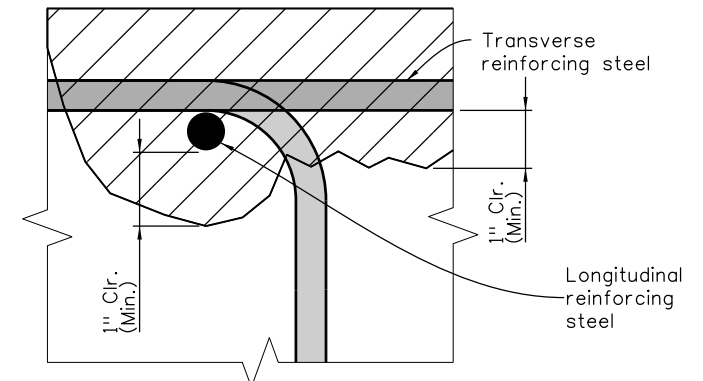


LEGEND

- Class 1 Removal:** From top of deck to sound concrete, but not less than 3/4" and not deeper than the center of the top transverse mat of reinforcing steel. If more than half the diameter of the transverse reinforcing steel is exposed before reaching sound concrete, or if adjacent to Class 2, Class 2 removal shall be performed at these locations.
- Class 2 Removal:** From top of deck to sound concrete, but not less than 1" clear below the top mat of reinforcing steel. If the bottom mat of reinforcing steel is exposed, then Class 3 removal shall be performed at these locations.
- Class 3 Removal:** From top to bottom of deck, full depth removal.
- Patch Material:** Concrete Class DR.
- Polyester Concrete:** Polyester concrete only shall be used for Class 1 repairs only. Class 1 repairs shall only be performed at isolated locations, not adjacent to Class 2 or 3 repairs.
- Grout Beds:** Required if the clear distance between anodes and existing concrete substrate is less than 1". Grout encapsulation of anodes may be required for certain patching materials. See Revision of Section 601 Galvanic Anodes.



DETAIL 1

NOTES

These details reflect the scope and the nature of the work. They are not intended to represent the actual structure.

The applicable classes of removal shall be as designated by the summary of quantities in the plans.

Plan quantities are estimates. Actual concrete removal and replacement shall be as needed to reach sound concrete or as directed by the Engineer.

Removal operations shall be coordinated with the Engineer and performed in a manner as required to ensure the structural integrity of the bridge.

If Class 3 removal is performed immediately adjacent to, and on both sides of a Cast in Place concrete girder simultaneously within the middle half of a span, that girder shall be shored from the ground at the third points of that span.

If Class 2 or 3 removal is performed on both sides of a Cast in Place concrete girder simultaneously within the quarter of a span on either side of the pier, that girder shall be shored at the third point each side of that pier. This note is not intended to require shoring for "pothole" type repairs of limited extent where at least one half of the longitudinal deck reinforcing is anchored on both sides of the removal area.

If falsework is required, the falsework load capacity required to support the girders shall be determined by the Contractor and approved by the Engineer unless specified otherwise on the plans.

Care shall be taken in removing concrete from around structural steel elements and reinforcing steel to prevent damage to the steel.

NOTE TO DESIGNER/DETAILER:

[Choose one of these two notes below depending on whether existing is non-epoxy or epoxy coated:]

