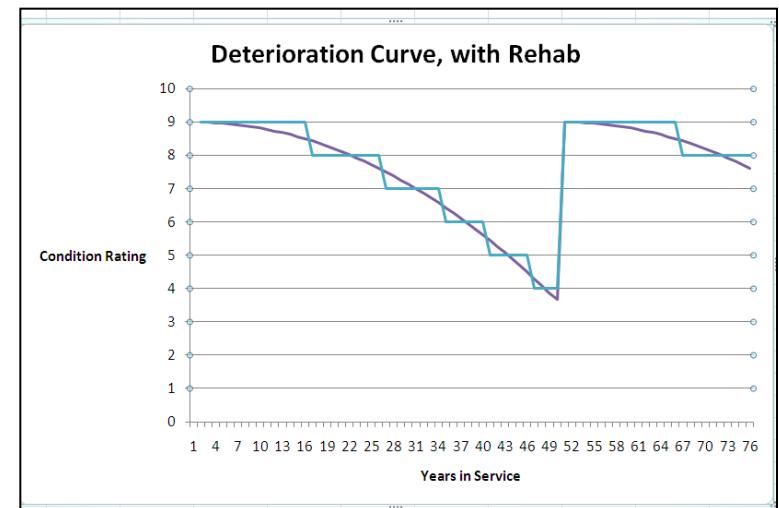


# Risk Management – Location Risk Areas



# Deterioration Model – Actual vs. Expected

- Utilize manufacturer estimates for expected life/mean time to failure
- Compare expected condition to observed condition
- Adjust actual curves to expected curves
- Allow for usage to be integrated and specific asset properties to be integrated to obtain more accurate results
- Different curves for different assets



# Budget/Reporting Features

## Customized Reports, Dashboards and Query's

**Report Query** Copy Query Clear Query Run Query

Enter Query Criteria  Add Criteria Field to Displayed Columns

Additional Filters  Return results that match **All** of the following:  
[Click to add a new criteria](#)

Select Display Columns

Save Query

Load Existing Query

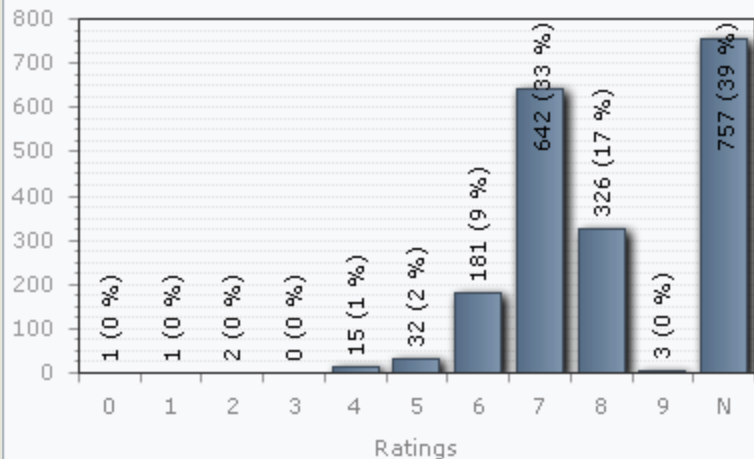
**System Reports**

Parent Asset: All Assets

Output Type: PDF

Report	Description	
Next Scheduled Inspection - All Reports	Lists the next scheduled inspection (Routine or any Critical Feature)	<a href="#">run report</a>
Next Scheduled Inspection - Routine	Lists the next scheduled inspection (Routine only)	<a href="#">run report</a>
Next Scheduled Inspection - Fracture Critical	Lists the next scheduled inspection (Fracture Critical only)	<a href="#">run report</a>
Next Scheduled Inspection - Underwater	Lists the next scheduled inspection (Underwater only)	<a href="#">run report</a>
Next Scheduled Inspection - Other Special	Lists the next scheduled inspection (Other Special only)	<a href="#">run report</a>
Next Scheduled Inspection - Access Required	Lists the next scheduled inspection (Access Required only)	<a href="#">run report</a>
Next 3 Months - All	Shows all Inspections due in the next 3 months	<a href="#">run report</a>
Next 3 Months - Routine	Shows all Routine Inspections due in the next 3 months	<a href="#">run report</a>
Next 3 Months - Fracture Critical	Shows all Fracture Critical Inspections due in the next 3 months	<a href="#">run report</a>
Next 3 Months - Underwater	Shows all Underwater Inspections due in the next 3 months	<a href="#">run report</a>
Next 3 Months - Other/Special	Shows all Other/Special Inspections due in the next 3 months	<a href="#">run report</a>

