Mobile Inspector® 2.3.1
Installation Guide
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Welcome

Thank you for choosing Mobile Inspector® to aid in your field inspection efforts. Mobile Inspector 2.3 is the progressive web application (PWA), or web app, version of the Mobile Inspector mobile application and features several upgrades. This installation guide is intended to help system administrators work with field personnel to install Mobile Inspector 2.3 on devices used for field sampling support.

Featured upgrades include:

+ Compatibility with more products
+ Measure Service feature
+ A custom bridge process that allows the AASHTOWare Project Construction & Materials™ acceptance record functionality to work with Mobile Inspector 2.3
Compatible Products

+ AASHTOWare Project Construction & Materials™
+ AASHTOWare Project FieldManager™
+ AASHTOWare Project SiteManager™
+ Appia®

Third-Party GPS Data Collection Software
The Measure Service feature allows users to import measurement data directly from a third-party application into a Mobile Inspector 2.3 report. Measure Service currently works with the following third-party software:

+ Trimble Access

For instructions on how to implement Measure Service, see the Measure Service section of this document, under Syncing data to Mobile Inspector 2.3.
System Requirements

AASHTOWare Project Construction & Materials

Mobile Inspector 2.3 works with AASHTOWare Project Construction & Materials 4.1.2 Revision 035 or later and requires SYNCTM.

Without acceptance records

To use Mobile Inspector 2.3 without acceptance record functionality, AASHTOWare Project Construction & Materials 4.1.2 Revision 035 or later is required. Acceptance record functionality is not required to take advantage of the updated Mobile Inspector 2.3 features. If upgrading from Mobile Inspector to Mobile Inspector 2.3, you will not need to change the app name that is associated to your device ID.

With acceptance records

To use Mobile Inspector 2.3 with acceptance record functionality, AASHTOWare Project Construction & Materials 4.3.1 Revision 026 or later is required to execute the custom bridge process. If upgrading from Mobile Inspector to Mobile Inspector 2.3, you will need to change the app name that is associated to your device ID.
## App version compatibility chart

<table>
<thead>
<tr>
<th>App Version</th>
<th>Process Name</th>
<th>AASHTOWare Project Construction &amp; Materials Version</th>
<th>Bridge Version</th>
<th>Acceptance Record Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Mobile Inspector 1.18+ (mobile app)(^1)</td>
<td>Bridge to Mobile Inspector (base)</td>
<td>4.1 Patch 2 – 4.4</td>
<td>AASHTOWare Project Bridge</td>
<td>No</td>
</tr>
<tr>
<td>Mobile Inspector 2.3 (PWA)</td>
<td>Bridge to Mobile Inspector (base)</td>
<td>4.1 Patch 2 – 4.4</td>
<td>AASHTOWare Project Bridge</td>
<td>No</td>
</tr>
<tr>
<td>Mobile Inspector 2.3 (PWA)</td>
<td>Bridge to Mobile Inspector 2 (custom)</td>
<td>4.3 Patch 1 – 4.4</td>
<td>AASHTOWare Project ODATA Bridge 1.0</td>
<td>Yes</td>
</tr>
<tr>
<td>Mobile Inspector 2.3 (PWA)</td>
<td>Bridge to Mobile Inspector 2 (custom)</td>
<td>4.5 – 4.6</td>
<td>AASHTOWare Project ODATA Bridge 2.0</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 1: Application compatibility

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\(^1\) Mobile Inspector 1.18 is not compatible with AASHTOWare Project Construction & Materials 4.5 or later.
AASHTOWare Project FieldManager

Mobile Inspector 2.3 works with AASHTOWare Project FieldManager given the following system requirements:

+ FieldManager Bridge 1.8.0.0

For instructions on how to implement Mobile Inspector 2.3 with FieldManager, see:

+ Interfacing with Infotech Mobile Inspector in the AASHTOWare Project FieldManager User’s Guide. This guide is located in your AASHTOWare Project FieldManager installation package.

+ Managing Infotech Mobile Inspector within AASHTOWare Project FieldManager. This guide is located in your AASHTOWare Project FieldManager Bridge installation package.

