



Florida Department of  
**TRANSPORTATION**



**Construction Academy**  
**2022**

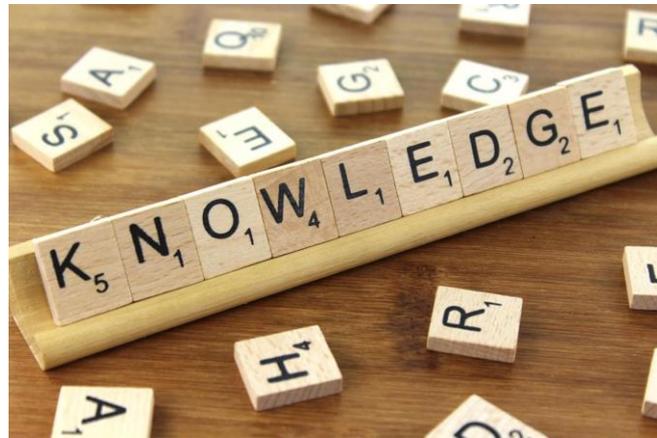
## Materials Acceptance and Certification

- PA or **delegate** in responsible charge
- **System user** in the PA role
  - Not necessarily the actual PA



## Materials Acceptance and Certification

- What do you need to know to do what you need to do?



## Materials Acceptance and Certification

- Method of Acceptance (MOA)
- Specifications Section 6
- FDOT has 2
  - Somebody samples and tests or
  - Somebody certifies
    - APL is a subset of Certification MOA





## Materials Acceptance and Certification

- The clay liner shall be of plastic soils consisting of A-5, A-6, A-7 or A-2-7 (AASHTO M145) material with more than 25% passing the No. 200 U.S. standard sieve. The clay soils shall be free of organic content and shall provide a minimum saturated unit weight of 115 pounds per cubic foot.

**MOA = Sampling and Testing  
or Certification?**



## Materials Acceptance and Certification

- Sampling and Testing
  - What Test(s)?
  - Who tests?
  - How often?
  - Does it need a qualified sampler, tester, lab?
  - Does it have to be produced at a facility under the Aggregate Control Program or QC Program?



## Materials Acceptance and Certification

- Sampling and Testing
  - What is passing criteria?
  - What happens when there is a failure?
    - How bad is bad enough to remove & replace?
  - If contractor QC,
    - What is VT frequency?
    - What is the comparison criteria?
    - What is resolution process?



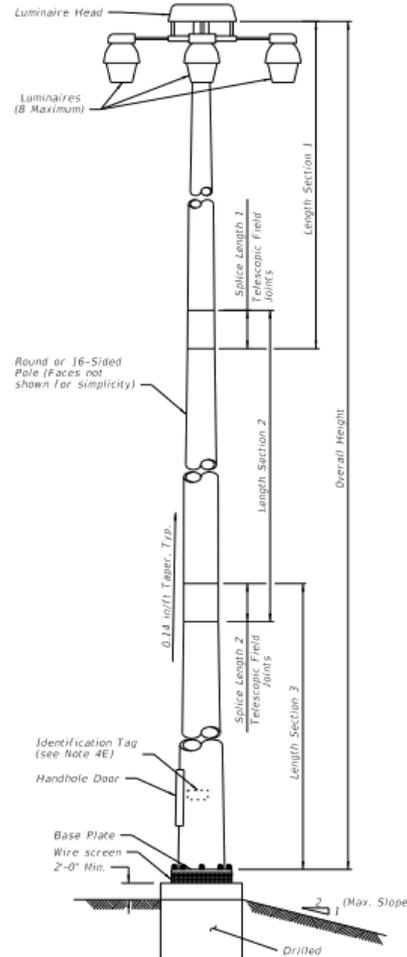
## Materials Acceptance and Certification

- Certification
  - Who certifies?
    - Contractor, Producer, Manufacturer
  - What does it have to say?
  - Does it have test results?
    - If yes, does SMO need to review?
  - **How often?**
    - **931 CMA (Manufacturer) 1 per heat, size and grade per shipment**



## Materials Acceptance and Certification

- Pause for SMO Website Certification examples



### 715-18 Method of Measurement.

The quantities to be paid for will be as follows, completed and accepted:

7. High Mast Lighting Pole Complete: The Contract unit price will include the pole, luminaires with lamps, lowering system, breakers and anchor bolts with lock nuts and washers, and foundation as indicated in the Plans and Standard Plans.



## Materials Acceptance and Certification

### 0715 19 11 - HIGH MAST LIGHT POLE, FURNISH AND INSTALL, 80'

1	346 - Portland Cement Concrete
2	415 - Reinforcing Steel
3	925 - Curing Materials for Concrete
4	931 - Metal Accessory Materials for Concrete Pavement and Concrete Structures
5	962 - Structural Steel and Miscellaneous Metal Items (Other than Aluminum)
6	415 - Reinforcing for Concrete
7	105 - Incidental Precast Concrete Product Certification
8	346 - Structural Portland Cement Concrete

**MAC Materials**

**More than 1 MOA**

### APL

### 0715 19 11 - HIGH MAST LIGHT POLE, FU

1	415 - Reinforcing for Concrete
2	715 - Highway Lighting System
3	925 - Curing Materials for Concrete

**APL Specs**

**More than 1 MOA**



## Materials Acceptance and Certification

- Multiple scenarios and we don't know what the Contractor is going to use
- PA is responsible for identifying the MOA and noting when one isn't used

## Materials Acceptance and Certification

- Optional material pay items:
- Base
  - Asphalt
  - Rock
    - Limerock, GAB, Shell Base, Shell-Rock





## Materials Acceptance and Certification

Optional material pay items:

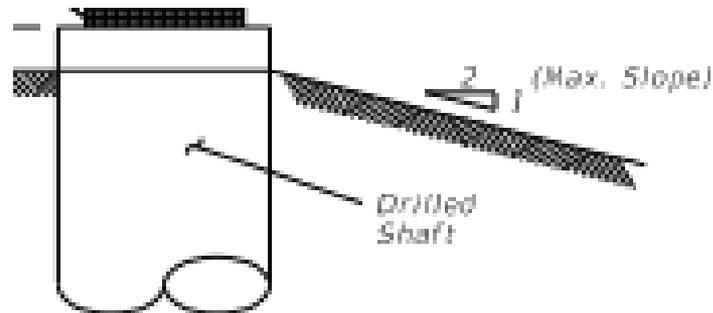
Pay Item:  \*      Material:       Last Updated By:

	Material	Last Updated By	On	
<b>0285701 - OPTIONAL BASE, BASE GROUP 01</b>				
1	200 - Rock Base	Dino Jameson	4/6/2016	<a href="#">Disassociate</a>
2	204 - Graded Aggregate Base	John Shoucair	10/17/2016	<a href="#">Disassociate</a>
3	234 - Superpave Asphalt Base	Marcus Madison	5/20/2016	<a href="#">Disassociate</a>
4	911 - Limerock Material for Base and Stabilized Base	John Shoucair	4/18/2016	<a href="#">Disassociate</a>
5	916 - Bituminous Materials	Susan Musselman	9/29/2016	<a href="#">Disassociate</a>

## Materials Acceptance and Certification

### 715-9 Foundations for Light Poles.

**715-9.1 Concrete Foundations:** Provide foundations for light poles of the sizes and shapes shown in the Plans. Construct precast or cast-in-place concrete foundations in accordance with the Standard Plans. Obtain precast foundations from a plant that is currently on the Department's Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105.





## Materials Acceptance and Certification

- High Mast Lighting Base
  - Precast
    - IPC Plant and 105 Certification
  - Cast in Place
    - Structural Concrete Plant with Drilled Shaft Mix Design
    - Reinforcing Steel
    - Curing Compound

## Materials Acceptance and Certification



- 334 Structural
- 337 Friction
- 330 Smoothness



# Materials Acceptance and Certification

Pay Item:  \*      Material:       Last Updated By:

Pay Item	Last Updated By	On
<b>330 - Hot Mix Asphalt – General Construction Requirements</b>		
1      0334 22 12 - SUPERPAVE ASPHALTIC CONC (TRAFFIC 2) (1 1/4")	Marcus Madison	5/20/2016
<b>334 - Superpave Asphalt Concrete</b>		
2      0334 22 12 - SUPERPAVE ASPHALTIC CONC (TRAFFIC 2) (1 1/4")	Marcus Madison	4/28/2016
<b>916 - Bituminous Materials</b>		
3      0334 22 12 - SUPERPAVE ASPHALTIC CONC (TRAFFIC 2) (1 1/4")	Susan Musselman	9/29/2016

## Materials Acceptance and Certification

- What does this have to do with the PA role in MAC?
  - It's not just failing material
  - You gotta know your contract!!
    - What Materials
    - What MOA for the Materials





## Materials Acceptance and Certification

# Contractor QC Plan





## Materials Acceptance and Certification

### 105-3 Quality Control Program.

Certain operations require personnel with specific qualifications. Certain materials require production under an approved Quality Control (QC) Plan to ensure that these materials meet the requirements of the Contract Documents. Applicable materials include hot mix asphalt, portland cement concrete (structural), earthwork, cementitious materials, timber, steel and miscellaneous metals, galvanized metal products, prestressed and/or precast concrete products, drainage products, and fiber reinforced polymer products. For all applicable materials included in the Contract, submit a QC Plan prepared in accordance with the requirements of this Section to the Engineer. Do not incorporate any of these materials into the project prior to the Engineer's approval of the QC Plan.

Steel and Miscellaneous Metal products, including aluminum, are defined as the metal components of bridges, including pedestrian and moveable bridges, overhead and cantilevered sign supports, ladders and platforms, bearings, end wall grates, roadway gratings, drainage items, expansion joints, roadway decking, shear connectors, handrails, galvanized products, fencing, guardrail, light poles, high mast light poles, standard mast arm assemblies and Monotube assemblies, stay in-place forms, casing pipe, strain poles, fasteners, connectors and other hardware.



## Materials Acceptance and Certification

### **105-5 Contractor Quality Control (QC) Plan.**

**105-5.1 General:** Submit the Contractor QC Plan in the Department's database **seven** days prior to beginning work on any QC material as defined in this Section. The QC Plan may be submitted as a whole or in portions for the work related to the Contract.

Update the QC Plan at least **five** working days prior to the implementation of any changes.

If at any time the Work is not in compliance with the Contract Documents, the Engineer may suspend operations in accordance with 8-6.1.



# Materials Acceptance and Certification

## 105-5 Contractor Quality Control (QC) Plan.

**105-5.1 General:** Submit the Contractor QC Plan in the Department's database **seven** days prior to beginning work on any QC material as defined in this Section. The QC Plan may be submitted as a whole or in portions for the work related to the Contract.

