QA Program

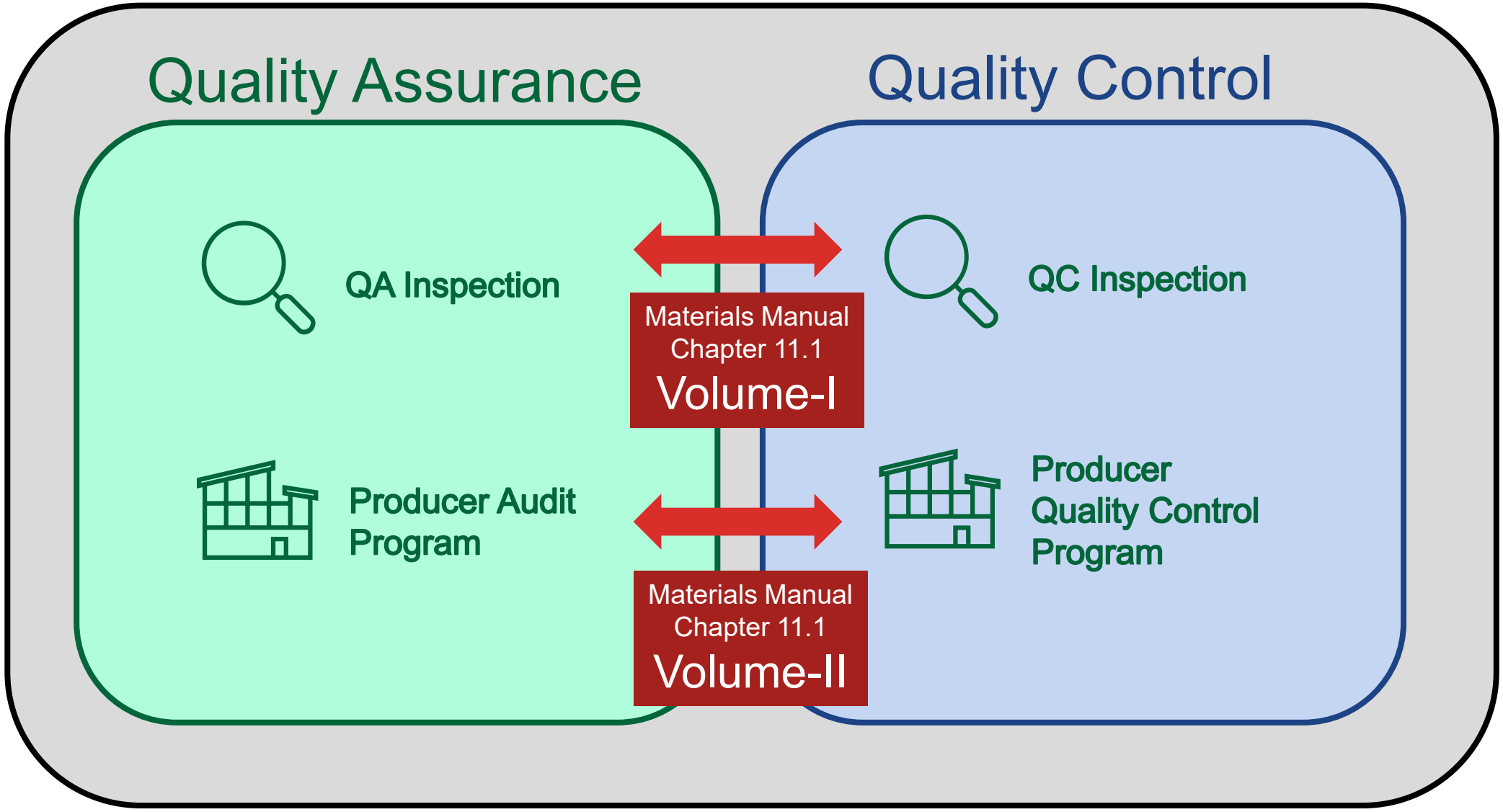
Adrian R Steele

Structural Metal QA Program Manager

Structural Metals and Coating Quality Assurance Program

State Materials Office

Structural Metals and Coatings Quality Program



Producer Audits

- Material Manual Chapter 11 – Volume II
  - Table 1
  - Facilities audited once every two years

Table 1 - Materials Included in Chapter 11.1
Steel Bridge Pedestrian Truss Category 1
Steel Bridge Advanced
Bridge Machinery
Bridge Forgings
Bridge Castings
Bridge Bearings (Rocker, Roller, Pot, Disc, Spherical, Sliding, Guide)
Modular Joints (Expansion and Finger)
Overhead Gantries
Overhead Spans / Trusses
Overhead Cantilevers
Overhead Monotubes
Guardrail (Thrie-Beam, W-Beam)
Shop Painting
Shop Metalizing

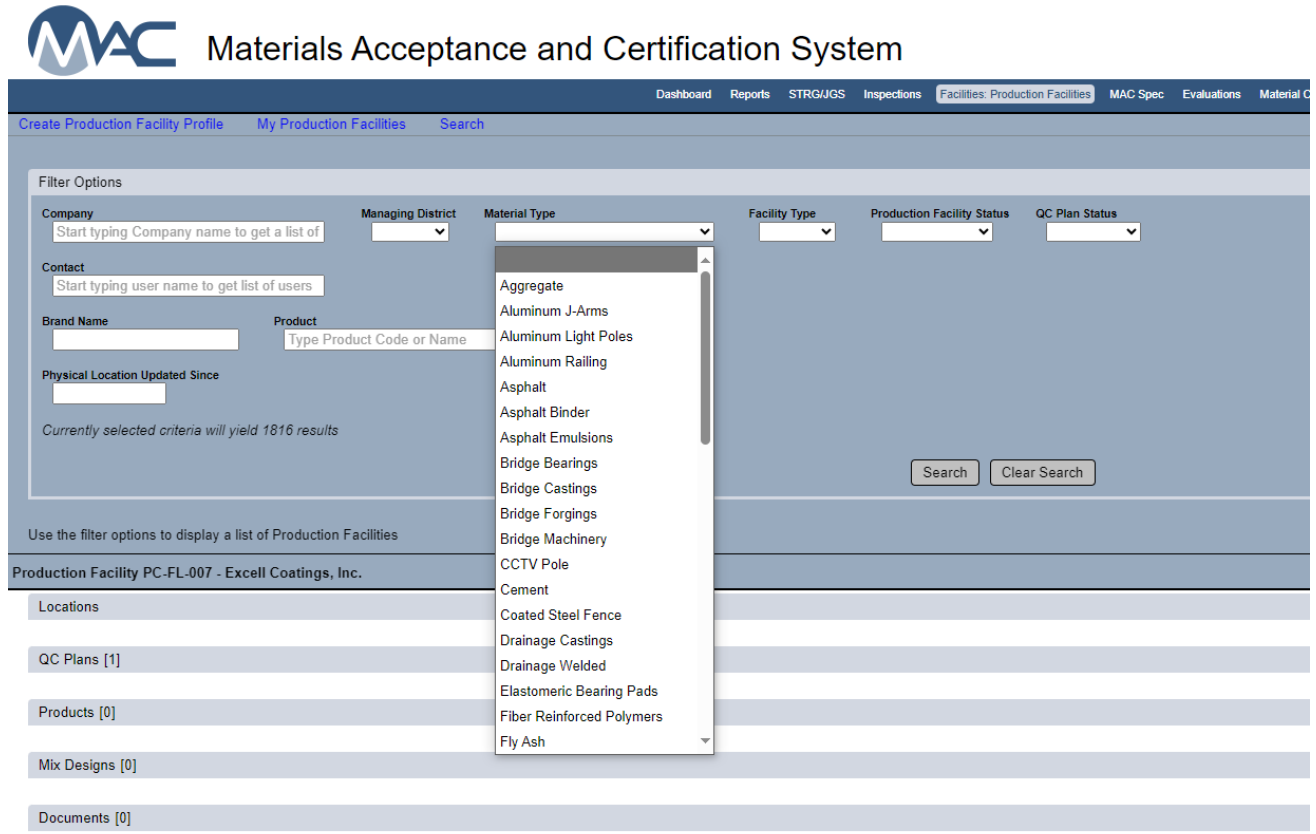
Producer Audits

- Material Manual Chapter 11 – Volume II
  - Fabricators are no longer audited for these materials
  - DCE Memorandum 24-04