AASHTOWare Project SiteManager

Mobile Inspector 2.3 works with AASHTOWare Project SiteManager given the following system requirements:

+ Supported AASHTOWare Project SiteManager client

+ Microsoft .NET Framework 4.5

+ Preconfigured (32-bit ODBC) System DSN to SiteManager Database

+ AASHTOWare Project SiteManager Bridge 1.7.0.0

For instructions on how to implement Mobile Inspector 2.3 with SiteManager, see the AASHTOWare Project SiteManager Bridge Installation Guide. This guide is located in your SiteManager Bridge installation package.

Appia

Mobile Inspector 2.3 works with all versions of Appia.
Device Requirements

+ For an **Android device**, you will need to use Google Chrome version 79 or later.

+ For an **iOS device**, you will need to use Safari and have iOS 13.4 or later.

+ For a **Windows device**, you can use Google Chrome version 79 or later or Microsoft Edge version 81.0.416.68 or later.
**Installation**

Once you’ve confirmed your system and devices are compatible, go to [https://mobileinspector.app](https://mobileinspector.app).

**Note:** Depending on your agency’s policies, you may need to whitelist “mobileinspectorsync.infotechfl.com” and “*.s3.amazonaws.com”.

**CAUTION:** To ensure that no data is lost in the transition from Mobile Inspector (mobile app) to Mobile Inspector 2.3 (web app), make sure to submit all daily report records (DWRs) prior to ending use. Draft DWRs in the mobile app version will **NOT** be transferred to the web app version.
Docking
After installation, you will need to dock the Mobile Inspector 2.3 web app to your device’s home screen. This step will allow the web app to look and feel like a traditional mobile app.

Docking for Android

1. From Chrome, select the three vertical dots in the upper right corner of the page, then select Add to Home screen.

2. From the pop-up window, select Add.
   a. If the page doesn’t close automatically, it is safe to close it.
3. Navigate to your home screen. The **Mobile Inspector** icon will be visible.
Docking for iOS

You **MUST** dock the web app to your home screen before registering the device. This step is necessary to ensure data is retained properly.

1. From Safari, click the **Share** button, then select **Add to Home Screen**.

**Note:** If you don’t immediately see **Add to Home Screen**, you may need to scroll vertically on newer iOS devices (shown in left image below) or horizontally on older iOS devices (shown in right image below) to locate this option.
2. A prompt will ask you to confirm the app name. Edit the name if you’d like, then select Add.
   a. The browser will close automatically.
3. Navigate to your home screen. The **Mobile Inspector** icon will be visible.
Docking for Windows

While Microsoft Edge is compatible with Mobile Inspector 2.3, it doesn’t support docking to the home screen. The following instructions are for Chrome only.

1. From Chrome, select the three vertical dots in the upper right corner of the page, then select **Add to Home screen**.
2. From the pop-up window, select **Add**.
   a. If the page doesn’t close automatically, it’s safe to close it.
3. Navigate to your home screen. The **Mobile Inspector** icon will be visible.
Device Registration

Once Mobile Inspector 2.3 is installed, you will need to register your device so that the application can pass data to your construction management system (CMS), such as AASHTOWare Project Construction & Materials or Appia. This is done through a device ID, which a system administrator will need to associate for each user.

**Note:** The Terms of Use must be accepted before the device can be registered.

**CAUTION:** Do not uninstall the app in order to troubleshoot an issue. This can cause unintended consequences, particularly with device IDs and associated data. For more information, see the *Preserving Data in Mobile Inspector 2.3* section of this document. If you need product support, see the *Support* section.
AASHTOWare Project Construction & Materials

1. From the Mobile Inspector 2.3 home page, select **Register This Device**. The application will automatically assign a unique device ID.

