

**FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM****Inspection/CIDR Report with PDF attachment(s)
(INTERIM INSPECTION REPORT)****Structure ID: 75M112****Inspection****DISTRICT: D5 - Deland****INSPECTION DATE: 5/28/2025 BZHA**

BY: Ayres Associates	STRUCTURE NAME: SR-552 (Curry Ford Rd.) at Dixie Belle Dr
OWNER: 1 State Highway Agency	YEAR BUILT: 1985
MAINTAINED BY: 4 City/Municipal Hwy Agy	SECTION NO.: 75 012 000
STRUCTURE TYPE: 3 Steel - Traffic Signal Mast Arm	MP: 1.001
LOCATION: .25 Miles West of SR-436	ROUTE: 00552
SERV. TYPE ON: Traffic Signal Mast Arm	FACILITY CARRIED: SR-552(Curry Ford)
SERV. TYPE UNDER: 1 Highway	FEATURE INTERSECTED: Dixie Belle Dr
MAST ARM CODE: 4	MAST ARM DESCRIPTION: Mast arm is outside the mast arm boundary area

☐ FUNCTIONALLY OBSOLETE☒ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Interim

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 5/28/2025 UNDERWATER: N/A

SUFFICIENCY RATING: -1
HEALTH INDEX: 77.12

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MAST ARM CODE: 4

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☐ THIS BRIDGE CONTAINS FRACTURE CRITICAL COMPONENTS☐ THIS BRIDGE IS SCOUR CRITICAL☒ THIS REPORT IDENTIFIES DEFICIENCIES WHICH REQUIRE PROMPT CORRECTIVE ACTION☐ FUNCTIONALLY OBSOLETE☒ STRUCTURALLY DEFICIENT

TYPE OF INSPECTION: Interim

DATE FIELD INSPECTION WAS PERFORMED: ABOVE WATER: 5/28/2025 UNDERWATER: N/A

OVERALL NBI RATINGS:

DECK: N N/A (NBI)

CHANNEL: N N/A (NBI)

SUPERSTRUCTURE: 3 Serious

CULVERT: N N/A (NBI)

SUBSTRUCTURE: 5 Fair

SUFF. RATING: -1

PERF. RATING: Performance Rating Not applicable or not calculable.

HEALTH INDEX: 77.12

FIELD PERSONNEL / TITLE / NUMBER:**INITIALS**

Fishman, David - Bridge Inspector (CBI #00648) (lead)

DMF

Vieau, Dick - Assistant Bridge Inspector

REVIEWING BRIDGE INSPECTION SUPERVISOR:

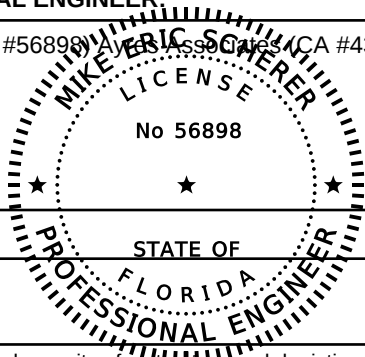
Maslyn, Rick - Bridge Inspector (CBI #00271)

*RM***CONFIRMING REGISTERED PROFESSIONAL ENGINEER:**

Scherer, Michael - Professional Engineer (PE #56898) Ayres Associates, CA #4356)
8875 Hidden River Pkwy
Suite 200
Tampa FL 33637

SIGNATURE: _____

DATE: _____



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SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL

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This report contains information relating to the physical security of a structure and depictions of the structure. This information is confidential and exempt from public inspection pursuant to sections 119.071(3)(a) and 119.071(3)(b), Florida Statutes. Only the cover page of this report may be inspected and copied.

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All Elements

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8480 / 3	Mast Arm Foundation	0	.	0	.	2	100	0	.	2 (EA)
UNIT 0	1020 / 3	Connection	0	.	0	.	2	100	0	.	2 (EA)

Element Inspection Notes:

8480/3 Note: This element consists of 2 foundations: F1 & F2.

Note: F1 - The foundation is below the sidewalk.

Note: F2 - Half of the foundation is below the sidewalk.

CS-3 (1020):

F1 - All (4) anchor bolts are missing the lock nuts and are too short for installation of a half-height jam nut. NO CHANGE. Refer to Photo 1. (1EA)

F2 - All (4) anchor bolts are missing the lock nuts. Half-height or modified jam nuts can be installed. NO CHANGE. Refer to Photo 2. (1EA)

F2 - The anchor bolt stand-off distance is greater than the diameter of the anchor bolt. Bolt diameter = 1 1/2 in. and average stand-off distance = 3 3/8 in. NO CHANGE. Refer to Photo 2.

INCIDENTAL:

F1 and F2 - The base plate covers are missing and there are no wire screens installed. NO CHANGE.

F2 - The top of the foundation is rough and irregular. NO CHANGE.

F2 - The foundation is 7 in. below grade on the south side. NO CHANGE.

