



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

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Michael R. Pence, Governor
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October 1, 2015

CONSTRUCTION MEMORANDUM

14-12
REVISED

TO: District Deputy Commissioners
District Construction Directors
District Technical Services Directors
District Area Engineers
District Traffic Engineers
District LPA Coordinators
Project Engineers/Supervisors
Field Engineers
Office of Material Management

FROM: Mark A. Miller, Director
Division of Construction Management and District Support

SUBJECT: Implementation of the SM-652 Field Assistant Application for Concrete Test Methods of Relative Yield, Slump, and Air Content

The purpose of this memorandum is to notify all field personnel of the implementation of the SM-652 Field Assistant application for concrete test methods of T-121 relative yield, T-119 slump, and T-152 air content.

Effective Tuesday, October 14th, all field personnel performing a concrete test method listed above that requires a SM-652 record must use the SM-652 Field Assistant application either via an iPad or computer to enter test information into SiteManager. Paper SM-652 records are no longer an acceptable method of documenting concrete tests but can be used temporarily when a device is not available to be used in the field. The intent of this application is to minimize the amount of field hand calculations, potential errors, and to give more functionality and versatility to the field personnel that are taking the concrete test. Furthermore, this application is to be used as a resource for getting the test record information to SiteManager without being logged into the Citrix application, authenticating thru Phone Factor, or having internet connectivity. However, test record information can be modified at a future time by logging into SiteManager directly.

This field application does not serve as a replacement for concrete test certifications or understanding of concepts. When Independent Assurance personnel perform their annual testing procedure inspection, field personnel will be able to utilize the application without needing to perform hand calculations. The purpose of annual testing procedure inspections is to confirm that field personnel have an acceptable level of understanding of the testing concepts and not to confirm the ability to perform hand calculations.

For more information and training material regarding the SM-530 Field Assistant application, please refer to the training manual found on the [SharePoint](#) website under *Shared Documents/Field Assistant Training Documents* or by clicking the following hyperlink ([Training Manuals](#)).

Any questions or SharePoint access requests should be directed to Ellis Holder at 317-232-0678, eholder@indot.in.gov or through assigned to your District Field Engineer of the Division of Construction Management.

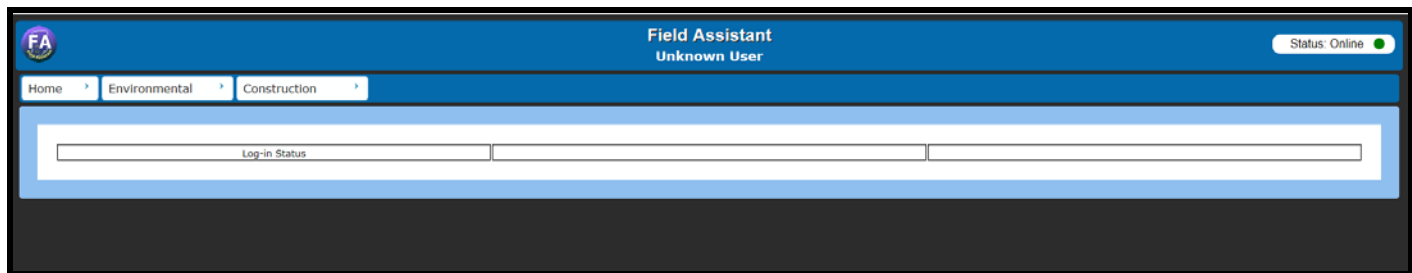
MAM/GGP/ekh

Field Assistant 652

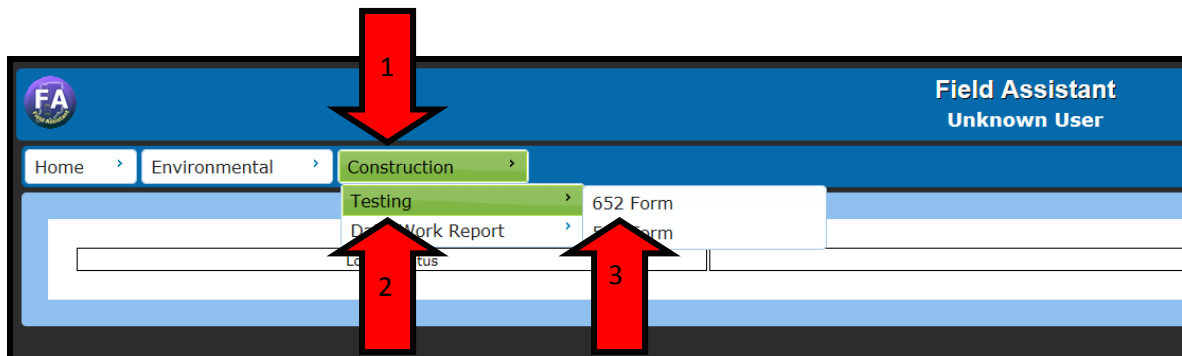
<https://fieldassistant.indot.in.gov>

Enter the above URL into your browser or Google search INDOT Field Assistant to navigate to the Field Assistant website.

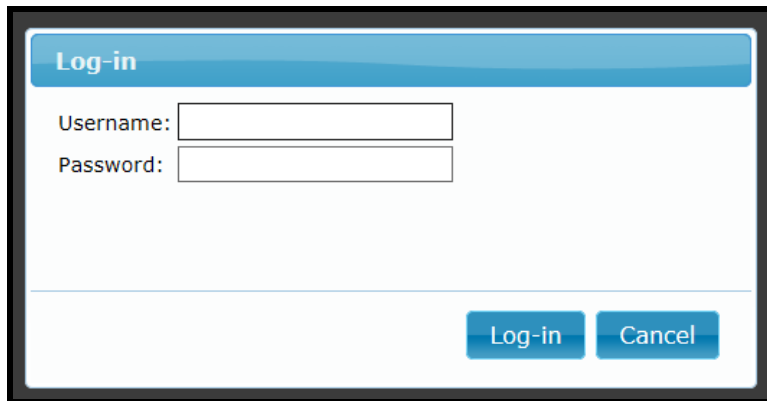
The below image is the Field Assistant Homepage.