Update the QC Plan at least **five** working days prior to the implementation of any changes.

If at any time the Work is not in compliance with the Contract Documents, the

Update ✕

Company ✕ 7 Days

Material Types

Asphalt ✕ Earthwork ✕ Incidental Precast Products ✕ Precast Pipe ✕ Precast Drainage Structures ✕ Structural Concrete ✕

Save



# Materials Acceptance and Certification

## 105-5 Contractor Quality Control (QC) Plan.

**105-5.1 General:** Submit the Contractor QC Plan in the Department’s database **seven** days prior to beginning work on any QC material as defined in this Section. The QC Plan may be submitted as a whole or in portions for the work related to the Contract.

Update the QC Plan at least **five** working days prior to the implementation of any changes.

If at any time the Work is not in compliance with the Contract Documents, the Engineer may suspend operations in accordance with 8-6.1.

Update Status    Update    Copy Plan    View for P

- Create Addendum for Asphalt
- Create Addendum for Drainage Castings
- Create Addendum for Earthwork
- Create Addendum for Precast Pipe
- Create Addendum for Precast Drainage Structures
- Create Addendum for Structural Concrete

5 days



## Materials Acceptance and Certification

Topic No. 700-000-000  
Construction Project Administration Manual  
Preconstruction Activities

Effective: July 23, 2002  
Revised: December 2, 2021

### Section 3.3

#### CONTRACTOR'S QUALITY CONTROL PLAN

##### 3.3.1 Purpose

This section describes the review and approval process of the **Contractor's Quality Control Plan (QCP)** when required per **Contract Documents**. This section also describes the process of suspending Contractor's work due to inadequate Quality Control (QC) Operations.



## Materials Acceptance and Certification

### (A) Resident Level Responsibilities

The PA shall review the **Contractor's QCP** to ensure it is correct and complete using the checklist provided as a guide in [Attachment 3.3-1, Quality Control Plan Review Checklist](#). All QC Program materials on the contract must be included in the Contractor's QCP prior to material being produced for the contract. Each QC Program material must have at least one production facility listed as the source of the material. Each production facility must have a **Producer's QCP** in acceptable status prior to material being produced for the contract. MAC will update the information with any status change to a technician, laboratory, production facility, or concrete mix design and will notify the PA of any production facility status changes.

describes the process of suspending Contractor's work due to inadequate Quality Control (QC) Operations.



## Materials Acceptance and Certification

- Are all materials included?
  - They don't all have to be there at the beginning
- Flagged entries
  - You can accept a material with flagged entries
    - Technicians
    - Labs
    - Production Facilities



Lab Status?

## Materials Acceptance and Certification

- Lab Status is not an indicator if the lab has the test methods for the material

Structural Concrete (Addendum 11)		
Technicians [18]		
Labs [2]		
Lab	City	Lab Status
10	Pensacola, FLORIDA	Qualified
10	Pensacola, FLORIDA	Qualified

Does lab have structural concrete test methods in a valid status?



## Materials Acceptance and Certification

- Pause for MAC demo of Contractor QC Plan Lab Check



## Materials Acceptance and Certification

Mix Design	Category	Environment Code	Intended Use	Material Availability	Program Maintenance User Reviewed
<a href="#">07-1244-04 [Approved]</a>	Class II (3400 PSI) / Conventional	Extremely Aggressive		Is Available	Yes
<a href="#">07-1245-05 [Approved]</a>	Class I (3000 PSI) / Conventional	Extremely Aggressive		Is Available	Yes
<a href="#">07-1248-05 [Approved]</a>	Class II (3400 PSI) / Slip Form	Extremely Aggressive		Is Available	Yes
<a href="#">07-1250-05 [Approved]</a>	Class II Bridge Deck (4500 PSI) / Conventional	Extremely Aggressive		Is Available	Yes
<a href="#">07-1261-05 [Approved]</a>	Class IV (5500 PSI) / Conventional	Extremely Aggressive		Is Available	Yes

<b>Mix Design Number</b>	<b>Request Number</b>	<b>Mix Design Type</b>	<b>Spec Version</b>
07-1244-04	00021833	Concrete	346 - Portland Cement (

<b>Current Status</b>	<b>Status Date</b>
Approved	1/29/2019

# Materials Acceptance and Certification





## Materials Acceptance and Certification

# Notification of Placing Order – Section 105

when requested.

**105-1.2.3 Notification of Placing Order:** Order materials sufficiently in advance of their incorporation in the work to allow time for sampling, testing and inspection. Notify the Engineer prior to placing orders for materials.

Submit to the Engineer a fabrication schedule for all items requiring commercial inspection at least 30 days before beginning fabrication. These items include steel bridge components, moveable bridge components, pedestrian bridges, castings, forgings, structures erected either partially or completely over the travelled roadway or mounted on bridges as overhead traffic signs (some of these may be further classified as cantilevered, overhead trusses, or monotubes) or any other item identified as an item requiring commercial inspection in the Contract Documents.

Not High Mast Light Poles

# Materials Acceptance and Certification



Bridge Mounted Sign





## Materials Acceptance and Certification

# Notification of Placing Order – Section 105

Commercial Inspection

**How does this tab get on the CQCP?**

**What's on the tab?**

**3 questions – Contractor answers 1**

**PA answers 2 & 3**



## Materials Acceptance and Certification

# Notification of Placing Order – Section 105

Commercial Inspection

**Update** [Close]

Company  
QUINN CONSTRUCTION, INC. [X]

Material Types

Asphalt [X] Earthwork [X] Guardrail [X] Incidental Precast Products [X]  
Precast Drainage Structures [X] Precast Pipe [X] Prestressed Concrete Products [X]

Overhead Gantry  
Overhead Monotube  
**Overhead Span/Truss**  
Painting  
Plastic Pipe

Save



## Materials Acceptance and Certification

Overhead Cantilever [Click to Collapse](#)

Production Facilities [1] [Click to Expand](#)

---

Overhead Span/Truss [Click to Collapse](#)

Production Facilities [1] [Click to Expand](#)

---

Commercial Inspection [Click to Collapse](#)

Are there steel and/or miscellaneous metal items on this project that require commercial inspection per section 105 Notification of Placing Order?  
**Yes**

Items to be Inspected	Component
700 - Highway Signing	Overhead Truss Cantilever
700 - Highway Signing	Overhead Truss Span

Are there other items on this project such as specialty fabrications, field assistance, etc. where commercial inspection should be performed?  
No

Are there steel and miscellaneous metal items on the project that will NOT have commercial inspection?  
Yes  The Contractor should collect certified test reports and submit them to the PA on items not receiving commercial inspection.

[Update](#)



## Materials Acceptance and Certification

- 3<sup>rd</sup> question – are there items that will not be commercially inspected?
  - High Strength Bolts for High Mast Lighting
  - If yes, a reminder is placed on Contractor QC Plan

A blue, cloud-like graphic with a white outline, containing the text "MC Review MOA".

MC Review  
MOA

Are there steel and miscellaneous metal items on the project that will NOT have commercial inspection?

Yes ●

The Contractor should collect certified test reports and submit them to the PA on items not receiving commercial inspection.



**INDUSTRY NOTIFICATION - posted June 15, 2021**

**MAC is the System of Record** for data related to the Quality Assurance Procedure for Construction.

Listings for Production Facilities and Laboratories are now generated from MAC by selecting the Reports menu option and selecting the specific production facility or laboratory listing. You do not need MAC access or to log into MAC to generate the reports. Just select the Reports menu option to be taken to the Reports screen.

FDOT is migrating users from district domains to the DOT domain. MAC users who have migrated must use the DOT\ user id to log into the FDOT sign in portal. If you have migrated do not use your old domain; for example D1\.

**The Earthwork Records System (ERS) is now available on the MAC menu but is not ready for use.** The implementation date has been extended from **July 1, 2021** to **October 1, 2021**. Training will be provided before full implementation for projects let on or after October 1, 2021. For more information, contact your local District Materials and Research Office Earthwork Section

For information on the material types for the Steel, Miscellaneous Metals and Coatings Quality Control Program contact the State Materials Office Commercial Inspection unit at [SM-StructuresCI@dot.state.fl.us](mailto:SM-StructuresCI@dot.state.fl.us)

Additional information on MAC is located at the following address: <http://www.fdot.gov/materials/mac/>.

MAC Implementation Status Update:

- Number of Samples - 850,078
- Number of Projects Certified - 3,164
- Number of Projects with samples - 2,903



# Florida Department of TRANSPORTATION



## Materials Acceptance and Certification System

User: -- [Log In](#)

[Help](#)

[Reports](#)

### [INDUSTRY NOTIFICATION - posted June 15, 2021](#)

**MAC is the System of Record** for data related to the Quality Assurance Procedure for Construction.

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Untitled - Message (HTML)

File Message Insert Options Format Text Review Help Kofax PDF Tell me what you want to do

Paste Copy Format Painter Clipboard Basic Text Names Include Tags Voice Sensitivity Editor Immersive My Templates

To: SM-StructuresCI

Cc:

Bcc:

Subject: Field Inspection Request

Call us or email us if you have any questions. Thank you.



## Materials Acceptance and Certification

# Job Guide Schedule (JGS)



Generated: 6/30/2017 8:37:58 AM

### Job Guide Schedule

FDOT State Materials Office, 5007 N.E. 39th Avenue, Gainesville, FL 32609 (352) 955-6600

**NOTE:** The requirements of the contract and/or Florida Specifications take precedence over this guide schedule.



## Materials Acceptance and Certification

- JGS is a report
- MOA is in the contract documents
- JGS is a guide of the contract requirements
- When there is a contradiction, contract rules



## Materials Acceptance and Certification

- Items on JGS you don't need
- Items you need not on JGS



## Materials Acceptance and Certification

- MAC has two types
  - Standard
  - Nonstandard (NSJGS)



## Materials Acceptance and Certification

- Standard JGS
  - Conventional Pay Item SM contracts
    - Pay item to material association
    - Let date logic to assign Supplemental MAC Specs ONLY



## Materials Acceptance and Certification

- Standard JGS
  - Project Specific requirements are manually assigned by the SMO
    - Special Provision
    - Technical Special Provision
    - Developmental Specification
    - Change Order
    - Plan Note



## Materials Acceptance and Certification

- Only for project specific requirements that change the standard Method of Acceptance

## EXCAVATION AND EMBANKMENT - DESCRIPTION - IDENTIFIED AREAS OF CONTAMINATION.

(REV 11-10-16) (FA 1-26-17) (7-22)

ARTICLE 120-1 is expanded by the following new Subarticle:

**120-1.3 Identified Areas of Contamination:** Certain area(s) within the limits of this project have been identified as contaminated and are delineated in the Plans. The contamination type and levels, when known, are in the specifications or in a contamination assessment report posted on the Department's website at the following URL address:  
<https://ftp.fdot.gov/public/folder/HkSWIK59G0qRNsAJUh3xXg/permitsandorutilityworkschedules>.

