

DATA ITEM DESCRIPTION			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. TITLE MATHEMATICAL MODEL FINITE ELEMENT ANALYSIS REPORT			2. IDENTIFICATION NUMBER DI-GDRQ-81257A	
3. DESCRIPTION / PURPOSE 3.1 This report details the problem narrative, the data elements analyzed and the results of the finite elements of structures. This report will be used to verify the structural analysis and design. This data is vital to assessing the contractor's results, for future studies and if modifications are made, to the system being analyzed.				
4. APPROVAL DATE (YYMMDD) 940331	5. OFFICE OF PRIMARY RESPONSIBILITY (OPR) E/WL-DOR	6a. DTIC APPLICABLE X	6b. GIDEP APPLICABLE	
7. APPLICATION / INTERRELATIONSHIP 7.1 This Data Item Description (DID) contains the content and format preparation instructions for the data product generated by the specific and discrete work task requirements as delineated in the contract. 7.2 This DID is applicable when analyses are carried out by the finite element method. <div style="text-align: right;">(Continued on page 2)</div>				
8. APPROVAL LIMITATION		9a. APPLICABLE FORMS	9b. AMSC NUMBER F7012	
10. PREPARATION INSTRUCTIONS 10.1 <u>Format.</u> Contractor's format is acceptable. 10.2 <u>Content.</u> The report shall contain the following information: a. Configuration version. b. Identification of the documents and drawings from which the model was generated. c. A key diagram showing the location of the component being modeled in relation to the rest of the structure. d. A brief description of the physical phenomena being modeled. <div style="text-align: right;">(Continued on page 2)</div>				
11. DISTRIBUTION STATEMENT DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.				

DI-GDRQ-81257A

Block 7, Application/Interrelationship (Continued)

7.3 This DID is mandatory when DI-GDRQ-81256A is cited in the contract.

7.4 The address for Defense Technical Information Center (DTIC) submittals is:

**Administrator
Defense Technical Information Center
Attn: DTIC-FDAC
Bldg 5, Cameron Station
Alexandria, VA 22304-6145**

7.5 This DID supersedes DI-GDRQ-81257.

Block 10, Preparation Instructions (Continued)

- e. A discussion of the physical phenomena being modeled.**
- f. A rationale explanation for the elements selected for the model.**
- g. An explanation of the boundary conditions.**
- h. Identification of the military standard from which the mechanical properties for material were derived, and the reasons for any deviations from the standard properties.**
- i. A complete description of the maneuvers for which the loading conditions are attributed.**
- j. Planform used for the analyses showing all important dimensions.**
- k. A summary of output results (such as deflections, stresses, frequencies, and at critical areas) shall be included.**
- l. A brief description of how these results were used to satisfy a specified design criteria shall be included.**
- m. Undeformed and deformed plots of the structure shall be included for each finite element model used.**
- n. A problem narrative summary shall be included.**