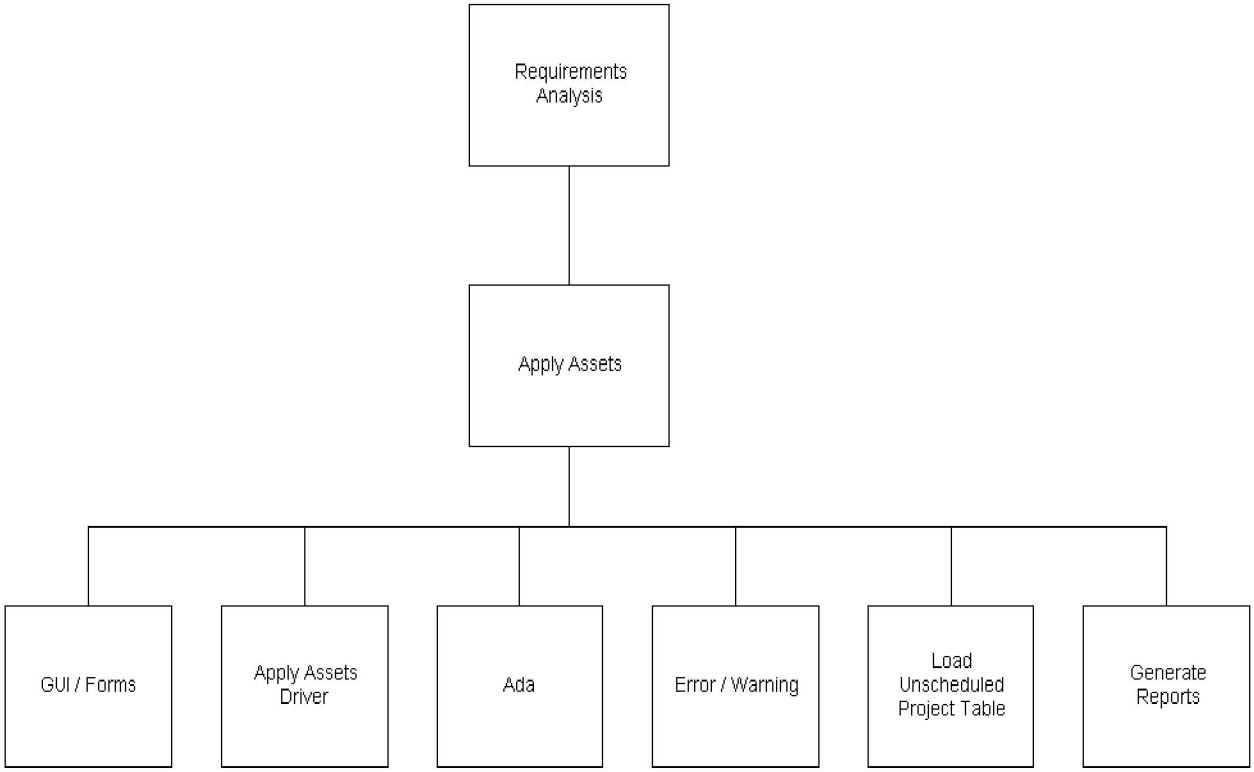

Figure A.2.2-5. Requirements Analysis - Apply Assets Work Package and Its Logical Units

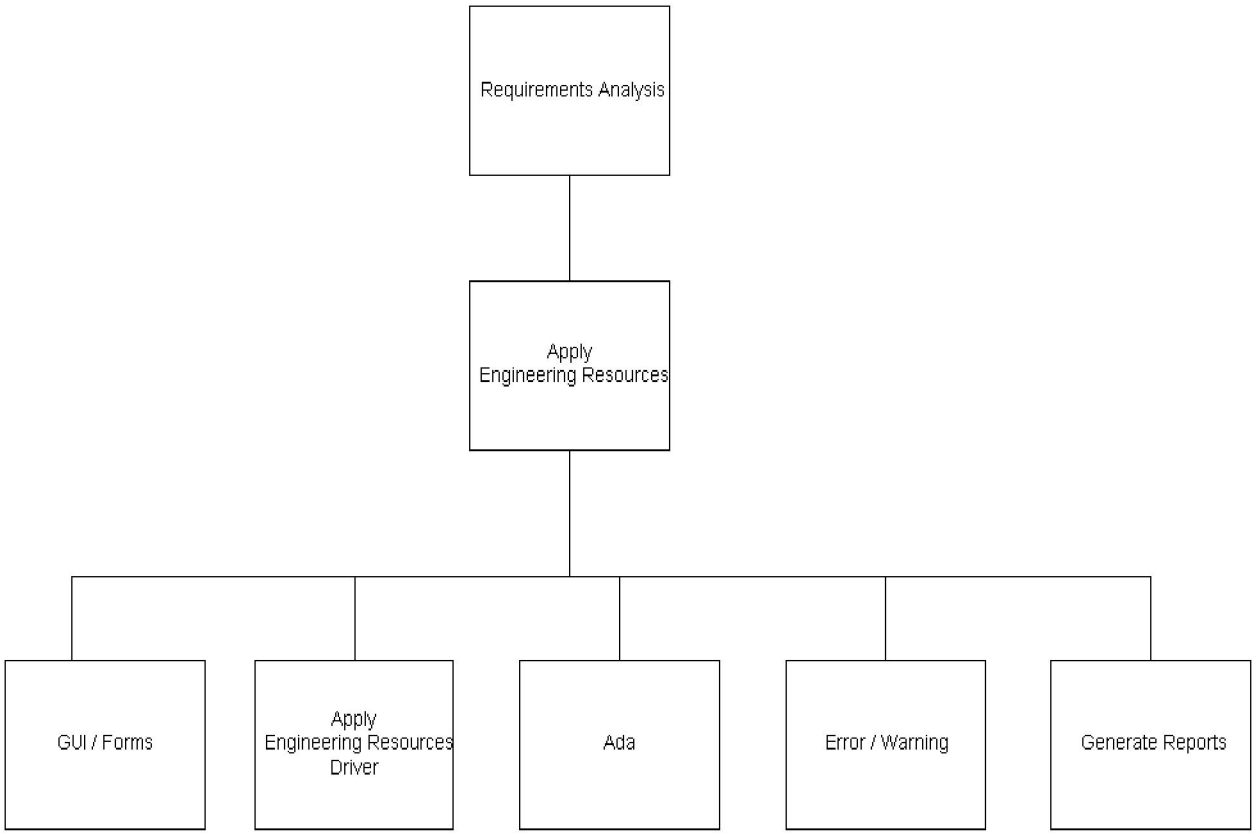

Figure A.2.2-6. Requirements Analysis - Apply Engineering Resources Work Package and Its Logical Units