The Department will have a Contractor qualified to perform contamination assessment and remediation working in the designated contamination areas under separate Contract (Contamination Assessment/Remediation Contractor - CAR Contractor) whose activities may include but not be limited to the following types of work:

1. Soil sampling.
2. Earth work.
3. Operating scientific field testing equipment.
4. Installation and operation of equipment for dewatering.
5. Installing sheet pile for cofferdams.
6. Treatment of water to remove any contaminants.

A staging area may be required to facilitate the CAR Contractor's operations and will be designated.

Where contamination assessment or remediation work is done simultaneously with the highway construction Contract, the assessment/remediation work period may or may not begin on the day highway construction begins and may or may not be consecutive working days. A schedule to accomplish the assessment/remediation work expeditiously will be established at the preconstruction conference. The Prime and the CAR Contractor will use this schedule as a basis for planning both work efforts. The Engineer must approve any deviation from this schedule before it occurs. Coordinate schedule changes with the CAR Contractor before approval by the Engineer. The Engineer may grant Contract Time extensions according to the provisions of 8-7.3.2.

Schedule operations to avoid intrusion into the areas designated in the Plans or in specified contaminated areas or staging areas reserved for the CAR Contractor until the established schedule dictate, unless agreed to by the CAR Contractor beforehand. Provide access to the aforementioned sites at all times during the assessment/remediation work phase. Resume normal operations in the designated area once the contamination is removed and notice to proceed is issued by the Engineer.

Pay particular attention to the provisions of 8-4.4 dealing with Coordination with other Contractors.

## Materials Acceptance and Certification

### INTEGRAL PILE JACKETS.

(REV 11-16-11) (FA 12-8-11) (1-16)

The following new Section is added after Section 455:

#### SECTION 457 INTEGRAL PILE JACKETS

##### 457-1 Description.

Furnish, fabricate and install an integral pile jacket in accordance with the Contract Documents.

##### 457-2 Materials.

**457-2.1 Stay-In-Place Forms:** Use forms composed of a durable, inert, corrosion resistant material with an interlocking joint along one or two sides that permits the form to be assembled and sealed in place around the pile. Fabricate the forms from fiberglass and polyester resins, having a minimum thickness of 1/8 inches with a minimum thickness at the corners of 3/16 inches. Ensure the form is capable of maintaining its original shape without additional support or damage when placed around a pile. Ensure the inside face of the form has no bond inhibiting agents in contact with the filler material. Provide the forms with bonded or bolted-on, non-metallic standoffs to maintain the forms in the required positions. Sandblast or score the inside surface of the forms with an abrasive material to provide a rough surface texture. Equip



## Materials Acceptance and Certification

**457-2.3.1 Portland Cement Grout:** Use a mix design of portland cement, fine aggregate, water and an admixture containing a minimum of 940 pounds of cementitious material per cubic yard. Up to 30%, by weight of cement, may be replaced by fly ash for standard pile jackets. Do not use fly ash, slag, or silica fume for cathodic protection jackets.

Use silica sand fine aggregate meeting the requirements of Section 902.

Use portland cement meeting the requirements of Section 921.

Use admixtures meeting the requirements of Section 924, ASHTO M194,

Types A and D.

Use air-entraining admixtures meeting the requirements of Section 924 and containing no chlorides or other salts corrosive to metals.

Use fly ash meeting the requirements of Section 929, ASTM C618,

Type F, except that loss on ignition shall not exceed 4%.

Provide a grout filler mix with a minimum compressive strength of 5,000 psi at 28 days and a slump of 7 inches to 9 inches. Submit the design mix to the Engineer for approval by the Department before placing any grout filler.

**457-2.3.2 Class IV Concrete:** Use Class IV Concrete meeting the requirements of Section 346 with an adjusted slump of 7 inches to 9 inches. Reduced size coarse aggregate may be used as approved by the Engineer. Do not use fly ash, slag, or silica fume for cathodic protection jackets.

Submit the design mix to the Engineer for approval by the Department before placing any concrete filler.



## Materials Acceptance and Certification

- “For Project” pay items:
- SIGN PANEL, FURNISH & INSTALL OVERHEAD MOUNT, 51-100 SF WITH, LIGHTING, **PROJECT 428358-4-52-01**
- OPTIONAL BASE- GRADED AGGREGATE, 18" **FOR PROJECT 442749-1-5,2-01**



## Materials Acceptance and Certification

- Non-Standard JGS
  - Created by QC data entry for LS/DB/**LAP** On-system



## Materials Acceptance and Certification

### **105-2 Additional Requirements for Lump Sum Projects.**

Prepare and submit to the Engineer a project-specific list of material items and quantities to be used on the project as a Job Guide Schedule in the same format as the current Sampling, Testing, and Reporting Guide 21 calendar days prior to commencement of construction. Submit up-to-date quantities for the items on the Job Guide Schedule to the Engineer with each monthly progress estimate. The Department may not authorize payment of any progress estimate not accompanied by updated Job Guide Schedule quantities. Maintain the Job Guide Schedule throughout the project including the quantity placed since the previous submittal, and total to date quantity and any additional materials placed. Do not commence work activities that require testing until the Job Guide Schedule has been reviewed and accepted by the Engineer. At final acceptance, submit a final Job Guide Schedule that includes all materials used on the project in the same format as the monthly reports.



## Materials Acceptance and Certification

- Non-Standard JGS
  - Let Date Logic for Supplemental MAC Specs ONLY



# Florida Department of TRANSPORTATION



Project  
201214-3-52-01: I-4 (SR 400) AT SR 559 INTERCHANGE

Company  
[REDACTED]

## Materials [14]

	Material	Estimated Quantity	Current To Date Quantity	Unit of Measure	Last Updated On	Notes
1	120 - Excavation and Embankment	128,719.2	128,719.2	Cubic Yard(s)	9/30/2016	
2	160 - Stabilizing	93,525	93,525	Square Yards	9/30/2016	
3	200 - Rock Base	80,836	80,836	Square Yards	9/30/2016	
4	285 - Optional Base Course	80,836	80,836	Square Yards	2/23/2017	
5	330 - Hot Mix Asphalt – General Construction Requirements	0	0	Ton(s)	10/14/2016	
6	334 - Superpave Asphalt Concrete	15,876	16,540.3	Ton(s)	9/30/2016	
7	337 - Asphalt Concrete Friction Courses	5,500	5,585.3	Ton(s)	11/21/2016	
8	346 - Portland Cement Concrete	1,921	2,441.5	Cubic Yard(s)	9/30/2016	
9	415 - Reinforcing for Concrete	241.57	241.57	Ton(s)	9/30/2016	
10	548 - Retaining Wall Systems	4,388	4,388	Cubic Yard(s)	9/30/2016	
11	550 - Fencing	875	875	Linear Feet	2/24/2017	
12	962 - Structural Steel and Miscellaneous Metal Items (Other than Aluminum)	68	68	Each	2/27/2017	
13	971 - Pavement Marking Materials	11	11	Mile(s)	2/23/2017	
14	975 - Structural Coating Materials	690	690	Gallon(s)	2/24/2017	



## Materials Acceptance and Certification

- Non-Standard JGS
  - Reviewed by PA
  - Project Specific Requirements



## Materials Acceptance and Certification

Non-SiteManager jobs  
don't have a let date





## Materials Acceptance and Certification

- Need to coordinate with SMO
  - When the initial Materials are added
  - When any new materials are added

Create New Non Standard JGS

Project  
415400-1-58-01: SR 500 US 441 MEDIAN \*

**ERROR:** Project must be a Lump Sum Project to have a Non Standard JGS. If you feel this Project does require a Non Standard JGS, please contact the System Admin to have this created.

Create



## Materials Acceptance and Certification

- SMO's job:
  - Find the correct MAC Supplemental workbook version for your project
    - We may need assistance
      - Usually somewhere in the contract documents
  - Assign a project specific MAC Spec copy of the appropriate workbook version



# Materials Acceptance and Certification

**Create Sample Login**

Sample Category  
Project ▾

Contract/Project  
ASK63 / 258958-1-58-01: RIDGE RD / SUNCOAST PKWY ✕

Pay Items  
No Pay Items found related to all selected projects/materials

Material/Specification  
160 - Stabilizing ▾

MAC Spec  
160 - Stabilizing, Supplemental Specification, 07/2018, v5.1



# Materials Acceptance and Certification

**Create Sample Login**

Sample Category  
Project ▾

Contract/Project  
ASK63 / 258958-1-58-01: RIDGE RD / SUNCOAST PKWY ✕

Pay Items  
No Pay Items found related to all selected projects/materials

Material/Specification  
160 - Stabilizing ▾

MAC Spec  
160 - Stabilizing, Special Provision [No Let Date 07/16], 01/2016, v1.1

**Materials Acceptance and Certification**

# Sample Status Progress



# Materials Acceptance and Certification



Company Roles



System Roles





## Materials Acceptance and Certification

- Track open sample status
  - Move them along in a timely manner
- A Finalized sample = or  $\neq$  “Closed”

## Materials Acceptance and Certification

# Finalized = Closed

- Logged
- Received
- Tested
- Submitted
- Finalized
  - Nothing else - DONE



## Materials Acceptance and Certification

# Finalized ≠ Closed

- Logged
- Received
- Tested
- Submitted
- Finalized
- ***Compares*** •

A blue thought bubble with a white outline, containing the text "Some place else to go after sample screen". The bubble is connected to the list by three smaller blue circles of increasing size.