1. Hover over or touch the Construction tab
2. Click or touch the Testing option
3. Finally click or touch the 652 Form option

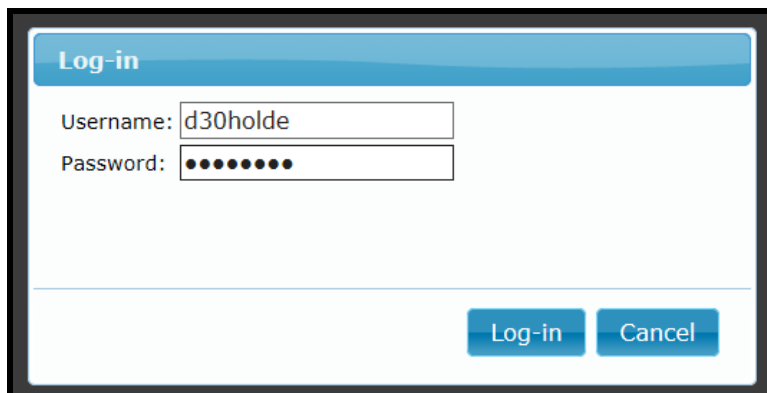


The Field Assistant validates who you are by your SiteManager user ID and password.



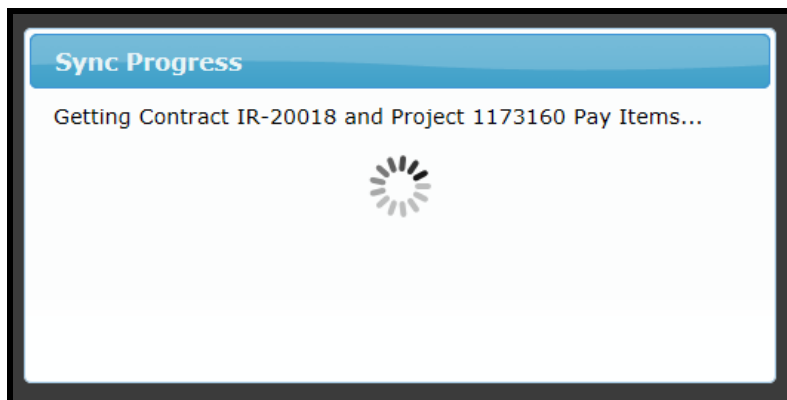
A screenshot of a 'Log-in' dialog box. It has a blue header bar with the text 'Log-in'. Below the header, there are two input fields: 'Username:' and 'Password:'. The 'Username:' field is empty, and the 'Password:' field is also empty. At the bottom right of the dialog, there are two buttons: 'Log-in' and 'Cancel'.

Please enter your SiteManager user ID and password then click or touch Log-in.



A screenshot of the same 'Log-in' dialog box, but now with user input. The 'Username:' field contains the text 'd30holde'. The 'Password:' field contains ten black dots, indicating a masked password. The 'Log-in' and 'Cancel' buttons are still present at the bottom right.

The Sync Progress screen will appear and indicates that the Field Assistant is downloading all Contract information from SiteManager that you have Contract Authority on.

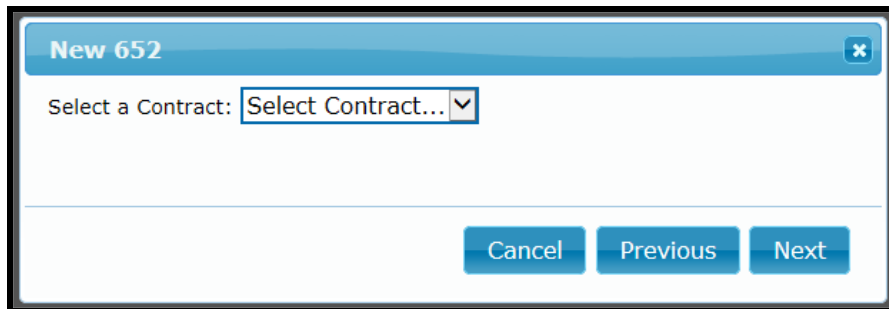


The Sample ID wizard will appear, Sample ID's must contain a capital R and 12 numbers. To build a Sample ID follow the steps below. Once the Sample ID is built click or touch Next.

- R = Report
- First two number indicate the year the Sample was made
- Third number indicates the District the Sample was taken in
- Numbers Four through Seven indicates the submitter number of the person entering the Sample. The submitter number to be used will be at the discretion of the PE/S on all Samples submitted for each specific contract.
- Numbers Eight through Twelve can be any sequence of numbers at the discretion of the PE/S.