- **Stairs**
- **Stay-In-Place Forms (with Polymer coating)**
- **Stay-In-Place Forms (without Polymer coating)**
- **Laminated Bearing Pads**
- **Ancillary Bearing Pads**
- **Steel Mast Arm**
- **Steel Strain Pole**
- **Steel CCTV Pole**
- **Aluminum J-Arms**
- **Aluminum Light Poles**
- **Steel Mast Lighting (High Mast Lighting, Conventional Lighting)**
- **Steel Railing**
- **Aluminum Railing**
- **Drainage (Welded gratings, inlets, frames)**
- **Drainage (Cast manhole, grating, inlets, frames)**
- **Coated Steel Fence (Aluminized, PVC, Powder)**
- **Galvanizing**
- **Powder Coating**

Producer Audits

- Material Manual Chapter 11 – Volume II
  - List of fabrication facilities can be found in MAC
  - Search Production Facilities selecting
    - Material Type
    - QC Plan Status = Accepted



Producer Audits

- Material Manual Chapter 11 – Volume II
  - Table 2
  - Facility Qualification Requirements
  - Necessary, but Not Sufficient

Table 2 - Required Production Facility Accreditation	
Structural Category	**Accepted Accreditation Program**
Steel Bridge Pedestrian Truss Category 1	AISC Simple Bridge
Steel Bridge Advanced	AISC Advanced Bridge with Fracture Control Endorsement
Bridge Machinery, Bridge Bearings, Modular Joints, Overhead Gantries, Overhead Spans/Trusses, Overhead Cantilevers, Overhead Monotubes	AISC Component Manufacturer or AWS Welding Fabricator
Bridge Forgings, Bridge Castings, Guardrail	ISO 9001 (2015)
Shop Painting	AISC Sophisticated Paint Endorsement or AMPP QP3
Shop Metalizing	AMPP QP6

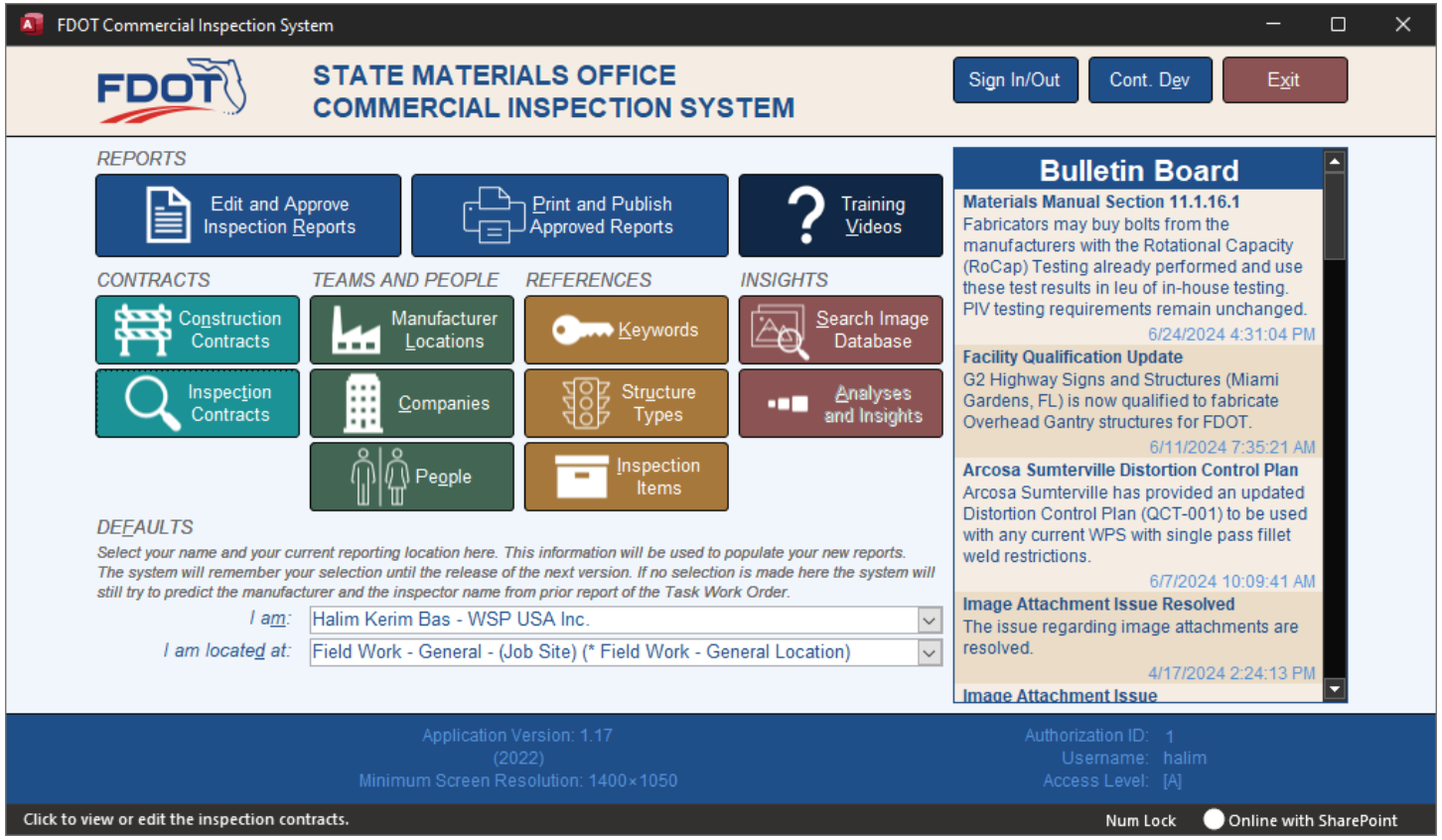
Producer Audits

- Material Manual Chapter 11 – Volume II
  - Table 3
  - Minimum Direct Experience Requirements for QC Management

Table 3 - Minimum Direct Experience Required for QC Management	
Material Types	**QC Management**
Steel Bridge Pedestrian Category 1, Steel Bridge Advanced	5 yrs. experience, and an active AWS CWI, and Pre-installation Verification Certificate
Bridge Bearings, Bridge Machinery, Modular Joints	5 yrs. experience, and an active AWS CWI
Bridge Forgings, Bridge Castings	5 yrs. experience
Overhead Gantries, Overhead Spans/Trusses, Overhead Cantilevers, Overhead Monotubes	3 yrs. experience, and an active AWS CWI, and Pre-Installation Verification Certificate
Guardrail	3 yrs. experience, and an active AWS CWI, or active AWS CAWI, or AWS D1.1 Endorsement, or AWS D1.6 Endorsement, or Annual Audit by FDOT approved QA Firm
Shop Painting	3 yrs. experience, and an active AMPP Certified Coating Inspector
Shop Metalizing	3 yrs. Experience, and an active AMPP Certified Coating Inspector

QA Inspections

- Material Manual Chapter 11 – Volume I
  - Commercial Inspection Program
  - 3 Parallel Contracts
    - CAH03 – Pennoni Engineering
    - CAG71 – KTA – Tator Inc.
    - CAG77 – WSP USA Inc.
  - ~50 inspectors
  - 235 Task Work Orders Issued
  - Daily Reporting
  - 70 Fabricators
  - Managed by SMO
  - Funded by Districts



QA Inspection

- Material Manual Chapter 11 – Volume II
  - Table 4
  - Commercially Inspected Items
    - Required by Specification
    - At the Request of the Engineer
    - All overhead metal structures within the Department right of way (except elements listed under specification section 646, 649, 650, 653, 654, 659, 700, 715)

Table 4 – Components Requiring Commercial Inspection
Required by Specification
Steel Bridge Pedestrian Tuss Category 1
Steel Bridge Advanced
Bridge Machinery
Bridge Bearings (Rocker, Roller, Pot, Disc, Spherical, Sliding, Guide)
Modular Joints (Expansion and Finger)
Overhead Gantries
Overhead Spans / Trusses
Overhead Cantilevers
Overhead Monotubes
Shop Painting
Shop Metalizing
At the Request of the Engineer
Steel Cable (Suspension, Bridge Stay, Guardrail)
Field Bolting
Field Welding
Field Coating
Buildings
Other Non-Standard Fabrication