Some place else  
to go after sample  
screen



## Materials Acceptance and Certification

- Finalize **project** samples

Sample 2200897939 [Pending Finalization]

Finalize Sample

- BUT FIRST



## Materials Acceptance and Certification

- Use checklists to finalize samples
- Asphalt
  - Plant
  - Roadway
- Soils
- ERS
- Structural Concrete



### Soils/Earthwork Materials

(Material IDs 120, 145, 160, 200 and 548)

- A. Check to see that the following sample header is accurate:**
- Aggregate Mine Production Facility Id (if applicable)
  - Date Sample Taken is correct
  - Sample Number
  - LOT Number
    - All samples identify the LOT Number
    - Verification Samples identify all QC LOTs that the sample represents in the LOTs represented field
  - Category, Type, Sample Purpose
- NOTE:** Do not return the sample for data correction if the Category, Type or Sample Purpose is incorrect. A new sample with the correct key fields must be created and the incorrect sample must be deleted.
- B. Check the following test data:**
- Test data is properly reported and look reasonable
  - Dates Tests Performed are correct
  - AASHTO T88 soil gradation analysis does not have negative values for total percent passing
    - Accurate soil gradation analysis is required and dependent upon on accurate reporting of AASHTO M145 soil classification
- C. Check to ensure the following qualifications are valid. These would only be returned if the reason for the issue is data entry error. Do not return if the information that triggered the issue is correct:**
- Review each entered test method to ensure the Technician's qualification is valid for both the sampler and tester
  - Correct TIN is identified
  - The Base Material Aggregate Production Facility is in approved status if applicable
  - The laboratory is qualified in the appropriate test methods
- D. Other Verifications:**
- All LOTs are sampled, tested, identified and reported on all samples (Refer to Specifications for frequency of sampling and testing)
  - Tests that are not performed have a note explaining the disposition of the

<https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/materials/mac/training/smplfinalguide/finalization-soils.pdf>



## Materials Acceptance and Certification

### B. Check the following test data:

- Test data is properly reported and look reasonable
- Dates Tests Performed are correct
- AASHTO T88 soil gradation analysis does not have negative values for total percent passing
  - Accurate soil gradation analysis is required and dependent upon on accurate reporting of AASHTO M145 soil classification



## Materials Acceptance and Certification

### Sieve Analysis

Sieve Size	Sieve Added	Mass Retained (g)	% Retained	% Finer	% Finer (Total)
3"	No				
2"	No				
1 1/2"	No				
1"	No				
3/4"	Yes	50.19	14.16	85.84	85.8
1/2"	No				
3/8"	Yes	62.40	17.61	82.39	82.4
#4	Yes	84.44	23.83	76.17	76.2
#8	No				
#10		128.90	36.37	63.63	63.6
#16	No				
#30	No				
#40		4.68	3.63	96.37	61.3
#50	Yes	16.52	12.82	87.18	55.5
#60	No				
#100	Yes	146.75	113.86	-13.86	-8.8
#200		82.59	64.08	35.92	22.9

Negative value check status?

Fail

Does not meet target/limit [Negative value check status? Equals (ignoring case) 'Pass']

# Structural Concrete Materials

## (Material IDs 346, 350 and 353)

### A. Check to see that the following sample header is accurate:

- FDOT sample number
- Date Sample Taken is correct
- LOT number/s
- Structural Concrete Production Facility Id number is correct and is on the QC Plan
- Mix design number is correct and is on the QC Plan
- Sample MAC Spec category and type match the mix design category and type
  - If not, the sample must be deleted and reentered if mismatch is due to incorrect category/type except for Class I (3000 PSI) used under MAC Spec 350 for formed concrete pavement*** - mismatch can be ignored if the category/type is correct only in this case
- All samples in the comparison package have the same:
  - MAC Spec
  - Category/Type
  - Mix Design
  - QC and VT have the same production facility

**NOTE:** Do not return the sample for data correction if key fields are incorrect. A new sample with the correct key fields must be created and the incorrect sample must be deleted.

### B. Check the following test data:

- Dates Tests Performed are correct
- All test results are properly reported and look reasonable
- The appropriate meter for the air content test has been selected
  - If the air content was performed using a pressure meter, review the mix design to ensure that it has an aggregate correction factor
- The correct number of cylinders is indicated
- The correct age is indicated



## Materials Acceptance and Certification

### Specimen Info

Type of Specimen	4" x 8" Cylinder		
Is Hardened Density Needed?	No		
Age	28 Days		
	Specimen 1	Specimen 2	Specimen 3
Length 1 (in)	8.00	8.00	8.00
Diameter 1 (in)	4.01	4.00	3.99
Diameter 2 (in)	3.98	3.98	3.98
Average Diameter (in)	4.00	3.99	3.99
Area (in <sup>2</sup> )	12.56637	12.50362	12.50362
Max Load (lbs)	70,300	72,545	7,915
Fracture Type	5	5	5
End Treatment Used	Unbonded Pads	Unbonded Pads	Unbonded Pads
Compressive Strength (psi)	5,594	5,802	633

Potential Error. Review Max Load Inputs

Average Compressive Strength (psi)

4,010

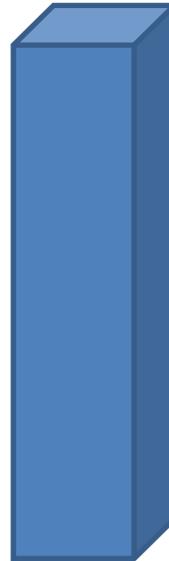


Does not meet target/limit [Average Compressive Strength >= 5,500]

# Materials Acceptance and Certification



Company Roles



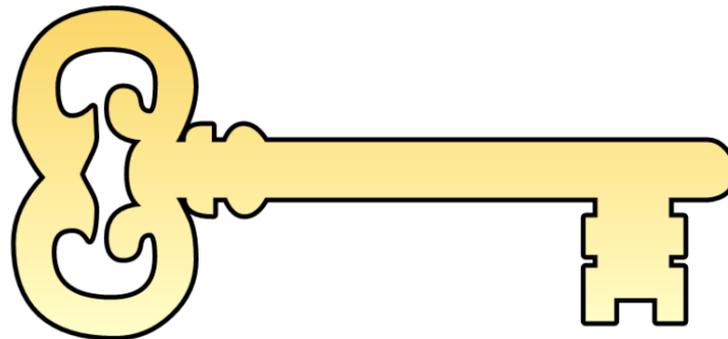
System Roles





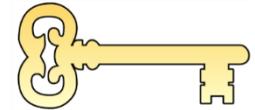
## Materials Acceptance and Certification

# Changing Key Fields on a Sample

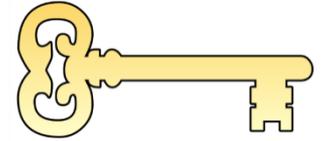
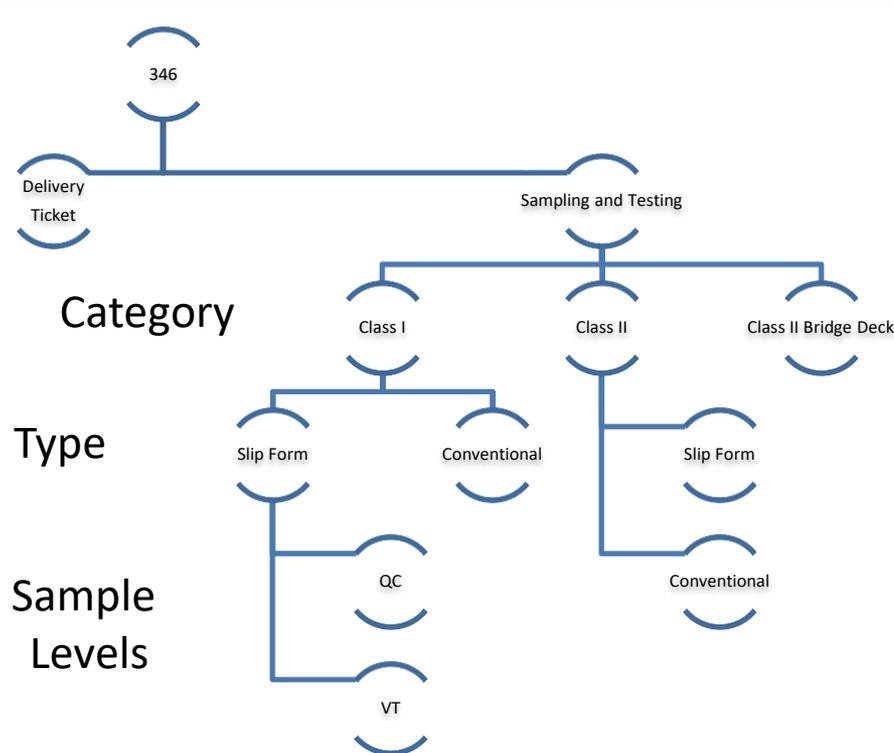


## Materials Acceptance and Certification

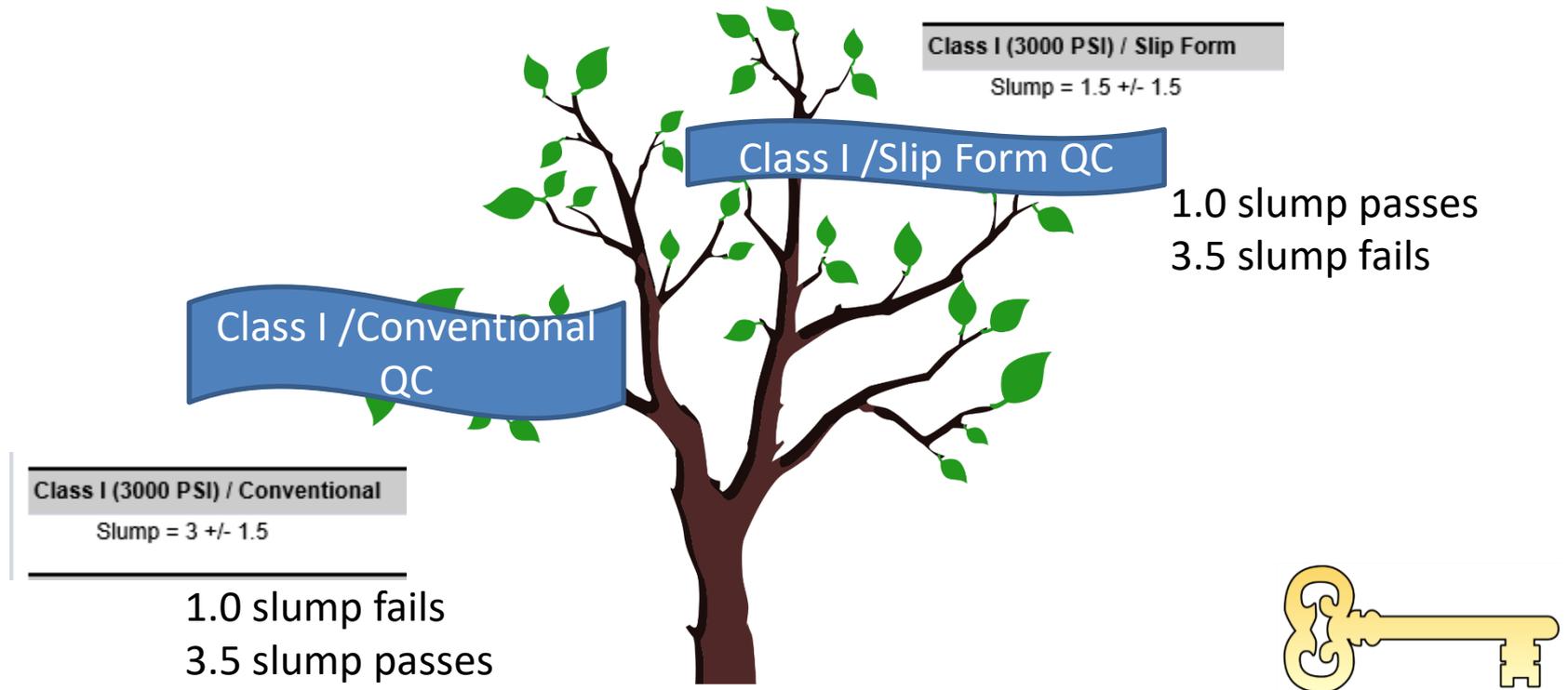
- User selected wrong MAC Spec, category, sample level, etc. on sample
- Don't change key fields
  - The system will **let** you, but it won't **work**
- New Sample Created with correct key fields & processed through life cycle
- Then incorrect sample must be deleted



## Materials Acceptance and Certification



# Materials Acceptance and Certification





## Materials Acceptance and Certification

- Pending Finalization Search Demo
- Hands on
  - Send the sample back?