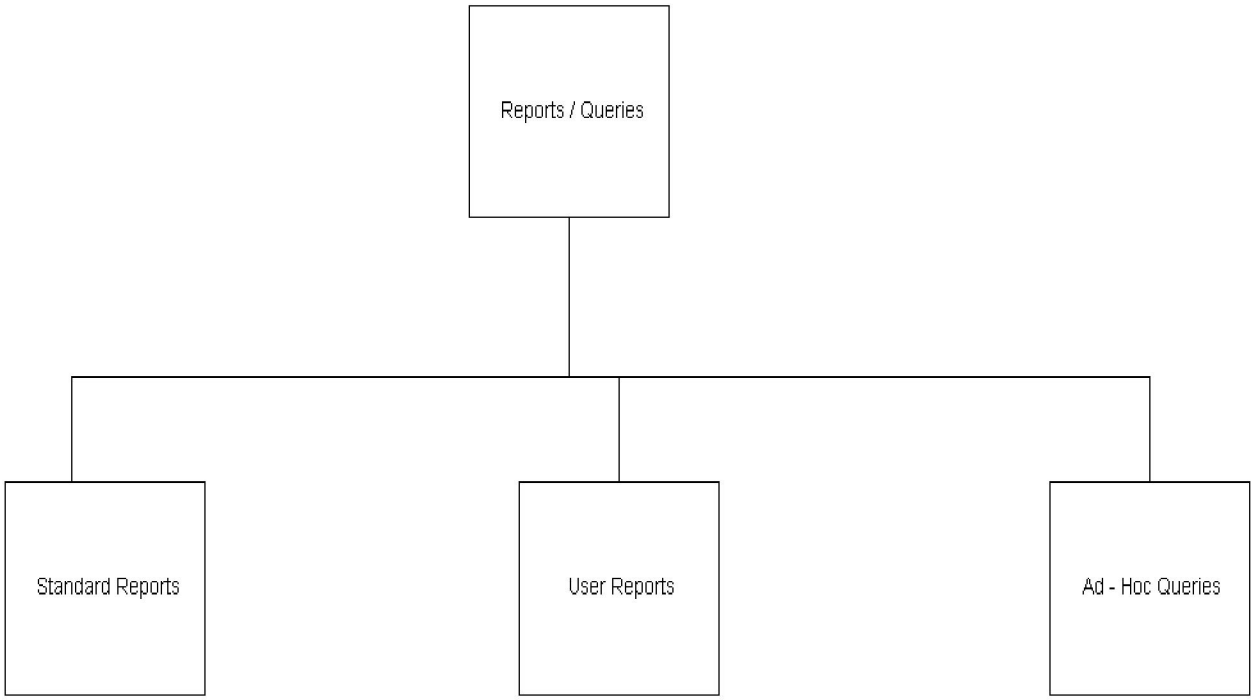

Figure A.2.2-7. Reports / Queries Work Package and Its Logical Units

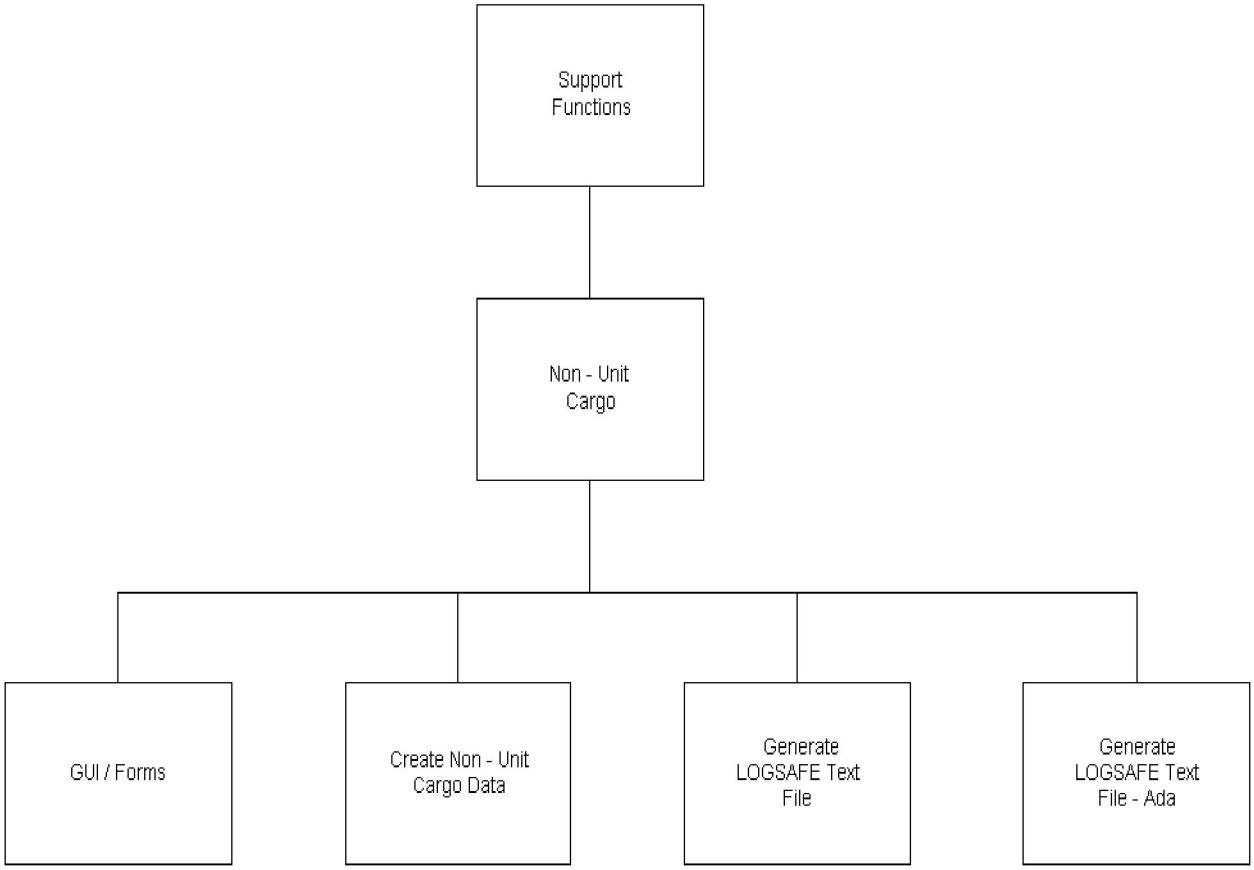

Figure A.2.2-8. Support Functions - Non-Unit Cargo Work Package and Its Logical Units