PREVIOUS CORRECTIVE ACTION EVALUATION (05/30/23 Routine Inspection):

F1 and F2 - Install anchor bolt covers and a structural grout pad below the base plate in accordance with FDOT Spec 649-9. - No repairs have been made since the 2023 Routine Inspection.

F1 - Install a self-locking nut on all 1 1/2 in. diameter anchor bolts. - Self locking nuts have not been installed since the 2023 Routine Inspection.

F2 - Install a half height jam nuts on all 1 1/2 in. diameter anchor bolts. - Half height jam nuts have not been installed since the 2023 Routine Inspection.

Foundation Measurements:

Grout Pad: F1= No; F2 = No

Base Plate Thickness: F1= 1 1/2 in.; F2 = 1 1/2 in.

Bolt Diameter: F1= 1 1/2 in.; F2 = 1 1/2 in.

Nut Height: F1= 1 1/2 in.; F2 = 1 1/2 in.

Washer Thickness (Above & Below Base Plate): F1= 1/8 in.; F2= 1/8 in.

Average Distance from bottom of base plate to foundation: F1= 3 in.; F2 = 5 in.

Average Standoff Distance: F1= 1 3/8 in.; F2 = 3 3/8 in.

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1020/3 Refer to Parent Element

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8481 / 3	Metal Mast Arm Vertical	0	.	0	.	2	100	0	.	2 (EA)
UNIT 0	1000 / 3	Corrosion	0	.	0	.	2	100	0	.	2 (EA)
UNIT 0	8516 / 3	Painted Steel	337	96.29	0	.	0	.	13	3.71	350 sq.ft
UNIT 0	3440 / 3	Eff (Stl Protect Coat)	0	.	0	.	0	.	13	100	13 sq.ft

Element Inspection Notes:

8481/3 Note: This element consists of 2 verticals: V1 & V2.

Note: The verticals are not galvanized and the paint coating is the protective system.

Note: Both verticals have a properly connected ground wire.

CS-3 (1000):

V1 - The column base plate has painted over moderate to heavy delaminative corrosion on all faces (top, bottom & vertical faces) with areas of pitting up to 1/8 in. deep. Original base plate thickness 1 1/2 in. Areas of corrosion bleeding thru the paint were cleaned and painted by the inspectors during the 2025 Interim Inspection. DECREASE. Refer to Photo 3 and 4. REPAIR. (1EA)

V1 - The bottom of the column at the base plate has painted over moderate to heavy delaminative corrosion around the full circumference x up to 3 in. high with areas of pitting up to 1/16 in. deep. Original column thickness 0.180 in. Areas of corrosion bleeding thru the paint were cleaned and painted by the inspectors during the 2025 Interim Inspection. DECREASE. Refer to Photo 4. REPAIR.

V1 - The northeast face of the column just below the moment connection collar has an area of painted over moderate corrosion 6 in. W x 2 in. H with pitting up to 1/16 in deep. Original column thickness 0.180 in. DECREASE. Refer to Photo 5. REPAIR.

V2 - The top face of the column base plate has painted over corrosion and light pitting up to 1/32 in. deep. Original base plate thickness 1 1/2 in. Areas of corrosion bleeding thru the paint were cleaned and painted by the inspectors during the 2025 Interim Inspection. DECREASE. REPAIR. (1EA)

V2 - The bottom northeast face of the column at the base plate behind anchor bolt #3 has an area of painted over corrosion 9 in. W x up to 3 in. high with light pitting up to 1/32 in. deep. Original column thickness 0.180 in. DECREASE. Refer to Photo 6. REPAIR.

V2 - The north face of the column just below the moment connection collar has an area of painted over moderate corrosion 16 in. W x 2 in. H with pitting up to 1/16 in deep. Original column thickness 0.180 in. DECREASE. Refer to Photo 7. REPAIR.

V1 & V2 - The column interiors have areas of light surface corrosion. NO CHANGE. Refer to Photo 8. REPAIR.

V1 & V2 - The top 2 in. of the columns under the column caps have painted over moderate corrosion. NO CHANGE. Refer to Photo 9. REPAIR.

V1 & V2 - The hand hole access flanges have painted over moderate corrosion with areas of light pitting. NO CHANGE. Refer to Photo 10. REPAIR.

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INCIDENTAL:

V1 - The access hatch cover is slightly bent leaving up to a 1/4 in. wide gap along the sides. NO CHANGE.

The following thickness measurements were taken below access hatch:

V1 - 0.180 in.

V2 - 0.180 in.

Length of mast arm vertical members in linear feet.

V1 - 32.0 ft.

V2 - 32.0 ft.

1000/3 Refer to Parent Element

8516/3 CS-4 (3440):
V1 & V2 - Failed: no protecting of underlying metal in areas of column with corrosion.
(13SF)

3440/3 Refer to Parent Element

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8484 / 3	Metal Mast Arm Horizontal	0	.	0	.	0	.	2	100	2 (EA)
UNIT 0	1000 / 3	Corrosion	0	.	0	.	0	.	2	100	2 (EA)
UNIT 0	8516 / 3	Painted Steel	95	51.35	0	.	0	.	90	48.65	185 sq.ft
UNIT 0	3440 / 3	Eff (Stl Protect Coat)	0	.	0	.	0	.	90	100	90 sq.ft

Element Inspection Notes:

8484/3 Note: This element consists of 2 horizontals: V1/H1 & V2/H2.