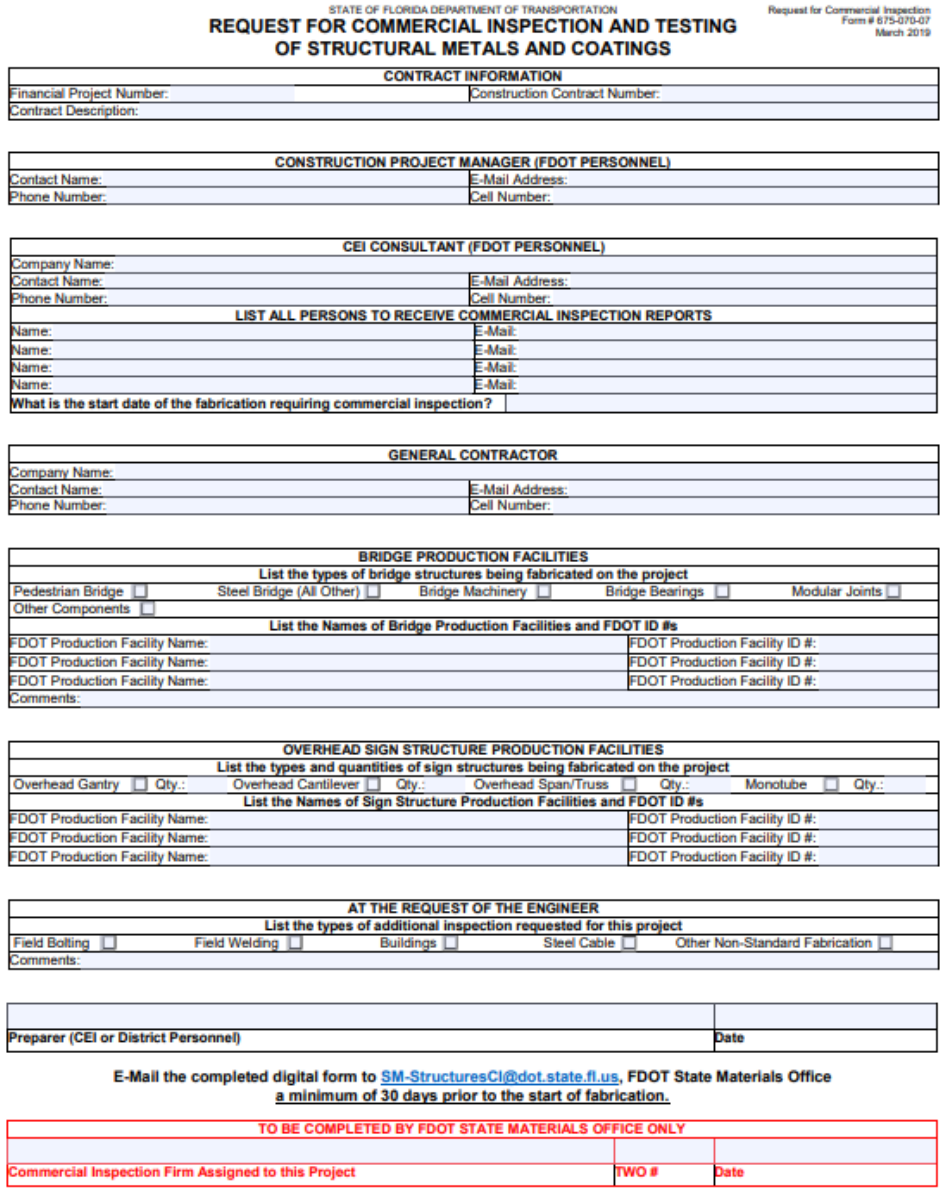
QA Inspection

- Material Manual Chapter 11 – Volume II
  - Section 11.1.13 Commercial Inspection
  - Request by contractor
  - Use request Form 675-070-07
- The 30 days are needed to:
  - Prepare an estimate and scope for CI
  - Encumber funds through the District
    - Federal, Local Agency, and Private Permit projects introduce additional layers to the process
  - Obtain a signed TWO contract amendment from the CI company.

This section of the ***Materials Manual*** discusses the scope, application, and scheduling of Commercial Inspection. The Contractor is responsible for sending the Production Facility's schedule to the Engineer at least 30 days prior to the beginning of fabrication. The components identified in ***Table 4*** require commercial inspection.

QA Inspection

- Material Manual Chapter 11 – Volume II
  - Section 11.1.13 Commercial Inspection
  - Request by contractor, or Engineer for optional structures or components
  - Use request Form 675-070-07



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

REQUEST FOR COMMERCIAL INSPECTION AND TESTING OF STRUCTURAL METALS AND COATINGS

Request for Commercial Inspection
Form # 675-070-07
March 2019

CONTRACT INFORMATION	
Financial Project Number:	Construction Contract Number:
Contract Description:	

CONSTRUCTION PROJECT MANAGER (FDOT PERSONNEL)	
Contact Name:	E-Mail Address:
Phone Number:	Cell Number:

CEI CONSULTANT (FDOT PERSONNEL)	
Company Name:	
Contact Name:	E-Mail Address:
Phone Number:	Cell Number:
LIST ALL PERSONS TO RECEIVE COMMERCIAL INSPECTION REPORTS	
Name:	E-Mail:
Name:	E-Mail:
Name:	E-Mail:
Name:	E-Mail:
What is the start date of the fabrication requiring commercial inspection?	

GENERAL CONTRACTOR	
Company Name:	
Contact Name:	E-Mail Address:
Phone Number:	Cell Number:

BRIDGE PRODUCTION FACILITIES					
List the types of bridge structures being fabricated on the project					
Pedestrian Bridge ☐	Steel Bridge (All Other) ☐	Bridge Machinery ☐	Bridge Bearings ☐	Modular Joints ☐	
Other Components ☐					
List the Names of Bridge Production Facilities and FDOT ID #s					
FDOT Production Facility Name:			FDOT Production Facility ID #:		
FDOT Production Facility Name:			FDOT Production Facility ID #:		
FDOT Production Facility Name:			FDOT Production Facility ID #:		
Comments:					

OVERHEAD SIGN STRUCTURE PRODUCTION FACILITIES					
List the types and quantities of sign structures being fabricated on the project					
Overhead Gantry ☐ Qty.:	Overhead Cantilever ☐ Qty.:	Overhead Span/Truss ☐ Qty.:	Monotube ☐ Qty.:		
List the Names of Sign Structure Production Facilities and FDOT ID #s					
FDOT Production Facility Name:			FDOT Production Facility ID #:		
FDOT Production Facility Name:			FDOT Production Facility ID #:		
FDOT Production Facility Name:			FDOT Production Facility ID #:		

AT THE REQUEST OF THE ENGINEER				
List the types of additional inspection requested for this project				
Field Bolting ☐	Field Welding ☐	Buildings ☐	Steel Cable ☐	Other Non-Standard Fabrication ☐
Comments:				

Preparer (CEI or District Personnel)	**Date**

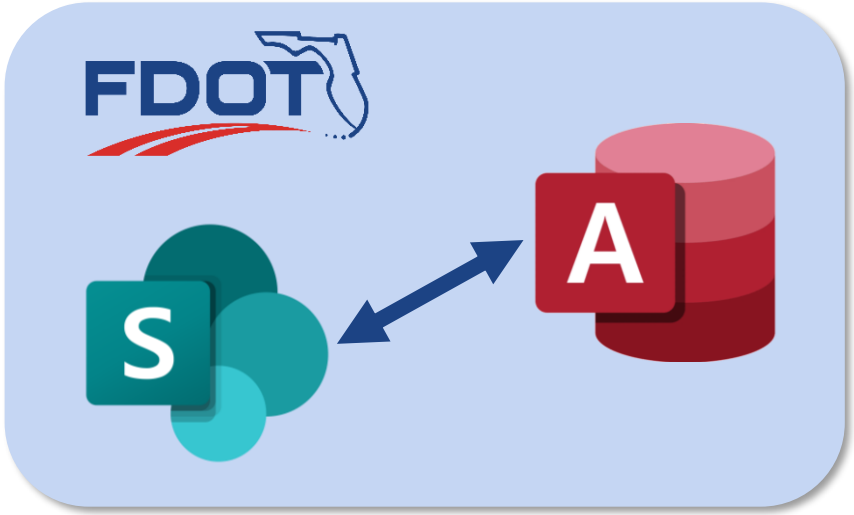
E-Mail the completed digital form to SM-StructuresCI@dot.state.fl.us, FDOT State Materials Office a minimum of 30 days prior to the start of fabrication.