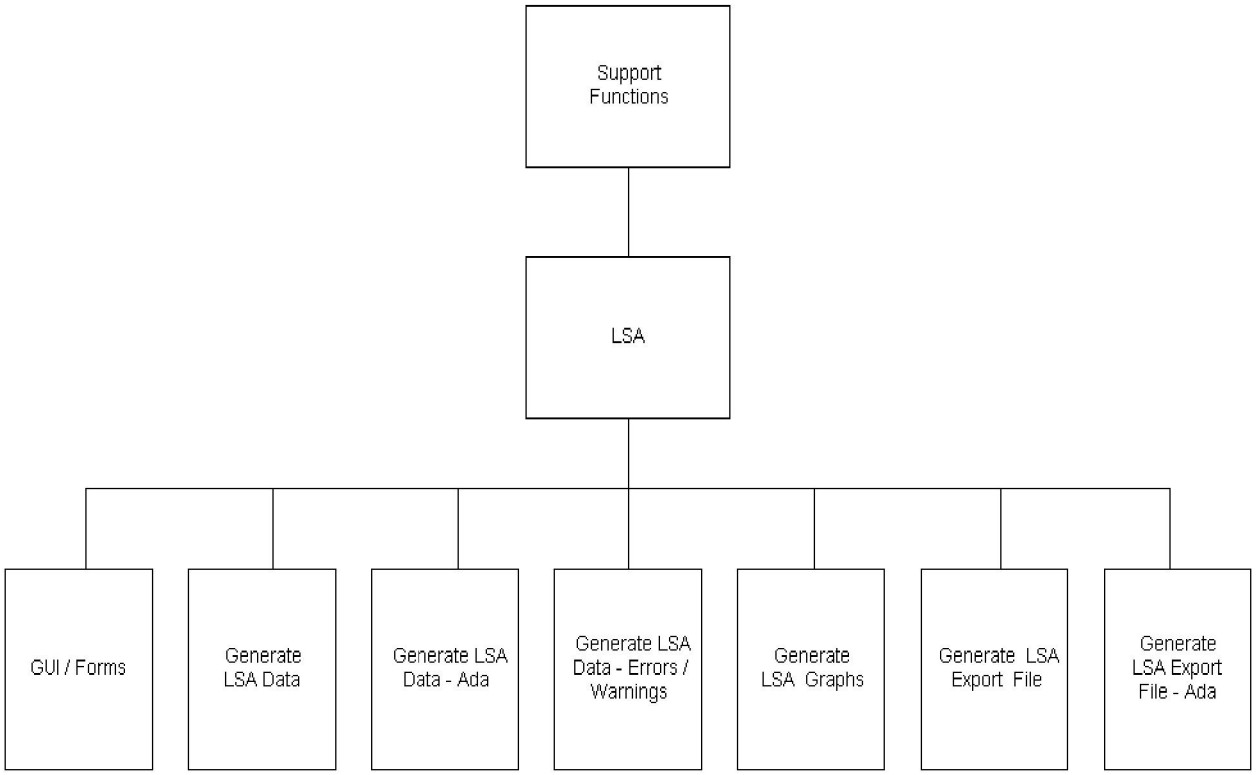

Figure A.2.2-9. Support Functions - LSA Work Package and Its Logical Units

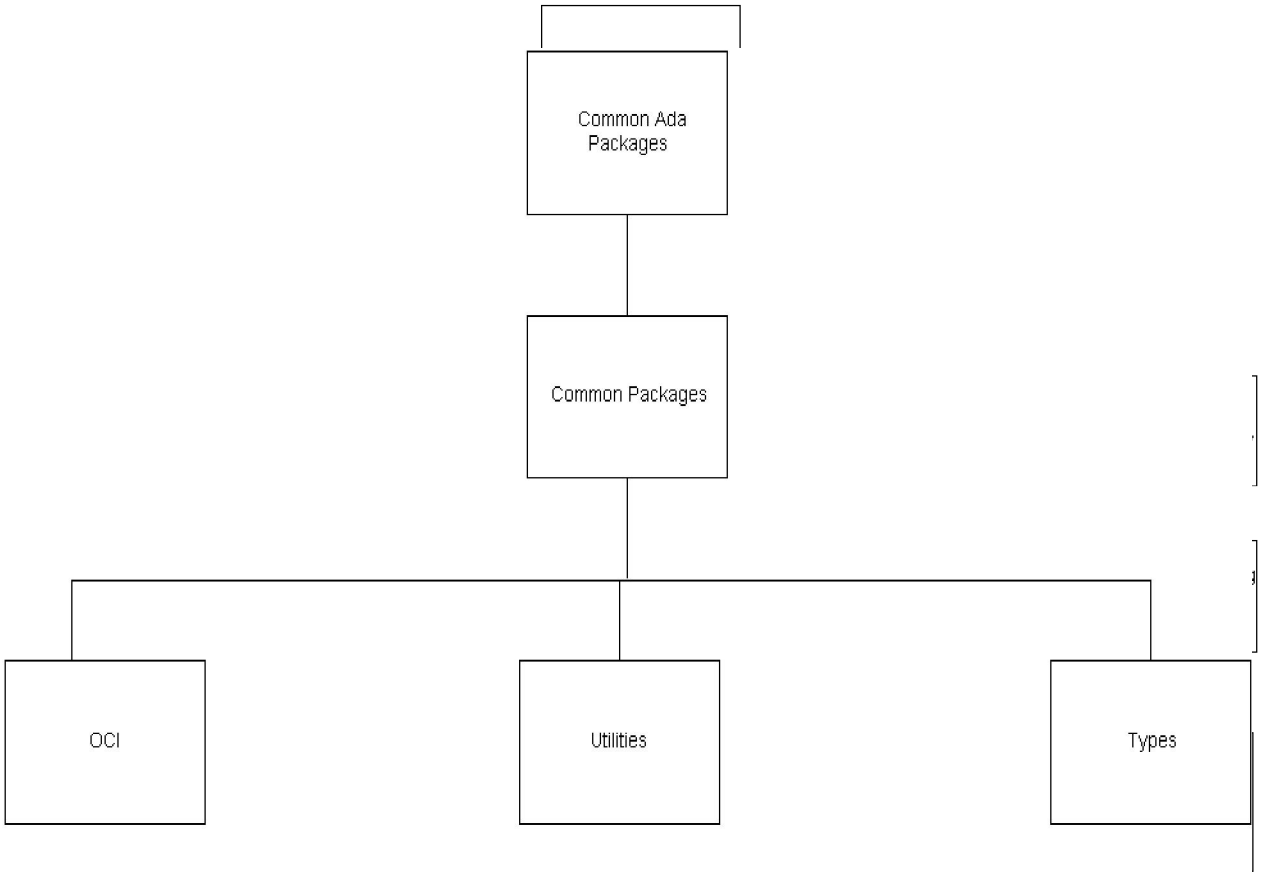

Figure A.2.2-11. Common Ada Packages - Common Packages Work Package and Its Logical Units

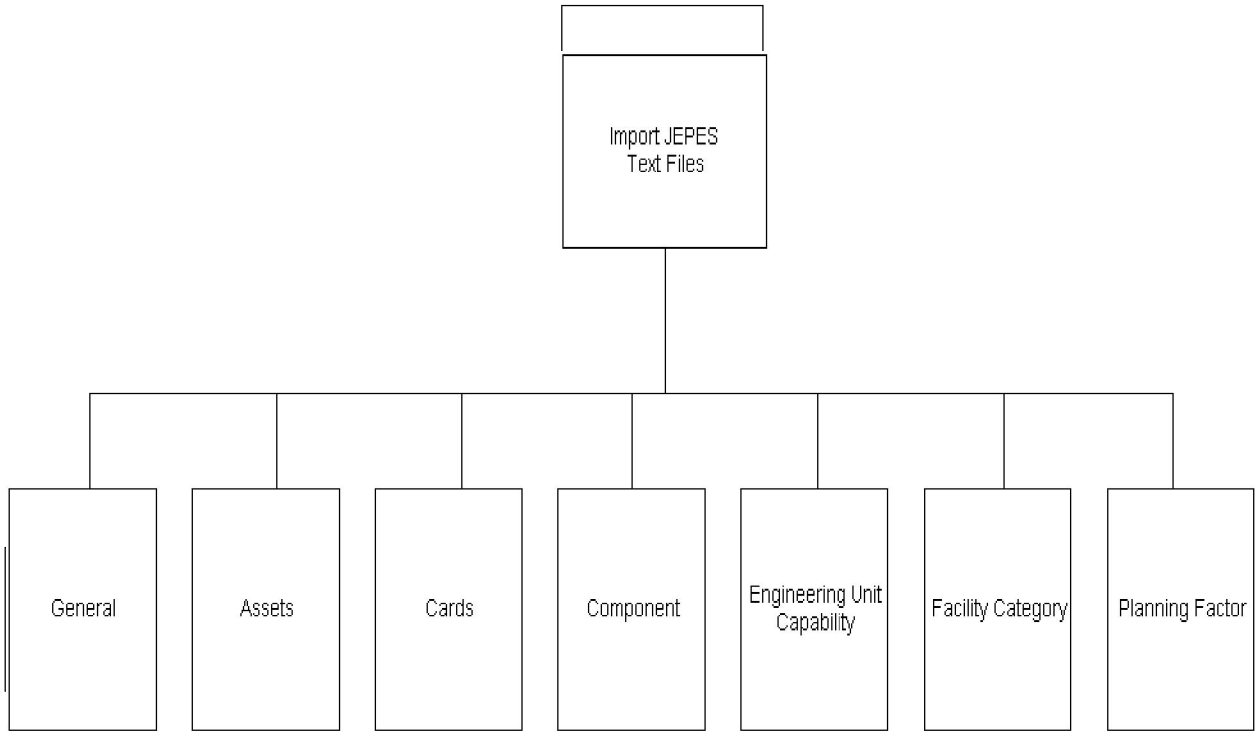

Figure A.2.2-13. Import JEPES Text Work Package and Its Logical Units

A.2.2.1 Utilities

1. Import Version 6 Database
   a. Import V6 ORACLE Database Driver (**imp_v6.s**)
   b. Import V6 ORACLE Database (**imp_v6_1.sql**)
   c. Create JEPES Synonyms (**cre_syn.sql**)
   d. Create Geoloc_Tab View (**crgeoloc.sql**)
   e. Create Obsolete JEPES Tables (**imp_v6_obs.sql**)
   f. Convert Table Name to JEPES Unit Type and JEPES Equipment Type for ORACLE 6 export files (**tbl_conflict_v6.sql**)