Note: The horizontal arms are not galvanized and the paint coating is the protective system.

CS-4 (1000):

V1/H1 - The horizontal arm interior has severe corrosion with flaking and section loss viewed with a borescope thru the signal wiring hole near the moment connection with the south face of the arm being slightly malleable adjacent to the moment connection 7 in. high x 4 in. long with approximately 47% section loss in this area (original arm thickness = 0.180 in. and remaining section = 0.095 in.). Section loss extends approximately 14 in. from the moment connection with thickness readings on the lower half of the arm ranging from 0.120 in. to 0.170 in. (previously noted as arm interior having heavy delaminative corrosion and pitting with the extent of any section loss unable to be determined). INCREASE. Refer to Photos 11 thru 15. REPAIR. (1EA)

V1/H1 - The bottom east & west edges of the moment connection collar has painted over moderate corrosion 8 in. W x 1 1/2 in. H with areas of pitting up to 1/16 in. deep. (original collar thickness 1/2 in.). DECREASE. REPAIR.

V1/H1 - The bottom face of the horizontal arm has an area of moderate corrosion at the signal wire entrance. NO CHANGE.

V2/H2 - The bottom 180 degrees of the horizontal arm is easily malleable with a hammer for a 5 in. length adjacent to the moment connection due to severe corrosion on the arm interior with approximately 47% section loss in this area (original arm thickness = 0.180

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in. and remaining section in this area was 0.095 in. on the arm underside and 0.100 in. to 0.105 in. on the east and west faces). Arm circumference = 28 in. and malleable area = 14 in. There is nowhere to insert a borescope to view the arm interior. Section loss extends approximately 24 in. from the moment connection with thickness readings taken on the lower half of the arm from 6 in. to 18 in. away from the moment connection ranging from 0.120 in. to 0.145 in. (previously noted as presumed some level of corrosion exists on the arm interior). INCREASE. Refer to Photos 16 thru 20. REPAIR. (1EA)

V2/H2 - The bottom north face of the moment connection collar has painted over moderate to heavy corrosion 16 in. W x 3 in. H with areas of pitting up to 1/16 in. deep. Original collar thickness = 1/2 in. DECREASE. REPAIR.

PREVIOUS CORRECTIVE ACTION EVALUATION:

V2/H2 - Drill a 3/4 in. diameter hole in the bottom of the horizontal arm 12 in. from the column to allow access for a borescope to inspect the arm interior. - Drain hole has not been installed since the 2024 Interim Inspection.

The following thickness measurements were taken on each horizontal member at the moment connection:

V1/H1 = 0.180 in.

V2/H2 = 0.180 in.

Length of mast arm horizontal members in linear feet:

V1/H1 - 24.0 ft.

V2/H2 - 32.0 ft.

Minimum vertical clearance:

V1/H1 - 15.7 ft. (Not over roadway)

V2/H2 - 17.6 ft.

1000/3 Refer to Parent Element

8516/3 CS-4 (3440):
V1/H1 & V2/H2 - Failed: no protecting of underlying metal in areas of horizontal arms with corrosion. NO CHANGE. (90SF)

3440/3 Refer to Parent Element

Total Number of ADE Elements*: 3

*excluding defects/protective systems

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Inspector Recommendations

UNIT: UNIT 0 MISCELLANEOUS

ELEMENT/ENV: 8481 / 3 Metal Mast Arm Vertical

ELEM CATEGORY: Other Elements

CONDITION STATE			PRIORITY
3	MMS Quantity: 1 mh	Element Estimated Quantity: 2 (EA)	3
WORK ORDER RECOMMENDATION:			
V1 and V2 - Program intersection for replacement. P3			

ELEMENT/ENV: 8484 / 3 Metal Mast Arm Horizontal

ELEM CATEGORY: Other Elements

CONDITION STATE			PRIORITY
4	MMS Quantity: 8 mh	Element Estimated Quantity: 1 (EA)	2
WORK ORDER RECOMMENDATION:			
V1H1 - Remove arm within 6 months. P2			
4	MMS Quantity: 8 mh	Element Estimated Quantity: 1 (EA)	1
WORK ORDER RECOMMENDATION:			
V2H2 - Remove arm within 1 week. P1			

Structure Notes

Maintaining Agency:

City of Orlando Transportation Engineering Division
1214 S. Westmoreland Dr.
Orlando, FL 32805
407-246-2617

Steven Jones; Traffic Operations Manager; (steven.jones@cityoforlando.net); Mobile: (321)-229-3890; Office: (407)-246-2673
John Falango; Traffic Systems Maintenance; (john.falango@cityoforlando.net)
Christopher Tucker; Traffic Signal Maintenance Supervisor; (christopher.tucker@cityoforlando.net); Mobile: (321)-229-0275
Isaiah Sadler; (isaiah.sadler@orlando.gov)

Plans are available at the District 5 Structures Maintenance office.