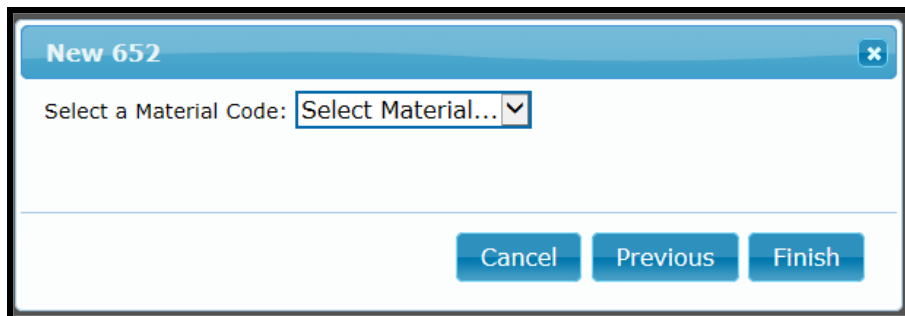
A screenshot of a mobile application screen titled "New 530". The screen displays a "Sample ID:" label followed by four input fields. The first field contains "R11", the second contains "1", the third contains "1111", and the fourth contains "11111". Below these fields are labels: "YEAR" under the first, "DISTRICT" under the second, "SUBMITTER" under the third, and "SEQUENCE" under the fourth. At the bottom right of the screen are three buttons: "Cancel", "Previous", and "Next".

Select the Contract ID from the dropdown provided you want to associate the Sample to then click or touch Next.



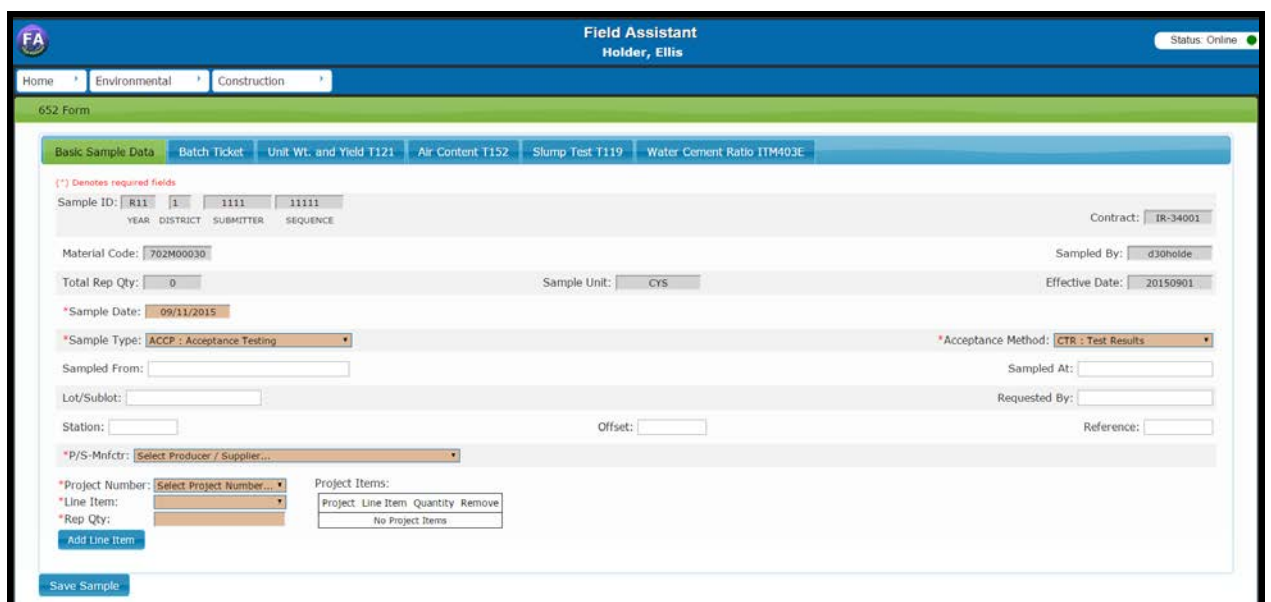
The screenshot shows a form titled "New 652" with a close button (X) in the top right corner. Below the title, there is a label "Select a Contract:" followed by a dropdown menu that currently displays "Select Contract...". At the bottom of the form, there are three buttons: "Cancel", "Previous", and "Next".

Select the Material Code from the dropdown provided that the Sample being submitted is relevant to then click or touch Finish.



The screenshot shows the same "New 652" form. The dropdown menu now displays "Select Material...". The buttons at the bottom are "Cancel", "Previous", and "Finish".

The 652 form will then appear



The screenshot shows the "652 Form" within the "Field Assistant" application. The header bar includes the "FA" logo, the user name "Holder, Ellis", and a "Status: Online" indicator. Below the header, there are tabs for "Home", "Environmental", and "Construction". The form itself has several sections: "Basic Sample Data" (with sub-tabs for "Batch Ticket", "Unit Wt. and Yield T121", "Air Content T152", "Slump Test T119", and "Water Cement Ratio ITM403E"), "Contract" (IR-34001), "Material Code" (702M00030), "Sampled By" (d30holde), "Total Rep Qty" (0), "Sample Unit" (cys), "Effective Date" (20150901), "Sample Date" (09/11/2015), "Sample Type" (ACCP : Acceptance Testing), "Acceptance Method" (CTR : Test Results), "Sampled From", "Lot/Sublot", "Station", "Offset", "Requested By", "Reference", "P/S-Mnfctr" (Select Producer / Supplier...), "Project Number" (Select Project Number...), "Line Item" (Add Line Item), "Rep Qty", and "Project Items" (No Project Items). A "Save Sample" button is located at the bottom left.

Any fields shaded in gray are auto populated and cannot be changed unless the current Sample ID is deleted and a new ID is created.

(*) Denotes required fields

Sample ID: R11 1 1111 11111
YEAR DISTRICT SUBMITTER SEQUENCE

Material Code: 702M00030

Total Rep Qty: 0 Sample Unit: CYS

Contract: IR-34001
 Sampled By: d30holde
 Effective Date: 20150901

Any fields that are shaded in peach and have an (*) are required fields and must be populated to push the Sample to SiteManager. Any fields that are white are optional fields and are not required to push the Sample to SiteManager. Material Codes for 501, 502 and 506 concrete must have a Concrete Mix Design (CMD) recorded.