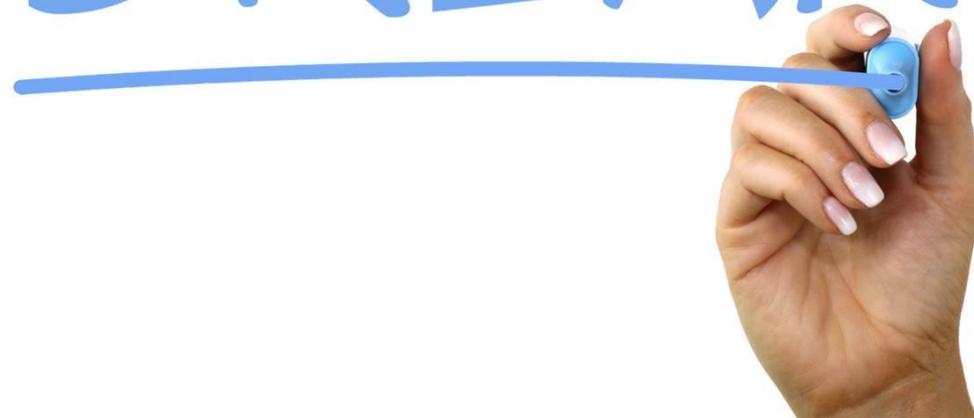


Florida Department of  
**TRANSPORTATION**



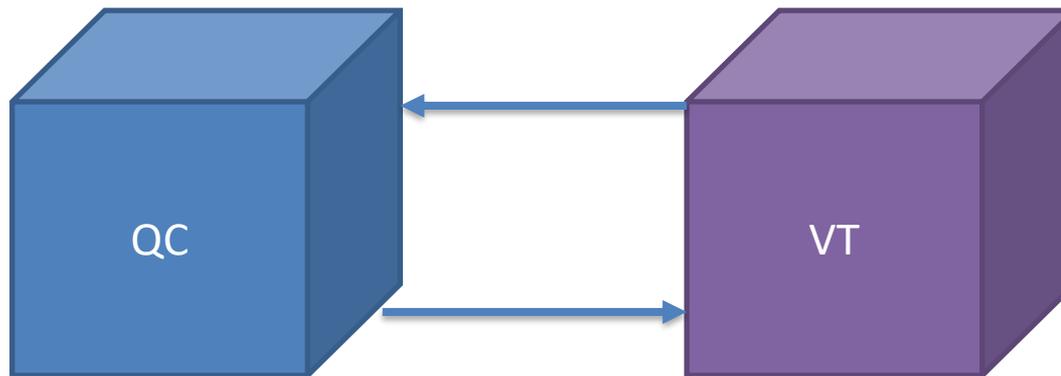
## Materials Acceptance and Certification

**BREAK**



## Materials Acceptance and Certification

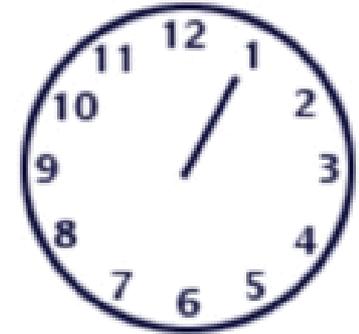
# Project Comparison Packages





## Materials Acceptance and Certification

- Structural concrete comparison packages
- How long does the resolution lab have to perform resolution?





## Materials Acceptance and Certification

- ***Don't wait*** for all the samples in the package to be finalized to create the package
- As ***soon*** as you finalize the original and verification samples, create the comparison package and ***run the comparison***
- Add associated samples later



## Materials Acceptance and Certification

- Are samples in a comparison package with a comparison status of **Compares** open or closed?



## Materials Acceptance and Certification

- Are samples in a comparison package with a comparison status of **Does Not Compare** open or closed?



## Materials Acceptance and Certification

- How do you get them closed?
- 2 ways
  - Perform (Run) Resolution and get **any** resolution status or
  - If resolution is required and not performed, designate it as Resolution Not Performed

## Materials Acceptance and Certification

- Get orphan samples into incomplete packages
- Incomplete packages don't always end up as an Exception

**CLOSED** 

### Incomplete Comparison Package Reason Code

Comparison Test(s) Not Performed  
Missing or Damaged IV Sample  
Missing or Damaged QC Sample  
Missing or Damaged VT Sample  
Random Number Did not Come Up  
Sample(s) in LIMS  
Small Quantities



## Materials Acceptance and Certification

- Pause for MAC Comparison Package demo
- Open Sample Report Demo

## Materials Acceptance and Certification

# MC Review





## Materials Acceptance and Certification

- The Materials Acceptance and **Certification** system, MAC, is designed around the requirements for Final Project Materials Certification.

## Materials Acceptance and Certification

- Certification is simply an audit of the material acceptance decisions made on the contract
- Therefore, we must get the acceptance testing data into the system
- This is accomplished with the Job Guide Schedule (JGS)

## Materials Acceptance and Certification

Topic No. 700-000-000  
Construction Project Administration Manual  
Project Documentation

Effective: July 1, 2002  
Revised: October 3, 2019

### **5.8.6 Method of Acceptance**

There are three methods of material acceptance: 1) certification; 2) visual inspection; and 3) sampling and testing.

testing data into the system

- This is accomplished with the Job Guide Schedule (JGS)



# Florida Department of TRANSPORTATION



## Materials Acceptance and Certification



### Florida Department of Transportation

RON DESANTIS  
GOVERNOR

14200 West SR-84  
Davie, FLORIDA 33325

KEVIN J. THIBAUT, P.E.  
SECRETARY

July 17, 2020

Mr. Mario Cabrera, P.E.  
District Six Construction Engineer  
1000 North West 111th Avenue  
Miami, FLORIDA 33172

Dear Mr. Cabrera:

Subject: Contract No: T6457  
Financial Project ID: 440184-1-52-01, 440185-1-52-01, 440188-1-52-01  
Federal Project ID: D618043B  
County: BROWARD  
Road No: SR 5/US 1 SIGNALIZED INTERSECTION  
LIGHTING FROM SW 344 TO SW 244 ST

This is to certify that:

The results of the tests on required acceptance samples indicate the materials incorporated in the construction work and operations controlled by sampling and testing were in conformity with the approved plans and specifications.

There are no known exceptions to this certificate.

Very truly yours,

Michael Kim, P.E.  
District Materials and Research Engineer

Timothy J. Ruelke, P.E.  
Director, Office of Materials

Digitally Signed by MAC Material Certification Process  
Authorization: Michael Kim 7/14/2020 12:18:14 PM

Digitally Signed by MAC Material Certification Process  
Authorization: Timothy Ruelke 7/17/2020 12:26:44 PM



# Materials Acceptance and Certification



## 23 CFR Appendix A to Subpart B of Part 637 - Guide Letter of Certification by State Engineer

[CFR](#)

[prev](#) [next](#)

### Appendix A to Subpart B of Part 637 - Guide Letter of Certification by State Engineer

Date  
Project No.

This is to certify that:

The results of the tests used in the acceptance program indicate that the materials incorporated in the construction work, and the construction operations controlled by sampling and testing, were in conformity with the approved plans and specifications. (The following sentence should be added if the IA testing frequencies are based on project quantities. All independent assurance samples and tests are within tolerance limits of the samples and tests that are used in the acceptance program.)

Exceptions to the plans and specifications are explained on the back hereof (or on attached sheet).

Director of STD Laboratory or other appropriate STD Official.

Very truly yours,

Michael Kim, P.E. District Materials and Research Engineer	Timothy J. Ruelke, P.E. Director, Office of Materials
<small>Digitally Signed by MAC Material Certification Process Authorization: Michael Kim 7/14/2020 12:18:14 PM</small>	<small>Digitally Signed by MAC Material Certification Process Authorization: Timothy Ruelke 7/17/2020 12:26:44 PM</small>



# Materials Acceptance and Certification

Topic No.: 675-000-000  
Materials Manual  
Quality Assurance

Effective: March 1, 2000  
Revised: February 1, 2018

## Section 5.4

### FINAL PROJECT MATERIAL CERTIFICATION

#### 5.4.1 PURPOSE

To describe the Material Certification process requirements.

#### 5.4.2 AUTHORITY

Sections 334.044(2), 334.044(10) (a) and 334.048 Florida Statutes

#### 5.4.3 SCOPE

Offices affected by this procedure include the State Materials Office (SMO), State Construction Office (SCO) District Construction Offices (DCOs) and District Materials and Research Offices (DMROs).

#### 5.4.4 REFERENCES

FEDERAL-AID POLICY GUIDE (FAPG), 23CFR, Subchapter G - Engineering and Traffic Operations, Part 637 - Construction Inspection and Approval, Subpart B - Quality Assurance Procedures for Construction

#### 5.4.5 GENERAL INFORMATION

Sampling, testing and reporting requirements are applicable for both Federal-

Topic No. 700-000-000  
Construction Project Administration Manual  
Project Documentation

Effective: July 1, 2002  
Revised: October 3, 2019

## Section 5.8 CONTROL OF MATERIALS

#### 5.8.1 Purpose

To establish a uniform standard for the control of materials on construction projects.