TO BE COMPLETED BY FDOT STATE MATERIALS OFFICE ONLY		
Commercial Inspection Firm Assigned to this Project	**TWO #**	**Date**

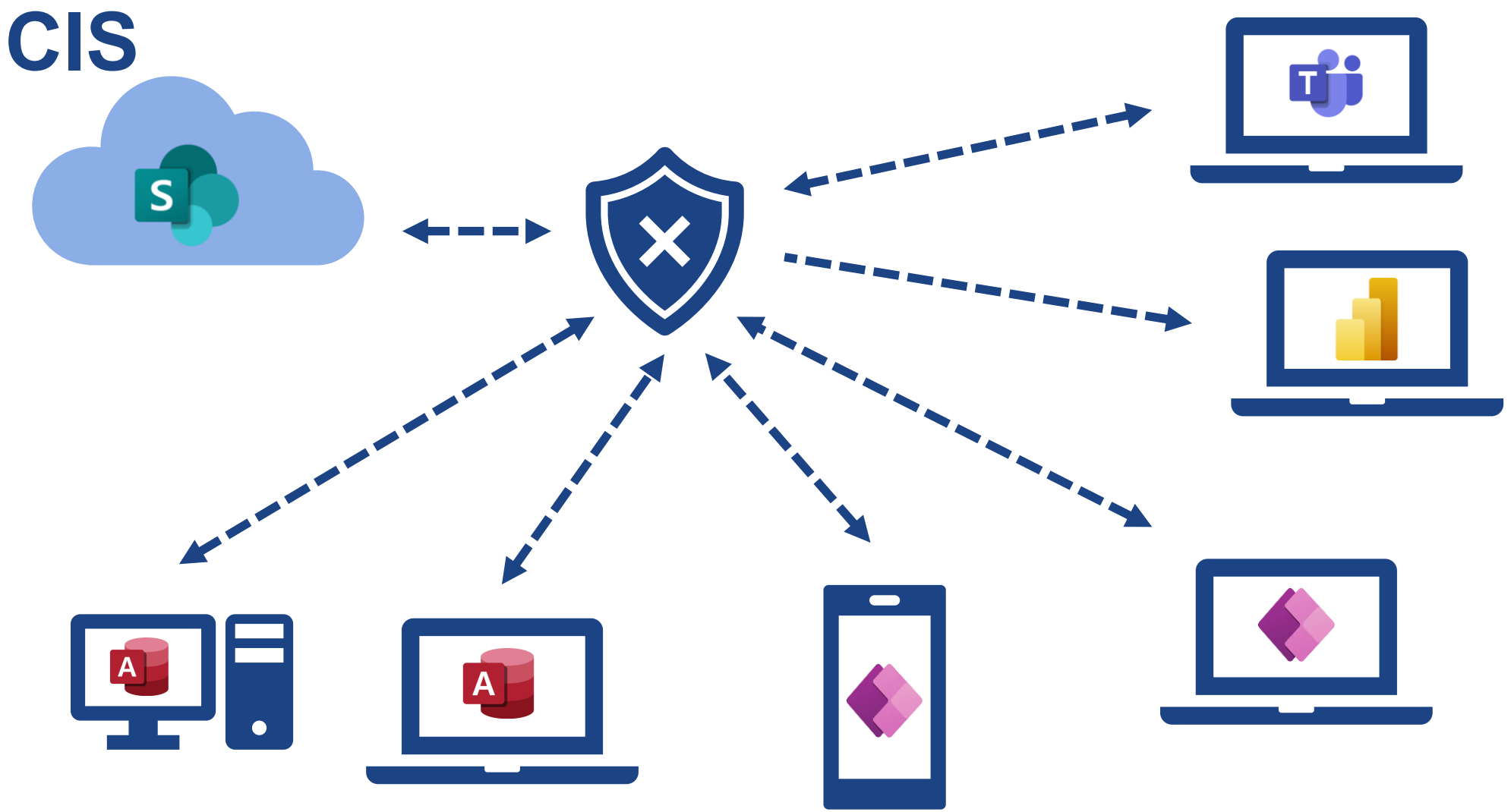
FDOT Commercial Inspection System

What is CIS?

- Integrated commercial inspection database
- The system is owned by the Department
- Application is used by all QA Inspection firms
- Data is stored in Department's server
- Microsoft SharePoint based
- Future ready



FDOT Commercial Inspection System

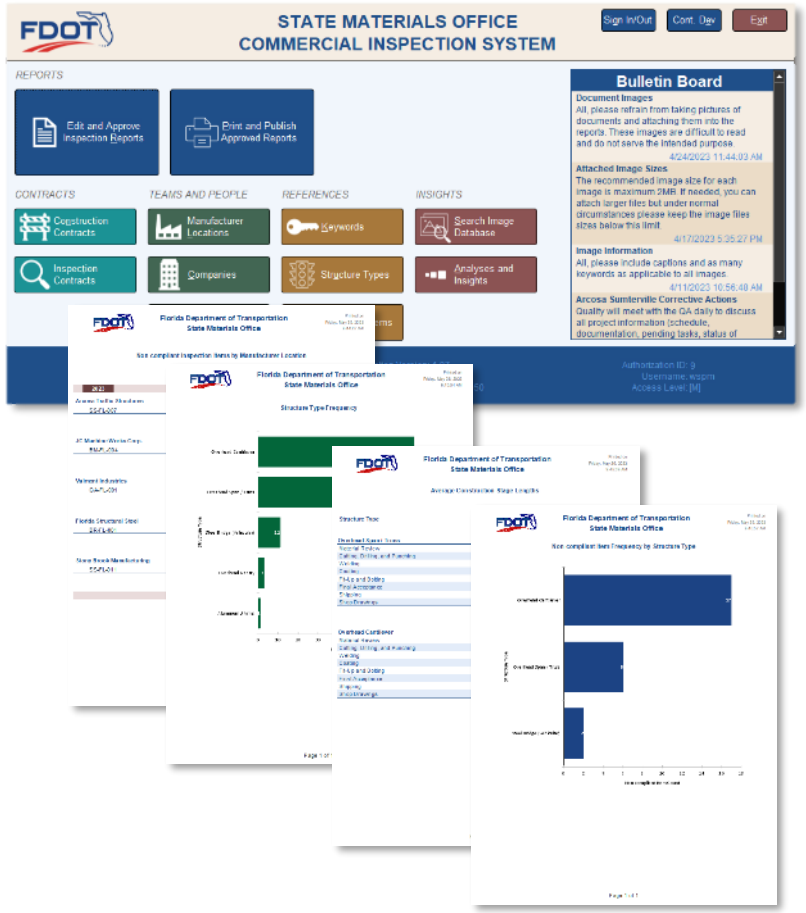


FDOT Commercial Inspection System

What does CIS achieve?

Reporting Side:

- Provides a standard guideline to the QA inspectors.
- Improves reporting quality.
- Standardizes and streamlines the inspection process.
- Speeds up the report drafting allowing additional time to perform inspections.