The year built was input as 1985 based on the design year found on plans for City of Orlando Project at SR-552 and Dixie Belle Dr. plus 1 year.

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INSPECTION NOTES: **BZHA** **5/28/2025**

A 42 ft. insulated bucket truck was utilized during this inspection.

NBI Item (59) Superstructure rating has been lowered from 4 - Poor to 3 - Serious during the 05/28/2025 Interim Inspection due to increased corrosion and section loss with malleable areas on the V1/H1 and V2/H2 Horizontals. A Prompt Corrective Action Advisory was sent to the FDOT on 05/30/2025 recommending removal of the V2/H2 horizontal within one week and V1/H1 within 6 months and is included with this inspection report as an addendum.

The inspection frequency is being increased from 12 months to 3 months until removal or replacement to monitor corrosion on both horizontal arm interiors.

NBI Item (60) Substructure rating is coded 5 - Fair due to excessive anchor bolt stand-off distance at F2 and missing anchor bolt lock nuts at both foundations.

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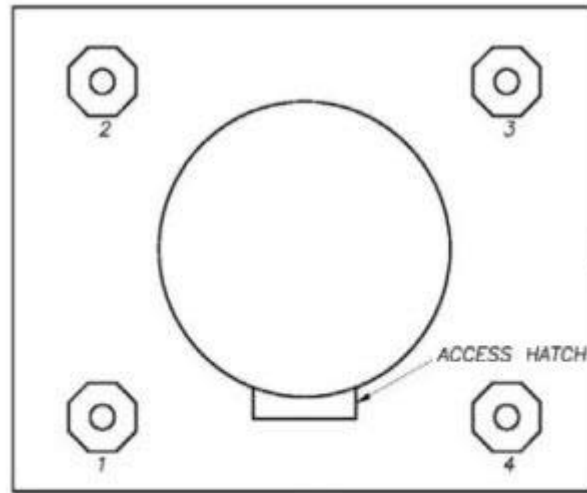
SR-552 (Curry Ford Rd.) at Dixie Belle Dr. - 0.25 Miles West of SR-436

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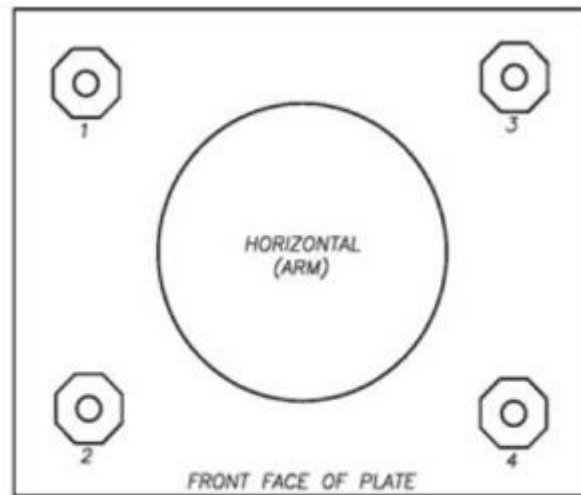
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TSMC ANCHOR BOLT NUMBERING SCHEME



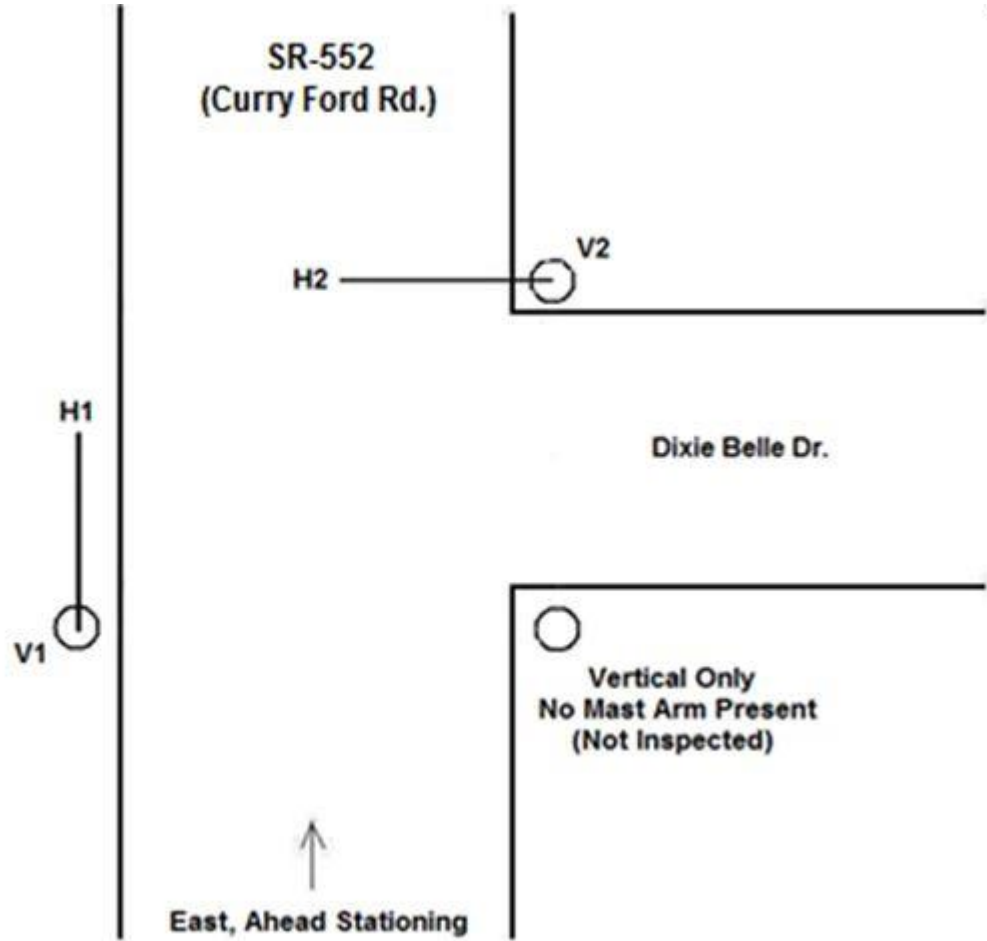
TSMC MOMENT CONNECTION BOLT NUMBERING SCHEME