2. Import/Export Version 7 Database
   a. Export/Import JEPES Database (**j_expimp.fmb**)
   b. List Export Files (**dodir.s**)
   c. Delete from Imp_Exp_List Table (**del_imex.sql**)
   d. Load dir.log into Imp_Exp_List Table (**imp_exp.ctl**)
   e. Import JEPES Tables (**j_imp.s**)
   f. Drop Dependent Tables (**d_drop.sql**)
   g. Drop Independent Tables (**i_drop.sql**)
   h. Drop JEPES Tables (**j_drop.sql**)
   i. Export JEPES Tables (**j_exp.s**)
   j. Dependent Tables (**para_dep**)
   k. Independent Tables (**para_ind**)
   l. JEPES Tables (**para_jep**)
   m. Delete Text Files (**del_text.s**)
   n. Drop RFA Private Synonyms (**drop_syn.sql**)
   o. Recreate RFA Synonyms Dropped During Import (**cre_rfa_syn.sql**)
   p. Determine Whether the Current User is an RFA User (**find_rfa.sql**)
   q. Convert Table Name to JEPES Unit Type and JEPES Equipment Type (**tbl_conflict.sql**)

3. Extract TPFDD Data
   a. Import TPFDD Driver (**imtp.s**)
   b. Import TPFDD (**imtp.sql**)

4. Extract TUCHA Data
   a. Import TUCHA Driver (**imtu.s**)
   b. Import TUCHA (**imtu.sql**)

5. Combined Asset
   a. Import Combined Asset (**ca_imp.s**)
   b. Truncate Combined Asset (**ca_trunc.sql**)
   c. Extract Combined Asset (**upasstwar.s**, **upasset.sql**, **upwardam.sql**)
   d. Browse Combined Asset (**combset.fmb**)

A.2.2.2 Database Maintenance

1. Edit Dependent Tables
    a. Edit Asset/War Damage Factor Table (**assetwar.fmb**).
    b. Edit Base Facility Construction Policy Table (**basefac.fmb**)
    c. Edit Backup Supply Table (**backup.fmb**)
    d. Edit Deployed Unit (Deployed Eng. Sensitive Unit) Table (**depeng.fmb**)
    e. Edit Engineering Support Table (**engsup.fmb**)
    f. Edit Plan Facility Construction Policy Table (**plfccn.fmb**)
    g. Edit Operation Table (**oper.fmb**)
    h. Edit Planner Input Requirements Table (**plninpre.fmb**)
    i. Edit Project Table (**project.fmb**)

2. Edit Independent Tables
    a. Edit Component Table (**comp.fmb**)
    b. Edit Engineering Unit Capability Table (**engunca.fmb**)
    c. Edit Equipment Planning Factor Table (**equplfc.fmb**)
    d. Edit Equipment Type Table (**equipty.fmb**)
    e. Edit Facility Category Table (**faccat.fmb**)
    f. Edit Facility Category Substitute Table (**fcctsub.fmb**)
    g. Edit Facility Component Table (**faccomp.fmb**)
    h. Edit Facility Requirement Table (**facreq.fmb**)
    i. Edit General Planning Factor Table (**gnrlplfc.fmb**)
    j. Edit Unit Equipment Table (**unitequi.fmb**)
    k. Edit Unit Type Table (**unit_typ.fmb**)

3. Rebasing
    a. Update Base Complex/Base Location Table (**bcmploc.fmb**)
    b. Update Population for Base Complex Table (**basepop.sql**)
    c. Update Asset/War Damage Factor/Deployed Eng Sens Unit Tables Driver (**rebase.s**)
    d. Update Asset/War Damage Factor/Deployed Eng Sens Unit Tables (**rebase.sql**)

4. Database Analysis
    a. Database Analysis Screen (**analysdb.fmb**)
    b. Analyze Asset/War Damage Factor Table (**aset_chk.sql**)
    c. Analyze Base Complex Table (**bsecomp.sql**)
    d. Analyze Base Location Table (**bse_loc.sql**)
    e. Analyze Equipment Planning Factor Table (**equiplan.sql**)
    f. Analyze Equipment Type Table (**equiptyp.sql**)
    g. Analyze Facility Requirements Table (**facreq.sql**)
    h. Analyze Facility Category Table (**facrpt.sql**)
    i. Analyze Planner Input Requirements Table (**planreq.sql**)
    j. Analyze Troop (Deployed Eng Sensitive Unit) Table (**trooprpt.sql**)
    k. Analyze Unit Equipment Table (**uniteq.sql**)
    l. Analyze Unit Type Table (**unitrpt.sql**)

A.2.2.3 Requirements Generation

1. GUI/ORACLE Forms 4.0
   a. Requirements Generation (**reqmain.fmb**)

2. Requirements Generation Driver
   a. Execute Requirements Generation Driver (**reqgen.s**)

3. Ada
   a. Requirements Generation Executable (**tjepes.x**)
   b. Requirements Generation Driver (**tjepes.ada**)
   c. Requirements Generation (**reqgen.ads**, **.adb**)
   d. Generate Requirements (**rggenreq.ada**)
   e. Bybase Requirements (**rgbybase.ada**)
   f. Equipment Requirements (**rgequip.ada**)
   g. People Requirements (**rgpeople.ada**)
   h. Planner Input Requirements (**rgplan.ada**)
   i. Total Population Requirements (**rgtotpop.ada**)
   j. Unit Allocated Requirements (**rgua.ada**)

4. Error/Warning
   a. Requirements Generation Error/Warning (**g_er_wrn.s**)

5. Loading of Project Table
   a. Load Project Table Driver (**runadaup.s**)
   b. Create Pre_project and Preproj Tables (**crprejct.sql**)
   c. Load bybase.txt into Pre_Project Table (**bybase.ctl**)
   d. Load equip.txt into Pre_Project Table (**equip.ctl**)
   e. Load people.txt into Pre_Project Table (**people.ctl**)
   f. Load planinp.txt into Pre_Project Table (**planinp.ctl**)
   g. Load totpop.txt into Pre_Project Table (**totpop.ctl**)
   h. Load unitallo.txt into Pre_Project Table (**unitallo.ctl**)
   i. Load Project Table (**loadproj.sql**)
   j. Create Project Table (**initproj.sql**)
   k. Create Project Table Index (**indxproj.sql**)
   l. Create Preproj Table (**preproj.sql**)
   m. Delete Text Files for Current OPLAN (**load_text.s**)

6. Generate Reports
   a. Requirements Generation Report For A Specific Base Complex (**req_base.sql**)
   b. Requirements Generation Report For All Bases (**req_dmp.sql**)

7. Generate Graphs
   a. Base Population Driver (**base_pop.s**)
   b. Base Population (**base_pop.sql**)
   c. Time-Phased Requirements for a Base Complex Driver (**base_req.s**)
   d. Time-Phased Requirements for a Base Complex (**base_req.sql**)
   e. Time-Phased Population for an OPLAN Driver (**plan_pop.s**)
   f. Time-Phased Population for an OPLAN (**plan_pop.sql**)

g. Time-Phased Requirements for an OPLAN Driver (**plan_req.s**)
h. Time-Phased Requirements for an OPLAN (**plan_req.sql**)
i. Time-Phased Population for a Base Complex Driver (**tp_pop.s**)
j. Time-Phased Population for a Base Complex (**tp_pop.sql**)