2. Select **Copy Device ID** to save the ID to your clipboard.

3. Open AASHTOWare Project Construction & Materials.

4. Navigate to the User Summary page for the user you want to register.
   a. **Home > System Administration > User > User Summary > Devices**

5. On the **Devices** tab, select **New**.
   a. In the Device ID field, paste the ID that you previously saved to your clipboard.
   b. In the App Name field,
      i. If your agency will **not** be using the acceptance record functionality, select **Mobile Inspector** from the drop-down menu.
      ii. If your agency will be using the acceptance record functionality, select **Mobile Inspector PWA** from the drop-down menu.
   c. In the Description field, you can add a nickname, such as *Tom’s iPhone*, to help track which device IDs go with which devices.
   d. Select **Save**.

**CAUTION**: To prevent data loss when switching between Mobile Inspector and Mobile Inspector PWA in the App Name field,

1. Ensure you have locked and synced all outstanding DWRs in your current Mobile Inspector instance.

2. Run the bridge process for your current instance.
   **Examples**
   a. **Instance**: Mobile Inspector (no acceptance record functionality)
      **App Name**: Mobile Inspector
      **Process Name**: Bridge to Mobile Inspector
b. **Instance**: Mobile Inspector 2.3 (acceptance record functionality)
   
   **App Name**: Mobile Inspector PWA
   
   **Process Name**: Mobile Inspector 2

3. After the bridge process is successful, change the App Name field to the desired value. Select **Save**.

4. Once the App Name value is successfully changed, re-run the bridge process from Step 2 to ensure SYNC is clear of old data.

5. Once SYNC is cleared, run the bridge process for the new Mobile Inspector instance, as set in Step 3.
**Appia**

1. From the Mobile Inspector 2.3 home page, select **Register This Device**.
   a. The application will automatically assign a unique device ID.
2. Select **Copy Device ID** to save the ID to your clipboard.
3. Open Appia.
4. From the home page, select **System Mgt**.
5. On the Users page, locate the row of the user you want to register and select **Devices**.
6. From the Devices page, select **Add**.
   a. In the Name field, add a nickname, such as *Tom’s iPhone*, to help track which device IDs go with which devices.
   b. In the Device ID field, paste the ID that you previously saved to your clipboard.
   c. Select **Save**.
Data Setup for AASHTOWare Project Construction & Materials

Overview
To make upgrading to Mobile Inspector 2.3 as smooth as possible, we’ve outlined the key steps below.

Setup without acceptance records

+ Assign user roles
+ Assign contract specific authority

Setup with acceptance records

+ Assign or create user roles
+ Assign contract specific authority
+ Create integrations for accessing the custom bridge process
+ Configure and create a custom process
Without Acceptance Records

User roles

1. Navigate to the Role Summary page.
   a. Home > System Administration > Users > User Summary > General
2. On the General tab, verify the user is assigned to a user role with the DWR Inspector check box selected.

For more information, see Maintaining User Roles in the Web-Based AASHTOWare Project online Help or in the AASHTOWare Project User’s Guide for Construction & Materials.

Contract specific authority

Assign users the proper permissions to access records in AASHTOWare Project Construction & Materials by assigning contract specific authority.

1. Navigate to the Contract Administration Summary page of the contract you want to authorize.
2. On the Contract Authority tab, assign users contract specific authority to the contracts they will need to support while using Mobile Inspector 2.3, using a role with the DWR Inspector check box selected.

Note: In AASHTOWare Project Construction & Materials 4.2 or later, this can also be done on the Contract Specific Authorities component.

For more information, see Maintaining Contract Authorities and Managing Contract Specific Authorities in the Web-Based AASHTOWare Project online Help or in the AASHTOWare Project User’s Guide for Construction & Materials.
With Acceptance Records

User roles

You will need to create two custom roles:

+ An Admin role for system-level operations, such as retrieving devices and ContractUserRoleAuthority

+ An Inspector role for device users

These roles provide the minimum access rights for use with Mobile Inspector 2.3.
Admin role

There are two ways to create the Admin role:

1. Use the script “sample-scripts/MobileInspectorAdminRole.sql” as a sample to create a role named “MobileInspectorAdmin”.
2. Create a role with ID “MobileInspectorAdmin” and the following permissions,