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Intersection Layout

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Intersection Overview (Looking East)

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Photo 1 - Element 8480 / Mast Arm Foundation

F1 Missing anchor bolt lock nuts.

MAINTAINING AGENCY REPAIR RECOMMENDATION:
None.

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Photo 2 - Element 8480 / Mast Arm Foundation

F2 Missing anchor bolt lock nuts and excessive stand-off distance.

MAINTAINING AGENCY REPAIR RECOMMENDATION:
None.

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Photo 3 - Element 8481 / Metal Mast Arm Vertical

V1 Base plate underside corrosion.

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 4 - Element 8481 / Metal Mast Arm Vertical

V1 Typical base plate top and vertical face corrosion and column corrosion at the base plate.

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 5 - Element 8481 / Metal Mast Arm Vertical

V1 Painted over column corrosion & pitting on NE face just below moment connection collar.

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 6 - Element 8481 / Metal Mast Arm Vertical

V2 Painted over column corrosion with light pitting at base plate at NE quadrant.

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 7 - Element 8481 / Metal Mast Arm Vertical

V2 Overview of painted over column corrosion & pitting on north face just below moment connection collar.

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 8 - Element 8481 / Metal Mast Arm Vertical

Typical column interior corrosion (V2 shown).

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 9 - Element 8481 / Metal Mast Arm Vertical

Typical painted over column corrosion under the cap (V2 shown).

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 10 - Element 8481 / Metal Mast Arm Vertical

Typical column hand hole access flange with painted over corrosion & pitting (V2 shown).

FDOT WORK ORDER RECOMMENDATION:

V1 and V2 - Program intersection for replacement. P=3

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Photo 11 - Element 8484 / Metal Mast Arm Horizontal

V1/H1 Slightly malleable area on south face of arm and thickness readings.

FDOT WORK ORDER RECOMMENDATION:

V1/H1 - Remove arm within 6 months. P=2

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Photo 12 - Element 8484 / Metal Mast Arm Horizontal

V1/H1 Thickness readings on underside and north face of arm.

FDOT WORK ORDER RECOMMENDATION:
V1/H1 - Remove arm within 6 months. P=2

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Photo 13 - Element 8484 / Metal Mast Arm Horizontal

V1/H1 Borescope view of corrosion on arm interior.

FDOT WORK ORDER RECOMMENDATION:
V1/H1 - Remove arm within 6 months. P=2

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Photo 14 - Element 8484 / Metal Mast Arm Horizontal

V1/H1 Borescope view of corrosion on arm interior.

FDOT WORK ORDER RECOMMENDATION:
V1/H1 - Remove arm within 6 months. P=2

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR Report with PDF attachment(s)
(INTERIM INSPECTION REPORT)

Structure ID: 75M112

Inspection

DISTRICT: D5 - Deland

INSPECTION DATE: 5/28/2025 BZHA



Photo 15 - Element 8484 / Metal Mast Arm Horizontal

V1/H1 Borescope view of corrosion on arm interior.

FDOT WORK ORDER RECOMMENDATION:

V1/H1 - Remove arm within 6 months. P=2

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR Report with PDF attachment(s)
(INTERIM INSPECTION REPORT)

Structure ID: 75M112
DISTRICT: D5 - Deland

Inspection

INSPECTION DATE: 5/28/2025 BZHA



Photo 16 - Element 8484 / Metal Mast Arm Horizontal

V2/H2 - Malleable area on underside of arm.

FDOT WORK ORDER RECOMMENDATION:
V2/H2 - Remove arm within 1 week. P=1

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR Report with PDF attachment(s)
(INTERIM INSPECTION REPORT)

Structure ID: 75M112
DISTRICT: D5 - Deland

Inspection

INSPECTION DATE: 5/28/2025 BZHA



Photo 17 - Element 8484 / Metal Mast Arm Horizontal

V2/H2 - Malleable area on underside of arm.