A.2.2.4 Requirements Analysis - Apply Assets

1. GUI/ORACLE Forms 4.0
   a. OPLAN Identification (**oplan.fmb**)
   b. Apply Assets (**appass.fmb**)

2. Apply Assets Driver
   a. Apply Assets Driver (**appass.s**)
   b. Clear Aggregated Asset Table (**clraggas.sql**)

3. Ada
   a. Apply Assets executable (**ajepes.x**)
   b. Apply Assets driver (**ajepes.ada**)
   c. Asset Manager (**assetmgr.ads**, .**adb**)

4. Error/Warning
   a. Apply Assets Error/Warning (**a_er_wrn.s**)

5. Load Unscheduled Project Table
   a. Load Unscheduled Project Driver (**unschprj.s**)
   b. Create Pre_Unscheduled_Project Table (**preunprj.sql**)
   c. Create S_P_Tab Table (**s_p_tab.sql**)
   d. Load unschdld.txt into Pre_Unscheduled Project Table (**unschprj.ctl**)
   e. Aggregate Assets (**aggrea.sql**)

6. Generate Reports
   a. All Asset-Satisfied Requirements Report Driver (**asstst1.s**)
   b. All Asset-Satisfied Requirements Report (**asstst1.sql**)
   c. Asset-Satisfied Requirements Report by Time/Region Driver (**asstst2.s**)
   d. Asset-Satisfied Requirements Report by Time/Region (**asstst2.sql**)
   e. All Asset-Unsatisfied Requirements Report Driver (**asstust1.s**)
   f. All Asset-Unsatisfied Requirements Report (**asstust1.sql**)
   g. Asset-Unsatisfied Requirements Report by Time/Region Driver (**asstust2.s**)
   h. Asset-Unsatisfied Requirements Report by Time/Region (**asstust2.sql**)

A.2.2.5 Requirements Analysis - Apply Engineering Resources

1. GUI/ORACLE Forms 4.0
   a. Engineer Phase-In Efficiency (**phasein.fmb**)
   b. Engineer Attrition (**engattr.fmb**)
   c. Skill Substitution (**skillsub.fmb**)
   d. Region/Time Constraints (**regtime.fmb**)
   e. War Damage Assessment (**damon.fmb**)
   f. Engineering Force Utilization (**engbase.fmb**)

g. Apply Engineering Resource (**appengre.fmb**)

2. Apply Engineering Resources Driver
   a. Apply Engineering Resources Driver (**appengre.s**)
   b. Clear Construction Capability Table (**clrcncap.sql**)
   c. Create/load Scheduled Project Table (**crschdpr.sql**)
   d. Recreate Construction Capability Table (**crecncap.sql**)
   e. Load schdld.txt into Scheduled Project Table (**schedprj.ctl**)

3. Ada
   a. Aggregate US Engineering Resources Executable (**bjepes.x**)
   b. Aggregate US Engineering Resources Driver (**bjepes.ada**)
   c. Apply Host Nation/Contractor Resources Executable (**cjepes.x**)
   d. Apply Host Nation/Contractor Resources Driver (**cjepes.ada**)
   e. Apply US Resources Executable (**djepes.x**)
   f. Apply US Resources Driver (**djepes.ada**)
   g. Apply Host Nation Resources (**apphost.ads**, .**adb**)
   h. Apply US Resources (**appus.ads**, .**adb**)
   i. US Resources (**usresrc.ads**, .**adb**)
   j. War Damage (**wardamag.ads**, .**adb**)
   k. Day Operations (**dayops.ads**, .**adb**)
   l. Manhour (**manhour.ads**, .**adb**)
   m. Scheduled Project (**schdproj.ads**, .**adb**)

4. Error/Warning
   a. Apply Engineering Error Warning (**e_er_wrn.s**)
   b. Display Apply Engineering Errors (**apengerr.s**)
   c. Print Apply Engineering Errors (**apengper.s**)
   d. Apply Engineering Warnings (**apengwar.s**)
   e. Display Apply Engineering Warnings (**apengwrn.s**)
   f. Print Apply Engineering Warnings (**apengpwn.s**)

5. Generate Reports
   a. Construction Requirements Report by Time Period Driver (**regtime1.s**)
   b. Construction Requirements Report by Time Period (**regtime1.sql**)
   c. Construction Requirements Report by Time/Region Period Driver (**regtime2.s**)
   d. Construction Requirements Report by Time/Region Period (**regtime2.sql**)
   e. All Construction Requirements Report Driver (**cnstr1.s**)
   f. All Construction Requirements Report (**cnstr1.sql**)
   g. Construction Requirements Report by Time/Region Driver (**cnstr2.s**)
   h. Construction Requirements Report by Time/Region (**cnstr2.sql**)
   i. Construction Requirements Report for Analysis Period Driver (**cnstr3.s**)
   j. Construction Requirements Report for Analysis Period (**cnstr3.sql**)
   k. Unsatisfied Construction Requirements Driver (**cnstr4.s**)
   l. Unsatisfied Construction Requirements (**cnstr4.sql**)

A.2.2.6 Reports/Queries

1. Standard Reports

a. Standard Reports (**civrpt.fmb**)
b. Region/Time Constraints (**regtimer.fmb**)

2. User Reports
   a. User Defined Reports (**usr_quer.fmb**)
   b. List Report Subdirectories (**dolist.s**)
   c. Delete Query Tables (**del_qry.sql**)
   d. Load dir.log into Usr Query Table (**usr_qry.ctl**)
   e. Load dir.log into Usr Query1 Table (**usr_qry1.ctl**)

3. Ad-Hoc Queries
   a. Adhoc (**adhoc.s**)

A.2.2.7 Support Functions - Non-Unit Cargo

1. GUI/ORACLE Forms 4.0
   a. Non-Unit Cargo (**nuc.fmb**)

2. Create Non-Unit Cargo Data
   a. Non-Unit Cargo Driver (**nuc.s**)
   b. Update Non-Unit Cargo Table (**nuc.sql**)
   c. Generate Non-Unit Cargo Report Driver (**nucprt.s**)
   d. Generate Non-Unit Cargo Report (**nucprt.sql**)

3. Generate LOGSAFE Text File
   a. Execute LOGSAFE Driver (**logsafe.s**)
   b. Update LOGSAFE_Interface Table (**logsafe.sql**)

4. Generate LOGSAFE Text File - Ada
   a. LOGSAFE Executable (**ljepes.x**)
   b. LOGSAFE Driver (**ljepes.ada**)
   c. LOGSAFE Interface File (**logsafe.ads**, .**adb**)

A.2.2.8 Support Functions - LSA

1. GUI/ORACLE Forms 4.0
   a. LSA (**lsa.fmb**)

2. Generate LSA Data
   a. Generate LSA Data Driver (**lsa_init.s**)
   b. Update S_P_Tab Table (**fix_s_p.sql**)
   c. Create LSA_Requirement Table (**crlsareq.sql**)
   d. Load satisfd.txt into LSA Requirement Table (**sat_req.ctl**)
   e. Merge Asset-Satisfied and Unsatisfied Requirements into the LSA_Requirement Table (**req_mrg.sql**)
   f. Update LSA_Interface Table (**lsa_gen.sql**)
   g. Insert Periods into LSA_Interface Table (**insertpd.sql**)
   h. Updates Plan_Sum and Base_Sum Tables (**lsa_tabs.sql**)
   i. Aggregate LSA information into LSA_Interface Table (**lsa_agg.sql**)

j. Calculate Base Complex Weighting Factor and Add to LSA_Interface Table (**bcn_wf.sql**)
k. Create V_2I View (**v-2i-vw.sql**)

3. Generate LSA Data - Ada
   a. LSA Executable (**sjepes.x**)
   b. LSA Driver (**sjepes.ada**)
   c. LSA Manager (**lsamgr.ads**, .**adb**)

4. Generate LSA Data - Error/Warning
   a. LSA Error/Warning (**l_er_wrn.s**)
   b. Display/Print LSA Errors (**lsa_err.s**)
   c. Display/Print LSA Warnings (**lsa_wrn.s**)