View access to:
AddNewSmfmiFromDsrMaterial
AddReferenceCrewToACostSheet
ApplyDwrContractTime
ApprovedFacilityProductsReport
ApprovedSourceProductsReport
ArchiveSourceVersion
AssociateFacilityToSml
AssociateProfileToEstimate
AssociateProfileToTask
AssociateSourceToSml
BidHistoryProfileReport
Brands
BridgeToFieldInterviewer
CTAvailableSuspendResumes
CalculateBidBasedPrice
CalculateItemHistoryPrice
CaseData
ConformanceWageDecisions
ContractAdministrativeOffices
ContractItems
ContractListBySubcontractorReport
ContractProjectItemMaterialSetMaterials
ContractProjectItemMaterialSets
ContractProjectItems
ContractProjectWageDecisions
ContractTimes
ContractUserRoleAuthorities
ContractVendorEquipments
ContractVendorPersonnels
ContractVendorStaffs

Contractors
Contracts
CopyAgencyEntity
CopyAgencyView
CopyAssetsToVendors
CopyBidHistoryProfile
CopyConceptSnapshot
CopyContingencyAssignmentProfile
CopyCostEstimateItemPriceTasksToCostEstimateItem
CopyDsr
CopyFacilityMaterialCategoriesToFacilities
CopyFacilityMaterialCategoriesToSources
CopyFacilityMaterialsToFacilities
CopyFacilityMaterialsToSources
CopyItemActions
CopyItemFamilyActions
CopyMaintenanceSchedule
CopyMarketArea
CopyMixDesign
CopyProjectSnapshot
CopyRefContractorEvaluation
CopyRefFormula
CopyRefFundPkgToContractFundPkg
CopyRefFundPkgToFundPkg
CopyRefItem
CopyRefItemBidBasedTask
CopyRefItemMaterialSet
CopyRefItemMaterialSets
UserRoleOfficeAuthorities
UserRoles
ValidateSampleDate
WageDecisionModificationReport

View and Update access to:
AgencyOptions
**Inspector role**

There are two ways to create the Inspector role:

1. Use the script “sample-scripts/MobileInspectorRole.sql” as a sample to create a role named “MobileInspector”.
2. Create a role with ID “MobileInspector”, the DWR Inspector check box selected, and the following permissions,

**Note**: If you already use a role for your field personnel, you have the option to configure the existing role for the integration. You will need to verify the role has the same minimum permissions listed below.

**View access to:**
- Brands

**View, Update, and Add access to:**
- UserFilters

**View, Update, and Delete access to:**
- AttachmentFileData
- AttachmentRoles
- Attachments
- DWRContractVendorEquipments
- DWRContractorPersonnels
- DWRCorporateStaffs
- DWRCorporate
- DWRStaffRecords
- DailyWorkReportRemarks
- DailyWorkReports
- DwrAcceptanceRecords
- DwrContractTimes
- DwrItemPostingAttentionFlags
- DwrItemPostingQuantities
- DwrItemPostings
- DwrWorkItems
- RecentActivities
**Contract specific authority**

Assign users the proper permissions to access records in AASHTOWare Project Construction & Materials by assigning contract specific authority.

1. Navigate to the Contract Administration Summary page of the contract you want to authorize.

2. On the **Contract Authority** tab, assign users contract specific authority to the contracts they will need to support while using Mobile Inspector 2.3, using the Inspector role.

   **Note:** In AASHTOWare Project Construction & Materials 4.2 or later, this can also be done on the Contract Specific Authorities component.

For more information, see *Maintaining Contract Authorities* and *Managing Contract Specific Authorities* in the Web-Based AASHTOWare Project online Help or in the AASHTOWare Project User’s Guide for Construction & Materials.
Integrations

You will need to create two integrations:

+ One that uses the admin role
+ One that uses the inspector role

These will be used by the custom bridge process to access AASHTOWare Project Construction & Materials.

For more information, see Using Integrations and the Authorization Model Service in the AASHTOWare Project System Administration Customization Guide.