*Sample Date: 05/13/2015 *Mix ID:

*Sample Type: ACCP: Acceptance Testing *Acceptance Method: CTR: Test Results

Sampled From: Lot/Sublot: Station: Offset: Requested By: Reference:

*P/S-Mnfctr: Select Product Supplier...

*Project Number: Select Project Number... *Line Item: Select Line Item... *Rep Qty:

Project Items:

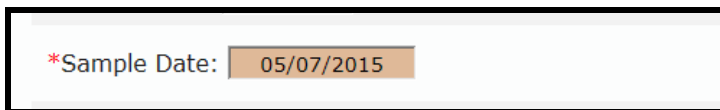
Project	Line Item	Quantity	Remove
No Project Items			

Add Line Item

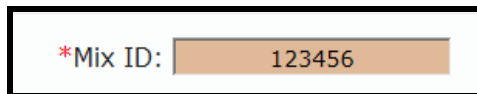
To fill out the 652 Form please follow the steps listed below.

- The Tab key on the keyboard of the PC or iPad work to move from field to field. On the iPad you can use the touch screen to move in between fields as well.

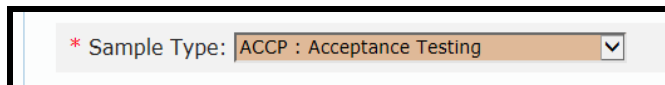
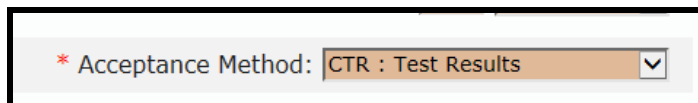
1. Sample Date auto populates with the date the Sample was created but can be changed to a day prior to that date. SiteManager Data Entry Policy still applies; all samples should be entered within two days of taking the sample. The Log Date in SiteManager will be the date the sample is pushed to SiteManager.

A screenshot of a web form field labeled "*Sample Date:". The text "05/07/2015" is entered in the field. The field has a light gray background and a thin black border.

2. Mix ID is required when entering a 652 for all 501, 502 and 506 material codes. On all other material codes this field will not appear.

A screenshot of a web form field labeled "*Mix ID:". The text "123456" is entered in the field. The field has a light gray background and a thin black border.

3. Sample Type and Acceptance Method are defaulted to Acceptance Testing and Test Results but can be changed by selecting different options on each dropdown provided.

A screenshot of a web form field labeled "* Sample Type:". The dropdown menu is open, showing the selected option "ACCP : Acceptance Testing" and a downward arrow icon. The field has a light gray background and a thin black border.A screenshot of a web form field labeled "* Acceptance Method:". The dropdown menu is open, showing the selected option "CTR : Test Results" and a downward arrow icon. The field has a light gray background and a thin black border.

4. Sampled From is optional but represents where the sample was taken from in general (Jobsite, Plant).

Sampled From: Jobsite
--

5. Sampled At is optional but represents where the sample was taken from specifically (Paver, Truck, Stockpile).

Sampled At: Paver
--

6. Lot/Sublot is required when entering a 652 for QC/QA PCCP only. Any other samples this field will appear white and the asterisk will disappear.

Lot/Sublot:

7. Requested By is optional but represents who asked you to pull a sample for testing.

Requested By: INDOT
--

8. Station, Offset and Reference are all listed as not required but is strongly recommended to be filled out when submitting a QC/QA PCCP sample.

Station:	325+25
Offset:	10'
Reference:	RT

9. P/S Mnfr is required on every sample submitted for testing and represents who manufactured the material being tested. Select the P/S Mnfr from the dropdown provided.

* P/S-Mnfr:	CONC1280 : Irving Materials Inc - Greenfield, In	v
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10. Project Number is required on every sample submitted for testing and represents what project the item is listed on in the Pay Item List. Select the Project Number from the dropdown provided.

*Project Number:	1006581	v
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11. Line Item is required on every sample submitted for testing and represents what Pay Item this sample is associated with. Select the Item Number from the dropdown provided.

*Line Item:	0103 : PCCP FOR APPRC	v
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12. Rep Qty is required on every sample submitted for testing and represents the quantity this sample represents per the Frequency Manual.

*Rep Qty: 50

13. At this point you must click or touch Add Line Item for the Field Assistant to save the Project, Lin Item and Rep. Qty. You can add additional Items to the sample by repeating steps 11 – 14.

Add Line Item

14. Once you have clicked or touched Add Line Item the Contract Line Items grid will populate with all Pay Items that have been associated with this sample. You can remove a Pay Item by clicking or touching the X located under remove in the grid.

*Project Number:

1298682

*Line Item:

0103 : PCCP FOR APPRC

*Rep Qty:

50

Add Line Item

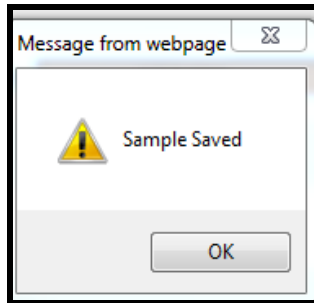
Project Items:

Project	Line Item	Quantity	Remove
1298682	0103 : PCCP FOR APPROACHES, 6 IN	50	

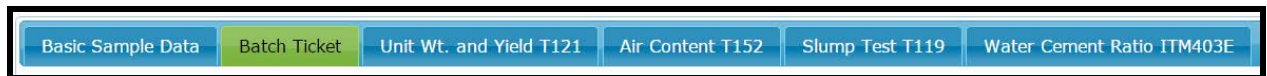
15. Now you must click or touch Save Sample in order for the Field Assistant to save the sample to whatever device you are using to submit the sample from.

