

The objective of this subtask is to evaluate the state-of-the-art pertaining to the design of urban shelters resistant to conventional World War II high explosive bombs. A subsidiary objective is to evaluate structural damage which might be expected to be inflicted on urban structures by such weapons.

The IITRI technical library contains extensive holdings of United States technical publications dating from 1936. Although not by any means complete, the holdings are comprehensive and provide immediate means of identifying and obtaining further relevant information.

Three comprehensive computerized literature searches were performed, two performed by United States Government bibliography search centers and one by the IITRI bibliography search center. All of the literature which is herein presented is summarized by author abstracts and, when not provided, by IITRI generated summaries. The literature search has broad coverage for the period 1945-1973 and limited coverage for the years 1940-1944.

Three broad categories of the effects of H.E. bomb attack are identified, namely airblast, earth shock and debris. The literature search and associated evaluation indicates that sufficient information is in hand in order to comprehensively construct a rational design procedure which allows for the production of H.E. damage resistant buildings and shelters.