

Commanding Officer
70th Engr Bn (Cbt)(A)
ATTN: S-3
APO 96297

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Co A, 70th Engr Bn
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29 Jun 69

1. Placing Keyways

When tying in two adjacent concrete pads, keyways are essential in order to give both pads the proper strength factor. An easy way to construct keyways is to drive U-shaped pickets in along the edge of the form which will be adjacent to the second pad. The "U" of the picket should be facing toward the outside in order to form the keyway. This picket should be driven just below the top edge of the form and will remain in the concrete to give the two pads extra strength. This method is much faster than using a wooden block which has to be oiled down so that it can be removed after the concrete hardens.

2. Expedient Sump

When pouring concrete footers below the water table of a stream, water seepage into the forms is usually a major problem. This is especially true during the rainy season when heavy rains can flood an entire site in several hours. In order to reduce some of the time needed for site preparation, it is suggested that a crane with clam shell be used to dig a hole directly adjacent to the forms. This hole should be considerably deeper than the bottom of the forms and filled with three inch minus rock to act as a sump. In addition, two half sections of thirty-six inch culvert should be placed upright in the hole to keep mud from washing into it. A channel should be dug leading from the bottom of the forms to the expedient sump. This hole will then keep the forms from filling with water and will save the time of pumping large quantities of water out of the forms before beginning work. Used in conjunction with a sump pump, this method enables you to pour the forms relatively dry.

3. Expedient Placing of Culvert

Where a boom from a crane was too short to move a sixty foot section of pre-constructed seventy-two inch culvert into place at the bottom of a bypass, it was discovered that the winch on a dozer could be used to accomplish the same purpose. Though it took a little longer, the dozer was eventually able to winch the culvert into place so that work could continue on the building of forms for a concrete headwall.

4. Placing Struts for Sixty Inch Culvert

When jacking up sixty inch culvert in order to place 4"x4" strutting material, the most common method is to place the jack at the bottom of the culvert and then use a block to reach the top. The problem with this method is that many times the block will jump out when the jack is raised. This creates a safety

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problem for obvious reasons. A way to correct this procedure is to set the block at the bottom of the culvert and then use a steel bearing plate to rest the jack on. A second bearing plate is then required between the jack and the top of the culvert in order to give it proper bearing surface. In this way the possibility of an accident is greatly decreased with no decrease in efficiency.

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