Save Sample

16. Once you have saved the sample this message will appear confirming the save click or touch OK.



17. Now that you have completed the Basic Sample Data tab and saved the sample it is time to enter your test information. Click or touch the Batch Ticket tab.



This screen will appear

*yd ³ Batched(0.01) Yd	
*Cement (lbs.)	
*Pozzolan (lbs.)	
*Fine Aggregate (lbs.)	
*Course Aggregate (lbs.)	
*Water (gallons or lbs)	

18. Enter the total cubic yards on the truck.

*yd³ Batched(0.01) Yd

19. Enter the total lbs. of cement on the truck.

*Cement (lbs.)

20. Enter the total lbs. of Pozzolan (Fly Ash) on the truck if applicable.

*Pozzolan (lbs.)

21. Enter the total lbs. of Fine Aggregate (Sand) on the truck.

*Fine Aggregate (lbs.)

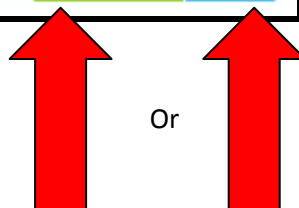
22. Enter the total lbs. of Course Aggregate (Stone) on the truck.

*Course Aggregate (lbs.)

23. Enter the total Gallons or lbs. of Water on the truck.

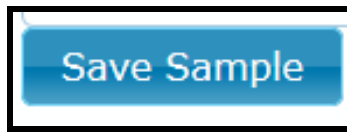
- Select the unit of measure by clicking or touching the Gallons or lbs. button.

*Water (gallons or lbs)

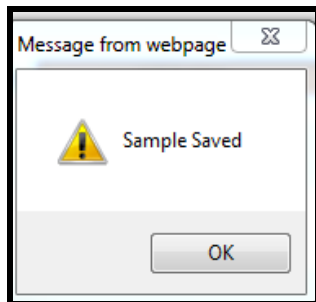


Or

24. Now you must click or touch Save Sample in order for the Field Assistant to save the sample to whatever device you are using to submit the sample from.



25. Once you have saved the sample this message will appear confirming the save click or touch OK.

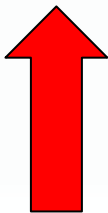


26. Now that you have completed the Batch Ticket tab and saved the sample it is time to enter test method information. Click or touch the Unit Wt. and Yield T121 tab.



This screen will appear

*Test Method		T121E-v1	Material 1yd ³ Batch Wts. (1 lb / yd ³)							
*Weight of Container (0.01 lbs.)	M _m		Cement (lbs.)	657						
*Weight of Container & Concrete (0.01 lbs.)	M _c		Pozzolan (lbs.)	111						
Net Wt. Concrete (0.01 lbs.) = M _c - M _m	N		Fine Aggregate (lbs.)	1233						
*Container Factor (0.001) = 1 / Volume	C _f		Coarse Aggregate (lbs.)	1786						
Unit Weight (0.1 lbs / ft ³) = N x C _f	A		Water (lbs.)	191						
Relative Yield (0.001) = B / (A x 27)	Y _f		Total Batch Weights (lbs.)	3978						
Cement Content (1 lb / yd ³) = C / Y _f			% Fine Aggregate (0.1%)	40.8						
*Test Results		Pass Fail Adjust								
Add Test Method										
Unit Weight and Relative Yield Test Methods:										
Test Result	Test Method	M _c	M _m	N	C _f	A	Y _f	C/Y _f	% Fine Agg	Remove
No Tests found										



- Notice how the Batch Weights have been divided out and populated in the correct fields for your review.
- Notice that there are only five fields required on this page
 - Test Method
 - Weight of Container & Concrete
 - Weight of Container
 - Container Factor
 - Pass/Fail/Adjust

27. Select the Test Method that applies to the test being performed.

T121E-v1 will be defaulted, select from the dropdown if Test Method is different than default.

*Test Method	T121E-v1
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28. Enter the Weight of Container empty.

*Weight of Container (0.01 lbs.)	M_m	8.03
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29. Enter the weight of the concrete bucket full of concrete.

*Weight of Container & Concrete (0.01 lbs.)	M_c	45.10
---	-------	-------

30. Enter the Container Factor for the concrete bucket being used to take the test.

*Container Factor (0.001) = 1 / Volume	C_f	4.008
--	-------	-------

31. Select if the test results Pass/Fail/Adjust required specifications.

*Unit Wt. and Rel. Yield T121	Pass	Fail	Adjust
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32. Once you have reviewed you test data and have ensured its accuracy you MUST select Add Test Method.

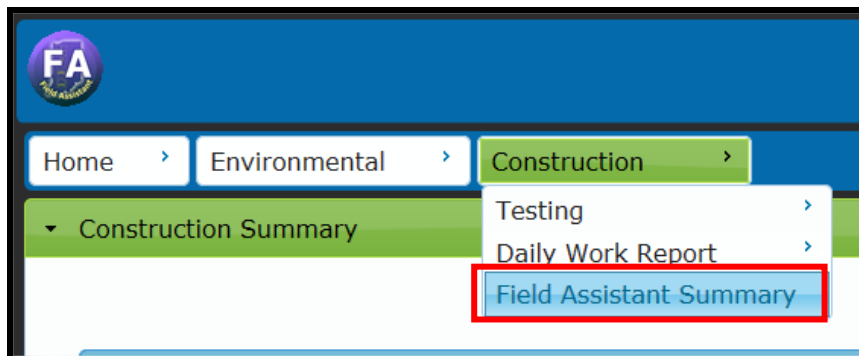
Add Test Method

33. Field Assistant will not see your test data until you select this button.
Once you have added the test method the test results will populate in a grid format under the Add Test Method button.