FDOT WORK ORDER RECOMMENDATION:
V2/H2 - Remove arm within 1 week. P=1

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR Report with PDF attachment(s)
(INTERIM INSPECTION REPORT)

Structure ID: 75M112
DISTRICT: D5 - Deland

Inspection

INSPECTION DATE: 5/28/2025 BZHA



Photo 18 - Element 8484 / Metal Mast Arm Horizontal

V2/H2 - Malleable area on underside of arm.

FDOT WORK ORDER RECOMMENDATION:
V2/H2 - Remove arm within 1 week. P=1

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR Report with PDF attachment(s)
(INTERIM INSPECTION REPORT)

Structure ID: 75M112
DISTRICT: D5 - Deland

Inspection

INSPECTION DATE: 5/28/2025 BZHA



Photo 19 - Element 8484 / Metal Mast Arm Horizontal

V2/H2 Thickness readings on underside and east face of arm.

FDOT WORK ORDER RECOMMENDATION:
V2/H2 - Remove arm within 1 week. P=1

FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM
Inspection/CIDR Report with PDF attachment(s)
(INTERIM INSPECTION REPORT)

Structure ID: 75M112
DISTRICT: D5 - Deland

Inspection

INSPECTION DATE: 5/28/2025 BZHA



Photo 20 - Element 8484 / Metal Mast Arm Horizontal

V2/H2 Thickness readings on underside and west face of arm.

FDOT WORK ORDER RECOMMENDATION:
V2/H2 - Remove arm within 1 week. P=1

May 30, 2025



To: Mr. Bobby McQuarrie
Florida Department of Transportation – District 5
1650 North Kepler Road
DeLand, FL 32724

From: Michael Scherer, P.E.
Senior Structural Engineer
8875 Hidden River Parkway, Suite 200
Tampa, Florida 33637

Project: FDOT District 5 Traffic Signal Mast Arm Inspection
Contract No. CAT71

Subject: **Prompt Corrective Action Advisory – Severe Corrosion on Horizontal Arms**
Interim TSMA Inspection
TSMA No. 75M112 – SR-552 at Dixie Belle Drive
City of Orlando

Copy to: Doug Shockley, Mario Bizzio, Jonathan Jastremsky, Rick Maslyn, Tricia Ballard, Jim Stroz, Kevin Marquez, Michael Sanders, Ray Marlin

Content: An Ayres Associates inspection team has recently inspected the above referenced intersection and observed the following deficiency noted below. **The Prompt Corrective Action (PCA) box has been marked in the report.**

Summary: During the May 28, 2025 interim inspection, all (2) horizontal arm interiors were observed to have severe corrosion with up to 47% loss of section. The notes from the interim inspection are as follows:

V2/H2 (arm length = 32 ft.) - The bottom 180 degrees of the horizontal arm is easily malleable with a hammer for a 5 in. length adjacent to the moment connection due to severe corrosion on the arm interior. Minimum thickness readings in this area were 0.095 in. on the arm underside and 0.100 in. to 0.105 in. on the east and west faces (original arm thickness = 0.180 in.) with approximately 47% section loss in this area. Arm circumference = 28 in. and malleable area = 14 in. There is nowhere to insert a borescope to view the arm interior. Section loss extends approximately 24 in. from the moment connection with thickness readings taken on the lower half of the arm from 6 in. to 18 in. away from the moment connection ranging from 0.120 in. to 0.145 in. Refer to Photos 1 through 5.

V1/H1 (arm length = 24 ft.)– The horizontal arm interior has severe corrosion with flaking and section loss viewed with a borescope thru the signal wiring hole near the moment connection. The south face of the arm has a slightly malleable area adjacent to the moment connection measuring 7 in. high x 4 in. long. Minimum thickness readings in this area were 0.095 in. (original arm thickness = 0.180 in.) with approximately 47% section loss in this area. Section loss extends approximately 14 in. from the moment connection with thickness readings on the lower half of the arm ranging from 0.120 in. to 0.170 in. Refer to Photos 6 through 11.

Recommendation: Based on the severity of corrosion, section loss, and malleable areas, it is recommended that V2/H2 be removed within one week. V1/H1 should be removed within 6 months.

TSMA No 75M112

The rating for Item 59 – Superstructure will be lowered to a 3 – Serious and the inspection frequency will be set to 3 months until removal or replacement.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael E. Scherer".

