# Origination Form

## Specifications

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|---|---|---|---|
| **Name:** | Ben Goldsberry | **Specification Number:** | 455-7.10 |
| **Email:** | ben.goldsberry@dot.state.fl.us | **Associated Specs:** | None |
| **Date:** | 2024-06-20T15:37:31Z | **Verified:** | VERIFIED |

### Summary:

This change requires the exposed ends of carbon steel strands and reinforcing bars in concrete piles to be coated with epoxy.

### Justification:

This change provides temporary protection to the exposed ends of carbon steel strands and reinforcing bars from chloride water. The temporary protection is for the period after pile cut-off and prior to the permanent condition of being encased in concrete.

### Do the changes affect other types of specifications?

Neither

### List Specifications Affected:

| Other Affected Documents/Offices | Contacted | Yes/No |
|---|---|---|
| **Other Standard Plans** | Josh Turley | Yes |
| **Florida Design Manual** | | No |
| **Structures Manual** | | No |
| **Basis of Estimates Manual** | | No |
| **Approved Product List** | | No |
| **Construction Office** | | No |
| **Maintenance Office** | | No |
| **Materials Manual** | | No |
| **Traffic Engineering Manual** | | No |

## Are changes in line with promoting and making progress on improving safety, enhancing mobility, inspiring innovation, and fostering talent; explain how?

This change is in line with improving safety and enhancing mobility. Ensuring that structures are protected from corrosion during construction will result in durable structures that will meet or exceed their target service life.

## What financial impact does the change have; project costs, pay item structure, or consultant fees?

Minor financial impact. The contractor will be required to apply a small amount of epoxy to the ends of the carbon steel strands and reinforcing.

## What impact does the change have on production or construction schedules?

Minor impact to construction schedules. The contractor will be required to apply a small amount of epoxy to the ends of the carbon steel strands and reinforcing.

## How does this change improve efficiency or quality?

This change improves quality. Ensuring that structures are protected from corrosion during construction will result in durable structures that will meet or exceed their target service life.

## Which FDOT offices does the change impact?

Construction

## What is the impact to districts with this change?

This change will mitigate corrosion for the piles, providing district maintenance with bridges that are in the best possible condition prior to opening to traffic.

## Does the change shift risk and to who?

No shift in risk.

## Provide summary and resolution of any outstanding comments from the districts or industry.

Comments and Responses are available on the Track the Status of Revisions hyperlink located on the Specifications landing page: https://www.fdot.gov/programmanagement/Specs.shtm

## What is the communication plan?

Through the established specification revision process (e.g., Internal and Industry Review)

## What is the schedule for implementation?

The Standard Specifications eBook and Workbook are effective July 1st every year.

**STRUCTURES FOUNDATIONS**
**(REV 6-20-24)**

ARTICLE 455-7 is expanded by the following:

**455-7.10 Protecting Tops of Concrete Piles:** Protect the exposed carbon steel strands and reinforcing bars at the top surface of each concrete pile with epoxy when all the following conditions apply:

1. The General Notes in the Plans classify the substructure environment as extremely aggressive due to chlorides,
2. The piles are not enclosed by a cofferdam maintaining a dry condition between the time the pile is cut off and when the pile top is encased in concrete,
3. The top of the piles after cut-off are within 6 feet of the mean high water elevation listed in the Plans.

After pile cut off is performed, the epoxy must be applied before the water level of the next high tide or flood event reaches the top of the pile. Use an epoxy meeting the requirements of 926-1, Type K. In accordance with the epoxy manufacturer's recommendations, prepare the surface of the top of the pile, and apply the epoxy to each exposed strand and bar. Apply the epoxy to each bar and strand such that its limits extend a minimum of 1 inch past the edge of the strand or bar.