Add Test Method										
Unit Weight and Relative Yield Test Methods:										
Test Result	Test Method	M _c	M _m	N	C _f	A	Y _f	C/Y _f	% Fine Agg	Remove
Pass	T121E-v1	45.10	8.03	37.07	4.008	148.6	0.991	663	40.8	✕

- *Multiple tests can be added to one sample ID by repeating steps 27-32. Please refer to Construction Memo 15-02 for details.*

34. At this point if you are only completing a Yield Test you are ready to push the sample to SiteManager. Steps 35 thru 45 are the same if you want to complete just an Air or a Slump Test. Click or touch Construction then Field Assistant Summary. The Field Assistant will then open the summary grid.



35. The Summary Grid contains all Test Forms/DWR's that have not been pushed to SiteManager yet. The Summary Grid allows you to edit or delete Test Forms/DWR's.

Field Assistant
Holder, Ellis
Status: Online

Home Environmental Construction

Construction Summary

Upload Selected Upload All

Show 10 entries Search:

Date	Contract ID	Type	Description	Status	Action
06/01/2015	IR-30889	DWR		New	  
06/01/2015	IR-30889	652	Sample: R11-1-1111-11111; LEVELING PAD, CONCRETE	Ready	  
06/01/2015	IR-30889	652	Sample: R22-2-2222-22222; LEVELING PAD, CONCRETE	Ready	  
06/01/2015	IR-30889	530	Sample: R33-3-3333-33333; QC/QA-HMA, 1, 64, BASE, 25.0 mm	Ready	  

Showing 1 to 4 of 4 entries Previous Next

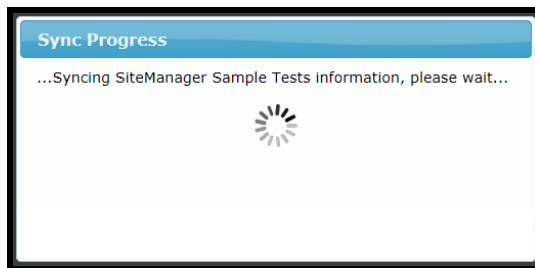
36. To push a single Sample to SiteManager Click or Touch the Sample you would like to push turning it green.

Date	Contract ID	Type	Description	Status	Action
06/01/2015	IR 30889	DWR		New	  
06/01/2015	IR-30889	652	Sample: R11-1-1111-11111; LEVELING PAD, CONCRETE	Ready	  
06/01/2015	IR-30889	652	Sample: R22-2-2222-22222; LEVELING PAD, CONCRETE	Ready	  
06/01/2015	IR-30889	530	Sample: R33-3-3333-33333; QC/QA-HMA, 1, 64, BASE, 25.0 mm	Ready	  

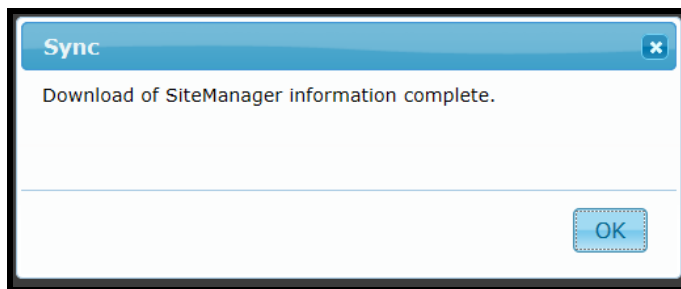
37. Then Click or touch Upload Selected.



38. This screen will appear and indicates that Field Assistant is pushing the Sample to SiteManager.



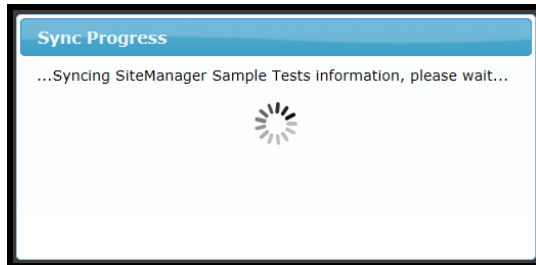
39. The Sync screen will appear if the Sample was successfully uploaded to SiteManager, click or touch Ok



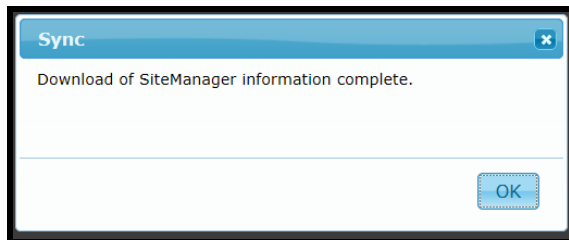
40. To push all Samples and DWR's to SiteManager you do not have to select each form separately. Click or Touch Upload All to upload all forms to SiteManager.



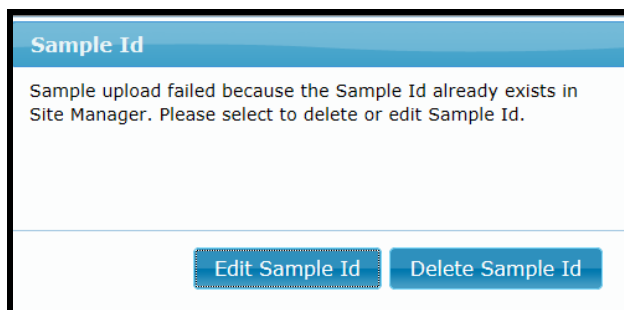
41. This screen will appear and indicates that Field Assistant is pushing the Sample to SiteManager.