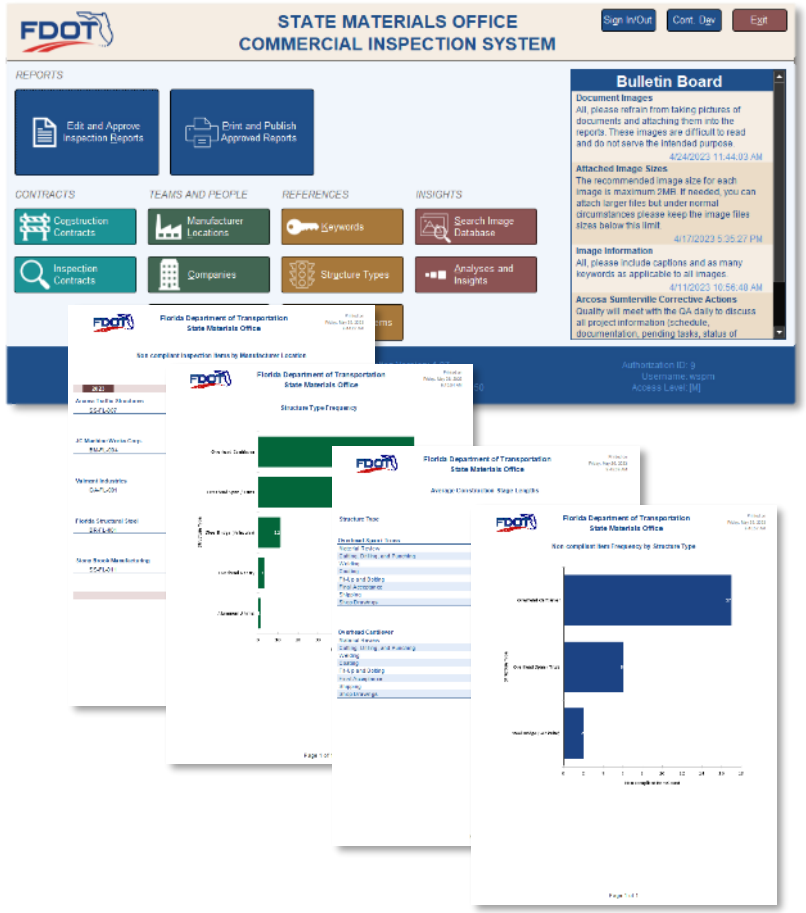


FDOT Commercial Inspection System

What does CIS achieve?

Program Management Side:

- Perform data analytics to gain insights otherwise unavailable
- Audit manufacturers based on historical performance data
- Manage the QA inspection firms and their workload.

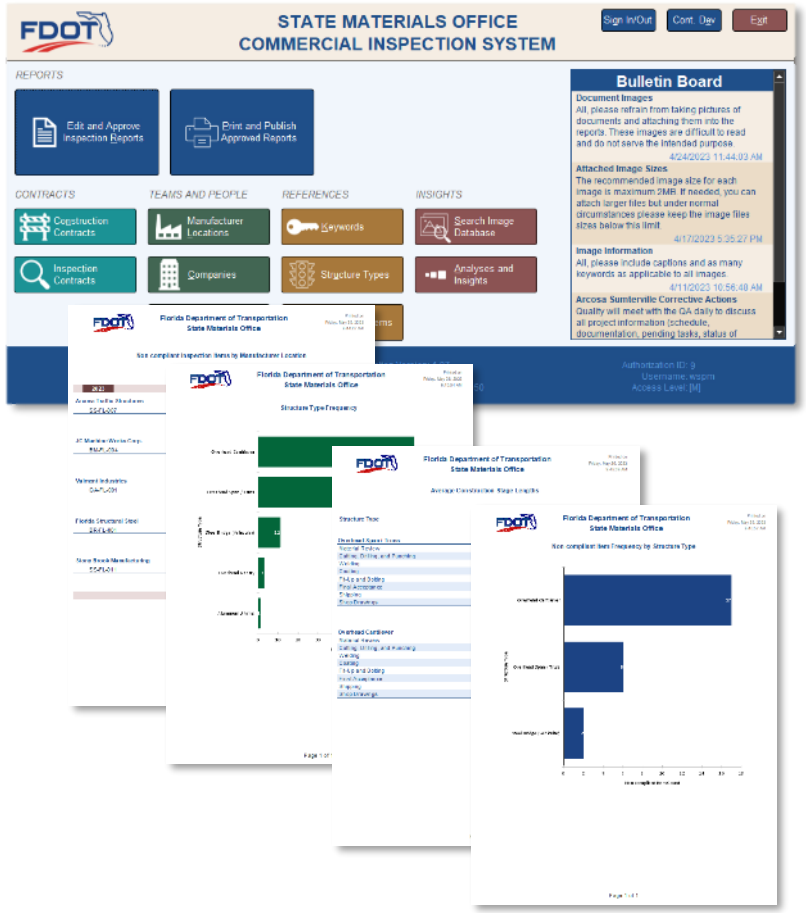


FDOT Commercial Inspection System

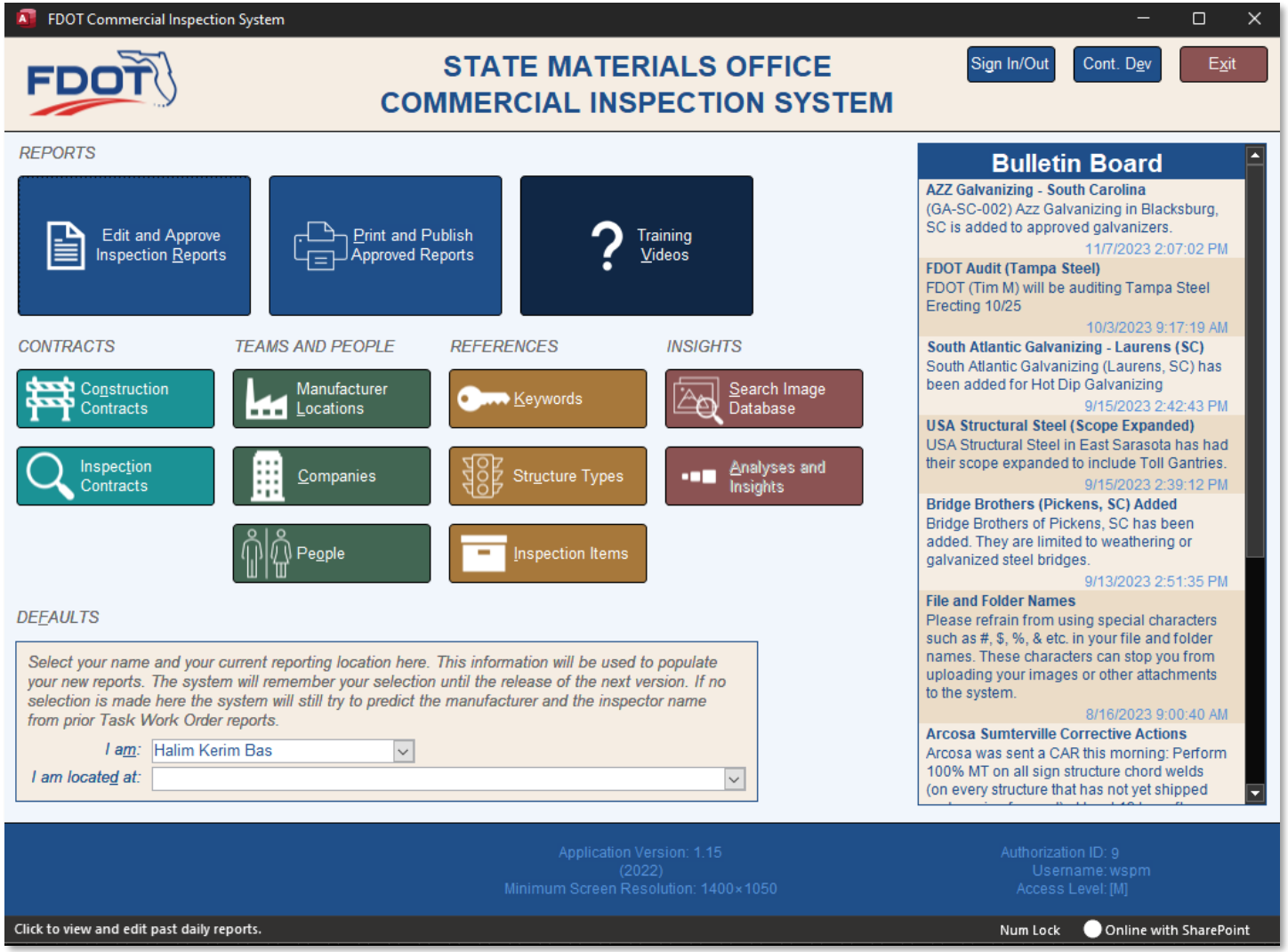
What does CIS achieve?