5. Generate LSA Graphs
   a. Percent Available Driver (**lsa_capb.s**)
   b. Percent Available (**lsa_capb.sql**)
   c. Percent Forces Sustainable Driver (**v-2i-1.s**)
   d. Percent Forces Sustainable (**v-2i-1.sql**)
   e. Minimum Percent by Sub-Element Driver (**v-2i-2.s**)
   f. Minimum Percent by Sub-Element (**v-2i-2.sql**)

6. Generate LSA Export File
   a. LSA Export File Driver (**lsa_exp.s**)
   b. Update LSA_Export Table (**lsa_exp.sql**)

7. Generate LSA Export File - Ada
   a. LSA Export Executable (**gjepes.x**)
   b. LSA Export Driver (**gjepes.ada**)
   c. LSA Interface File (**lsa.ads**, .**adb**)

A.2.2.9 Common Ada Packages - Data/View Packages

1. Asset/Aggregated Asset/War Damage Factor
   a. Asset Data (**assdata.ads**, .**adb**)
   b. Aggregated Asset View (**aassview.ads**, .**adb**)
   c. Asset View (**assview.ads**, .**adb**)
   d. War Damage Factor View (**wardview.ads**, .**adb**)

2. Base Complex/Backup Supply
   a. Base Data (**basedata.ads**, .**adb**)
   b. Base Complex View (**bcview.ads**, .**adb**)
   c. Backup Supply View (**bsview.ads**, .**adb**)

3. Attrition Factor/Climatic Factor/Engineering Unit Capability/Phase-In Efficiency/Base Complex Calculations
   a. Base Capability Data (**bcapdata.ads**, .**adb**)
   b. Attrition Factor View (**attfview.ads**, .**adb**)
   c. Climatic Factors View (**climview.ads**, .**adb**)
   d. Engineering Unit Capability View (**enguview.ads**, .**adb**)
   e. Phase-In Efficiency View (**phasview.ads**, .**adb**)

4. Component/Facility Component
   a. Component Data (**compdata.ads**, .**adb**)
   b. Component View (**cmpview.ads**, .**adb**)
   c. Facility Component View (**fcmpview.ads**, .**adb**)

5. Construction Capability
   a. Construction Capability Data (**ccapdata.ads**, .**adb**)
   b. Construction Capability View (**ccapview.ads**, .**adb**)

6. Base Facility Construction Policy
   a. Construction Policy Data (**cpoldata.ads**, .**adb**)
   b. Base Facility Construction View (**bfcview.ads**, .**adb**)

7. Deployed Eng Sensitive Unit
   a. Deployed Unit Data (**dudata.ads**, .**adb**)
   b. Deployed Eng Sensitive Unit View (**duview.ads**, .**adb**)

8. Engineering Support
   a. Engineering Support Data (**engsdata.ads**, .**adb**)
   b. Engineering Support View (**engsview.ads**, .**adb**)

9. Facility Category/Plan Facility Construction Policy
   a. Facility Data (**facdata.ads**, .**adb**)
   b. Facility Category View (**fcview.ads**, .**adb**)
   c. Plan Facility Construction Policy View (**pfcpview.ads**, .**adb**)

10. LOGSAFE Interface
    a. LOGSAFE Data (**lgsfdata.ads**, .**adb**)
    b. LOGSAFE Interface View (**lgsfview.ads**, .**adb**)

11. LSA Export
    a. LSA Data (**lsadata.ads**, .**adb**)
    b. LSA Export View (**lsaview.ads**, .**adb**)

12. Equipment Planning Factor/General Planning Factor
    a. Planning Factors Data (**pfdata.ads**, .**adb**)
    b. Equipment Planning Factor View (**epfview.ads**, .**adb**)
    c. General Planning Factor View (**gpfview.ads**, .**adb**)

13. Planner Input Requirement
    a. Planner Input Data (**pidata.ads**, .**adb**)
    b. Planner Input View (**piview.ads**, .**adb**)

14. Project
    a. Project Data (**projdata.ads**, .**adb**)
    b. Project View (**prjview.ads**, .**adb**)

15. Operation/Skill Substitution
    a. Run Data (**rundata.ads**, .**adb**)
    b. Operation View (**opview.ads**, .**adb**)
    c. Skill Substitution View (**ssubview.ads**, .**adb**)

16. Satisfied Project
    a. Satisfied Project Data (**satpdata.ads**, .**adb**)
    b. Satisified Project View (**satpview.ads**, .**adb**)

17. Scheduled Project
    a. Scheduled Project Data (**sprjdata.ads**, .**adb**)
    b. Scheduled Project View (**sprjview.ads**, .**adb**)

18. Facility Requirement/Unit Equipment/Unit Type
    a. Unit Data (**unitdata.ads**, .**adb**)
    b. Facility Requirement View (**frqview.ads**, .**adb**)
    c. Unit Equipment View (**ueqview.ads**, .**adb**)
    d. Unit Type View (**utview.ads**, .**adb**)

19. Unscheduled Project
    a. Unscheduled Project Data (**uprjdata.ads**, .**adb**)
    b. Unscheduled Project View (**uprjview.ads**, .**adb**)

A.2.2.10 Common Ada Packages - Common Packages

1. OCI
    a. Pro*C OCI (**c_oci.ads**)
    b. OCI (**oci.ads**, .**adb**)
    c. ORACLE Descriptors (**ordesc.ads**, .**adb**)
    d. SQL Engine (**sqlengin.ads**, .**adb**)
    e. Strings (**strings.ads**, .**adb**)

2. Utilities
    a. Directory Name (**dirname.ads**, .**adb**)
    b. Errors (**errors.ads**, .**adb**)
    c. File Name Separator (**fnamesep.ads**, .**adb**)

d. LOGSAFE Text File (**lgsftext.ads**, .**adb**)
e. LSA Text File (**lsatext.ads**, .**adb**)
f. Ordered Sequential Search (**orsqsrch.ads**, .**adb**)
g. Project Text File (**projtext.ads**, .**adb**)
h. Screen Cursor (**scrcurs.ads**, .**adb**)
i. Single Linked List (**slnklist.ads**, .**adb**)
j. Storage Manager (**stormgr.ads**, .**adb**)
k. Time Utilities (**timeutil.ads**, .**adb**)
l. User Message (**usermsg.ads**, .**adb**)
m. Warnings (**warnings.ads**, .**adb**)

3. Types
   a. Attrition Factor Types (**afactype.ads**)
   b. Asset Types (**asstype.ads**, .**adb**)
   c. Base Types (**basetype.ads**)
   d. Climatic Types (**climtype.ads**)
   e. Component Types (**comptype.ads**)
   f. Construction Policy Types (**cpoltype.ads**, .**adb**)
   g. Engineering Types (**engtype.ads**)
   h. Equipment Types (**eqtype.ads**)
   i. Facility Types (**factype.ads**, .**adb**)
   j. JEPES Common (**jepescom.ads**)
   k. Labor Types (**labtype.ads**)
   l. LOGSAFE Types (**lgsftype.ads**)
   m. LSA Types (**lsatype.ads**, .**adb**)
   n. Planning Factors Types (**pftype.ads**)
   o. Portable Integers (**portint.ads**)
   p. Portable Reals (**portreal.ads**)
   q. Project Types (**projtype.ads**, .**adb**)
   r. Priority Types (**prtype.ads**)
   s. Rate Types (**ratetype.ads**)
   t. Region Types (**regtype.ads**)
   u. Run Data Types (**runtype.ads**)
   v. Service Types (**servtype.ads**, .**adb**)
   w. Unit Types (**unittype.ads**)
   x. Unsigned (**unsigned.ads**)
   y. War Damage Types (**wardtype.ads**)
   z. Weight Types (**wghtypes.ads**)