Michael E. Scherer, P.E.
Structural Engineer
Ayres Associates

TSMA No 75M112



Photo 1: V2/H2 – Malleable area on underside of arm



Photo 2: V2/H2 – Malleable area on underside of arm

TSMA No 75M112



Photo 3: V2/H2 – Malleable area on underside of arm



Photo 4: V2/H2 – Thickness readings on underside and east face of arm

TSMA No 75M112



Photo 5: V2/H2 – Thickness readings on underside and west face of arm



Photo 6: V1/H1 – Slightly malleable area on south face of arm

TSMA No 75M112



Photo 7: V1/H1 – Thickness readings on south face of arm



Photo 8: V1/H1 – Thickness readings on underside and north face of arm

TSMA No 75M112



Photo 9: V1/H1 – Borescope view of corrosion on arm interior



Photo 10: V1/H1 – Borescope view of corrosion on arm interior

TSMA No 75M112



Photo 11: V1/H1 – Borescope view of corrosion on arm interior

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 75M112

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 7/2/2025

Description

Structure Unit Identification

Bridge/Unit Key: 75M112 1
 Structure Name: SR-552 (Curry Ford Rd.) at Dixie Belle Dr
 Description: TSMA
 Type: M - Main

Structure Identification

Admin Area: METROPLAN Orlando
 District (2): D5 - Deland
 County (3): (75) Orange
 Location (9): .25 Miles West of SR-436
 FIPS State/Region (1): 12 Florida Region 4-Atlanta
 NBIS Bridge Len (112): N - Does not meet NBI Length
 Maint. Resp. (21): 4 City/Municipal Hwy Agcy
 Owner (22): 1 State Highway Agency
 Previous Structure:
 2nd Previous Structure:
 Replacement Structure:

Age and Service

Year Built (27): 1985
 Year Reconstructed (106): 0
 Type of Service On (42a): Traffic Signal Mast Arm
 Under (42b): 1 Highway

Structure Type and Material

Main Span Material (43A): 3 Steel
 Main Span Design (43B): Traffic Signal Mast Arm

NBI Rating

Superstructure (59): 3 Serious
 Substructure (60): 5 Fair

General Structure Information

Electrical Devices: Combination values 1-7
 Maintenance Yard: 594-Orlando (594)

Mast Arm Managing Agency ID:
 Mast Arm Code: 4
 Mast Arm Description: Mast arm is outside the mast arm boundary area

Appraisal

Minimum Vertical Clearance

Over Structure (53): 99.99 ft
 Under (reference) (54a): H Hwy beneath struct
 Under (54b): 0 ft

Minimum Lateral Underclearance

Reference (55a): H Hwy beneath struct
 Right Side (55b): 0 ft
 Left Side (56): 0 ft

Schedule

Current Inspection

Inspection Date: 05/28/2025
 Inspector: KNAAAFD - David Fishman
 Bridge Group: CA523
 Alt. Bridge Group:
 Primary Type: Interim
 Review Required: ☒

Next Inspection Date Scheduled

NBI: 05/30/2028
 Element: 08/28/2025
 Other/Special: 08/28/2025
 Inventory Photo Update Due: 05/31/2033

Inspection Types Performed

NBI ☐ Element ☒ Other Special ☒

Inspection Intervals Required (92) Frequency (92) Last Date (93) Inspection Resources

Other Special	☒	3 mos	05/28/2025	Crew Hours: 2
NBI		60 mos (91)	05/30/2023 (90)	Flagger Hours: 0
				Helper Hours: 0
				Snooper Hours: 0

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 75M112

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 7/2/2025

Elements

Inspection Date: 05/28/2025 BZHA

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8480 / 3	Mast Arm Foundation	0	.	0	.	2	100	0	.	2 (EA)
UNIT 0	1020 / 3	Connection	0	.	0	.	2	100	0	.	2 (EA)

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8481 / 3	Metal Mast Arm Vertical	0	.	0	.	2	100	0	.	2 (EA)
UNIT 0	1000 / 3	Corrosion	0	.	0	.	2	100	0	.	2 (EA)
UNIT 0	8516 / 3	Painted Steel	337	96.29	0	.	0	.	13	3.71	350 sq.ft
UNIT 0	3440 / 3	Eff (Stl Protect Coat)	0	.	0	.	0	.	13	100	13 sq.ft

MISCELLANEOUS : Other Elements

Str Unit	Elem/Env	Description	Qty1	%1	Qty2	%2	Qty3	%3	Qty4	%4	T Qty
UNIT 0	8484 / 3	Metal Mast Arm Horizontal	0	.	0	.	0	.	2	100	2 (EA)
UNIT 0	1000 / 3	Corrosion	0	.	0	.	0	.	2	100	2 (EA)
UNIT 0	8516 / 3	Painted Steel	95	51.35	0	.	0	.	90	48.65	185 sq.ft
UNIT 0	3440 / 3	Eff (Stl Protect Coat)	0	.	0	.	0	.	90	100	90 sq.ft

Total Number of ADE Elements*: 3

*excluding defects/protective systems

Inspection Information**Inspection Date:** 05/28/2025**Type:** Interim**Inspector:** KNAAAFD - David Fishman**Inspection Notes:** A 42 ft. insulated bucket truck was utilized during this inspection.

NBI Item (59) Superstructure rating has been lowered from 4 - Poor to 3 - Serious during the 05/28/2025 Interim Inspection due to increased corrosion and section loss with malleable areas on the V1/H1 and V2/H2 Horizontals. A Prompt Corrective Action Advisory was sent to the FDOT on 05/30/2025 recommending removal of the V2/H2 horizontal within one week and V1/H1 within 6 months and is included with this inspection report as an addendum.

