



# Illinois Department of Transportation

## Memorandum

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To: ALL BRIDGE DESIGNERS  
From: D. Carl Puzey  
Subject: Slipforming of Parapets Option  
Date: August 17, 2012

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12.4  
*D. Carl Puzey*

This memorandum supersedes ABD 07.1 and provides guidance on the use of slipformed parapets. Previous restrictions on slipforming 42 inch tall parapets, as well as when conduits are required in parapets, have been removed due to the successful completion of several test projects. The Guide Bridge Special Provision for Slipform Parapets (GBSP 61) has been revised accordingly, and a new base sheet SFP34-42, which covers details for both 34 and 42 inch tall slipformed F shape parapets has been developed.

The revision to GBSP 61 includes specific language to address requirements for a test section for 42 inch tall F Shape parapets. This language requires the contractor to slip a stand-alone trial section for all 42 inch F shape parapets to allow for the Department to evaluate the contractor's machine settings, travel speed and mix design. In addition, the restriction on slipforming parapets with conduits has been removed and an alternate parapet reinforcement detail has been added for use when embedded conduits are specified.

### **Project Screening and Selection**

The following initial screening criteria should be used to exclude projects where slipforming is either inappropriate or where the Department's investigation is ongoing.

Exclude:

1. Parapets taller than 42 inches.
2. Back-to-back parapets similar to Bridge Manual Figure 3.2.7-2.
3. Parapets with less than 2 feet of horizontal clearance to an obstruction such as an adjacent bridge or other structure.
4. Projects where aesthetic patterns requiring the use of form liners is specified.
5. Projects in regions where there are known problems with either concrete consistency or timely delivery.

Consideration:

1. Parapets mounted on top of retaining walls or on top of anchorage slabs are acceptable but provisions in the contract documents for an extended portion of the wall or slab shall be provided such that the supporting element extends 1.5 inches beyond the back face of the parapet. Details similar to the SFP base sheet are required.
2. Curved bridges with radius less than 1500 feet may not be suitable candidates for slipforming. While parapets with a smaller radius have been slipped, this is dependent on the length of the contractor's mold and its ability to move along the curve while still maintaining proper concrete cover over the rebar. It is also dependent on the accuracy of rebar placement. Slipforming of parapets with a radius of less than 1500 feet is not recommended.

Projects passing the initial screening requirements shall also require approval from the District/Owner before allowing the slipforming option.

**Implementation**

Projects approved for the slipforming option, shall include base sheet (SFP34-42) and Special Provision (GBSP61) in the contract documents.

For projects where the District does not want to allow slipforming or that do not pass the screening, a note stating, "Slipforming of the parapets is not allowed." shall be placed with the other general notes in the plans. This note may be modified to accommodate those projects where the parapet on one side of the bridge passes the screening while the other side does not. The typical example of this is a dual structure where the median barrier from Bridge Manual Figure 3.2.7-2 is used. If the barrier adjacent to the water table passes the screening and the District desires to allow slipforming, the designer shall add a descriptive plan note such as "Slipforming of the median parapet is not allowed".

The Standard Specifications for Highway and Bridge Construction 2012 does not reference slipforming of bridge parapets. It is, therefore, important to indicate in the contract documents whether or not slipforming of the parapets will be allowed. GBSP 61 and base sheet SFP34-42 will be available on the IDOT website in the near future. Designers shall implement this change on applicable projects not yet let.

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