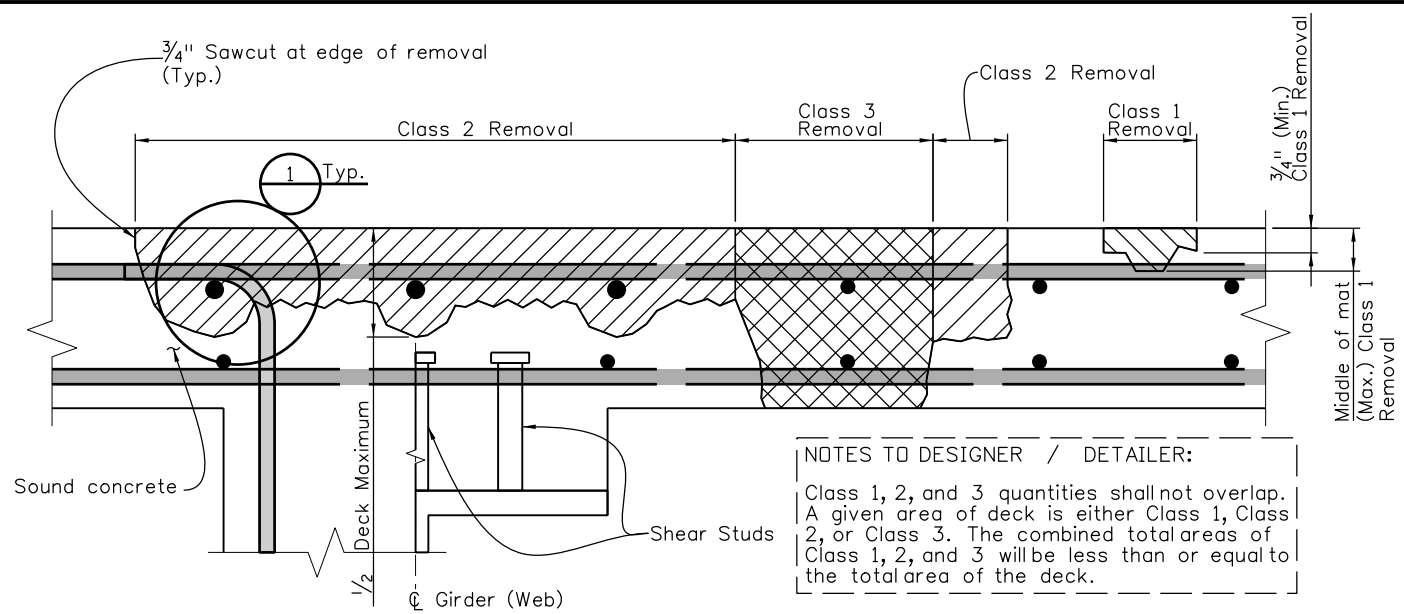
All damaged or corroded non-epoxy coated reinforcing steel requires new non-epoxy coated reinforcing steel to be added per Revision of Section 202 Removal of Portions of Present Structure. All exposed non-epoxy coated reinforcing steel shall be cleaned with hand tools, straightened and sandblasted prior to placing concrete.

All damaged or corroded epoxy coated reinforcing steel requires new epoxy coated reinforcing steel to be added per Revision of Section 202 Removal of Portions of Present Structure. All exposed epoxy coated reinforcing steel shall be cleaned by hand tools of any loose concrete and rust and the cleaned area epoxy coated prior to placing concrete. Sandblasting shall not be performed on any exposed epoxy coated reinforcing steel, unless approved by the Engineer.

Galvanic Anode Corrosion protection is required on all areas of exposed non-epoxy or corroded epoxy coated reinforcing prior to placing Concrete. Galvanic Anodes shall be installed per manufacturer's recommendations in accordance with Revision of Section 601 Galvanic Anodes.

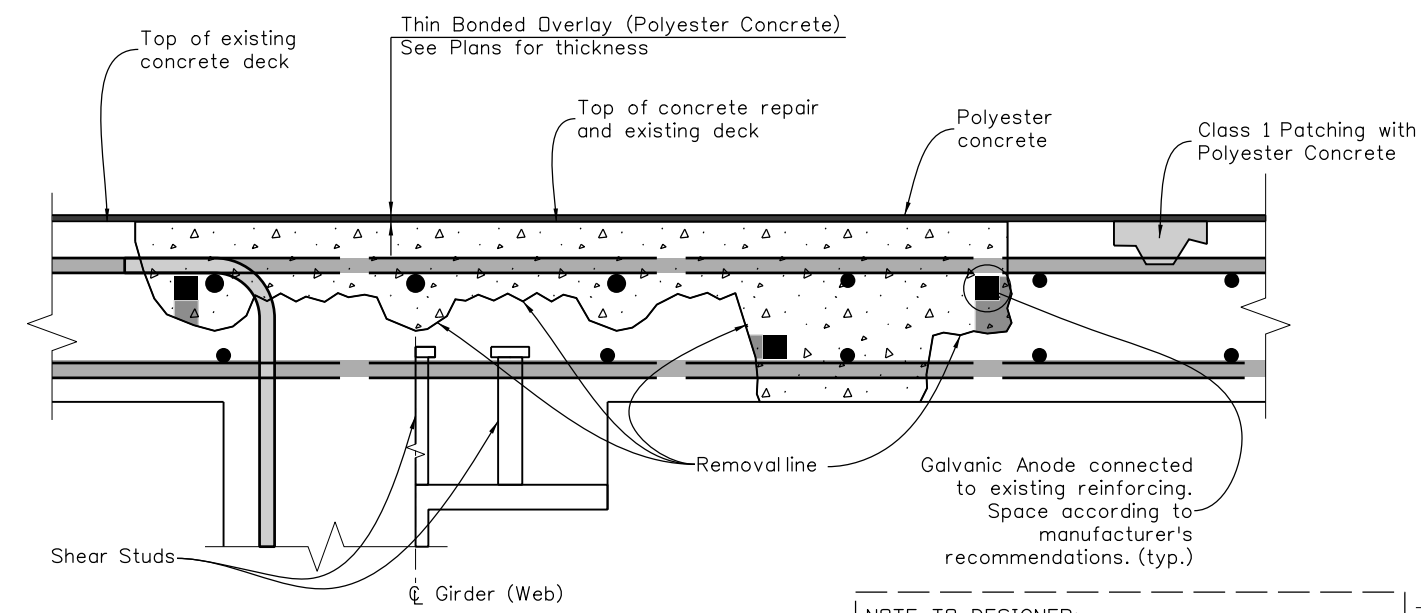
Patched deck may be opened to traffic as soon as new concrete has attained required strength.