**Superstructure Condition - (59) Overall Condition Rating**



# Budget/Reporting Features



### Bridge Statistics

(data as of: 10/14/2010)

# Bridges	Description
911	Bridges in the CRAWFORDSVILLE District
750	Bridges in the FORT WAYNE District
1138	Bridges in the GREENFIELD District
620	Bridges in the LA PORTE District
949	Bridges in the SEYMOUR District
0	Bridges in the VINCENNES District
849	TOLL FACILITIES Toll Road District
330	Bridges in the TOLL ROAD District
6	Border Bridges - ILLINOIS Lead State
6	Border Bridges - KENTUCKY Lead State
2	Border Bridges - PRIVATELY OWNED, between Indiana & Illinois

# Bridges	Description
5763	Bridges inventoried by INDOT
1495	Bridges that Carry Interstate Routes
1092	Bridges that Carry U.S. Routes
2441	Bridges that Carry County Roads Over Interstate Routes
335	Bridges that Carry County Roads Over U.S. Routes
17	Bridges that Carry County Roads Over Other
3	Bridges that Carry County Streets Over Interstate Routes
0	Bridges that Carry County Streets Over U.S. Routes
162	Bridges that Carry City Streets Over S.R. Routes
21	Bridges that Carry City Streets Over Other
7	Bridges that Carry State Properties Roads
0	Bridges that Carry Railroads Over INDOT Routes
0	Bridges that Carry ABANDONED Railroads Over INDOT Routes
0	Bridges that Carry Pedestrian Walkway over the Mainline Route
0	Bridges that Carry INDOT Routes, Adjacent to the Mainline Route
0	Misc - Bridges over INDOT Routes
0	Bridges that Carry a Private Bridge over the Wabash River
17	Bridges ON the Highway System OVER Fourth Level Interchange
3529	Bridges ON the Highway System OVER Highway-Pedestrian
23	Bridges ON the Highway System OVER Third Level Interchange

### NBIS Items 92A and 93A --Fracture Critical Bridges

(Bridges that carry 1. HIGHWAYS, 2. RAILROADS, 3. WALKWAYS)

DISTRICT	1	2	3	4	5	6	7	INDOT Totals
	Crawfordsville	Fort Wayne	Greenfield	La Porte	Seymour	Vincennes	Toll Facility	Toll Road
# of Bridges Coded = Y (yes)	28	9	14	20	33	18	0	7
# of Bridges with Insp. Date	28	11	17	28	34	22	0	7
# of Bridges with Current Insp. Date	13	4	8	26	26	16	0	2
# of Bridges Insp. Date NOT Current	15	7	9	2	8	6	0	5
% of Bridge Dates Current	54%	64%	53%	7%	76%	73%	0	29%
% of Bridge Dates NOT Current	46%	36%	47%	93%	24%	27%	0	71%

DISTRICT	1	2	3	4	5	6	7	INDOT Totals
	Crawfordsville	Fort Wayne	Greenfield	La Porte	Seymour	Vincennes	Toll Facility	Toll Road
# of Bridges Coded = Y (yes)	4	9	14	20	33	18	0	7
# of Bridges with Insp. Date	4	9	17	28	34	22	0	7
# of Bridges with Current Insp. Date	2	6	8	26	26	16	0	2
# of Bridges Insp. Date NOT Current	2	3	9	2	8	6	0	5
% of Bridge Dates Current	50%	67%	50%	0%	76%	73%	0	29%
% of Bridge Dates NOT Current	50%	33%	50%	100%	24%	27%	0	71%

### COMPLIANCE with National Bridge Inspection Standards (NBIS)

10/14/2010

NBIS Category	INDOT Districts							Overall
	1	2	3	4	5	6	7	
	Crawfordsville	Fort Wayne	Greenfield	La Porte	Seymour	Vincennes	Toll Facilities	Toll Road
Regular Biennial Inspection (NBIS Item #90)	89.9%	96.4%	87.1%	93%	98.3%	98.4%	0%	99.7%
Fracture Critical (NBIS Item #92A)*	55.6%	0%	25%	100%	95.2%	71.4%	0%	28.6%
Special Inspection Details (NBIS Item #92C)	48.1%	0%	37.1%	70.8%	90.5%	87.5%	0%	95.6%
INSPECTION	0%	0%	0%	0%	0%	0%	0%	0%
INSPECTIONS	97.7%	95.2%	93.3%	93.2%	95%	93.2%	0%	100%

# Goals of the New TAM Software

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- **Better identify cost-effective approaches for asset repair and replacement**
- **Prevent poor conditions through proactive management and well-timed system investments**
- **Utilize criteria such as risk to provide better performance for all stakeholders**
- **Enhance and promote a State of Good Repair wherever possible**

# Questions



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