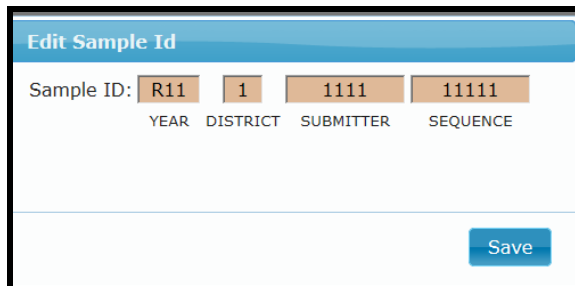
42. The Sync screen will appear if the Sample was successfully uploaded to SiteManager, click or touch Ok



43. If the Field Assistant sees a duplicate Sample ID this warning will be generated. You can then Edit the Sample ID or Delete the Sample ID.

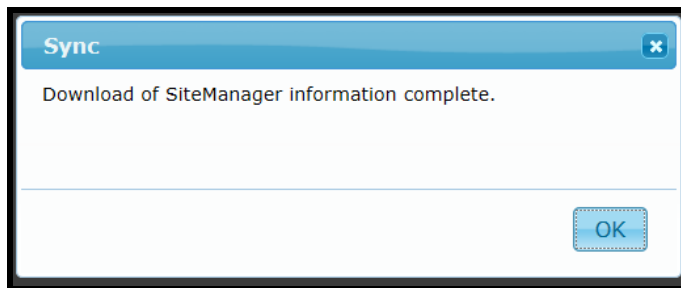


44. If you select Edit Sample ID the Sample ID wizard will appear to allow changes to be made and saved. Once changed you must repeat steps 36 thru 39.



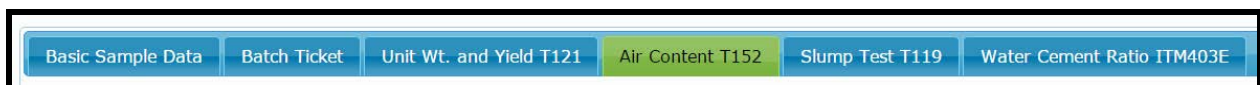
The 'Edit Sample Id' dialog box features a title bar with the text 'Edit Sample Id'. Below the title bar, the 'Sample ID:' label is followed by four input fields. The first field contains 'R11', the second '1', the third '1111', and the fourth '11111'. Underneath these fields are the labels 'YEAR', 'DISTRICT', 'SUBMITTER', and 'SEQUENCE' respectively. A 'Save' button is located at the bottom right of the dialog.

45. If the Sample has been uploaded to SiteManager successfully you will see this message appear.



The 'Sync' dialog box has a title bar with the text 'Sync' and a close button (X). The main text area displays the message 'Download of SiteManager information complete.' An 'OK' button is positioned at the bottom right.

46. If you need to add additional tests click or touch Air Content T152.



A horizontal bar containing six buttons: 'Basic Sample Data', 'Batch Ticket', 'Unit Wt. and Yield T121', 'Air Content T152', 'Slump Test T119', and 'Water Cement Ratio ITM403E'. The 'Air Content T152' button is highlighted with a green background.

This screen will appear

*Test Method

T152-v1

*Percent Air Gross (0.1%)

A₁

*Aggregate Correction (0.1%)

G

Air Content (0.1%) A₁-G

A_s

*Test Results

Pass

Fail

Add Test Method

Air Test Methods:

Test Result	Test Method	A ₁	G	A _s	Remove
No Tests found					

- *Notice that there are only four fields required on this page*
 - *Test Method*
 - *Percent Air Gross*
 - *Aggregate Correction*
 - *Pass/Fail*

47. Select the Test Method that applies to the test being performed.

T152E-v1 will be defaulted, select from the dropdown if Test Method is different than default.

*Test Method

T152-v1

48. Enter the Percent Air Gross.

*Percent Air Gross (0.1%)

A₁

49. Enter the Aggregate Correction.

*Aggregate Correction (0.1%) G

50. Select if the test results Pass/Fail required specifications.

*Test Results Pass Fail

51. Once you have reviewed you test data and have ensured its accuracy you MUST select Add Test Method.

Add Test Method

52. Field Assistant will not see your test data until you select this button.
Once you have added the test method the test results will populate in a grid format under the Add Test Method button.

Air Test Methods:					
Test Result	Test Method	A ₁	G	A _s	Remove
Pass	T152-v1	7.2	0.2	7.0	✕

- Multiple tests can be added to one sample ID by repeating steps 47-51. Please refer to Construction Memo 15-02 for details.

53. Repeat steps 34-45 if your only entering a T152 Air Test

54. If you need to add additional tests click or touch Slump Test T119.

Basic Sample Data	Batch Ticket	Unit Wt. and Yield T121	Air Content T152	Slump Test T119	Water Cement Ratio ITM403E
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This screen will appear

*Test Method

T119E-v1

*Formed, Slipformed or Cast-In-Place?

Formed

Slipformed

Cast-In-Place

*Slump (0.25 in.)

*Test Results

Pass

Fail

Add Test Method

Slump Test Methods:

Test Result	Test Method	Form, Slip or Cast	Slump	Remove
No Tests found				

Notice that there are only four fields required on this page.

- o Test Method
- o Formed/Slipformed/Cast-in-place
- o Slump
- o Pass/Fail

55. Select the Test Method that applies to the test being performed.

T119E-v1 will be defaulted, select from the dropdown if Test Method is different than default.

*Test Method

T119E-v1

56. Enter if the concrete is being Formed/Slipformed/Cast-In-Place by clicking or touching the correct response.

*Formed, Slipformed or Cast-In-Place?

Formed

Slipformed

Cast-In-Place

57. Enter the slump to the nearest quarter of a inch.

*Slump (0.25 in.)