Polyester concrete overlay shall not be placed until the new concrete meets the moisture criteria of Revision of Section 519 Thin Bonded Overlay (Polyester Concrete).



NOTES TO DESIGNER / DETAILER:
 Class 1, 2, and 3 quantities shall not overlap. A given area of deck is either Class 1, Class 2, or Class 3. The combined total areas of Class 1, 2, and 3 will be less than or equal to the total area of the deck.

REMOVAL OF PORTIONS OF PRESENT STRUCTURE (CLASS 1, 2, & 3)



CONCRETE REPLACEMENT

DECK REMOVAL PERCENTAGE ESTIMATION

| DECK NBI RATING | CLASS 1 | CLASS 2 | CLASS 3 |
|-----------------|---------|---------|---------|
| 7 | 5% | - | - |
| 6 | 5% | 5% | 1% |
| 5 | 10% | 10% | 2% |

[Designer - Percentages above are just a starting point, adjust per designer judgement up or down based on cores (if taken), actual bridge age, NBI Deck Rating and other visual indicators such as condition of top of bare deck or asphalt overlay and bottom of deck; Modify or remove table as required. When Summary of Quantity sheet is ready move table there, or to General Layout sheet.]

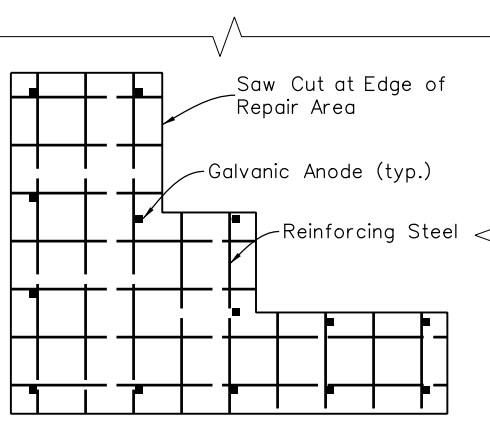
NOTE TO DESIGNER:

Take out the galvanic anodes and all references to them if it is known that the deck has all coated reinforcing steel.

Polyester Concrete Class 1 repairs cannot be completed adjacent to Class 2 and Class 3 repairs done with other patching materials during a night-time only lane closure. The bond between Polyester Class 1 and the other Class 2 and 3 materials is the concern with adjacent patches.

NOTE TO DESIGNER/DETAILER:

Move the following note to Summary of Quantities or General Layout Sheet: "Anode Quantity Based on 5 Anodes/SY/Class 2 & 3 Removal"



CORROSION PROTECTION

| Revision Dates | DATE | QUANTITY | DATE |
|----------------|------|----------|------|
| | 4/16 | | 3/19 |
| | | | |

| INITIALS | DESIGN | DATE | DETAIL | DATE | QUANTITY | DATE |
|----------|--------|------|--------|------|----------|------|
| | | | | | | |

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|--|--|--|---|--|---|
| Print Date: 7/28/2020 File Name: b-202-2.dgn Horiz. Scale: NTS Staff Bridge Branch - Unit 022X Unit Leader Initials | Sheet Revisions Date: Comments Init. | Colorado Department of Transportation 2829 West Howard Place 3rd Floor Denver, CO 80204 Phone: 303-757-9309 FAX: 303-757-9197 Staff Bridge Branch | As Constructed No Revisions: Revised: Void: | DECK REPAIR DETAILS POLYESTER CONCRETE OVERLAY Designer: Detailer: Sheet Subset: BRIDGE Subset Sheets: of | Project No./Code Sheet Number |
|--|--|--|---|--|---|