#### 5.8.2 Authority

Sections 20.23(3)(a) and 334.048(3), [Florida Statutes](#)

#### 5.8.3 References

[Standard Specifications for Road and Bridge Construction](#)

[Federal-Aid Policy Guide, 23 Code of Federal Regulations \(CFR\) 637](#)

[Procedure No. 675-000-000, Materials Manual](#)

#### 5.8.4 General

The **Contract Documents** contain **Specifications** and guidance relevant to the acceptance of all materials incorporated into a project. The Job Guide Schedule (JGS), included in the Materials Acceptance and Certification system (MAC), indicates who samples and tests each of these materials and at what frequency. The Final Project



## Materials Acceptance and Certification

Topic No. 700-000-000  
Construction Project Administration Manual  
Project Documentation

Effective: July 1, 2002  
Revised: October 3, 2019

### **(A) Resident Level Responsibilities**

The Project Administrator (PA) is responsible for reviewing the **Contract Documents** to ensure the JGS is correct and complete. If there are missing material assignments, the PA must contact the SMO technical unit to ensure the JGS is complete. Project specific materials are included in the **Special Provisions, Technical Special Provisions, Developmental Specifications, and Change Orders** that designate a method of acceptance. If any exist, the PA is responsible to ensure that the JGS includes these entries.



## Materials Acceptance and Certification

- MC Reviewer needs to initiate review when project begins
- MAC sends findings to the MC Review process



## Materials Acceptance and Certification

- Pause for MAC MC Review findings screen



## Materials Acceptance and Certification

- What is a finding?
  - Automatic findings
  - Manual Findings
- What is an Exception?



## Materials Acceptance and Certification

- Exception 1 = Non-Standard Material
  - Failing Test Results
  - Missing Reports



## Materials Acceptance and Certification

- Exception 2 = Minimum Frequency
  - Required tests not performed
  - Required Comparison not performed
  - Required Resolution not performed
  - Not enough samples



# Florida Department of TRANSPORTATION



## Materials Acceptance and Certification

### Concrete Sample Number – Lot Number Report

Lot #	FDOT Sample #	Level	Production Facility ID	Sample ID	Date Sample Taken	Sample Status	Comparison Package Id	Comparison Status	Quantity Represented
<b>Mix Design: 01-1188-03</b>									
<b>Category: Class II Bridge Deck (4500 PSI) / Conventional</b>									
<b>Financial Project ID:</b> [REDACTED]									
<b>Material ID: 346</b>									
29	CC20029Q	QC	13-489	1600017858	10/19/2016	Finalized	4429	Compares	40 Cubic Yard(s)
30	CC20030Q	QC	13-489	1600017860	10/19/2016	Finalized	4429	Compares	30 Cubic Yard(s)
31	CC20031Q	QC	13-489	1600020470	10/27/2016	Finalized	4429	Compares	50 Cubic Yard(s)
29-32	CC20031v	VT	13-489	1600020508	10/27/2016	Finalized	4429	Compares	50 Cubic Yard(s)
32	CC20032Q	QC	13-489	1600020472	10/27/2016	Finalized	4429	Compares	20 Cubic Yard(s)
33	CC20033Q	QC	13-489	1600023564	11/3/2016	Finalized	8478	Compares	26 Cubic Yard(s)
34	CC20034Q	QC	13-489	1600024225	11/4/2016	Finalized	8478	Compares	26 Cubic Yard(s)
35	CC20035Q	QC	13-489	1700072239	3/11/2017	Finalized	8478	Compares	50 Cubic Yard(s)
33-36	CC20035v	VT	13-489	1700072251	3/11/2017	Finalized	8478	Compares	50 Cubic Yard(s)
36	CC20036Q	QC	13-489	1700072240	3/11/2017	Finalized	8478	Compares	50 Cubic Yard(s)
37	CC20037Q	QC	13-489	1700072241	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
38	CC20038Q	QC	13-489	1700072242	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
37-40	CC20038v	VT	13-489	1700072260	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
39	CC20039Q	QC	13-489	1700072243	3/11/2017	Finalized	8479	Compares	50 Cubic Yard(s)
40	CC20040Q	QC	13-489	1700072245	3/11/2017	Finalized	8479	Compares	41 Cubic Yard(s)
41	CC20041Q	QC	13-489	1700074639	3/16/2017	Finalized	8480	Compares	50 Cubic Yard(s)
42	CC20042Q	QC	13-489	1700074642	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
41-44	CC20042v	VT	13-489	1700074359	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
43	CC20043Q	QC	13-489	1700074644	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
44	CC20044Q	QC	13-489	1700074646	3/17/2017	Finalized	8480	Compares	50 Cubic Yard(s)
45	CC20045Q	QC	13-489	1700074649	3/17/2017	Finalized			50 Cubic Yard(s)
46	CC20046Q	QC	13-489	1700074651	3/17/2017	Finalized	9766	Incomplete Package	40 Cubic Yard(s)



## Materials Acceptance and Certification

- Pause for MAC Sample Tracking Reports
  - Sample Certification Summary
  - Sample Certification Tracking



## Materials Acceptance and Certification

- Exception Category 3 = Qualifications
  - Technicians
  - Laboratories
  - Production Facilities
    - Manual Findings



## Materials Acceptance and Certification

### Special Programing:

- Straightedge Deficiencies
- Materials that allow Delineation

These two automatic findings trigger specific functionality with the MAR process that you will not get when creating a manual finding



## Materials Acceptance and Certification

### Add Manual Finding

Finding Type

Other

Description

Contractor placed pipe that was produced by a plant with no Producer QC Plan.

Comparison Package

Sample

Create



## Materials Acceptance and Certification

**Add Manual Finding** ✕

**Finding Type**  ★

**Description**  ★

**Comparison Package**

**Sample**



## Materials Acceptance and Certification

- Respond to Findings
- Process MARs



## Materials Acceptance and Certification

936756 	Comparison is required by the MAC Spec for Sample 2100806578 but was not performed	System		2100806578 QC		Submitted
936755	Sample 2100804368 is not Finalized	System		2100804368 QC		Submitted
936754	Sample 2100795829 is not Finalized	System		2100795829 QC		Submitted
936753	Sample 2100789940 has a failing result on required Test ASTM C39 Compressive Strength	System		2100789940 QC	ASTM C39 Compressive Strength	Submitted
936752	Sample 2100789940 is not Finalized	System		2100789940 QC		Submitted
936751	Sampler [M24578064] on Sample 2100789939 is not Qualified	System		2100789939 QC		Submitted
936750	Sample 2100789939 is not Finalized	System		2100789939 QC		Submitted
936749	Sample 2100788790 is not Finalized	System		2100788790 VT		Submitted
936748 	Comparison Package 126848 is required but was marked Incomplete	System	126848	2200904696 QC		Submitted



## Materials Acceptance and Certification

- What is MAR?
- When is it used?



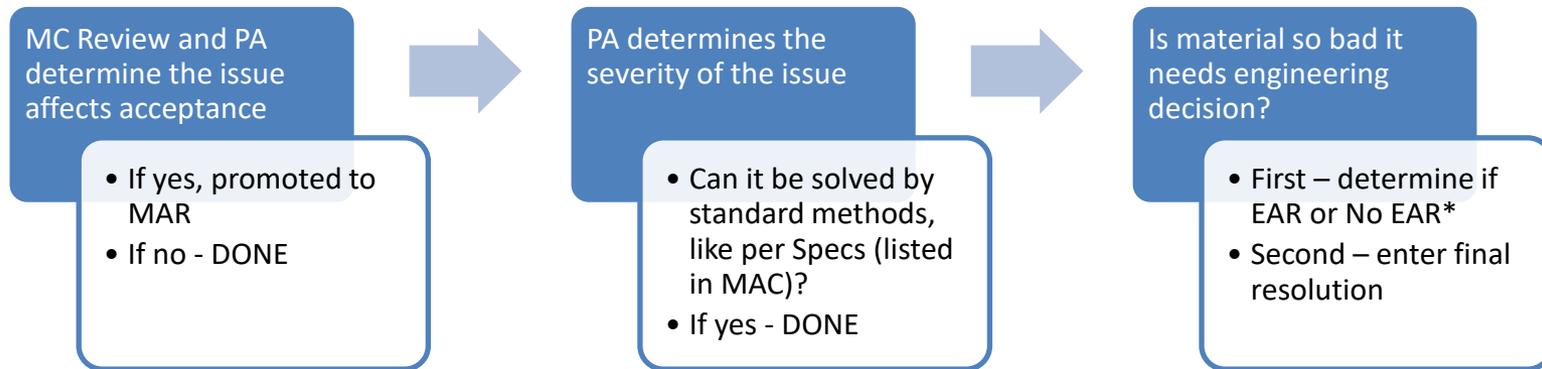
## Materials Acceptance and Certification

### 5.8.7 Materials Acceptance Resolution

If a material is designated by the Materials Certification Review personnel to require resolution of the material acceptance, it will be promoted to the Materials Acceptance Resolution (MAR) process in MAC. All materials with acceptance issues will be promoted to MAR and final resolution determined. The life cycle of the issue will depend on the original issue and the nature of the material acceptance needing resolution. Some issues can be resolved directly by the PA without additional input. Some issues will require input from the District Materials and Research Engineer (DMRE), the District Construction Engineer (DCE), and the Director, Office of Construction (DOC). This procedure is outlined in the *Material Acceptance Resolution Flow Chart* ([Attachment 5.8-1](#)).

## Materials Acceptance and Certification

# Overview of the MAR Process





## Materials Acceptance and Certification

Findings [70] [Click to Collapse](#)

[Return to List](#)

[Update](#)

Finding Type	Description	Sample	FDOT Sample Number	Sample Package Test	Status
System Generated	Tester [F12345678] on Sample 1600013594/Test ASTM C39 Compressive Strength is not Qualified	<a href="#">1600013594 QC</a>	CC40001Q	ASTM C39 Compressive Strength	Promoted to MAR

**Current Recommendation**

Recommendation has not yet been made by District Materials Research Engineer

**Pay Items**

Sample Info [Click to Expand](#)

Responses [1] [Click to Expand](#)

Recommendations [2] [Click to Expand](#)

Resolutions [0] [Click to Expand](#)

Locations [0] [Click to Expand](#)

Documents [0] [Click to Expand](#)

Comments [0] [Click to Expand](#)



## Materials Acceptance and Certification

- What is the difference between a recommendation & a resolution?



## Materials Acceptance and Certification

- There are seven (7) recommendations
- Five (5) are also final resolutions that can be made by the PA



## Materials Acceptance and Certification

Set R

Asphalt Follow Up Sample Passed  
Complete Removal and Replacement  
EAR

Re

Material Rejected for Use  
No EAR

Pay Reduction Per Specification  
Reworked and Remixed



## Materials Acceptance and Certification

### (1) **Materials Acceptance Resolution by Specifications**

For straightedge deficiencies, the procedures shall follow the requirements of [CPAM Section 11.5, Testing and Correcting Asphalt Pavement Surface Deficiencies](#).