58. Select if the test results Pass/Fail required specifications.

*Test Results

Pass

Fail

59. Once you have reviewed you test data and have ensured its accuracy you MUST select Add Test Method.

Add Test Method

60. Field Assistant will not see your test data until you select this button.
Once you have added the test method the test results will populate in a grid format under the Add Test Method button.

Slump Test Methods:				
Test Result	Test Method	Form, Slip or Cast	Slump	Remove
Pass	T119E-v1	Formed	3.50	✕

- *Multiple tests can be added to one sample ID by repeating steps 55-59. Please refer to Construction Memo 15-02 for details.*

61.Repeat steps 34-45 if your only entering a T119 Slump Test

62.If you need to add additional tests click or touch Water Cement Ratio ITM 403E.

Basic Sample Data	Batch Ticket	Unit Wt. and Yield T121	Air Content T152	Slump Test T119	Water Cement Ratio ITM403E
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This screen will appear

*Test Method

IT403E-v1

	Coarse Aggregate		Fine Aggregate	
*Mass of Container	M _c	lbs	M _f	lbs
*Wet Mass of Sample & Container	W _c	lbs	W _f	lbs
*Dry Mass of Sample & Container	D _c	lbs	D _f	lbs
Moisture % [MP=((W-D)/(D-M))*100]	Mp _c	%	Mp _f	%

From Concrete Mix Design

*Percent Absorption	P _c	%	P _f	%
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Batch Information

Batch Mass	B _c	lbs	B _f	lbs
Dry Batch Mass [Db=(B/(1+(Mp/100)))]	Db _c	lbs	Db _f	lbs
Free Water in Aggregate [A=B-Db]	A _c	lbs	A _f	lbs
Total Free Water in Aggregate [Wa=Ac+Af]	Wa	lbs		
Add Water at Mixer	Wm	lbs		
Total Free Water in Mix [((Wa+Wm)-((Dbc*(Pc/100))+ (Dbf*(Pf/100))))]	Wt	lbs		
Total Wt. of Cement in Batch	C	lbs		
Total Wt. Pozzolans in Batch	P	lbs		
Total Wt. Cementitious in Batch [Ct=C+P]	Ct	lbs		
Water Cementitious Ratio R=Wt/Ct	R			

*Final Test Results

Pass

Fail

Info

Add Test Method

Water Cementitious Ratio Test Methods:

Test Result	Test Method	Mp _c	Mp _f	Db _c	Db _f	A _c	A _f	Wa	Wt	Ct	R	Remove
No Tests found												

Notice that there are only 9 fields required on the pervious page.

- o Test Method
- o Mass of Container (Coarse and Fine Aggregates)
- o Wet Mass of Sample and Container (Coarse and Fine Aggregates)
- o Dry Mass of Sample and Container (Coarse and Fine Aggregates)
- o Percent Absorption (From CMD for Coarse and Fine Aggregates)

63. Select the Test Method that applies to the test being performed.

ITM 403E will be defaulted, select from the dropdown if Test Method is different than default.

*Test Method	IT403E-v1 ▼
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64. Enter Weight of the empty container for Coarse Aggregate.

*Mass of Container		lbs
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65. Enter Weight of wet sample and container for Coarse Aggregate.

*Wet Mass of Sample & Container		lbs
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66. Enter Weight of dry sample and container for Coarse Aggregate.

*Dry Mass of Sample & Container		lbs
---------------------------------	----------------------	-----

67. Enter the Percent Absorption for the Coarse Aggregate from the CMD or contact your District Testing Engineer for Producer Supplier Absorption rates.

*Percent Absorption		%
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68. Enter Weight of the empty container for Fine Aggregate.

*Mass of Container		lbs
--------------------	----------------------	-----

69. Enter Weight of wet sample and container for Fine Aggregate.

*Wet Mass of Sample & Container		lbs
---------------------------------	----------------------	-----

70. Enter Weight of dry sample and container for Fine Aggregate.

*Dry Mass of Sample & Container		lbs
---------------------------------	----------------------	-----

71. Enter the Percent Absorption for the Fine Aggregate from the CMD or contact your District Testing Engineer for Producer Supplier Absorption rates.

*Percent Absorption		%
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72. Batch weight information is pulled from the Batch Ticket Tab, follow steps 17-24 to enter these weights.

Batch Information			
Batch Mass	B_c	1768.00 lbs	B_f 1225.00 lbs
Dry Batch Mass [$Db=(B/(1+(Mp/100)))$]	Db_c	1689 lbs	Db_f 1132 lbs
Free Water in Aggregate [$A=B-Db$]	A_c	79 lbs	A_f 93 lbs
Total Free Water in Aggregate [$Wa=Ac+Af$]	Wa	172 lbs	
Add Water at Mixer	Wm	191.00 lbs	

73. The Field Assistant will automatically calculate your Water Cement Ratio for you. Review the calculations and mark the sample accordingly (Pass, Fail or Info).

*Final Test Results	Pass Fail Info
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74. Once you have reviewed you test data and have ensured its accuracy you MUST select Add Test Method.

Add Test Method
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75. Field Assistant will not see your test data until you select this button. Once you have added the test method the test results will populate in a grid format under the Add Test Method button.

Water Cementitious Ratio Test Methods:												
Test Result	Test Method	Mp_c	Mp_f	Db_c	Db_f	A_c	A_f	Wa	Wt	Ct	R	Remove
Fail	IT403E-v1	4.66	8.24	1689	1132	79	93	172	328	694	0.472	X

- Multiple tests can be added to one sample ID by repeating steps 63-74.
Please refer to Construction Memo 15-02 for details.

76. Repeat steps 34-45 if you're only entering a ITM 403E Water Cement Ratio test.