The inspection frequency is being increased from 12 months to 3 months until removal or replacement to monitor corrosion on both horizontal arm interiors.

NBI Item (60) Substructure rating is coded 5 - Fair due to excessive anchor bolt stand-off distance at F2 and missing anchor bolt lock nuts at both foundations.

Structure Notes

Maintaining Agency:

City of Orlando Transportation Engineering Division
1214 S. Westmoreland Dr.
Orlando, FL 32805
407-246-2617

Steven Jones; Traffic Operations Manager; (steven.jones@cityoforlando.net); Mobile: (321)-229-3890; Office: (407)-246-2673
John Falango; Traffic Systems Maintenance; (john.falango@cityoforlando.net)
Christopher Tucker; Traffic Signal Maintenance Supervisor; (christopher.tucker@cityoforlando.net); Mobile: (321)-229-0275
Isaiah Sadler; (isaiah.sadler@orlando.gov)

Plans are available at the District 5 Structures Maintenance office.

The year built was input as 1985 based on the design year found on plans for City of Orlando Project at SR-552 and Dixie Belle Dr. plus 1 year.

Schedule Notes

This report contains information relating to the physical security of a structure and depictions of the structure. This information is confidential and exempt from public inspection pursuant to sections 119.071(3)(a) and 119.071(3)(b), Florida Statutes. Only the cover page of this report may be inspected and copied.

**FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM**

REPORT ID: INSP005

Structure ID: 75M112

**Inspection/CIDR Report with PDF attachment(s)
TRAFFIC SIGNAL MAST ARM**

DATE PRINTED: 7/2/2025

FLORIDA DEPARTMENT OF TRANSPORTATION BRIDGE MANAGEMENT SYSTEM

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 75M112

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 7/2/2025

Under Route Information

Roadway Identification

NBI Structure No (8): 75M112
 Position/Prefix (5): A - 1st Route Under
 Kind Hwy (Rte Prefix): 3 State Hwy
 Design Level of Service: 1 Mainline
 Route Number/Suffix: 00552 / 0 N/A (NBI)
 District (2): D5 - Deland
 County (3): (75) Orange
 Place Code (4): Orlando
 Feature Intersect (6): Dixie Belle Dr
 Roadway Name: Curry Ford Rd
 Mile Point (11): 1.001
 Latitude (16): 028d31'27.3" Long (17): 081d18'51.6"

Roadway Traffic and Accidents

Lanes (28): 4 Medians: 1 Speed: 40 mph

Roadway Classification

Nat. Hwy Sys (104): 0 Not on NHS
 National base Net (12): 0 - Not on Base Network
 LRS Inventory Rte (13a): 75 012 000 Sub Rte (13b): 00
 Functional Class (26): 16 Urban Minor Arterial
 Federal Aid System: ON
 Defense Hwy (100): 0 Not a STRAHNET hwy
 Direction of Traffic (102): 2 2-way traffic
 Emergency: ☐

Roadway Clearances

Vertical (10): 0 ft
 Horiz. (47): 0 ft Roadway (51): 0 ft
 Truck Network (110): 0 Not part of natl netwo
 Toll Facility (20): 3 On free road
 Fed. Lands Hwy (105): 0 N/A (NBI)

**FLORIDA DEPARTMENT OF TRANSPORTATION
BRIDGE MANAGEMENT SYSTEM**

REPORT ID: INSP005

Inspection/CIDR Report with PDF attachment(s)

Structure ID: 75M112

TRAFFIC SIGNAL MAST ARM

DATE PRINTED: 7/2/2025

Under Route Information**Roadway Identification**

NBI Structure No (8): 75M112
Position/Prefix (5): B - 2nd Route Under
Kind Hwy (Rte Prefix): 5 City Street
Design Level of Service: 1 Mainline
Route Number/Suffix: 00000 / 0 N/A (NBI)
District (2): D5 - Deland
County (3): (75) Orange
Place Code (4): Orlando
Feature Intersect (6): Dixie Belle Dr
Roadway Name: Dixie Belle Dr
Mile Point (11): 1.760
Latitude (16): 028d31'27.3" Long (17): 081d18'51.6"

Roadway Traffic and Accidents

Lanes (28): 2 Medians: 0 Speed: 40 mph

Roadway Classification

Nat. Hwy Sys (104): 0 Not on NHS
National base Net (12): 0 - Not on Base Network
LRS Inventory Rte (13a): 75 000 191 Sub Rte (13b): 00
Functional Class (26): 17 Urban Collector
Federal Aid System: ON
Defense Hwy (100): 0 Not a STRAHNET hwy
Direction of Traffic (102): 2 2-way traffic
Emergency: ☐

Roadway Clearances

Vertical (10): 0 ft
Horiz. (47): 0 ft Roadway (51): 0 ft
Truck Network (110): 0 Not part of natl netwo
Toll Facility (20): 3 On free road
Fed. Lands Hwy (105): 0 N/A (NBI)