For other material acceptance within **Specifications**, the PA will document the final resolution on the MAR issue in MAC. These determinations are designated by selecting one of the following options:

- a) Asphalt Follow-up Sample Passed – The material is resampled and the results are acceptable in accordance with **Materials Manual Section 3.1 District Materials Activities for Asphalt Pavement Construction**.
- b) Complete Removal and Replacement – The Contractor chooses to remove the material and replace it without requesting an [Engineering Analysis Report \(EAR\)](#).
- c) Material Rejected for Use – The material was sampled from a stockpile and the material is removed from use on the project before it is placed.
- d) Pay Reduction per Specifications – The **Specifications** allow a pay reduction to be assessed if a material falls within the pay reduction criteria.
- e) Reworked and Remixed – The material allows for rework, and sample is taken for the rework that designates that the reworked material is acceptable.

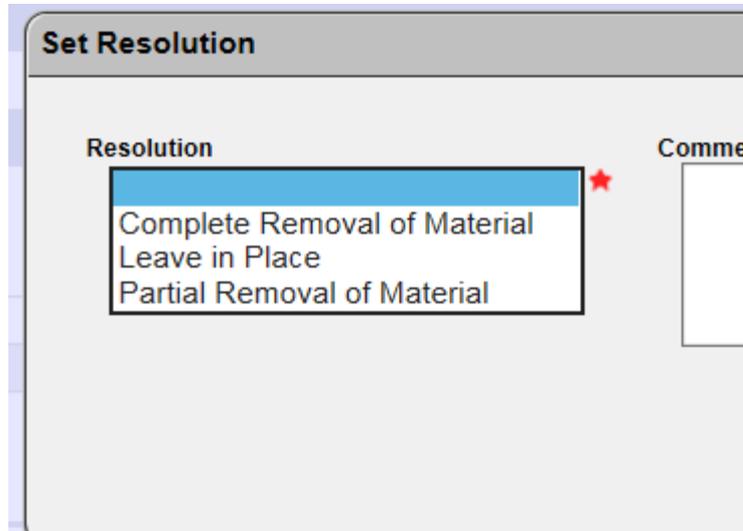


## Materials Acceptance and Certification

- If EAR or No EAR is selected, 2<sup>nd</sup> process is needed to determine final resolution
  - Or No EAR Delineation if the Specification allows resolution by delineation

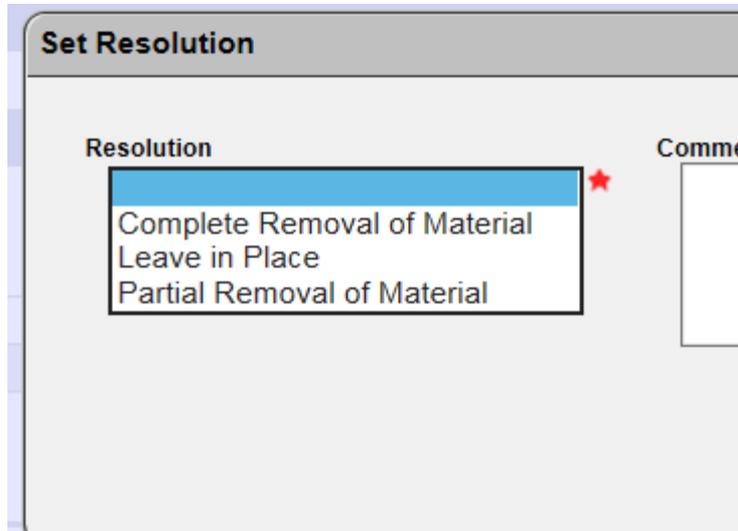
## Materials Acceptance and Certification

- Resolution options:

A screenshot of a software dialog box titled "Set Resolution". The dialog has a light gray background and a title bar. Below the title bar, there are two main sections: "Resolution" and "Comments". The "Resolution" section contains a dropdown menu with three options: "Complete Removal of Material", "Leave in Place", and "Partial Removal of Material". The "Complete Removal of Material" option is currently selected and highlighted in blue. A small red star icon is positioned to the right of the dropdown menu. The "Comments" section is partially visible on the right side of the dialog, showing a text input area.

## Materials Acceptance and Certification

- Resolution options:

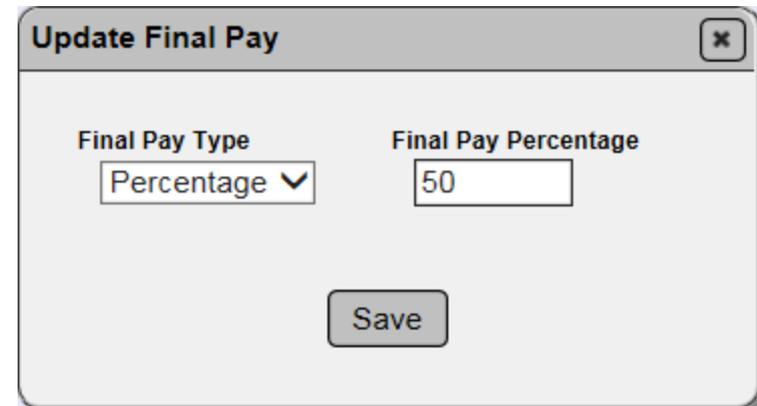
A screenshot of a software dialog box titled "Set Resolution". It features a "Resolution" label and a dropdown menu with three options: "Complete Removal of Material" (highlighted in blue), "Leave in Place", and "Partial Removal of Material". A red star icon is positioned to the right of the dropdown menu. To the right of the dropdown is a "Comments" label and a text input field.

**Set Resolution**

Resolution

Complete Removal of Material  
Leave in Place  
Partial Removal of Material

Comments

A screenshot of a software dialog box titled "Update Final Pay". It contains two fields: "Final Pay Type" with a dropdown menu set to "Percentage" and a checkmark, and "Final Pay Percentage" with a text input field containing the value "50". A "Save" button is located at the bottom center of the dialog box.

**Update Final Pay**

Final Pay Type: Percentage

Final Pay Percentage: 50

Save

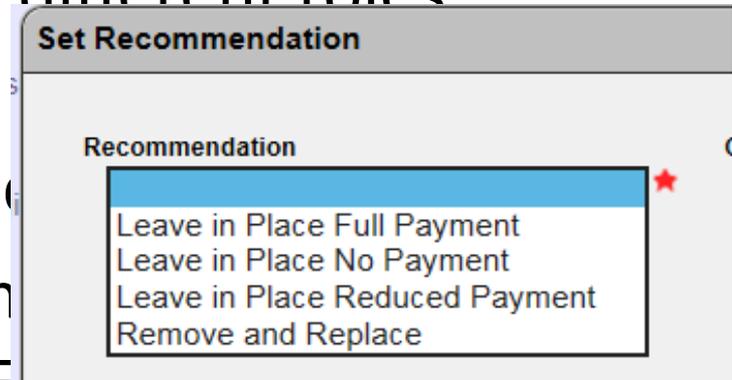


## Materials Acceptance and Certification

- Straightedge Deficiencies
  - Has a different flow with different roles based on CPAM Chapter 11
  - Resident Engineer instead of PA
  - District Bituminous Engineer instead District Materials and Research Engineer
  - Recommendation is Final Resolution

## Materials Acceptance and Certification

- Straightedge Deficiencies
  - Has a different flow with different roles based on CPAM Chapter
  - Resident Engineer instead
  - District Bituminous Engineer Materials and Research Engineer
  - Recommendation is Final Resolution



The screenshot shows a 'Set Recommendation' dialog box with a list of four options. The first option, 'Leave in Place Full Payment', is highlighted in blue and has a red star icon to its right. The other options are 'Leave in Place No Payment', 'Leave in Place Reduced Payment', and 'Remove and Replace'.

Recommendation
Leave in Place Full Payment
Leave in Place No Payment
Leave in Place Reduced Payment
Remove and Replace



## Materials Acceptance and Certification

Recommendations [3]

	Recommendation	Comment	Asphalt Sample	Final Pay (\$)	Final Pay (%)	
Resident Engineer	Leave in Place No Payment					<a href="#">Update Final Pay</a>
District Bituminous Engineer	Leave in Place No Payment					<a href="#">Update Final Pay</a>
District Construction Engineer	Leave in Place No Payment					<a href="#">Update Final Pay</a>

Resolutions [0]

*No results found*

- DISTRICT BITUMINOUS ENGINEER INSTEAD DISTRICT Materials and Research Engineer
- Recommendation is Final Resolution



## Materials Acceptance and Certification

- Materials that allow Delineation
  - Has the same flow with the same roles as other MARs
  - The difference is the option for No EAR – Delineation will not show up for a manual finding



## Materials Acceptance and Certification

**Set Recommendation**

Recommendation

- Asphalt Follow Up Sample Passed
- Complete Removal and Replacement
- EAR
- Material Rejected for Use
- No EAR
- Pay Reduction Per Specification
- Reworked and Remixed

**Set Recommendation**

Recommendation

- Asphalt Follow Up Sample Passed
- Complete Removal and Replacement
- EAR
- Material Rejected for Use
- No EAR
- No EAR - Delineation**
- Pay Reduction Per Specification
- Reworked and Remixed

11/11/18

Discontinuation



## Materials Acceptance and Certification

- Location Information
  - PA fills it out
  - After the resolution



## Materials Acceptance and Certification

- PA needs to ensure the location information is correct and complete
- For Complete Removal and Replacement & Leave in Place – one set of entries



## Materials Acceptance and Certification

### Add Location of Representative Material

Rci Lanes

 \*

From Station

 \*

To Station

 \*

Latitude

 \*

Longitude

 \*

Ending Latitude

 \*

Ending Longitude

 \*

Offset Distance

Offset Direction

Reference Line

Placement Designation

- Left in Place \*
- Partial Remove and Replace
- Removed

Quantity

 \*

Unit Of Measure

 \*

Save



## Materials Acceptance and Certification

### Add Location of Representative Material

Rci Lanes

L1 x L3 x L4 x

From Station

100+00

To Station

275+45

Latitude

21.012578

Longitude

-82.213457

Ending Latitude

21.032145

Ending Longitude

-82.242354

Offset Distance

Offset Direction

Reference Line

Placement Designation

Left in Place

Quantity

1,250

Unit Of Measure

Ton(s)

Save



## Materials Acceptance and Certification

- For Partial Removal and Replacement
  - Enter overall area
  - Enter sub-locations for material that was removed and material that was replaced



## Materials Acceptance and Certification



Overall Area = L1, L2 1+00 – 41+00 Lift 1 (1 ½")

