

DIVISION 400 - STRUCTURES

SECTION 401 - CONCRETE STRUCTURES

[NOTE FOR THE DESIGNER:

For LMC overlay finish on rehabilitation and widening contracts use either section 401.17 (F)(2) or 401.17 (F) (3) depending on staging and other considerations. For new construction with no staging use section 401.17(F)(3):]

[NOTE FOR THE DESIGNER:

Contracts containing a large quantity of Class A concrete shall use "Protective Coatings for Concrete Surfaces". For contracts which have a small amount of concrete, water repellant treatment should be used. Water repellant treatment should also be used for the protection of Class B, C, D concrete:]

[Include the following if necessary:]

SECTION 403 - STEEL STRUCTURES

403.01 DESCRIPTION.

The following is added:

Steel Structures shall also include design, installation and removal of catches and protective shielding.

Delete the last paragraph in its entirety and replace with the following:

Materials and Construction operations not specifically covered in the Plans and Specifications shall be in accordance with AASHTO Standard Specifications for Highway Bridges or AASHTO LRFD Bridge Design Specifications as applicable, based on the design code noted on the Plans.

403.06 FABRICATION AND WELDING

Formed steel flooring plates shall be welded at the supports with two ½ by 1 inch fillet welds through the holes in each valley. The lapped edges of adjacent plates shall be welded together with a bead, 3 inches long, midway in the span between supports.

Painting is not required for galvanized surfaces.

403.08 SHIPPING, HANDLING AND ERECTION

The girders, stiffeners, diaphragms, and steel bridge flooring for each span shall be assembled in the shop and delivered to the site and erected a unit. As specified hereinafter, the intermediate and finish coats of paint may be applied in the shop or on the site before erection. If painted areas are damaged during transportation or erection, these areas shall be repainted.

403.08 SHIPPING, HANDLING AND ERECTION.

(B) ERECTION.

Delete the last paragraph in its entirety and replace with the following:

When erecting structures over existing buildings, structures, utilities, active roadways, walkways, railroads, navigable waterways, recreational and storage areas, catches or protective shielding shall be installed at the locations designated on the plans or as directed by the Engineer before any further operations may proceed over these areas. Design, installation and removal of catches or protective shielding shall meet the requirements of Subsection 417.04 (A) (1) Catches.

403.18 MEASUREMENT

Formed steel flooring will be measured by the square foot.

The following is added:

Catches or protective shielding as required by Subsection 403.08(B) will not be measured for payment.

403.19 PAYMENT

Payment will be made under:

<i>PAY ITEM</i>	<i>PAY UNIT</i>
Formed Steel Flooring for Pedestrian Bridges	Square Foot

The following is added:

No separate payment will be made for catches or protective shielding, but costs thereof shall be included in the price bid for the pay item "Structural Steel".

[Include as-needed with timber fender repair contracts:]

SECTION 405 - PILES

405.01 DESCRIPTION

or approved equal.

To be considered for approval, an alternate elastic joint sealer must be compatible with the asphaltic plug joints, bond to asphaltic plug joints, and be capable of accommodating thermal movements of two (2) inches between temperatures of 120 degrees F and -30 degrees F.

417.03 EQUIPMENT

1) Sawing and Sealing Deck Joints

Equipment used for sawing and sealing joints in bituminous concrete overlay over deck joints shall conform with the following:

- Sawing equipment shall conform to the requirements of Section 401. The blades shall be of such size and configuration that the desired dimensions of the sawcut are achieved in one pass.
- Sealing equipment shall consist of a kettle, or melter, and applicator wand. The melter shall be constructed as a double boiler, with the space between the inner and outer shells filled with oil or other heat transfer medium. The melter shall include positive temperature control, mechanical agitation, recirculation pumps, and thermometers for continuous reading of the temperature of both the sealing compound and the heat transfer medium. The applicator wand shall be heated or insulated to maintain the pouring temperature of the sealant during the placing operation. Pouring pots or similar devices shall not be used to fill sawed joints.

If the condition of the existing steelwork does not permit bolting of the catch system, add the following:

417.04 CONCRETE DECK REPLACEMENT

The second paragraph is changed to:

Bolted connections between the temporary catch system and webs of stringers are not permitted.

Include the following as necessary:

(A) REMOVAL OF DECK SLABS.

(1) Catches.

Delete the fifth paragraph in its entirety and replace with the following:

Catches and shielding shall be in place prior to handrail, fencing, parapet, safetywalk removal, deck removal, bridge formwork installation, and the placement of new concrete deck and parapet.

All catches and shielding required to protect buildings, structures, utilities, active roadways, walkways, railroads, navigable waterways, recreational and storage areas located beneath the work site shall remain in place until the newly placed concrete has cured in accordance with the specifications or until directed by the Engineer. Fascia catches and shielding for these areas shall also remain in place until any fencing, light standards and other parapet mounted appurtenances have been properly installed. Catches in all other areas shall remain in place until all demolition debris has been removed to the satisfaction of the Engineer and the installation of the Stay In Place (SIP) form have been completed. However, these areas shall be restricted from public access until the bridge deck has been placed.

Delete the first sentence of the eighth paragraph and replace with the following:

Details of all catch and protective shielding systems shall be designed by the Contractor.

417.10 MEASUREMENT

Asphaltic Plug Joints will be measured by the linear foot, measured curb to curb for the depth shown on the Plans or to an average depth of 2-1/2 inches maximum. No separate measurement or payment will be made for joint replacement at the barrier curbs, parapets and sidewalks, the cost of which will be included in the linear foot item for deck joint replacement. Payment for Asphaltic Plug Joints will include removal of the existing concrete header, deck joint material and bituminous overlay as required, the preparation, and the furnishing and installation of the deck joint system as shown on the Plans and described herein.

[Include the following as necessary:]

Removal of Existing Non-Composite Deck Slabs will be measured by the square yard in plan area.

The following is added:

Catches installed where shown on the plans or as directed by the Engineer will be measured by the surface area, complete and in place, along the top of the catches. All other catches, including catches installed for the item "Concrete Deck Replacement with Catches", and catches installed for fall protection, work platforms or for the Contractor's convenience will not be measured for payment.

417.11 PAYMENT

Payment will be made under:

PAY ITEM	PAY UNIT
Asphaltic Plug Joint	Linear Foot

[Include the following as necessary:]

The following is added:

PAY ITEM	PAY UNIT
Removal of Existing Non-Composite Deck Slabs.....	Square Yard

The following is added:

The following Pay Item is added:

PAY ITEM	PAY UNIT
Catches.....	Square Yard

[Include the following as necessary:]