Program Management Side:

- Identify chronic problems across districts
- Inform specification updates based on real world data
- Provide a broader understanding of the system in general



FDOT Commercial Inspection System



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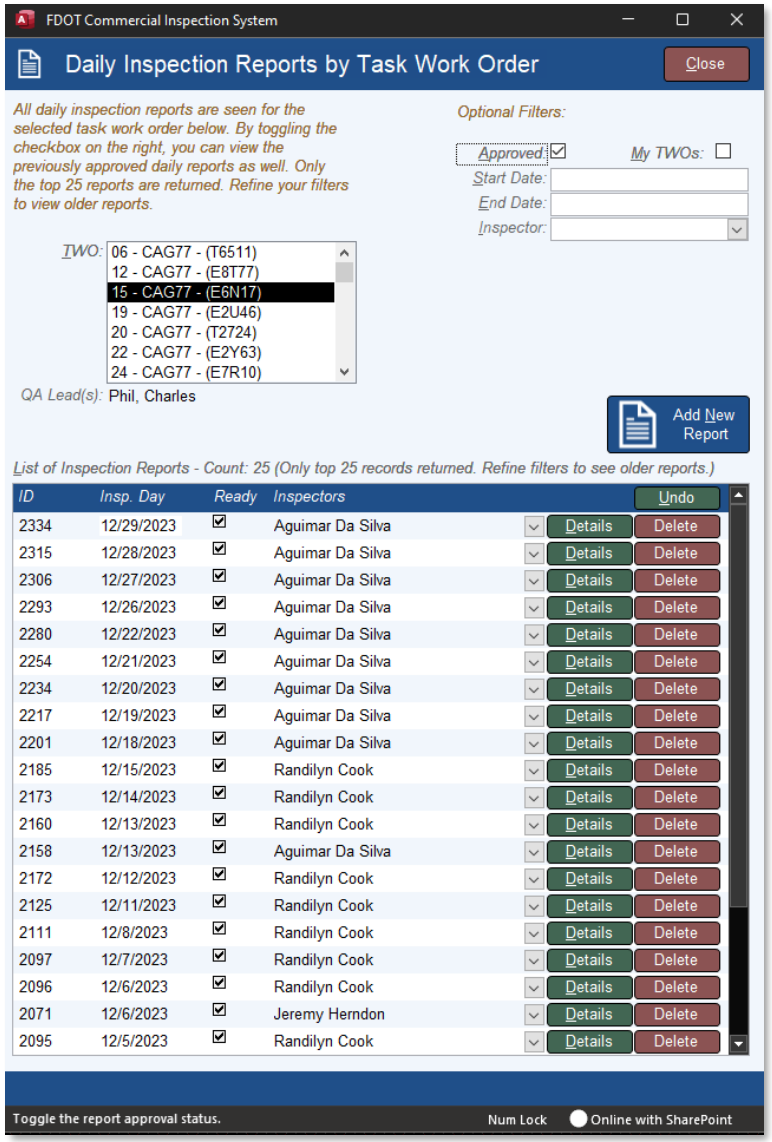

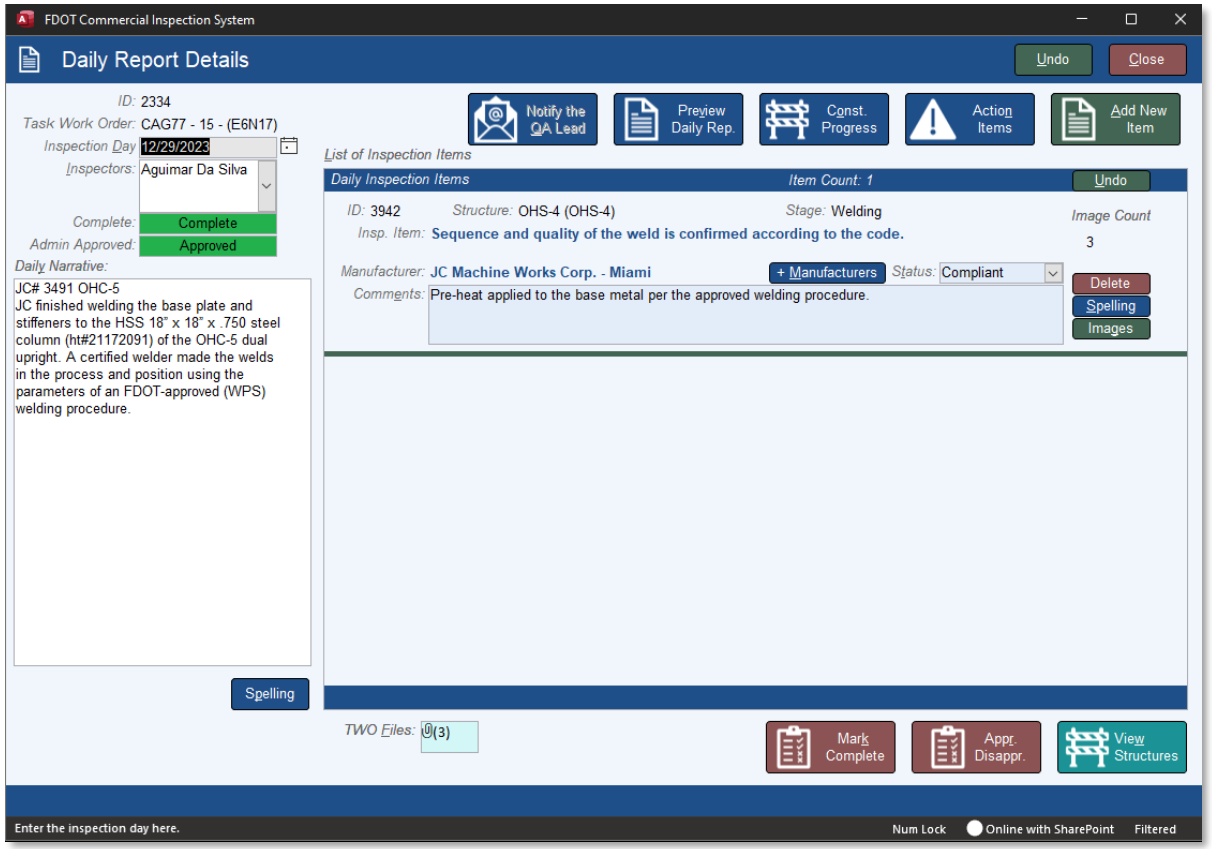

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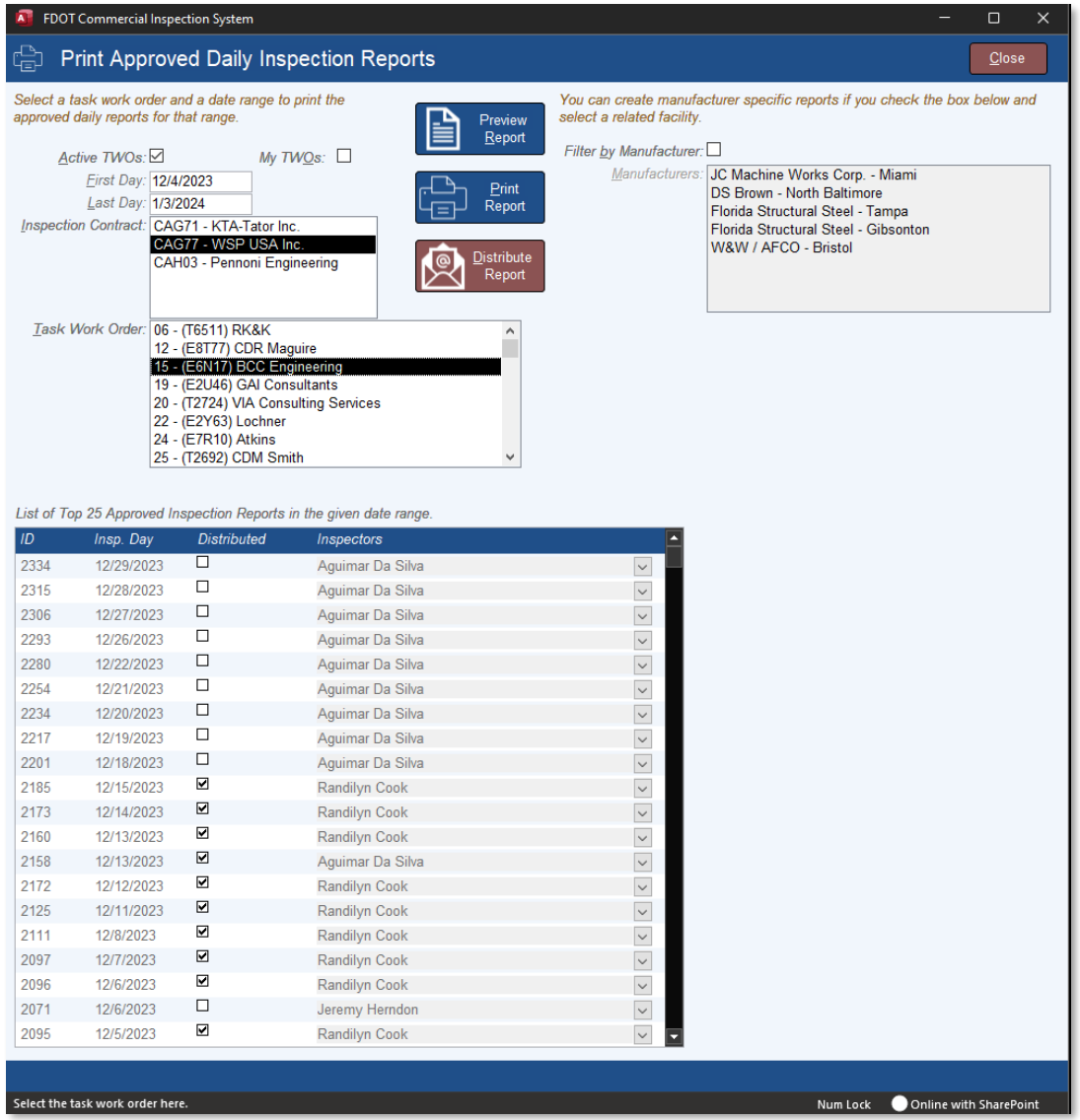