1. Create an integration named “MobileInspectorAdmin”.
   a. Assign the role MobileInspectorAdmin to the integration.
   b. Select the Active check box.
2. Select the integration MobileInspectorAdmin and generate the access key.
   a. Make a note of the key for the process configuration later.
3. Create an integration named “MobileInspector”.
   a. Assign the role MobileInspector to the integration (or your existing role if you are reusing one).
   b. Select the Active check box.
4. Select the integration MobileInspector and generate the access key.
   a. Make a note of the key for the process configuration later.
Custom process

Once the integrations have been created, you will need to configure and create the custom process executable file to the application server.

Configure

The AASHTOWare Project ODATA Bridge.zip package is available on aashtowareproject.org > Downloads > Software Downloads > Product: AASHTOWare Project ODATA Bridge, Download Type: Bridge.

1. Extract the files from the zip.
2. From the installation package, copy all contents from the bin folder to \<AWP InstallationFolder>\ProcessesAndUtils\MobileInspectorBridge.
3. Edit the file MobileInspectorODataBridge.exe.config and find the settings below.

**Note:** Only the entries between the <value> tags should be changed.

**Example**

```xml
<setting name="AMS_AP_ENDPOINT" serializeAs="String">
</setting>
```

**Settings**

AMS_AP_ENDPOINT:

+ This is the AASHTOWare Project Construction & Materials authorization model service (AMS) URL.

INTEGRATION_APP_NAME: “MobileInspectorAdmin”

+ This is the name of the application integration for Mobile Inspector 2.3 that is setup in AASHTOWare Project Construction & Materials.

INTEGRATION_SECRET_KEY:
This is the secret key that was generated for the MobileInspectorAdmin integration. You made a note of this earlier.

INTEGRATION_USER_NAME: "MobileInspector"

This is the name of the application integration for Mobile Inspector 2.3 that is setup in AASHTOWare Project Construction & Materials and is configured with a limited role for the device users.

INTEGRATION_SECRET_KEY_USER:

This is the access key that was generated for the MobileInspector integration. You made a note of this earlier.

SYNC_ENDPOINT:

This is the SYNC URL. This should be set already and does not need to be changed.

CMS_ID:

This is the construction management system (CMS) ID for the AASHTOWare Project Construction & Materials install.
Create
You will need to add a custom process to your agency’s instance of AASHTOWare Project Construction & Materials.

For more information, see Creating a Custom Process in the Web-Based AASHTOWare Project online Help or in the AASHTOWare Project User’s Guide for Construction & Materials.

1. Create the custom process with the following information,

   **General tab**
   - CustomProcessID: BridgeMobileInspector2
   - Process Description: Bridge to Mobile Inspector 2
   - FileName: MobileInspectorBridge\MobileInspectorODataBridge.exe
   - Entity ID: <blank>
   - Output Type: Text

   **Parameters tab**
   - Parameters: [None]

   **Note**: The text entered in the Process Description field is what will appear in the process list on the Execute Process component.

2. Assign permissions to run this process to any roles in AASHTOWare Project Construction & Materials that need it.

   For more information, see Assigning Custom Process Access Rights to a Role in the Web-Based AASHTOWare Project online Help or in the AASHTOWare Project User’s Guide for Construction & Materials.
**Syncing Data to Mobile Inspector 2.3**

Syncing is the final step in integrating Mobile Inspector 2.3 with your construction management system (CMS). Now that you have completed setting up the required data conditions, you will be able to use Mobile Inspector 2.3 to sync contract data between your device and CMS.

**AASHTOWare Project Construction & Materials**

You can run the bridge process manually or schedule it to run automatically at regular intervals. The frequency with which this process runs determines how often data is exchanged between Mobile Inspector 2.3 and AASHTOWare Project Construction & Materials.

1. Open AASHTOWare Project Construction & Materials.
2. From the dashboard, select the **Actions** button in the upper right corner of the page, then select **Execute Process**. The Execute Process page will open.
3. From the Process list, select either **Bridge to Mobile Inspector** or **Bridge to Mobile Inspector 2** based on desired functionality.
   a. If you wish to run the process manually, select **Execute**.
   b. If you wish to set up a scheduled process, select the **Enable Scheduling** check box. This will allow you to build out your schedule frequency information.

