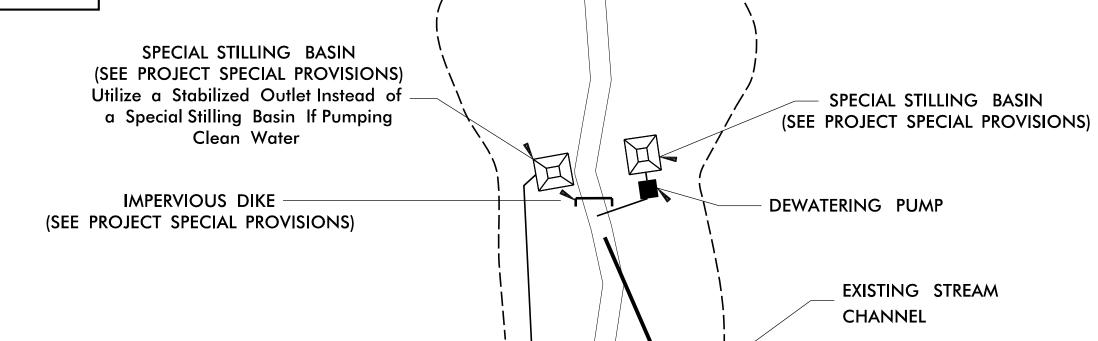
PROJECT REFERENCE NO.		SHEET NO.
<i>U-6003</i>		EC-2E
RW SHEET NO.		
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER

HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116

PUMP-AROUND OPERATION

1) All excavation shall be performed in only dry or isolated areas of the work zone.

- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses, sand bags, steel sheeting, etc. 4) Pumps and hoses shall be of sufficient size to dewater
- the work area.



#LOW

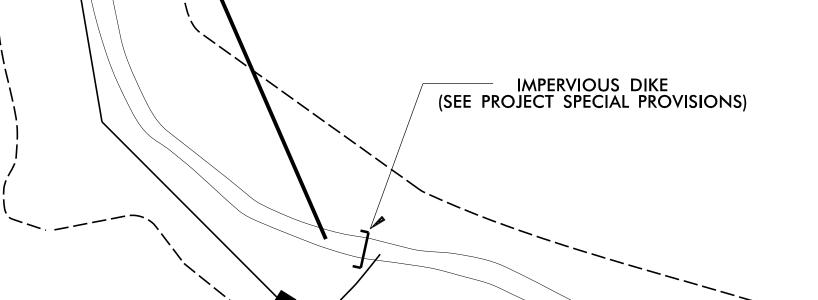
TEMPORARY FLEXIBLE HOSE

**ADDITIONAL PROJECT_SPECIFIC NOTES:

- USE PUMP-AROUND OPERATION AND IMPERVIOUS DIKES TO COMPLETE UPSTREAM AND DOWNSTREAM CHANNEL IMPROVEMENTS/PROTECTIONS AS APPLICABLE.
- ENSURE ALL UPSTREAM AND DOWNSTREAM CHANNEL IMPROVEMENT/PROTECTIONS ARE COMPLETE PRIOR TO REMOVAL OF IMPERVIOUS DIKES AND ALLOWING STREAM FLOW INTO NEW CULVERTS.

SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

- 1. INSTALL SPECIAL STILLING BASIN(S).
- 2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
- 3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
- 4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA.
- 5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
- 6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
- 7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.



CULVERT

PUMP-AROUND PUMP

TOP OF BANK