A.2.2.11 Common JEPES Files

1. Common Graphics Files - Applixware Files
   a. Graph Defaults (**JEPES.as**)
   b. Create Bar Graph (**JEPES_Create_Bar_Graph.am**)
   c. Create Line Graph (**JEPES_Create_Line_Graph.am**)
   d. Display Graph (**JEPES_Display_Graph.am**)
   e. Display Spreadsheet (**JEPES_Display_Spreadsheet.am**)
   f. Exit Applixware (**JEPES_Exit_Applix.am**)
   g. Define Graph (**JEPES_Graph_Info.am**)

h. Menu File (**JEPES_Menu_File**)
i. Print Dialog (**JEPES_Print.am**)
j. Print Information (**JEPES_Print.d**)
k. Print Graph (**JEPES_Print_Graph.am**)
l. Print Spreadsheet (**JEPES_Print_Spreadsheet.am**)
m. Start Spreadsheet Task (**JEPES_Start_Up.am**)
n. Applixware Defaults (**JEPES_ax_prof3**)

2. Common Graphic Files - Shell Script Files
   a. Create a Graph (**crtgraph.s**)
   b. JEPES Graphic Driver (**jgraphs.s**)
   c. Execute JEPES Graphic Driver (**runjgraphs.s**)

3. Common GUI/ORACLE Forms 4.0 Files
   a. JEPES Main Menu (**menu4.fmb**)
   b. Database Maintenance Menus (**jepes2.fmb**)
   c. Edit Tables Help Screen (**edit_hlp.fmb**)
   d. Database Analyis (**analysdb.fmb**)

4. Common Shell Script Files
   a. Execute JEPES (**runjepes.s**)
   b. Wait for Users Response (**getyn.s**)
   c. Initiate X-Term/Execute Command (**execute.s**)
   d. Create JEPES_USER_DIR Directories (**makedir.s**)
   e. Wait User Input (**pause.s**)
   f. Shutdown JEPES (**shutdown.s**)
   g. Print Reports (**print.s**)
   h. Start JEPES (**startup.s**)
   i. Gets Current Printer Selected by User Driver (**get_current_printer.csh***)*
   j. Gets/Displays a List of Printers for Tcl/Tk (**get_current_printer_wish.csh**)
   k. Gets/Displays a List of Printers Using Tcl/Tk (**get_current_printer_wish.tk**)
   l. Gets/Displays a List of Printers Using an xterm (**get_current_printer_xterm.csh**)
   m. Formats the File, Placing Information at Top and Bottom (**print_file.awk***)*
   n. Prints the File (**print_file.csh***)*
   o. Displays the Print File Message (**print_file.tk**)
   p. Validate as an ORACLE or a JEPES User (**invalid_user.s**)

5. Common SQL Files
   a. Select Component Codes (**comp_sel.sql**)
   b. List of Requirements for LSA sub-element (**req_lst.sql**)
   c. Validate JEPES User (**validate_user.sql**)

A.2.2.12 Import Text Files

1. General
    a. Create Tables, Indices and Synonyms (**crtables.s**)
    b. Create Tables and Indices (**crtables.sql**)
    c. Import Text Files Driver (**imp_text.s**)
    d. Initialize OPLAN (**init_op.sql**)
    e. Reindex JEPES Tables (**reindex.sql**)
    f. Reset OPLAN (**reset_op.sql**)
    g. Execute Import Text Files Driver (**runimptext.s**)

2. Assets
    a. Assets (**assets.s**)
    b. US Assets (**assetus.s**)
    c. Load assetus.txt into Asset Table (**assetus.ctl**)
    d. US War Damage (**wardamus.s**)
    e. Load assetus.txt into War Damage Factor Table (**wardamus.ctl**)
    f. Host Nation Assets (**assethn.s**)
    g. Load assethn.txt into Asset Table (**assethn.ctl**)
    h. Host Nation War Damage (**wardamhn.s**)
    i. Load assethn.txt into War Damage Factor Table (**wardamhn.ctl**)

3. Cards
    a. Cards (**cards.s**)
    b. Base Complex (**bascmplx.s**)
    c. Load bascmplx.txt into Base Complex Table (**bascmplx.ctl**)
    d. Base Location (**baseloc.s**)
    e. Load acard.txt into Base Location Table (**baseloc.ctl**)
    f. Base Facility Construction Policy (**basfccpy.s**)
    g. Load dcard.txt into Base Facility Construction Policy Table (**basfccpy.ctl**)
    h. Backup Supply (**bckupsup.s**)
    i. Load ccard.txt into Backup Supply Table (**bckupsup.ctl**)
    j. Engineering Support (**engsupp.s**)
    k. Load pcard.txt into Engineering Support Table (**engsupp.ctl**)
    l. Plan Facility Construction Policy (**plfacpol.s**)
    m. Load gcard.txt into Plan Facility Construction Policy Table (**plfacpol.ctl**)
    n. Planner Input Requirement (**plninreq.s**)
    o. Load lcard.txt into Planner Input Requirement Table (**plninreq.ctl**)
    p. Update Planner Input Requirement Table (**fix_p_i.sql**)

4. Components
    a. Components (**cmpnts.s**)
    b. Component (**cmpnt.s**)
    c. Load cmpnt.txt into Component Table (**cmpnt.ctl**)
    d. Facility Component (**facompnt.s**)
    e. Load cmpnt.txt into Facility Component Table (**facompnt.ctl**)

5. Engineering Unit Capability
    a. Engineering Unit Capability (**enguncap.s**)

b. Load enguncap.txt into Engineering Unit Capability Table (**enguncap.ctl**)

6. Facility Category
   a. Facility Category (**faltcd.s**)
   b. Load faccat.txt into Facility Category Table (**faltcd.ctl**)

7. Planning Factor
   a. Planning Factor (**plngfctr.s**)
   b. General and Equipment Planning Factor (**plngfact.s**)

8. Equipment Type
   a. Equipment Type (**equipmnt.s**)
   b. Load plngfact.txt into Equipment Planning Factor and General Planning Factor Tables (**plngfact.ctl**)
   c. Load plngfact.txt into Equipment Type Table (**equipmnt.ctl**)

A.2.3 Environment Variables

The following is the list of UNIX environment variables that need to be defined before executing JEPES.

1. JEPES Specific Enviroment Variables
   These environment variables can be found in the following file: **JEPESenv**

2. ORACLE Specific Environment Variables
   These environment variables can be found in the following file: **coraenv**

3. PATH Specific Environment Variables
   These environment variables can be found in the following file: **UpdatePATHenv**

A.2.4 Database Variables

The following is the list of JEPES tables, views, private synonyms and indices. In addition, there is a list of Table_Master tables that the JEPES user will have select access. For more information on JEPES tables and views and their data elements refer to Appendix D of the JEPES Users Manual (see Section 2.0, Reference item a.). Appendix I in the JEPES Users Manual describes the JEPES synonyms.

1. JEPES Tables
   The list and description of the JEPES tables can be found in the following file: **jepes.sql**

2. JEPES Views
   The list and description of the JEPES views can be found in the following file: **jepes.sql**

3. JEPES Synonyms
   The list and description of the JEPES synonyms can be found in the following file: **cre_syn.sql**

4. JEPES Indices
   The list and description of the JEPES indices can be found in the following file: **jepesind.sql**

5. Table_Master Tables
The list of Table_Master tables that the user has select access to can be found in the following file: **jepes_user.sql**

A.2.5 External System Interfaces

JEPES provides ASCII text files for LOGSAFE and LSA. When generating Non-Unit Cargo Data, JEPES will create a *logsafe.Txt* file. The Export LSA Data function will create a *lsa.Txt* file. For more information concerning these text files, refer to the JEPES Users Manual (UM), Section 3.0. Section 5.0 in the UM provides more information on the LOGSAFE and LSA interfaces.

