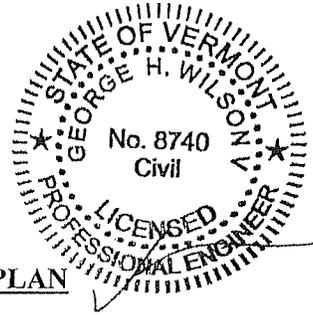

J. A. McDONALD, INC.

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IRASBURG STP CULV(30) BR6 and BR7

TEMPORARY STREAM RELOCATION/DEWATERING PLAN



Prior to construction activities on the above referenced project, JA McDonald will install a sand bag/concrete barrier impoundment area approximately 10 feet upstream of the proposed precast box culverts. This containment area will allow for the by-pass pumping of stream flows to permit box culvert installation in the dry. A temporary pipe sleeve will be installed under VT Route 58 and the temporary detours for the discharge pipe/hose from the pumps. Primary pumps shall be sized to accommodate ordinary low and average daily flows. Stand-by pumps will also be provided in the event the primary pump fails, becomes inoperative or for additional pumping capacity. The by-pass pump discharge will be located downstream of the proposed box culvert limits of work. The discharge pipe will be fitted with a "diffuser" and placed on existing large stream cobbles and/or stone fill. Pumps shall be maintained 24/7 during construction operations. Please refer to the attached plans for the location of the by-pass pumps, pump intake and discharge locations and the temporary sleeve.

Prior to construction activities, J.A. McDonald, Inc. will install the above mentioned by-pass pumps such that the functionality and capacity of the pumps can be optimized and the intake/discharge hoses strategically placed for the least amount of disturbance.

In addition to the primary and stand-by pumps noted above, temporary culverts will be installed to provide for the $Q_{2.33}$ storm event. A 60" culvert will be installed at BR6 and a 54" culvert at BR7 to maintain flows exceeding the average daily flows. Culverts will be installed as part of the Phase I detour construction, prior to box culvert excavation.

Sump pipes/pumps as needed, bedded in stone shall be installed within the limits of the box culvert excavation, to de-water excavation. Sump shall extend a minimum of 3 feet below invert of box. Pump discharge shall be directed to filter bags located greater than 50 feet from the stream. Reference the ESPC Plan for further details and location of filter bags.

Box culvert installation will be scheduled to coincide with favorable conditions with little or no precipitation forecasted. Construction activities will be suspended if unanticipated storm events produce flows which exceed pumping capacity.