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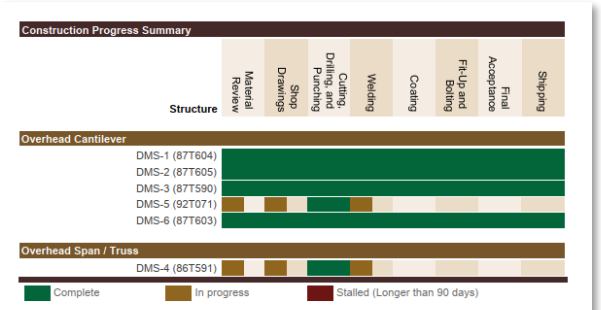

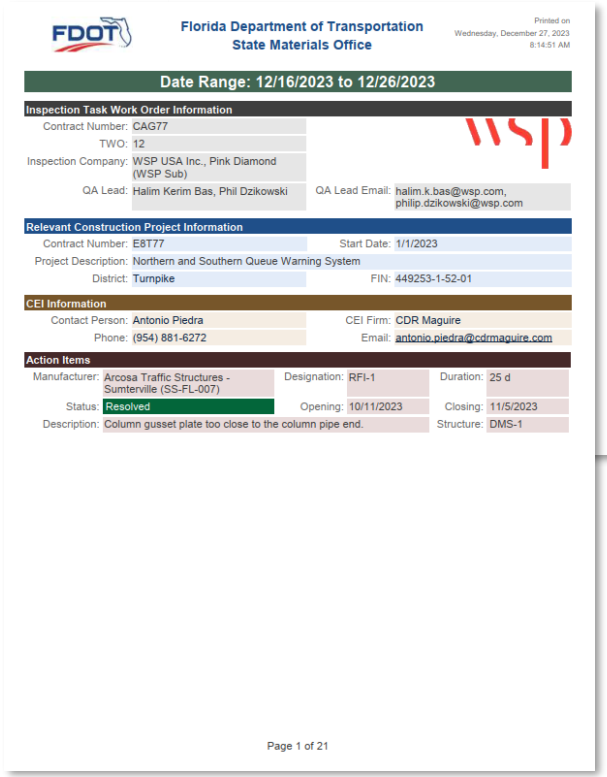

FDOT

Florida Department of Transportation
State Materials Office

Printed on Wednesday, December 27, 2023 8:14:51 AM

Date Range: 12/16/2023 to 12/26/2023

Inspection Task Work Order Information

Contract Number:	CAG77		
TWO:	12		
Inspection Company:	WSP USA Inc., Pink Diamond (WSP Sub)		
QA Lead:	Halim Kerim Bas, Phil Dzikowski	QA Lead Email:	halim.k.bas@wsp.com, philip.dzikowski@wsp.com

Relevant Construction Project Information

Contract Number:	E8T77	Start Date:	1/1/2023
Project Description:	Northern and Southern Queue Warning System		
District:	Turnpike	FIN:	449253-1-52-01

CEI Information

Contact Person:	Antonio Piedra	CEI Firm:	CDR Maguire
Phone:	(954) 881-6272	Email:	antonio.piedra@cdrmaguire.com

Action Items

Manufacturer:	Arcosa Traffic Structures - Sumterville (SS-FL-007)	Designation:	RFI-1	Duration:	25 d
Status:	Resolved	Opening:	10/11/2023	Closing:	11/5/2023
Description:	Column gusset plate too close to the column pipe end.			Structure:	DMS-1

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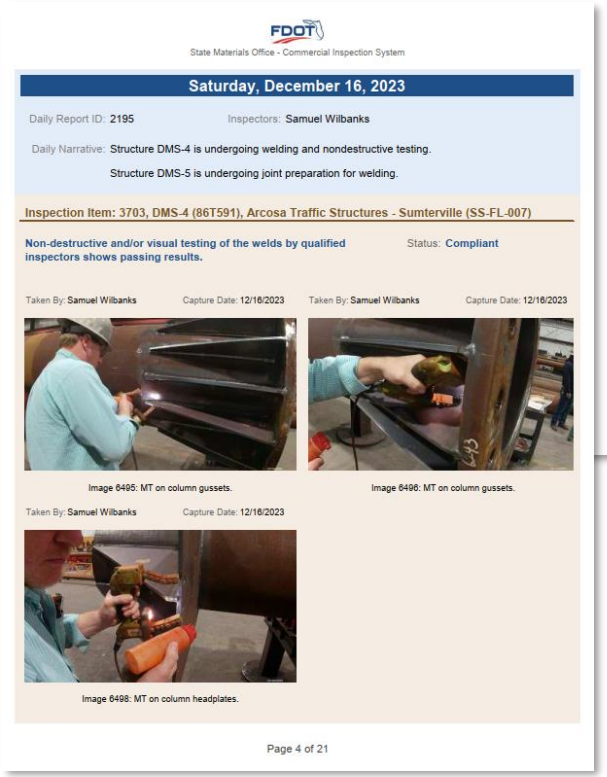

FDOT
State Materials Office - Commercial Inspection System

Saturday, December 16, 2023

Daily Report ID: 2195 Inspectors: Samuel Wilbanks

Daily Narrative: Structure DMS-4 is undergoing welding and nondestructive testing.

Structure DMS-5 is undergoing joint preparation for welding.

Inspection Item: 3703, DMS-4 (86T591), Arcosa Traffic Structures - Sumterville (SS-FL-007)

Non-destructive and/or visual testing of the welds by qualified inspectors shows passing results. Status: **Compliant**

Taken By: Samuel Wilbanks Capture Date: 12/16/2023

Image 6495: MT on column gussets.

Taken By: Samuel Wilbanks Capture Date: 12/16/2023

Image 6496: MT on column gussets.

Taken By: Samuel Wilbanks Capture Date: 12/16/2023

Image 6498: MT on column headplates.