   **Note**: Due to run time length of the custom process, a minimum of 10 minutes is recommended as a scheduled frequency.

4. Once **Execute** is selected, the process will run immediately.
   a. If you have enabled scheduling, the time frame you established will have to expire before the process runs.

5. In Mobile Inspector 2.3, select **Menu** (three horizontal lines), then navigate to the SYNC page.

   **Note**: If you have not yet accepted the Terms of Use and registered your device, you will not be able to navigate to the SYNC page.
6. On the SYNC page, select **SYNC DATA** from the upper right corner of the page.
   a. A pop-up window will display during the SYNC process and disappear once syncing is complete.

7. Once you are ready to SYNC locked DWRs from Mobile Inspector 2.3 to AASHTOWare Project Construction & Materials, select **SYNC DATA** again in Mobile Inspector 2.3.

8. The bridge process will need to be run again in order to retrieve data packages from Mobile Inspector 2.3. The base bridge and custom bridge processes can be run manually or through a scheduled process, as discussed above.

**Note:** For more information regarding the status of the Bridge to Mobile Inspector (base) process, in AASHTOWare Project Construction & Materials, click the **Actions** button in the upper right corner of the page, then select **Open Process History**. If the process passed, a bridge output log and an error log will be present. If it failed, only an error log will be present.

**Note:** If the Bridge to Mobile Inspector 2 (custom) process is run manually, the process results will automatically display in a new browser tab upon completion. If the custom process has been scheduled, the results will appear in the Process History Overview page of AASHTOWare Project Construction & Materials. The bridge output log will be the best source of information regarding which data was passed to and from Mobile Inspector 2.3.

Once you have successfully synced, your field personnel are ready to begin using Mobile Inspector 2.3. The Mobile Inspector 2.3 in-app help discusses how users can create daily work reports (DWRs) and record field inspection data in the app.
**Appia**

Daily Reports must be locked in order to send from Mobile Inspector 2.3 to Appia.

1. Click the white **SYNC DATA** button in the upper right corner of the SYNC page.

   **Note:** Standard SYNC functionality in Appia still applies.

Once you have successfully synced, your field personnel are ready to begin using Mobile Inspector 2.3.

**Measure Service**

The Mobile Inspector 2.3 Measure Service feature allows users to import measurement data directly from a third-party application into a Mobile Inspector 2.3 report. This feature is available for contracts in AASHTOWare Project Construction & Materials and Appia.

To enable, navigate to the Mobile Inspector 2.3 About screen, select **Measure Service**, then click the **Enable Measure Service** toggle button.

1. **For Trimble Access**
   
   o Open Trimble Access, select the **globe** icon in the upper left corner of the screen, then click the **Mobile Inspector** button.
     
     ▪ You can now import Mobile Inspector 2.3 projects into Trimble Access as you would any other project.

For device support, call Trimble Access support.
Preserving Data in Mobile Inspector 2.3

+ For an **Android device**, data will be lost if the browser data (Chrome) is cleared globally or on the mobileinspector.app domain.

+ For an **iOS device**, 
  
  o In a **docked app**, data will be lost if the app is deleted from the home screen.
  
  o In a **non-docked app**, data will be lost if the browser data (Safari) is cleared globally or on the mobileinspector.app domain.

+ For a **Windows device**, data will be lost if the browser data (Chrome, Edge) is cleared globally or on the mobileinspector.app domain.

Additionally, switching browsers will “lose data” in the sense that the new browser won’t have the data from the old browser.

**CAUTION**: Do not uninstall the app in order to troubleshoot an issue. This can cause unintended consequences, particularly with device IDs and associated data. If you need product support, see the *Support* section of this document.
Support

Email: customer.support@infotechinc.com
Phone:

+ For users of:
  o AASHTOWare Project Construction & Materials
  o AASHTOWare Project FieldManager
  o AASHTOWare Project SiteManager
    - (884) 915-2655

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