A.3 Compilation/Build Procedures

Ada Compiles can be performed in two ways. The best method is to use the Alsys Ada World for Motif. Please refer to the Ada World for SPARCstations under Solaris 2.x Installation Manuals Version 5.5.2 (see Section 2.0, Reference item k.) for installing the Alsys Ada compiler. For configuring and starting up AdaWorld for Motif, creating working environments, creating compilation lists, compiling and binding software, refer to Ada World for SPARCstations under Solaris 2.x Host Specific Manuals (see Section 2.0, Reference item l.). When creating the working environment, make sure that all ORACLE libraries are included, such as SQL*Net and Pro*C libraries. Before compiling JEPES Ada code, create a make file for compilation ordering. Then, compile and bind the JEPES Ada executables, which are the following:

a. *ajepes.x* - Apply Asset executable.
b. *bjepes.x* - Generate Construction Capability Data executable.
c. *cjepes.x* - Apply Host Nation/Contractor Resources executable.
d. *djepes.x* - Apply U.S. Resources executable.
e. *gjepes.x* - Generate LSA export data executable.
f. *ljepes.x* - Generate LOGSAFE export data executable.
g. *sjepes.x* - Generate LSA data executable.
h. *tjepes.x* - Requirement Generation executable.

The second method should only be used if AdaWorld for Motif is not available. It consists of script files that compile and bind the Ada code. They are the following:

a. ***jepesdir.s*** - Creates the Ada directories and Ada libraries
b. ***compile.s*** - Compiles the Ada source code.
c. ***bind.s*** - Creates the Ada executables.

A.4 Modification Procedures

This section explains how JEPES should be modified following receipt of a Government-approved GCCS Software Problem Report (GSPR). The following paragraphs specify information necessary to perform modifications.

A.4.1 Supporting Software

The following software packages are required for JEPES use:

a. ORACLE RDBMS ORACLE 7 Server Release 7.1.4.1.0 w/distributed option ORACLE PL/SQL PL/SQL Release 2.1.4.0.0

b. ORACLE Forms 4.0.13.20.0

c. SQL*Loader Release 7.1.4.1.0

d. ORACLE SQL Plus SQL*Plus Release 3.1.3.5.1

e. ORACLE Pro*C Libraries

f. JOPES Core Database (SMDB Segment)

g. Solaris 2.3

h. SQL*NET ver 2.0.15.0.0

A.4.2 Databases/Data Files

JEPES, in accordance with GCCS JOPES-wide conventions, accesses but does not directly modify data stored in the JOPES Core database. JEPES does provide data to LOGSAFE, which has the capability to update data, modified by JEPES, within the JOPES Core database.

A.4.3 Design, Coding and Other Conventions

The following design and coding standards and procedures apply to modification efforts.

A.4.3.1 Coding Standards

JEPES was created in accordance with the following:

1. Language-independent,
2. Ada,
3. C,
4. JEPES ORACLE Forms 4.0,
5. Stored Packages and Procedures, and

6. UNIX scripts.

These standards appear in the JOPES Software Development Standards, (see Section 2.0, Reference item n., and have been informally provided to the Government.

A.4.3.2 Applicable Procedures

The procedures in the following paragraphs should be used to modify each type of source file found in JEPES.

A.4.3.2.1 ORACLE Forms 4.0 Software

To update the JEPES screens, the programmer must execute the ORACLE Forms 4.0 designer. The programmer must first make sure the ORACLE environment variables are set. Then, change to the forms directory path, which should be /h/JEPES/forms. At the prompt, enter f40desm. This will bring up the ORACLE Forms 4.0 designer application. Select forms when opening the files. A list of *.fmb* files will be displayed. Select an *.fmb* file and then Canvas-View and the screen will appear. The user can edit the text and buttons by clicking on the objects. Under the Forms option, JEPES forms are defined by the Module, Blocks, Canvas-Views, Items and Triggers. The file *regtime.fmb*, also, contain LOVs and Record Groups for the region listings. When making a text, block or item change, to save the changes, first select Control-Apply, to apply the changes. Then, File-Save to save the changes and finally, File-Generate to create the new ORACLE Forms 4.0 executable file (*.fmx*). The user will need to connect to the ORACLE database before creating or running the executable.

A.4.3.2.1.1 ORACLE Forms 4.0 Triggers

All code is written using triggers. PL/SQL program units are not used. The triggers are written as V2 and V3 triggers. V2 triggers can only be seen by selecting the V2 trigger style zoom option when selecting a trigger for editing. Only one step or command line is shown at a time. Unfortunately, there is no way of knowing what is the last step until you have gone past it. Once you have gone past the step, delete the current step by using the keys Control-Delete to avoid compilation errors when saved. If changes need to be made to the V2 trigger, then a V3 trigger should be created and the code written in PL/SQL and the V2 trigger should be deleted. V3 triggers are written in PL/SQL code and have much more capabilities. The reason V2 triggers still exist throughout the majority of the forms is that JEPES was originally developed with ORACLE 5.0 and ORACLE Forms 2.3, and V2 triggers was the only option available.

A.4.3.2.1.2 Running ORACLE Form 4.0 Executables

All forms depend on global variables defined in *menu4.fmb*, so in order to execute a modified form, the user should first execute *menu4.fmx*. Select Edit-Preferences-Debug Mode to view which trigger is getting executed.

A.4.3.2.2 Ada Code

All Ada source code resides in /h/JEPES/ada. The specifications reside in *.ads* files, the bodies in *.adb* files and the separates in *.ada* files. The Ada executables reside in /h/JEPES/bat as *.x* files. Any modifications made to the Ada code should follow the GCCS Language Independent Coding Standards. To compile and create executables, follow the instructions defined in Paragraph 5.2, Compilation/Build procedures.

A.4.3.2.3 SQL and PL/SQL Files

The SQL files are used for accessing the ORACLE database. The majority of the SQL files reside in /h/JEPES/sql. /h/JEPES/cots contains SQL files used for the JEPES graphics. /h/JEPES/load contains SQL files to load old WWMCCS text files. All SQL and PL/SQL files are *.sql* files. The only two PL/SQL files are *imtp.sql* and *imtu.sql*.

A.4.3.2.4 CTL Files

The CTL files are used for loading ASCII text files into JEPES tables. These files reside in directories /h/JEPES/bat and /h/JEPES/load. All files have *.ctl* as the extension.

A.4.3.2.5 C-Shell Scripts

All JEPES shell scripts are C-Shell scripts and should have the following for the first line:

```
#! /bin/csh -f
```

All Shell Scripts have either .s or .csh as the extension, and the majority of files reside in the bat directory. /h/JEPES/cots contains Shell Scripts used for the JEPES graphics. /h/JEPES/load contains Shell Scripts to load old WWMCCS text files.

A.4.3.2.6 Applixware Macros

The Applixware macros reside in the /h/JEPES/applix directory. These files usually have a *.am* extension. These macro files are for executing the Applixware COTS product to display/print graphics and spreadsheets.

A.4.4 Compilation/Build Procedures

The compilation and build procedures defined in Section A.3 should be used.

A.4.5 Integration and Testing Procedures

To perform integration and test of JEPES modifications, use DEMO_DB as the OPLAN. The DEMO_DB export file resides in the /h/JEPES/oplans directory as *demo_v6.exp* and *demo_v7.jep*. The *demo_v6.exp* export file is a ORACLE Version 6 export file and should be import using the Import V6 Database function in Utilities. The *demo_v7.exp* file is a ORACLE Version 7 export file and should be import using the Import V7 Database function in Utilities. Test results should be compared with results generated by the JEPES Software Test Description and Procedures document (see Section 2.0, Reference item g.).

A.5 Qualification Provisions

The JEPES application is delivered on magnetic tape media, using the standard UNIX "tar" format. The current version identification can be verified through manual examination of the VERSION file located in the /h/JEPES/SegDescrip directory. This file can be viewed through the use of the procedure described in Paragraph 1.3.