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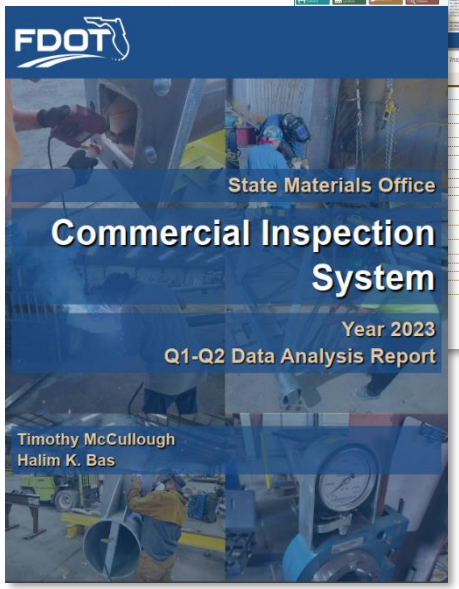
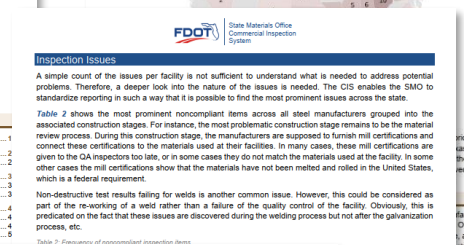
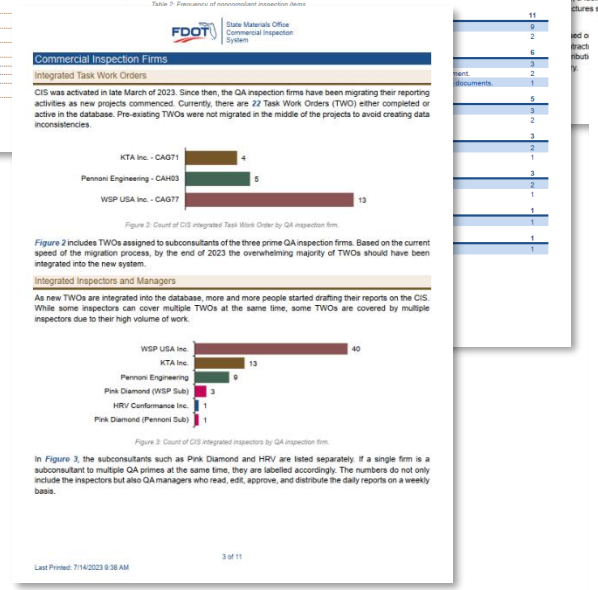
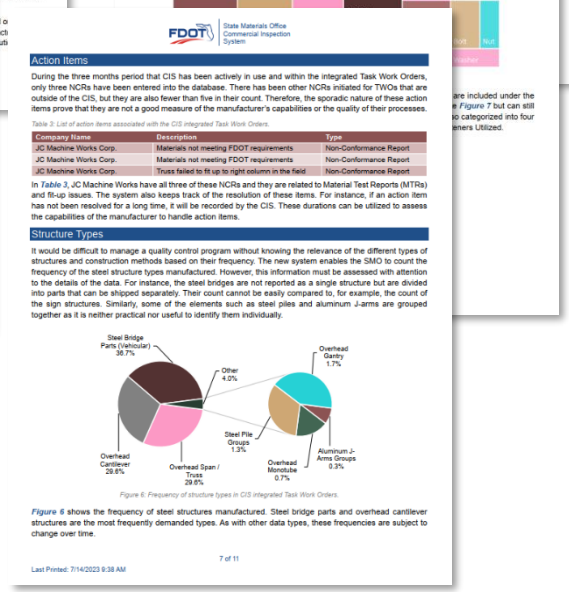
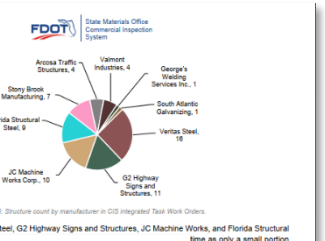
FDOT Commercial Inspection System

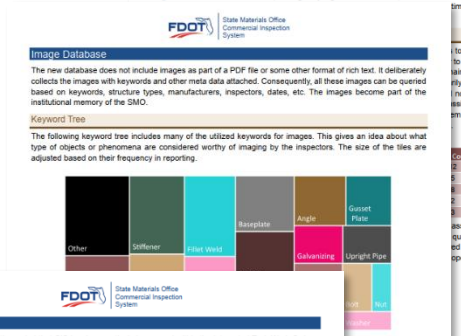


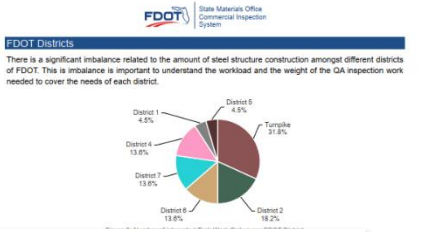


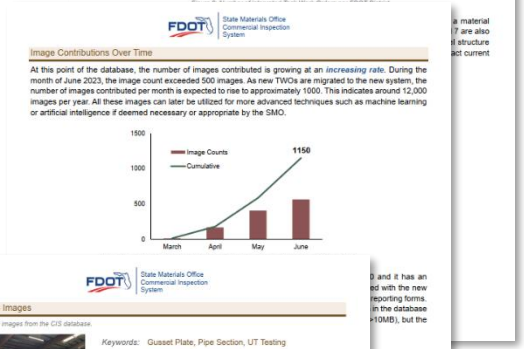


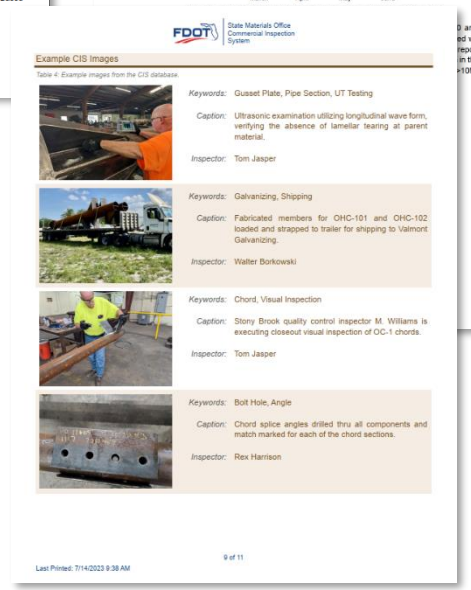


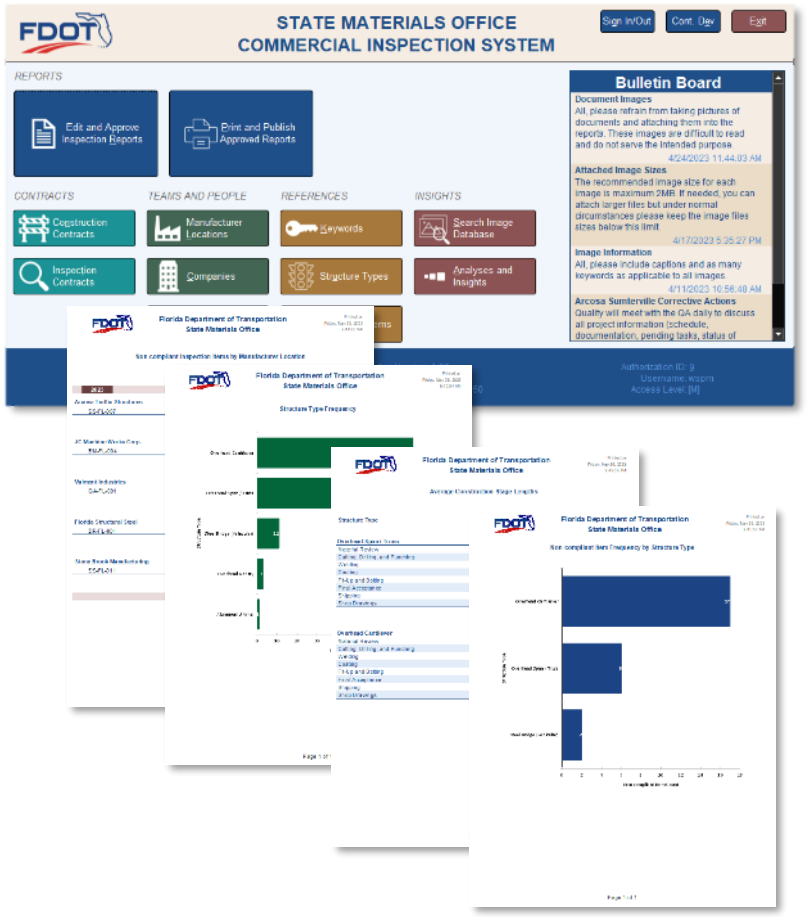












Thank you.

Questions

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