Orange Areas were removed

Green Areas left in place

Total tonnage = 880 tons

7 entries – 1 for overall area & 6 for sub areas



## Add Location of Representative Material ✕

**Entry 1 for overall area, full limits, full quantity**

RCI Lanes

From Station

To Station

Latitude

Longitude

Ending Latitude

Ending Longitude

Offset Distance

Offset Direction

Reference Line

Placement Designation

Quantity

Unit Of Measure

✕

Save



## Materials Acceptance and Certification

**Total Affected Quantity**  
880.00

**Total Affected Quantity Units**  
Ton(s)

**Accumulative Quantity**  
0

	RCI Lanes	From Station	To Station	Latitude	Longitude	Ending Latitude	Ending Longitude	Offset Distance	Offset Direction	Reference Line	Placement Designation	Quantity	Units
1	L1 L2	1+00	41+00	21.123456	-82.123456	21.123456	-83.391456				Partial Remove and Replace	880.00	Ton(s)



Add Location of Representative Material



Sub Area 1

RCI Lanes

L1 ✖

From Station

1+00

To Station

11+50

▼

Latitude

21.123456

Longitude

-82.123456

Ending Latitude

21.123456

Ending Longitude

-82.479956

Offset Distance

Offset Direction

▼

Reference Line

▼

Placement Designation

Removed ▼

Quantity

115.5

Unit Of Measure

Ton(s) ✖

Save



# Florida Department of TRANSPORTATION



## Materials Acceptance and Certification

Total Affected Quantity		Total Affected Quantity Units		Accumulative Quantity								
880.00		Ton(s)		115.5								
RCI Lanes	From Station	To Station	Latitude	Longitude	Ending Latitude	Ending Longitude	Offset Distance	Offset Direction	Reference Line	Placement Designation	Quantity	Units
1 L1 L2	1+00	41+00	21.123456	-82.123456	21.123456	-83.391456				Partial Remove and Replace	880.00	Ton(s)
2 L1	1+00	11+50	21.123456	-82.123456	21.123456	-82.479956				Removed	115.50	Ton(s)



# Florida Department of TRANSPORTATION



## Materials Acceptance and Certification

Total Affected Quantity		Total Affected Quantity Units		Accumulative Quantity		Matches												
880.00		Ton(s)		880		RCI Lanes	From Station	To Station	Latitude	Longitude	Ending Latitude	Ending Longitude	Offset Distance	Offset Direction	Reference Line	Placement Designation	Quantity	Units
1	L1 L2	1+00	41+00	21.123456	-82.123456	21.123456	-83.391456									Partial Remove and Replace	880.00	Ton(s)
2	L1	1+00	11+50	21.123456	-81.123456	21.123456	-82.479956									Removed	115.50	Ton(s)
	L1	11+50	31+80	21.123456	-82.479956	21.123456	-83.109256									Left in Place	223.30	Ton(s)
	L1	31+80	41+00	21.123456	-83.109256	21.123456	-83.391456									Removed	101.20	Ton(s)
	L2	1+00	11+90	21.123456	-81.123456	21.123456	-82.461356									Left in Place	119.90	Ton(s)
	L2	11+90	21+45	21.123456	-82.461356	21.123456	-82.789606									Removed	105.00	Ton(s)
	L2	21+45	41+00	21.123456	-82.789606	21.123456	-83.391456									Left in Place	215.10	Ton(s)



- MC Reviewer will notify PA if additional information is needed for location information
- This gets used on the PMCL so it needs to be right



## Non Standard Materials

The QC-Sample, 5F007Q, failed to meet the minimum required AC Content. Total affected quantity was 880 tons.

• **Other: Asphalt Content Failure (Lot 19, Load #14) FDOT Sample Number 5F007Q**

Ref Material ID: 337 - Asphalt Concrete Friction Courses

Sample Level: QC

Total Quantity: 880 Ton(s)                      Accumulative Quantity: 880

RCI Options (Lanes):	L1; L2	From Station:	1+00	To Station:	41+00
Beginning Latitude:	21.123456	Longitude:	-82.123456		
Ending Latitude:	21.123456	Longitude:	-83.391456		
Placement Designation:	Partial Remove and Replace	Quantity:	880 Ton(s)		
RCI Options (Lanes):	L1	From Station:	1+00	To Station:	11+50
Beginning Latitude:	21.123456	Longitude:	-81.123456		
Ending Latitude:	21.123456	Longitude:	-82.479956		
Placement Designation:	Removed	Quantity:	115.5 Ton(s)		
RCI Options (Lanes):	L1	From Station:	11+50	To Station:	31+80
Beginning Latitude:	21.123456	Longitude:	-82.479956		
Ending Latitude:	21.123456	Longitude:	-83.109256		
Placement Designation:	Left in Place	Quantity:	223.3 Ton(s)		
RCI Options (Lanes):	L1	From Station:	31+80	To Station:	41+00
Beginning Latitude:	21.123460	Longitude:	-83.109256		
Ending Latitude:	21.123456	Longitude:	-83.391456		
Placement Designation:	Removed	Quantity:	101.2 Ton(s)		
RCI Options (Lanes):	L2	From Station:	1+00	To Station:	11+90
Beginning Latitude:	21.123456	Longitude:	-81.123456		
Ending Latitude:	21.123456	Longitude:	-82.461356		
Placement Designation:	Left in Place	Quantity:	119.9 Ton(s)		
RCI Options (Lanes):	L2	From Station:	11+90	To Station:	21+45
Beginning Latitude:	21.123456	Longitude:	-82.461356		
Ending Latitude:	21.123456	Longitude:	-82.789606		
Placement Designation:	Removed	Quantity:	105 Ton(s)		
RCI Options (Lanes):	L2	From Station:	21+45	To Station:	41+00
Beginning Latitude:	21.123456	Longitude:	-82.789606		
Ending Latitude:	21.123456	Longitude:	-83.391456		
Placement Designation:	Left in Place	Quantity:	215.1 Ton(s)		

Delineation testing was performed. The project personnel recommended that the material be accepted through partial removal and replacement, as shown. The District Materials and Research Engineer and District Construction Engineer concurred.



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## Materials Acceptance and Certification

### List of MCs per District

- D1/7 – Mark Conley  
– 863-519-4233
- D1/7 – James (Randee) Stricklin  
– 863-519-4257
- D2 - Curtis Becker  
– 386-961-7724
- D2 - Mystery Easter  
– 386-961-7808
- D3 – Anthony Mosier  
– 850-330-1373
- D4/6 - Wismith Voltaire  
– 954-677-7047
- D5 - Jeanie Kozak  
– 386-740-3489
- D5 - Jodi Johnson  
– 386-740-3502
- TP – Brad Biery  
– 954-934-1147



## Materials Acceptance and Certification

# Enhancements





## Materials Acceptance and Certification

# Notifications





## My Notification Subscriptions

Email Notification Schedule <sup>?</sup>

Real Time

Update

Email Address

Susan.Musselman@dot.state.fl.us

Notification Event Type Group

Contractor QC Plans

Notification Event Type

Contractor QC Plan's Mix Design No Longer Approved

### Update

User

Susan Musselman

Opt In/Opt Out?

Opt In

Send Type

Both Email and Dashboard

Filters?

Managing Districts

Contracts

Type Contract Number/Description

Production Facility Material Types

Companies

Start typing Company name to get a list of

User Who Created Record <sup>?</sup>

Is In  Is NOT In

Start typing user name to get list of users

Save

PA

PMU



# Florida Department of TRANSPORTATION



## Materials Acceptance and Certification

Notification Event Type Group: **Material Certification**

Notification Event Type: **Finding awaiting recommendation**

Subject: MC Review Finding Awaiting Recommendation    Opt In/Opt Out: Can Opt Out

Showing 1 to 1 of 1

# Company and/or Facility Role logic is used to determine who will receive notification

### Update

Opt In/Opt Out? **Opt In**    Send Type **Both Email and Dashboard**

Filters?

Managing Districts: [Dropdown]    Contracts: **Type Contract Number/Description**

Projects: **Type Item/Item Segment**

User Who Created Record:  Is In     Is NOT In

Start typing user name to get list of users

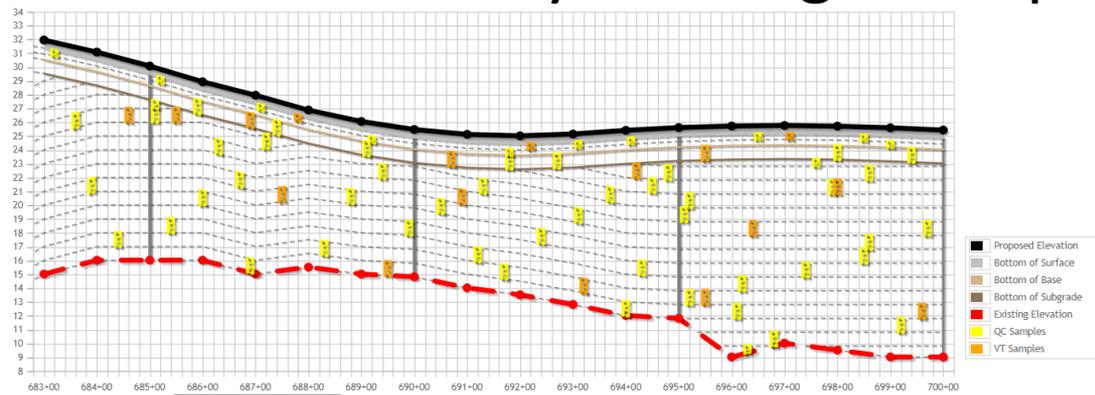
Non Compliance Resolution Types: [Dropdown]

- Director Office of Construction
- District Bituminous Engineer
- District Construction Engineer
- District Materials Research Engineer
- Project Administrator**
- Resident Engineer

Save

## Materials Acceptance and Certification

- Earthwork Records System
  - Construction Academy winning team project



### MAC Implementation Status Update:

- Number of Samples - 923,133
- Number of Projects Certified - 3,485
- Number of Projects with samples - 3,092
- Number of Projects with ERS Projects - 107



## Materials Acceptance and Certification

### List of primary DACs per District

- D1/7 – Theodora  
(Dorothy) Storigka  
– 863-519-4222
- D2 – Cassie Hammond  
– 386-961-7728
- D3 – Glenn Cook  
– 850-330-1747
- D4/6 – Jean Moline  
– 954-677-7033
- D5 - Jodi Johnson  
– 386-740-3502
- TP – Brad Biery  
– 954-934-1147



## Materials Acceptance and Certification

- Certification Examples
  - <https://www.fdot.gov/materials/administration/resources/library/publications/certifications/sampleforms.shtm>
- MAC Resources
  - Now one website for all things MAC
  - <https://www.fdot.gov/materials/mac/default.shtm>



## Materials Acceptance and Certification



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